Microsoft PowerPoint Objects

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Object and collection
Object only
What's New for Microsoft PowerPoint 2002 Developers

Extensive changes have been made to the Microsoft PowerPoint 2002 Visual Basic object model to support new and improved features in the application.

Visit the Office Developer Center at MSDN Online for the latest Microsoft PowerPoint development information, including new technical articles, downloads, samples, product news, and more.
New Language Elements

The following topics provide lists of language elements that are new in PowerPoint 2002.

New Objects

New Properties (by Object)

New Properties (Alphabetical)

New Methods (by Object)

New Methods (Alphabetical)

New Events

Language-Specific Properties and Methods
ActionSetting Object

Multiple objects | ActionSettings (ActionSetting)
                 | Hyperlink
                 | SoundEffect

Contains information about how the specified shape or text range reacts to mouse actions during a slide show. The ActionSetting object is a member of the ActionSettings collection. The ActionSettings collection contains one ActionSetting object that represents how the specified object reacts when the user clicks it during a slide show and one ActionSetting object that represents how the specified object reacts when the user moves the mouse pointer over it during a slide show.
Using the ActionSetting Object

Use `ActionSettings(index)`, where `index` is the either `ppMouseClick` or `ppMouseOver`, to return a single `ActionSetting` object. The following example sets the mouse-click action for the text in the third shape on slide one in the active presentation to an Internet link.

```vba
With ActivePresentation.Slides(1).Shapes(3)
    .TextFrame.TextRange.ActionSettings(ppMouseClick)
    .Action = ppActionHyperlink
End With
```
Remarks

If you've set properties of the ActionSetting object that don't seem to be taking effect, make sure that you've set the Action property to the appropriate value.
ActionSettings Collection Object

Multiple objects

- ActionSettings (ActionSetting)
  - Hyperlink
  - SoundEffect

A collection that contains the two ActionSetting objects for a shape or text range. One ActionSetting object represents how the specified object reacts when the user clicks it during a slide show, and the other ActionSetting object represents how the specified object reacts when the user moves the mouse pointer over it during a slide show.
Using the ActionSettings Collection

Use the ActionSettings property to return the ActionSettings collection. Use ActionSettings(index), where index is either ppMouseClick or ppMouseOver, to return a single ActionSetting object. The following example specifies that the CalculateTotal macro be run whenever the mouse pointer passes over the shape during a slide show.

With ActivePresentation.Slides(1).Shapes(3) _
    .ActionSettings(ppMouseOver)
    .Action = ppActionRunMacro
    .Run = "CalculateTotal"
    .AnimateAction = True
End With
AddIn Object

AddIn Object

Represents a single add-in, either loaded or not loaded. The AddIn object is a member of the AddIns collection. The AddIns collection contains all of the PowerPoint-specific add-ins available, regardless of whether or not they're loaded. The collection does not include Component Object Model (COM) add-ins.
Using the AddIn Object

Use AddIns(index), where index is the add-in's title or index number, to return a single AddIn object. The following example loads the My Ppt Tools add-in.

AddIns("my ppt tools").Loaded = True

The add-in title, shown above, should not be confused with the add-in name, which is the file name of the add-in. You must spell the add-in title exactly as it's spelled in the Add-Ins dialog box, but the capitalization doesn't have to match.

The index number represents the position of the add-in in the Available Add-Ins list in the Add-Ins dialog box. The following example displays the names of all the add-ins that are currently loaded in PowerPoint.

For i = 1 To AddIns.Count
    If AddIns(i).Loaded Then MsgBox AddIns(i).Name
Next
Remarks

Use the **Add** method to add a PowerPoint-specific add-in to the list of those available. Note, however, that using this method doesn't load the add-in. To load the add-in, set the **Loaded** property of the add-in to **True** after you use the **Add** method. You can perform both of these actions in a single step, as shown in the following example (note that you use the name of the add-in, not its title, with the **Add** method).

```
AddIns.Add("generic.ppa").Loaded = True
```

Use **AddIns(index)**, where **index** is the add-in's title, to return a reference to the loaded add-in. The following example sets the **presAddin** variable to the add-in titled "my ppt tools" and sets the **myName** variable to the name of the add-in.

```
Set presAddin = AddIns("my ppt tools")
With presAddin
    myName = .Name
End With
```
AddIns Collection Object

Application - AddIns (AddIn)

A collection of AddIn objects that represent all the Microsoft PowerPoint-specific add-ins available to PowerPoint, regardless of whether or not they're loaded. This does not include Component Object Model (COM) add-ins.
Using the AddIns Collection

Use the AddIns method to return the AddIns collection. The following example displays the names of all the add-ins that are currently loaded in PowerPoint.

For Each ad In AddIns
    If ad.Loaded Then MsgBox ad.Name
Next

Use the Add method to add a PowerPoint-specific add-in to the list of those available. The Add method adds an add-in to the list but doesn't load the add-in. To load the add-in, set the Loaded property of the add-in to True after you use the Add method. You can perform these two actions in a single step, as shown in the following example (note that you use the name of the add-in, not its title, with the Add method).

AddIns.Add("graphdrs.ppa").Loaded = True

Use AddIns(index), where index is the add-in's title or index number, to return a single AddIn object. The following example loads the hypothetical add-in titled "my ppt tools."

AddIns("my ppt tools").Loaded = True

Don't confuse the add-in title with the add-in name, which is the file name of the add-in. You must spell the add-in title exactly as it's spelled in the Add-Ins dialog box, but the capitalization doesn't have to match.
Adjustments Object

**Shapes (Shape)** | **Adjustments**

Contains a collection of adjustment values for the specified AutoShape, WordArt object, or connector. Each adjustment value represents one way an adjustment handle can be adjusted. Because some adjustment handles can be adjusted in two ways — for instance, some handles can be adjusted both horizontally and vertically — a shape can have more adjustment values than it has adjustment handles. A shape can have up to eight adjustments.
Using the Adjustments Object

Use the **Adjustments** property to return an **Adjustments** object. Use **Adjustments(index)**, where **index** is the adjustment value's index number, to return a single adjustment value.

Different shapes have different numbers of adjustment values, different kinds of adjustments change the geometry of a shape in different ways, and different kinds of adjustments have different ranges of valid values. For example, the following illustration shows what each of the four adjustment values for a right-arrow callout contributes to the definition of the callout's geometry.

![Adjustment handles for right-arrow callout]

**Note** Because each adjustable shape has a different set of adjustments, the best way to verify the adjustment behavior for a specific shape is to manually create an instance of the shape, make adjustments with the macro recorder turned on, and then examine the recorded code.

The following table summarizes the ranges of valid adjustment values for different types of adjustments. In most cases, if you specify a value that's beyond the range of valid values, the closest valid value will be assigned to the adjustment.

<table>
<thead>
<tr>
<th>Type of adjustment</th>
<th>Valid values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linear (horizontal or ...)</td>
<td>Generally the value 0.0 represents the left or top edge of the shape and the value 1.0 represents the right or bottom edge of the shape. Valid values correspond to valid adjustments you can make to the shape manually. For example, if you can only pull an adjustment handle half way across the shape manually, the maximum</td>
</tr>
</tbody>
</table>
value for the corresponding adjustment will be 0.5. For shapes such as connectors and callouts, where the values 0.0 and 1.0 represent the limits of the rectangle defined by the starting and ending points of the connector or callout line, negative numbers and numbers greater than 1.0 are valid values.

An adjustment value of 1.0 corresponds to the width of the shape. The maximum value is 0.5, or half way across the shape.

Values are expressed in degrees. If you specify a value outside the range –180 to 180, it will be normalized to be within that range.

The following example adds a right-arrow callout to myDocument and sets adjustment values for the callout. Note that although the shape has only three adjustment handles, it has four adjustments. Adjustments three and four both correspond to the handle between the head and neck of the arrow.

```vba
Set myDocument = ActivePresentation.Slides(1)
Set rac = myDocument.Shapes.AddShape(msoShapeRightArrowCallout, 10, 10, 250, 190)
With rac.Adjustments
    .Item(1) = 0.5  'adjusts width of text box
    .Item(2) = 0.15 'adjusts width of arrow head
    .Item(3) = 0.8  'adjusts length of arrow head
    .Item(4) = 0.4  'adjusts width of arrow neck
End With
```
AnimationBehavior Object

AnimationBehaviors  AnimationBehavior
 Multiple objects

Represents the behavior of an animation effect, the main animation sequence, or an interactive animation sequence. The AnimationBehavior object is a member of the AnimationBehaviors collection.
Using the AnimationBehavior object

Use `Behaviors(index)`, where `index` is the number of the behavior in the sequence of behaviors, to return a single `AnimationBehavior` object. The following example sets the positions of the a rotation's starting and ending points. This example assumes that the first behavior for the main animation sequence is a `RotationEffect` object.

Sub Change()
    With ActivePresentation.Slides(1).TimeLine.MainSequence(1) _
        .Behaviors(1).RotationEffect
        .From = 1
        .To = 180
    End With
End Sub
AnimationBehaviors Collection

Effect → AnimationBehaviors
  → AnimationBehavior

Represents a collection of AnimationBehavior objects.
Using the AnimationBehaviors collection

Use the Add method to add an animation behavior. The following example adds a five-second animated rotation behavior to the main animation sequence on the first slide.

Sub AnimationObject()
    Dim timeMain As TimeLine

    'Reference the main animation timeline
    Set timeMain = ActivePresentation.Slides(1).TimeLine

    'Add a five-second animated rotation behavior
    'as the first animation in the main animation sequence
    timeMain.MainSequence(1).Behaviors.Add Type:=msoAnimTypeRotation
End Sub
AnimationPoint Object

AnimationPoints ⊆ AnimationPoint

Represents an individual animation point for an animation behavior. The AnimationPoint object is a member of the AnimationPoints collection. The AnimationPoints collection contains all the animation points for an animation behavior.
Using the AnimationPoint object

To add or reference an AnimationPoint object, use the Add or Item method, respectively. Use the Time property of an AnimationPoint object to set timing between animation points. Use the Value property to set other animation point properties, such as color. The following example adds three animation points to the first behavior in the active presentation's main animation sequence, and then it changes colors at each animation point.

Sub AniPoint()

    Dim sldNewSlide As Slide
    Dim shpHeart As Shape
    Dim effCustom As Effect
    Dim aniBehavior As AnimationBehavior
    Dim aptNewPoint As AnimationPoint

    Set sldNewSlide = ActivePresentation.Slides.Add( Index:=1, Layout:=ppLayoutBlank)
    Set shpHeart = sldNewSlide.Shapes.AddShape( Type:=msoShapeHeart, Left:=100, Top:=100, _
    Width:=200, Height:=200)
    Set effCustom = sldNewSlide.TimeLine.MainSequence_.
        AddEffect(shpHeart, msoAnimEffectCustom)
    Set aniBehavior = effCustom.Behaviors.Add(msoAnimTypeProperty)

    With aniBehavior.PropertyEffect
        .Property = msoAnimShapeFillColor
        Set aptNewPoint = .Points.Add
        aptNewPoint.Time = 0.2
        aptNewPoint.Value = RGB(0, 0, 0)
        Set aptNewPoint = .Points.Add
        aptNewPoint.Time = 0.5
        aptNewPoint.Value = RGB(0, 255, 0)
        Set aptNewPoint = .Points.Add
        aptNewPoint.Time = 1
        aptNewPoint.Value = RGB(0, 255, 255)
    End With

End Sub
AnimationPoints Collection

`PropertyEffect` ▼ `AnimationPoints` ▼ `AnimationPoint`

Represents a collection of animation points for a `PropertyEffect` object.
Using the AnimationPoints collection

Use the **Points** property of the **PropertyEffect** object to return an **AnimationPoints** collection object. The following example adds an animation point to the first behavior in the active presentation's main animation sequence.

```vba
Sub AddPoint()
    ActivePresentation.Slides(1).TimeLine.MainSequence(1) _
End Sub
```

Transitions from one animation point to another can sometimes be abrupt or choppy. Use the **Smooth** property to make transitions smoother. This example smoothes the transitions between animation points.

```vba
Sub SmoothTransition()
    ActivePresentation.Slides(1).TimeLine.MainSequence(1) _
End Sub
```
AnimationSettings Object

Shapes (Shape) - AnimationSettings
  - ColorFormat
  - PlaySettings
  - SoundEffect

Represents the special effects applied to the animation for the specified shape during a slide show.
Using the AnimationSettings Object

Use the **AnimationSettings** property of the **Shape** object to return the **AnimationSettings** object. The following example adds a slide that contains both a title and a three-item list to the active presentation, and then it sets the list to be animated by first-level paragraphs, to fly in from the left when animated, to dim to the specified color after being animated, and to animate its items in reverse order.

```vba
Set sObjs = ActivePresentation.Slides.Add(2, ppLayoutText).Shapes
sObjs.Title.TextFrame.TextRange.Text = "Top Three Reasons"
With sObjs.Placeholders(2)
    With .AnimationSettings
        .TextLevelEffect = ppAnimateByFirstLevel
        .EntryEffect = ppEffectFlyFromLeft
        .AfterEffect = ppAfterEffectDim
        .DimColor.RGB = RGB(100, 120, 100)
        .AnimateTextInReverse = True
    End With
End With
End With
```
Application Object

Application - Multiple objects

Represents the entire Microsoft PowerPoint application. The Application object contains:

- Application-wide settings and options (the name of the active printer, for example).
- Properties that return top-level objects, such as ActivePresentation, Windows, and so on.
Using the Application Object

Use the Application property to return the Application object. The following example returns the path to the application file.

```vba
Dim MyPath As String
MyPath = Application.Path
```

The following example creates a PowerPoint Application object in another application, starts PowerPoint (if it's not already running), and opens an existing presentation named "Ex_a2a.ppt."

```vba
Set ppt = New Powerpoint.Application
ppt.Visible = True
ppt.Presentations.Open "c:\My Documents\ex_a2a.ppt"
```
Remarks

When you are writing code that will run from PowerPoint, the following properties of the **Application** object can be used without the object qualifier: **ActivePresentation**, **ActiveWindow**, **AddIns**, **Assistant**, **CommandBars**, **Presentations**, **SlideShowWindows**, **Windows**. For example, instead of writing **Application.ActiveWindow.Height = 200**, you can write **ActiveWindow.Height = 200**.
AutoCorrect Object

Application - AutoCorrect

Represents the AutoCorrect functionality in Microsoft PowerPoint.
Using the AutoCorrect object

Use the AutoCorrect property to return an AutoCorrect object. The following example disables displaying the AutoCorrect options buttons.

```vba
Sub HideAutoCorrectOpButton()
    With Application.AutoCorrect
        .DisplayAutoCorrectOptions = msoFalse
        .DisplayAutoLayoutOptions = msoFalse
    End With
End Sub
```
Borders Collection Object

Multiple objects \texttt{Borders (LineFormat)}

A collection of \texttt{LineFormat} objects that represent the borders and diagonal lines of a cell or range of cells in a table.
Using the Borders Collection

Each Cell object or CellRange collection has six elements in the Borders collection. You cannot add objects to the Borders collection.

Use Borders(index), where index identifies the cell border or diagonal line, to return a single Border object. Index can be any PPBorderType constant.

PPBorderType can be one of these PPBorderType constants.

- ppBorderBottom
- ppBorderLeft
- ppBorderRight
- ppBorderTop
- ppBorderDiagonalDown
- ppBorderDiagonalUp

Use the DashStyle property to apply a dashed line style to a Border object. This example selects the second row from the table and applies a dashed line style to the bottom border.

ActiveWindow.Selection.ShapeRange.Table.Rows(2) _
BulletFormat Object

Represents bullet formatting.
Using the BulletFormat Object

Use the **Bullet** property to return the **BulletFormat** object. The following example sets the bullet size and color for the paragraphs in shape two on slide one in the active presentation.

```vbnet
With ActivePresentation.Slides(1).Shapes(2)
        .Visible = True
        .RelativeSize = 1.25
        .Character = 169
        With .Font
            .Color.RGB = RGB(255, 255, 0)
            .Name = "Symbol"
        End With
    End With
End With
```
CalloutFormat Object

Shapes (Shape) \( \sqsubseteq \) CalloutFormat

Contains properties and methods that apply to line callouts.
Using the CalloutFormat Object

Use the Callout property to return a CalloutFormat object. The following example specifies the following attributes of shape three (a line callout) on myDocument:

- The callout will have a vertical accent bar that separates the text from the callout line.
- The angle between the callout line and the side of the callout text box will be 30 degrees.
- There will be no border around the callout text.
- The callout line will be attached to the top of the callout text box.
- The callout line will contain two segments.

For this example to work, shape three must be a callout.

```vba
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(3).Callout
    .Accent = True
    .Angle = msoCalloutAngle30
    .Border = False
    .PresetDrop msoCalloutDropTop
    .Type = msoCalloutThree
End With
```
Cell Object

Multiple objects \texttt{CellRange (Cell)}

\texttt{Multiple objects}

Represents a table cell. The \texttt{Cell} object is a member of the \texttt{CellRange} collection. The \texttt{CellRange} collection represents all the cells in the specified column or row. To use the \texttt{CellRange} collection, use the \texttt{Cells} keyword.
Using the Cell Object

Use Cell(row, column), where row is the row number and column is the column number, or Cells(index), where index is the number of the cell in the specified row or column, to return a single Cell object. Cells are numbered from left to right in rows and from top to bottom in columns. With right-to-left language settings, this scheme is reversed. The following example merges the first two cells in row one of the table in shape five on slide two.

With ActivePresentation.Slides(2).Shapes(5).Table .Cell(1, 1).Merge MergeTo:=.Cell(1, 2)
End With

This example sets the bottom border for cell one in the first column of the table to a dashed line style.

End With

Use the Shape property to access the Shape object and to manipulate the contents of each cell. This example deletes the text in the first cell (row 1, column 1), inserts new text, and then sets the width of the entire column to 110 points.

End With
Remarks

You cannot programmatically add cells to or delete cells from a PowerPoint table. Use the Add method of the Columns or Rows collections to add a column or row to a table. Use the Delete method of the Columns or Rows collections to delete a column or row from a table.
CellRange Collection Object

A collection of Cell objects in a table column or row. The CellRange collection represents all the cells in the specified column or row. To use the CellRange collection, use the Cells keyword.
Using the CellRange Collection

Use the Cells property to return the CellRange collection. This example sets the right border for the cells in the first column of the table to a dashed line style.

```vba
End With
```

This example returns the number of cells in row one of the selected table.

```vba
num = ActiveWindow.Selection.ShapeRange.Table.Rows(1).Cells.Count
```

Use Cell(row, column), where row is the row number and column is the column number, or Cells(index), where index is the number of the cell in the specified row or column, to return a single Cell object. Cells are numbered from left to right in rows and from top to bottom in columns. With right-to-left language settings, this scheme is reversed. The example below merges the first two cells in row one of the table in shape five on slide two.

```vba
With ActivePresentation.Slides(2).Shapes(5).Table
  .Cell(1, 1).Merge MergeTo:=.Cell(1, 2)
End With
```
Remarks

Although the collection object is named **CellRange** and is shown in the Object Browser, this keyword is not used in programming the PowerPoint object model. The keyword **Cells** is used instead.

You cannot programmatically add cells to or delete cells from a PowerPoint table. Use the **AddTable** method with the **Table** object to add a new table. Use the **Add** method of the **Columns** or **Rows** collections to add a column or row to a table. Use the **Delete** method of the **Columns** or **Rows** collections to delete a column or row from a table.
ColorEffect Object

AnimationBehavior $\backslash$ ColorEffect
   $\backslash$ ColorFormat

Represents a color effect for an animation behavior.
Using the ColorEffect object

Use the **ColorEffect** property of the **AnimationBehavior** object to return a **ColorEffect** object. Color effects can be changed using the **ColorEffect** object's **From** and **To** properties, as shown below. Color effects are initially set using the **To** property, and then can be changed by a specific number using the **By** property. The following example adds a shape to the first slide of the active presentation and sets a color effect animation behavior to change the fill color of the new shape.

```vba
Sub ChangeColorEffect()
    Dim sldFirst As Slide
    Dim shpHeart As Shape
    Dim effNew As Effect
    Dim bhvEffect As AnimationBehavior

    Set sldFirst = ActivePresentation.Slides(1)
    Set shpHeart = sldFirst.Shapes.AddShape(Type:=msoShapeHeart, _
        Left:=100, Top:=100, Width:=100, Height:=100)
    Set effNew = sldFirst.TimeLine.MainSequence.AddEffect _
        (Shape:=shpHeart, EffectID:=msoAnimEffectChangeFillColor, _
        Trigger:=msoAnimTriggerAfterPrevious)
    Set bhvEffect = effNew.Behaviors.Add(Type:=msoAnimTypeColor)

    With bhvEffect.ColorEffect
        .From.RGB = RGB(Red:=255, Green:=0, Blue:=0)
        .To.RGB = RGB(Red:=0, Green:=0, Blue:=255)
    End With
End Sub
```
ColorFormat Object

Multiple objects ColorFormat

Represents the color of a one-color object, the foreground or background color of an object with a gradient or patterned fill, or the pointer color. You can set colors to an explicit red-green-blue value (by using the RGB property) or to a color in the color scheme (by using the SchemeColor property).
Using the ColorFormat Object

Use one of the properties listed in the following table to return a ColorFormat object.

<table>
<thead>
<tr>
<th>Use this property</th>
<th>With this object</th>
<th>To return a ColorFormat object that represents this</th>
</tr>
</thead>
<tbody>
<tr>
<td>DimColor</td>
<td>AnimationSettings</td>
<td>Color used for dimmed objects</td>
</tr>
<tr>
<td>BackColor</td>
<td>FillFormat</td>
<td>Background fill color (used in a shaded or patterned fill)</td>
</tr>
<tr>
<td>ForeColor</td>
<td>FillFormat</td>
<td>Foreground fill color (or simply the fill color for a solid fill)</td>
</tr>
<tr>
<td>Color</td>
<td>Font</td>
<td>Bullet or character color</td>
</tr>
<tr>
<td>BackColor</td>
<td>LineFormat</td>
<td>Background line color (used in a patterned line)</td>
</tr>
<tr>
<td>ForeColor</td>
<td>LineFormat</td>
<td>Foreground line color (or just the line color for a solid line)</td>
</tr>
<tr>
<td>ForeColor</td>
<td>ShadowFormat</td>
<td>Shadow color</td>
</tr>
<tr>
<td>PointerColor</td>
<td>SlideShowSettings</td>
<td>Default pointer color for a presentation</td>
</tr>
<tr>
<td>PointerColor</td>
<td>SlideShowView</td>
<td>Temporary pointer color for a view of a slide show</td>
</tr>
<tr>
<td>ExtrusionColor</td>
<td>ThreeDFormat</td>
<td>Color of the sides of an extruded object</td>
</tr>
</tbody>
</table>

Use the SchemeColor property to set the color of a slide element to one of the colors in the standard color scheme. The following example sets the text color for shape one on slide two in the active presentation to the standard color-scheme title color.

```vbnet
```

Use the RGB property to set a color to an explicit red-green-blue value. The following example adds a rectangle to myDocument and then sets the foreground
color, background color, and gradient for the rectangle's fill.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes.AddShape(msoShapeRectangle, 90, 90, 90, 50).Fill
    .ForeColor.RGB = RGB(128, 0, 0)
    .BackColor.RGB = RGB(170, 170, 170)
    .TwoColorGradient msoGradientHorizontal, 1
End With
ColorScheme Object

Multiple objects of `ColorScheme`<br>
- `RGBColor`

Represents a color scheme, which is a set of eight colors used for the different elements of a slide, notes page, or handout, such as the title or background. (Note that the color schemes for slides, notes pages, and handouts in a presentation can be set independently.) Each color is represented by an `RGBColor` object. The `ColorScheme` object is a member of the `ColorSchemes` collection. The `ColorSchemes` collection contains all the color schemes in a presentation.
Using the ColorScheme Object

This section describes how to do the following:

- Return a `ColorScheme` object from the collection of all the color schemes in the presentation
- Return the `ColorScheme` object attached to a specific slide or master
- Return the color of a single slide element from a `ColorScheme` object
Returning a ColorScheme object from the collection of all the color schemes in the presentation

Use `ColorSchemes(index)`, where `index` is the color scheme index number, to return a single `ColorScheme` object. The following example deletes color scheme two from the active presentation.

`ActivePresentation.ColorSchemes(2).Delete`
Returning the ColorScheme object attached to a specific slide or master

Set the **ColorScheme** property of a **Slide**, **SlideRange**, or **Master** object to return the color scheme for one slide, a set of slides, or a master, respectively. The following example creates a color scheme based on the current slide, adds the new color scheme to the collection of standard color schemes for the presentation, and sets the color scheme for the slide master to the new color scheme. All new slides based on the master will have this color scheme.

```vba
Set newScheme = ActiveWindow.View.Slide.ColorScheme
newScheme.Colors(ppTitle).RGB = RGB(0, 150, 250)
Set newStandardScheme = _
    ActivePresentation.ColorSchemes.Add(newScheme)
ActivePresentation.SlideMaster.ColorScheme = newStandardScheme
```
Returning the color of a single slide element from a ColorScheme object

Use the Colors method to return an RGBColor object that represents the color of a single slide-element type. You can set an RGBColor object to another RGBColor object, or you can use the RGB property to set or return the explicit red-green-blue (RGB) value for an RGBColor object. The following example sets the background color in color scheme one to red and sets the title color to the title color that's defined for color scheme two.

```vba
With ActivePresentation.ColorSchemes
    .Item(1).Colors(ppBackground).RGB = RGB(255, 0, 0)
    .Item(1).Colors(ppTitle) = .Item(2).Colors(ppTitle)
End With
```
ColorSchemes Collection Object

A collection of all the ColorScheme objects in the specified presentation. Each ColorScheme object represents a color scheme, which is a set of colors that are used together on a slide.
Using the ColorSchemes Collection

Use the **ColorSchemes** property to return the **ColorSchemes** collection. Use **ColorSchemes(index)**, where index is the color scheme index number, to return a single **ColorScheme** object. The following example deletes color scheme two from the active presentation.

```
ActivePresentation.ColorSchemes(2).Delete
```

Use the **Add** method to create a new color scheme and add it to the **ColorSchemes** collection. The following example adds a color scheme to the active presentation and sets the title color and background color for the color scheme (because no argument was used with the **Add** method, the added color scheme is initially identical to the first standard color scheme in the presentation).

```
With ActivePresentation.ColorSchemes.Add
   .Colors(ppTitle).RGB = RGB(255, 0, 0)
   .Colors(ppBackground).RGB = RGB(128, 128, 0)
End With
```

Set the **ColorScheme** property of a **Slide**, **SlideRange**, or **Master** object to return the color scheme for one slide, a set of slides, or a master, respectively. The following example sets the color scheme for all the slides in the active presentation to the third color scheme in the presentation.

```
With ActivePresentation
End With
```
Column Object

Represents a table column. The Column object is a member of the Columns collection. The Columns collection includes all the columns in a table.
Using the Column Object

Use `Columns(index)` to return a single Column object. `Index` represents the position of the column in the Columns collection (usually counting from left to right; although the TableDirection property can reverse this). This example selects the first column of the table in shape five on the second slide.

```
ActivePresentation.Slides(2).Shapes(5).Table.Columns(1).Select
```

Use the Cell object to indirectly reference the Column object. This example deletes the text in the first cell (row 1, column 1), inserts new text, and then sets the width of the entire column to 110 points.

```
With ActivePresentation.Slides(2).Shapes(5).Table.Cell(1, 1)
    .Shape.TextFrame.TextRange.Delete
    .Shape.TextFrame.TextRange.Text = "Rooster"
    .Parent.Columns(1).Width = 110
End With
```

Use the `Add` method to add a column to a table. This example creates a column in an existing table and sets the column width to 72 points (one inch).

```
With ActivePresentation.Slides(2).Shapes(5).Table
    .Columns.Add.Width = 72
End With
```
Remarks

Use the **Cells** property to modify the individual cells in a **Column** object. This example selects the first column in the table and applies a dashed line style to the bottom border.

```vba
ActiveWindow.Selection.ShapeRange.Table.Columns(1) _
```
Columns Collection Object

A collection of Column objects that represent the columns in a table.
Using the Columns Collection

Use the **Columns** property to return the **Columns** collection. This example finds the first table in the active presentation, counts the number of **Column** objects in the **Columns** collection, and displays information to the user.

```vba
Dim ColCount, sl, sh As Integer

With ActivePresentation
    For sl = 1 To .Slides.Count
        For sh = 1 To .Slides(sl).Shapes.Count
            If .Slides(sl).Shapes(sh).HasTable Then
                ColCount = .Slides(sl).Shapes(sh)._
                    .Table.Columns.Count
                MsgBox "Shape " & sh & " on slide " & sl & _
                    " contains the first table and has " & _
                    ColCount & " columns."
                Exit Sub
            End If
        Next
    Next
End With
```

Use the **Add** method to add a column to a table. This example creates a column in an existing table and sets the width of the new column to 72 points (one inch).

```vba
With ActivePresentation.Slides(2).Shapes(5).Table_.
    .Columns.Add.Width = 72
End With
```

Use **Columns(index)** to return a single **Column** object. **Index** represents the position of the column in the **Columns** collection (usually counting from left to right; although the **TableDirection** property can reverse this). This example selects the first column of the table in shape five on the second slide.

```vba
ActivePresentation.Slides(2).Shapes(5).Table.Columns(1).Select
```
Comment Object

Comment

Represented a comment on a given slide or slide range. The Comment object is a member of the Comments collection object.
Using the Comment object

Use `Comments(index)`, where `index` is the number of the comment, or the `Item` method to access a single comment on a slide. This example displays the author of the first comment on the first slide. If there are no comments, it displays a message stating such.

```
Sub ShowComment()
    With ActivePresentation.Slides(1).Comments
        If .Count > 0 Then
            MsgBox "The first comment on this slide is by " & _
                .Item(1).Author
        Else
            MsgBox "There are no comments on this slide."
        End If
    End With
End Sub
```

Use the following properties to access comment data:

- **Author** The author's full name
- **AuthorIndex** The author's index in the list of comments
- **AuthorInitials** The author's initials
- **DateTime** The date and time the comment was created
- **Text** The text of the comment
- **Left, Top** The comment's screen coordinates

This example displays a message containing the author, date and time, and contents of all the messages on the first slide.

```
Sub SlideComments()
    Dim cmtExisting As Comment
    Dim cmtAll As Comments
    Dim strComments As String

    Set cmtAll = ActivePresentation.Slides(1).Comments

    If cmtAll.Count > 0 Then
        For Each cmtExisting In cmtAll
            strComments = strComments & cmtExisting.Author & vbTab &
        Next
        MsgBox strComments
    Else
        MsgBox "There are no comments on this slide."
    End If
End Sub
```
cmtExisting.DateTime & vbTab & cmtExisting.Text & vbCrLf
Next
MsgBox "The comments in your document are as follows:" & vbCrLf & strComments
Else
    MsgBox "This slide doesn't have any comments."
End If
End Sub
Comments Collection

Multiple objects

\[ \text{Comments} \]

\[ \text{Comment} \]

Represents a collection of \text{Comment} objects.
Using the Comments collection

Use the Comments property to refer to the Comments collection. The following example displays the number of comments on the current slide.

Sub CountComments()
    MsgBox "You have " & ActiveWindow.Selection.SlideRange(1).Comments.Count & " comments on this slide."
End Sub

Use the Add method to add a comment to a slide. This example adds a new comment to the first slide of the active presentation.

Sub AddComment()
    Dim sldNew As Slide
    Dim cmtNew As Comment
    Set sldNew = ActivePresentation.Slides.Add(Index:=1, _
        Layout:=ppLayoutBlank)
    Set cmtNew = sldNew.Comments.Add(Left:=12, Top:=12, _
        Author:="Jeff Smith", AuthorInitials:="JS", _
        Text:="You might consider reviewing the new specs " & _
        "for more up-to-date information."
End Sub
ConnectorFormat Object

**Shapes (Shape)** → **ConnectorFormat**

Contains properties and methods that apply to connectors. A connector is a line that attaches two other shapes at points called connection sites. If you rearrange shapes that are connected, the geometry of the connector will be automatically adjusted so that the shapes remain connected.
Using the ConnectorFormat Object

Use the **ConnectorFormat** property to return a **ConnectorFormat** object. Use the **BeginConnect** and **EndConnect** methods to attach the ends of the connector to other shapes in the document. Use the **RerouteConnections** method to automatically find the shortest path between the two shapes connected by the connector. Use the **Connector** property to see whether a shape is a connector.

Note that you assign a size and a position when you add a connector to the **Shapes** collection, but the size and position are automatically adjusted when you attach the beginning and end of the connector to other shapes in the collection. Therefore, if you intend to attach a connector to other shapes, the initial size and position you specify are irrelevant. Likewise, you specify which connection sites on a shape to attach the connector to when you attach the connector, but using the **RerouteConnections** method after the connector is attached may change which connection sites the connector attaches to, making your original choice of connection sites irrelevant.

The following example adds two rectangles to **myDocument** and connects them with a curved connector.

```vba
define myDocument = ActivePresentation.Slides(1)
define s = myDocument.Shapes
define firstRect = s.AddShape(msoShapeRectangle, 100, 50, 200, 100)
define secondRect = s.AddShape(msoShapeRectangle, 300, 300, 200, 100)
with s.AddConnector(msoConnectorCurve, 0, 0, 0, 0).ConnectorFormat .BeginConnect ConnectedShape:=firstRect, ConnectionSite:=1 .EndConnect ConnectedShape:=secondRect, ConnectionSite:=1 .Parent.RerouteConnections

end with
```
Remarks

Connection sites are generally numbered according to the rules presented in the following table.

<table>
<thead>
<tr>
<th>Shape type</th>
<th>Connection site numbering scheme</th>
</tr>
</thead>
<tbody>
<tr>
<td>AutoShapes, WordArt, pictures,</td>
<td>The connection sites are numbered starting at the top and proceeding</td>
</tr>
<tr>
<td>and OLE objects</td>
<td>counterclockwise.</td>
</tr>
<tr>
<td>Freeforms</td>
<td>The connection sites are the vertices, and they correspond to the</td>
</tr>
<tr>
<td></td>
<td>vertex numbers.</td>
</tr>
</tbody>
</table>

To figure out which number corresponds to which connection site on a complex shape, you can experiment with the shape while the macro recorder is turned on and then examine the recorded code; or you can create a shape, select it, and then run the following example. This code will number each connection site and attach a connector to it.

```
Set mainshape = ActiveWindow.Selection.ShapeRange(1)
With mainshape
    bx = .Left + .Width + 50
    by = .Top + .Height + 50
End With
With ActiveWindow.View.Slide
    For j = 1 To mainshape.ConnectionSiteCount
        With .Shapes.AddConnector(msoConnectorStraight, _
            bx, by, bx + 50, by + 50)
            .ConnectorFormat.EndConnect mainshape, j
            .ConnectorFormat.Type = msoConnectorElbow
            .Line.ForeColor.RGB = RGB(255, 0, 0)
        End With
        With .Shapes.AddTextbox(msoTextOrientationHorizontal, _
            l, t, 36, 14)
            .Fill.Visible = False
            .Line.Visible = False
            .TextFrame.TextRange.Text = j
        End With
    Next j
```
End With
DefaultWebOptions Object

Contains global application-level attributes used by Microsoft PowerPoint when you publish or save a complete or partial presentation as a Web page or when you open a Web page. You can return or set attributes either at the application (global) level or at the presentation level. (Note that attribute values can be different from one presentation to another, depending on the attribute value at the time the presentation was saved.) Presentation-level attribute settings override application-level attribute settings. Presentation-level attributes are contained in the WebOptions object.
Using the DefaultWebOptions Object

Use the `DefaultWebOptions` property to return the `DefaultWebOptions` object. The following example checks to see whether PNG (Portable Network Graphics) are allowed as an image format, and then sets the `strImageFile_Type` variable accordingly.

```
Set objAppWebOptions = Application.DefaultWebOptions
With objAppWebOptions
    If .AllowPNG = True Then
        strImageFile_Type = "PNG"
    Else
        strImageFile_Type = "JPG"
    End If
End With
```
Design Object

Multiple objects \(\text{Design} \leq \text{Master}\)

Represents an individual slide design template. The Design object is a member of the Designs and SlideRange collections and the Master and Slide objects.
Using the Design object

Use the **Design** property of the **Master**, **Slide**, or **SlideRange** objects to access a **Design** object, for example:

- `ActivePresentation.SlideMaster.Design`
- `ActivePresentation.Slides(1).Design`
- `ActivePresentation.Slides.Range.Design`

Use the **Add**, **Item**, **Clone**, or **Load** methods of the **Designs** collection to add, refer to, clone, or load a **Design** object, respectively. For example, to add a design template, use `ActivePresentation.Designs.Add designName:="MyDesign"

The **Design** object's **AddTitleMaster** method and **HasTitleMaster** property can be used to add and / or query the status of a title slide master. For example:

```vba
Sub AddQueryTitleMaster(dsn As Design)
    dsn.AddTitleMaster
    MsgBox dsn.HasTitleMaster
End Sub
```
Designs Collection

Represented by a collection of slide design templates.
Using the Designs collection

Use the **Designs** property of the **Presentation** object to reference a design template.

To add or clone an individual design template, use the **Designs** collection's **Add** or **Clone** methods, respectively. To refer to an individual design template, use the **Item** method.

To load a design template, use the **Load** method.

The following example adds a new design template to the **Designs** collection and confirms it was added correctly.

```vbscript
Sub AddDesignMaster()
    With ActivePresentation.Designs
        .Add designName:="MyDesignName"
        MsgBox .Item("MyDesignName").Name
    End With
End Sub
```
Diagram Object

Multiple objects

Diagram

DiagramNodes

Represents a single diagram in a document. The Diagram object is a member of the DiagramNode and Shape objects and the ShapeRange collection.
Using the Diagram object

Use the **Diagram** property of the **Shape** object or **ShapeRange** collection to return a **Diagram** object.

Use the **Convert** method to change a diagram from one type to another. This example converts the first diagram on the first slide of the active presentation into a radial diagram. This example assumes that the first shape in the active presentation is a diagram and not another type of shape.

```vba
Sub DiagramConvert()
    ActivePresentation.Slides(1).Shapes(1).Diagram.Convert Type:=msoDiagramRadial
End Sub
```

Use the **Reverse** property to flip the order of the nodes in a diagram, so that the first node becomes the last node, and vice versa. This example reverses the order of the diagram nodes for the second shape on the first slide of the active presentation. This assumes that the second shape in the active presentation is a diagram and not another type of shape.

```vba
Sub DiagramReverse()
    ActivePresentation.Slides(1).Shapes(2).Diagram.Reverse = msoTrue
End Sub
```

A **DiagramNode** object can have a nested **Diagram** object. Use the **Diagram** property of a **DiagramNode** object to return the nested **Diagram** object.
DiagramNode Object

Multiple objects \( \rightarrow \text{DiagramNode} \)
\( \rightarrow \text{Multiple objects} \)

Represents a node in a diagram.
Using the DiagramNode object

To return a DiagramNode object, use one of the following:

- The DiagramNode object's AddNode, CloneNode, NextNode or PrevNode methods, or Root property.
- The DiagramNodeChildren collection's AddNode or Item methods, or FirstChild or LastChild properties.
- The DiagramNodes collection's Item method.
- The Shape object's or ShapeRange collection's DiagramNode property.

A diagram node can terminate, or contain other child diagrams, child diagram nodes, or child shapes:

- To refer to a child diagram, use the Diagram property.
- To refer to an individual child diagram node, use the AddNode, CloneNode, NextNode or PrevNode methods, or Root property.
- To refer to a collection of child diagram nodes, use the Children property.
- To refer to a shape, use the Shape or TextShape properties.

Use the AddNode method to add a node to a diagram or to a diagram node. This example assumes the third shape in the active presentation is a diagram and adds a node to it.

Sub AddDiagramNode()
    ActivePresentation.Shapes(3).DiagramNode.Children.AddNode
End Sub

Use the Delete method to remove a node from a diagram or diagram node. This example assumes the second shape in the presentation is a diagram and removes the first node from it.

Sub DeleteDiagramNode()
    ActivePresentation.Shapes(2).DiagramNode.Children(1).Delete
End Sub
DiagramNodeChildren Collection

A collection of DiagramNode objects that represents child nodes in a diagram.
Using the `DiagramNodeChildren` collection

Use the `Children` property of the `DiagramNode` object to return a `DiagramNodeChildren` collection. To add an individual child diagram node to the collection, use the `AddNode` method. To return individual child diagram nodes in the collection, use the `FirstChild` or `LastChild` properties or the `Item` method.

This example deletes the first child of the second node in the first diagram in the document. This example assumes that the first shape in the active document is a diagram with at least two nodes, one with child nodes.

```vba
Sub DiagramNodeChild()
    ActiveDocument.Shapes(1).Diagram.Nodes.Item(2)_
        .Children.FirstChild.Delete
End Sub
```
DiagramNodes Collection

Diagram ← DiagramNodes
  ← DiagramNode

A collection of DiagramNode objects that represents all the nodes in a diagram.
Using the DiagramNodes collection

Use the Nodes property of the Diagram object to return a DiagramNodes collection. Use the Item method to select and work with a single diagram node in a diagram. This example assumes the first shape on the first slide in the active presentation is a diagram, selects the first node, and deletes it.

Sub FillDiagramNode()
    ActivePresentation.Slides(1).Shapes(1).Diagram.Nodes.Item(1).Delete
End Sub

Use the SelectAll method to select and work with all nodes in a diagram. This example assumes the first shape on the first slide in the active presentation is a diagram, selects all nodes, and fills them with the specified pattern.

Sub FillDiagramNodes()
    ActivePresentation.Slides(1).Shapes(1).Diagram.Nodes.SelectAll
    ActiveWindow.Selection.ShapeRange.Fill.Patterned _
        Pattern:=msoPatternSmallConfetti
End Sub
DocumentWindow Object

Multiple objects

DocumentWindows (DocumentWindow)

Panes (Pane)

Presentation

Selection

View

Using the DocumentWindow Object

Use **Windows(index)**, where *index* is the document window index number, to return a single **DocumentWindow** object. The following example activates document window two.

```
Windows(2).Activate
```

The first member of the **DocumentWindows** collection, **Windows(1)**, always returns the active document window. Alternatively, you can use the **ActiveWindow** property to return the active document window. The following example maximizes the active window.

```
ActiveWindow.WindowState = ppWindowMaximized
```

Use **Panes(index)**, where *index* is the pane index number, to manipulate panes within normal, slide, outline, or notes page views of the document window. The following example activates pane three, which is the notes pane.

```
ActiveWindow.Panes(3).Activate
```

Use the **ActivePane** property to return the active pane within the document window. The following example checks to see if the active pane is the outline pane. If not, it activates the outline pane.

```
mypane = ActiveWindow.ActivePane.ViewType
If mypane <> 1 Then
    ActiveWindow.Panes(1).Activate
End If
```

Use the **Presentation** property to return the presentation that's currently running in the specified document window.

Use the **Selection** property to return the selection.

Use the **SplitHorizontal** property to return the percentage of the screen width that the outline pane occupies in normal view.

Use the **SplitVertical** property to return the percentage of the screen height that the slide pane occupies in normal view.
Use the **View** property to return the view in the specified document window.
DocumentWindows Collection Object

Multiple objects

- Presentation
- Selection
- View

A collection of all the DocumentWindow objects that are currently open in PowerPoint. This collection doesn't include open slide show windows, which are included in the SlideShowWindows collection.
Using the DocumentWindows Collection

Use the **Windows** property to return the **DocumentWindows** collection. The following example tiles the open document windows.

```vbnet
Windows.Arrange ppArrangeTiled
```

Use the **NewWindow** method to create a document window and add it to the **DocumentWindows** collection. The following example creates a new window for the active presentation.

```vbnet
ActivePresentation.NewWindow
```

Use **Windows(index)**, where *index* is the window index number, to return a single **DocumentWindow** object. The following example closes document window two.

```vbnet
Windows(2).Close
```
Effect Object

Sequence  Effect
Multiple objects

Represents timing information about a slide animation.
**Using the Effect object**

Use the *AddEffect* method to add an effect. This example adds a shape to the first slide in the active presentation and adds an effect and a behavior to the shape.

```vba
Sub NewShapeAndEffect()
    Dim shpStar As Shape
    Dim sldOne As Slide
    Dim effNew As Effect

    Set sldOne = ActivePresentation.Slides(1)
    Set shpStar = sldOne.Shapes.AddShape(Type:=msoShape5pointStar, _
                                           Left:=150, Top:=72, Width:=400, Height:=400)
    Set effNew = sldOne.TimeLine.MainSequence.AddEffect(Shape:=shpSt
     EffectId:=msoAnimEffectStretchy, Trigger:=msoAnimTriggerAfte
    With effNew
        With .Behaviors.Add(msoAnimTypeScale).ScaleEffect
            .FromX = 75
            .FromY = 75
            .ToX = 0
            .ToY = 0
        End With
        .Timing.AutoReverse = msoTrue
    End With
    End With
End Sub
```

To refer to an existing *Effect* object, use *MainSequence(index)*, where *index* is the number of the *Effect* object in the *Sequence* collection. This example changes the effect for the first sequence and specifies the behavior for that effect.

```vba
Sub ChangeEffect()
    With ActivePresentation.Slides(1).TimeLine _
        .MainSequence(1)
        .EffectType = msoAnimEffectSpin
        With .Behaviors(1).RotationEffect
            .From = 100
            .To = 360
            .By = 5
        End With
    End With
End Sub
```
There is always at least one **Effect** object in each slide regardless of whether the slide has animations or not.
**EffectInformation Object**

**Effect**  \(\rightarrow\) **EffectInformation**

- Multiple objects

Represents various animation options for an **Effect** object.
Using the EffectInformation object

Use the members of the **EffectInformation** object to return the current state of an **Effect** object, such as the after effect, whether the background animates along with its corresponding text, whether text animates in reverse, play settings, sound effects, text building behavior, and so on. All of the members of the **EffectInformation** object are read-only. To change any effect information properties, you must use the methods of the corresponding **Sequence** object.

Use the **EffectInformation** property of the **Effect** object to return an **EffectInformation** object. The following example sets the **HideWhileNotPlaying** property for the play settings in the main animation sequence.

```vba
Sub HideEffect()
    ActiveWindow.Selection.SlideRange(1).TimeLine.
    .MainSequence(1).EffectInformation.PlaySettings.
    .HideWhileNotPlaying = msoTrue
End Sub
```
EffectParameters Object

Effect \rightarrow EffectParameters
\rightarrow ColorFormat

Represents various animation parameters for an Effect object, such as colors, fonts, sizes, and directions.
Using the EffectParameters object

Use the `EffectParameters` property of the `Effect` object to return an `EffectParameters` object. The following example creates a shape, sets a fill effect, and changes the starting and ending fill colors.

```vba
Sub effParam()
    Dim shpNew As Shape
    Dim effNew As Effect

    Set shpNew = ActivePresentation.Slides(1).Shapes .AddShape(Type:=msoShapeHeart, Left:=100, _
        Top:=100, Width:=150, Height:=150)

    With effNew.EffectParameters
        .Color1.RGB = RGB(Red:=0, Green:=0, Blue:=255)
        .Color2.RGB = RGB(Red:=255, Green:=0, Blue:=0)
    End With

End Sub
```
ExtraColors Object

Represents the extra colors in a presentation. The object can contain up to eight colors, each of which is represented by an red-green-blue (RGB) value.
Using the ExtraColors Object

Use the `ExtraColors` property to return the `ExtraColors` object. Use `ExtraColors(index)`, where index is the extra color index number, to return the red-green-blue (RGB) value for a single extra color. The following example adds a rectangle to slide one in the active presentation and sets its fill foreground color to the first extra color. If there hasn't been at least one extra color defined for the presentation, this example will fail.

```vba
With ActivePresentation
    Set rect = .Slides(1).Shapes _
        .AddShape(msoShapeRectangle, 50, 50, 100, 200)
    rect.Fill.ForeColor.RGB = .ExtraColors(1)
End With
```

Use the `Add` method to add an extra color. The following example adds an extra color to the active presentation (if the color hasn't already been added).

```vba
ActivePresentation.ExtraColors.Add RGB(69, 32, 155)
```
FillFormat Object

Shapes (Shape) ➔ FillFormat ➔ ColorFormat

Represents fill formatting for a shape. A shape can have a solid, gradient, texture, pattern, picture, or semi-transparent fill.
Using the FillFormat Object

Use the Fill property to return a FillFormat object. The following example adds a rectangle to myDocument and then sets the gradient and color for the rectangle's fill.

```vba
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes _
    .AddShape(msoShapeRectangle, 90, 90, 90, 80).Fill
        .ForeColor.RGB = RGB(0, 128, 128)
        .OneColorGradient msoGradientHorizontal, 1, 1
    End With
```
Remarks

Many of the properties of the FillFormat object are read-only. To set one of these properties, you have to apply the corresponding method.
Font Object

Multiple objects

- Font
  - ColorFormat

Represents character formatting for text or a bullet. The Font object is a member of the Fonts collection. The Fonts collection contains all the fonts used in a presentation.
Using the Font Object

This section describes how to do the following:

- Return the **Font** object that represents the font attributes of a specified bullet, a specified range of text, or all text at a specified outline level
- Return a **Font** object from the collection of all the fonts used in the presentation
Returning the Font object that represents the font attributes of a specified bullet, a specified range of text, or all text at a specified outline level

Use the **Font** property to return the **Font** object that represents the font attributes for a specific bullet, text range, or outline level. The following example sets the title text on slide one and sets the font properties.

```vba
With ActivePresentation.Slides(1).Shapes.Title.TextFrame.TextRange
    .Text = "Volcano Coffee"
    With .Font
        .Italic = True
        .Name = "Palatino"
        .Color.RGB = RGB(0, 0, 255)
    End With
End With
```
Returning a Font object from the collection of all the fonts used in the presentation

Use `Fonts(index)`, where `index` is the font's name or index number, to return a single `Font` object. The following example checks to see whether font one in the active presentation is embedded in the presentation.

```vba
If ActivePresentation.Fonts(1).Embedded = _
    True Then MsgBox "Font 1 is embedded"
```
Fonts Collection Object

A collection of all the **Font** objects in the specified presentation. Each **Font** object represents a font that's used in the presentation.

**Note**  The **Fonts** collection is used by the Geni Wizard to determine whether any of the fonts in the specified presentation won't be supported when Genigraphics images the slides. If you just want to set character formatting for a particular bullet or text range, use the **Font** property to return the **Font** object for the bullet or text range.
Using the Fonts Object

Use the **Fonts** property to return the **Fonts** collection. The following example displays the number of fonts used in the active presentation.

MsgBox ActivePresentation.Fonts.Count

Use **Fonts(index)**, where *index* is the font's name or index number, to return a single **Font** object. The following example checks to see whether font one in the active presentation is embedded in the presentation.

If ActivePresentation.Fonts(1).Embedded = True Then
    MsgBox "Font 1 is embedded"
FreeformBuilder Object

Multiple objects

\[ \text{FreeformBuilder} \]

\[ \text{Shape} \]

Represents the geometry of a freeform while it's being built.
Using the FreeformBuilder Object

Use the **BuildFreeform** method to return a **FreeformBuilder** object. Use the **AddNodes** method to add nodes to the freeform. Use the **ConvertToShape** method to create the shape defined in the **FreeformBuilder** object and add it to the **Shapes** collection. The following example adds a freeform with four segments to myDocument.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes.BuildFreeform(msoEditingCorner, 360, 200)
    .AddNodes msoSegmentCurve, msoEditingCorner, _, 380, 230, 400, 250, 450, 300
    .AddNodes msoSegmentCurve, msoEditingAuto, 480, 200
    .AddNodes msoSegmentLine, msoEditingAuto, 480, 400
    .AddNodes msoSegmentLine, msoEditingAuto, 360, 200
    .ConvertToShape
End With
GroupShapes Collection Object

Shapes (Shape) ▼ GroupShapes (Shape)

Represents the individual shapes within a grouped shape. Each shape is represented by a Shape object. Using the Item method with this object, you can work with single shapes within a group without having to ungroup them.
Using The Groupshapes Collection

Use the GroupItems property to return the GroupShapes collection. Use GroupItems(index), where index is the number of the individual shape within the grouped shape, to return a single shape from the GroupShapes collection. The following example adds three triangles to myDocument, groups them, sets a color for the entire group, and then changes the color for the second triangle only.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes
    .AddShape(msoShapeIsoscelesTriangle, 10, _, 10, 100, 100).Name = "shpOne"
    .AddShape(msoShapeIsoscelesTriangle, 150, _, 10, 100, 100).Name = "shpTwo"
    .AddShape(msoShapeIsoscelesTriangle, 300, _, 10, 100, 100).Name = "shpThree"
With .Range(Array("shpOne", "shpTwo", "shpThree")).Group
    .Fill.PresetTextured msoTextureBlueTissuePaper
    .GroupItems(2).Fill.PresetTextured msoTextureGreenMarble
End With
End With
HeaderFooter Object

Slides (Slide) ← HeaderFooters
       ← HeaderFooter

Represents a header, footer, date and time, slide number, or page number on a slide or master. All the HeaderFooter objects for a slide or master are contained in a HeadersFooters object.
Using the HeaderFooter Object

Use one of the properties listed in the following table to return the HeaderFooter object.

<table>
<thead>
<tr>
<th>Use this property</th>
<th>To return</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DateAndTime</strong></td>
<td>A HeaderFooter object that represents the date and time on the slide.</td>
</tr>
<tr>
<td><strong>Footer</strong></td>
<td>A HeaderFooter object that represents the footer for the slide.</td>
</tr>
<tr>
<td><strong>Header</strong></td>
<td>A HeaderFooter object that represents the header for the slide. This works only for notes pages and handouts, not for slides.</td>
</tr>
<tr>
<td><strong>SlideNumber</strong></td>
<td>A HeaderFooter object that represents the slide number (on a slide) or page number (on a notes page or a handout).</td>
</tr>
</tbody>
</table>

**Note**  HeaderFooter objects aren't available for Slide objects that represent notes pages. The HeaderFooter object that represents a header is available only for a notes master or handout master.

You can set properties of HeaderFooter objects for single slides. The following example sets the footer text for slide one in the active presentation.

```vba
ActivePresentation.Slides(1).HeadersFooters.Footer.Text = "Volcano Coffee"
```

You can also set properties of HeaderFooter objects for the slide master, title master, notes master, or handout master to affect all slides, title slides, notes pages, or handouts and outlines at the same time. The following example sets the text for the footer in the slide master for the active presentation, sets the format for the date and time, and turns on the display of slide numbers. These settings will apply to all slides that are based on this master that display master graphics and that have not had their footer and date and time set individually.

```vba
Set mySlidesHF = ActivePresentation.SlideMaster.HeadersFooters
With mySlidesHF
```

.Footer.Visible = True
.Footer.Text = "Regional Sales"
.SlideNumber.Visible = True
.DateAndTime.Visible = True
.DateAndTime.UseFormat = True
.DateAndTime.Format = ppDateTimeMdyy
End With

To clear header and footer information that has been set for individual slides and make sure all slides display the header and information you define for the slide master, run the following code before running the previous example.

For Each s In ActivePresentation.Slides
    s.DisplayMasterShapes = True
    s.HeadersFooters.Clear
Next
HeadersFooters Object

Multiple objects

Contains all the HeaderFooter objects on the specified slide, notes page, handout, or master. Each HeaderFooter object represents a header, footer, date and time, or slide number.

Note  HeaderFooter objects aren't available for Slide objects that represent notes pages. The HeaderFooter object that represents a header is available only for a notes master or handout master.
Using the HeaderFooters Object

Use the **HeadersFooters** property to return the **HeadersFooters** object. Use the **DateAndTime**, **Footer**, **Header**, or **SlideNumber** property to return an individual **HeaderFooter** object. The following example sets the footer text for slide one in the active presentation.

```vbnet
ActivePresentation.Slides(1).HeadersFooters.Footer.Text = "Volcano Coffee"
```
LineFormat Object

Multiple objects

- LineFormat
- ColorFormat

Represents line and arrowhead formatting. For a line, the LineFormat object contains formatting information for the line itself; for a shape with a border, this object contains formatting information for the shape's border.
Using the LineFormat Object

Use the Line property to return a LineFormat object. The following example adds a blue, dashed line to myDocument. There's a short, narrow oval at the line's starting point and a long, wide triangle at its end point.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes.AddLine(100, 100, 200, 300).Line
    .DashStyle = msoLineDashDotDot
    .ForeColor.RGB = RGB(50, 0, 128)
    .BeginArrowheadLength = msoArrowheadShort
    .BeginArrowheadStyle = msoArrowheadOval
    .BeginArrowheadWidth = msoArrowheadNarrow
    .EndArrowheadLength = msoArrowheadLong
    .EndArrowheadStyle = msoArrowheadTriangle
    .EndArrowheadWidth = msoArrowheadWide
End With
LinkFormat Object

Shapes (Shape) \(\text{LinkFormat}\)

Contains properties and methods that apply to linked OLE objects. The OLEFormat object contains properties and methods that apply to OLE objects whether or not they’re linked. The PictureFormat object contains properties and methods that apply to pictures and OLE objects.
Using the LinkFormat Object

Use the **LinkFormat** property to return a **LinkFormat** object. The following example loops through all the shapes on all the slides in the active presentation and sets all linked Microsoft Excel worksheets to be updated manually.

```vba
For Each sld In ActivePresentation.Slides
    For Each sh In sld.Shapes
        If sh.Type = msoLinkedOLEObject Then
            If sh.OLEFormat.ProgID = "Excel.Sheet" Then
            End If
        End If
    Next
Next
```
Master Object

Multiple objects

Represents a slide master, title master, handout master, notes master, or design master.
Using the Master Object

To return a Master object, use the Master property of the Slide object or SlideRange collection, or use the HandoutMaster, NotesMaster, SlideMaster, or TitleMaster property of the Presentation object. Note that some of these properties are also available from the Design object as well. The following example sets the background fill for the slide master for the active presentation.

```vba
ActivePresentation.SlideMaster.Background.Fill._
.PresetGradient msoGradientHorizontal, 1, msoGradientBrass
```

To add a title master or design to a presentation and return a Master object that represents the new title master or design, use the AddTitleMaster method. The following example adds a title master to the active presentation and places the title placeholder 10 points from the top of the master.

```vba
ActivePresentation.AddTitleMaster.Shapes.Title.Top = 10
```
MotionEffect Object

AnimationBehavior ⊑ MotionEffect ⊑ ShapeNodes

Represents a motion effect for an AnimationBehavior object.
Using the MotionEffect object

Use the MotionEffect property of the AnimationBehavior object to return a MotionEffect object. The following example refers to the motion effect for a given animation behavior.

ActivePresentation.Slides(1).TimeLine.MainSequence.Item.Behaviors(1)

Use the ByX, ByY, FromX, FromY, ToX, and ToY properties of the MotionEffect object to construct a motion path. The following example adds a shape to the first slide and creates a motion path.

Sub AddMotionPath()
    Dim shpNew As Shape
    Dim effNew As Effect
    Dim aniMotion As AnimationBehavior

    Set shpNew = ActivePresentation.Slides(1).Shapes._
        .AddShape(Type:=msoShape5pointStar, Left:=0, _
        Top:=0, Width:=100, Height:=100)
    Set effNew = ActivePresentation.Slides(1).TimeLine.MainSequence._
        .AddEffect(Shape:=shpNew, effectId:=msoAnimEffectCustom, _
        Trigger:=msoAnimTriggerWithPrevious)
    Set aniMotion = effNew.Behaviors.Add(msoAnimTypeMotion)

    With aniMotion.MotionEffect
        .FromX = 0
        .FromY = 0
        .ToX = 500
        .ToY = 500
    End With
End Sub
NamedSlideShow Object

SlideShowSettings ⊑ NamedSlideShows (NamedSlideShow)

Represents a custom slide show, which is a named subset of slides in a presentation. The NamedSlideShow object is a member of the NamedSlideShows collection. The NamedSlideShows collection contains all the named slide shows in the presentation.
Using the NamedSlideShow Object

Use `NamedSlideShows(index)`, where `index` is the custom slide show name or index number, to return a single NamedSlideShow object. The following example deletes the custom slide show named "Quick Show."

```vba
ActivePresentation.SlideShowSettings._.NamedSlideShows("Quick Show").Delete
```

Use the `SlideIDs` property to return an array that contains the unique slide IDs for all the slides in the specified custom show. The following example displays the slide IDs for the slides in the custom slide show named "Quick Show."

```vba
idArray = ActivePresentation.SlideShowSettings._.NamedSlideShows("Quick Show").SlideIDs
For i = 1 To UBound(idArray)
    MsgBox idArray(i)
Next
```
NamedSlideShows Collection Object

SlideShowSettings ▼ NamedSlideShows (NamedSlideShow)

A collection of all the NamedSlideShow objects in the presentation. Each NamedSlideShow object represents a custom slide show.
Using the NamedSlideShows Collection

Use the `NamedSlideShows` property to return the `NamedSlideShows` collection. Use `NamedSlideShows(index)`, where `index` is the custom slide show name or index number, to return a single `NamedSlideShow` object. The following example deletes the custom slide show named "Quick Show."

```vba
ActivePresentation.SlideShowSettings._NamedSlideShows("Quick Show").Delete
```

Use the `Add` method to create a new slide show and add it to the `NamedSlideShows` collection. The following example adds to the active presentation the named slide show "Quick Show" that contains slides 2, 7, and 9. The example then runs this custom slide show.

```vba
Dim qSlides(1 To 3) As Long
With ActivePresentation
    With .Slides
        qSlides(1) = .Item(2).SlideID
        qSlides(2) = .Item(7).SlideID
        qSlides(3) = .Item(9).SlideID
    End With
    With .SlideShowSettings
        .NamedSlideShows.Add "Quick Show", qSlides.RangeType = ppShowNamedSlideShow
        .SlideShowName = "Quick Show"
        .Run
    End With
End With
```
ObjectVerbs Object

Shapes (Shape) - OLEFormat - ObjectVerbs

Represents the collection of OLE verbs for the specified OLE object. OLE verbs are the operations supported by an OLE object. Commonly used OLE verbs are "play" and "edit."
Using the ObjectVerbs Object

Use the ObjectVerbs property to return an ObjectVerbs object. The following example displays all the available verbs for the OLE object contained in shape one on slide two in the active presentation. For this example to work, shape one must contain an OLE object.

With ActivePresentation.Slides(2).Shapes(1).OLEFormat
    For Each v In .ObjectVerbs
        MsgBox v
    Next
End With
OLEFormat Object

- **Shapes (Shape)**
  - **OLEFormat**
  - **ObjectVerbs**

Contains properties and methods that apply to OLE objects. The **LinkFormat** object contains properties and methods that apply to linked OLE objects only. The **PictureFormat** object contains properties and methods that apply to pictures and OLE objects.
Using the OLEFormat Object

Use the `OLEFormat` property to return an `OLEFormat` object. The following example loops through all the shapes on all the slides in the active presentation and sets all linked Microsoft Excel worksheets to be updated manually.

```vba
For Each sld In ActivePresentation.Slides
    For Each sh In sld.Shapes
        If sh.Type = msoLinkedOLEObject Then
            If sh.OLEFormat.ProgID = "Excel.Sheet" Then
            End If
        End If
    Next
Next
```
Options Object

Application.Options

Represents application options in Microsoft PowerPoint.
Using the Options object

Use the Options property to return an Options object. The following example sets three application options for PowerPoint.

Sub TogglePasteOptionsButton()
    With Application.Options
        If .DisplayPasteOptions = False Then
            .DisplayPasteOptions = True
        End If
    End With
End Sub
PageSetup Object

Contains information about the page setup for slides, notes pages, handouts, and outlines in a presentation.
Using the PageSetup Object

Use the **PageSetup** property to return the **PageSetup** object. The following example sets all slides in the active presentation to be 11 inches wide and 8.5 inches high and sets the slide numbering for the presentation to start at 17.

```vba
With ActivePresentation.PageSetup
    .SlideWidth = 11 * 72
    .SlideHeight = 8.5 * 72
    .FirstSlideNumber = 17
End With
```
Pane Object

An object representing one of the three panes in normal view or the single pane of any other view in the document window.
Using the Pane Object

Use **Panes**(index), where index is the index number for a pane, to return a single **Pane** object. The following table lists the names of the panes in normal view with their corresponding index numbers.

<table>
<thead>
<tr>
<th>Pane</th>
<th>Index number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outline</td>
<td>1</td>
</tr>
<tr>
<td>Slide</td>
<td>2</td>
</tr>
<tr>
<td>Notes</td>
<td>3</td>
</tr>
</tbody>
</table>

When using a document window view other than normal view, use **Panes**(1) to reference the single **Pane** object.

Use the **Activate** method to make the specified pane active.

Use the **ViewType** property to determine which pane is active. The following example uses the **ViewType** property to determine whether the slide pane is the active pane. If it is, then the **Activate** method makes the notes pane the active pane.

```vbnet
With ActiveWindow
    If .ActivePane.ViewType = ppViewSlide Then
        .Panes(3).Activate
    End If
End With
```
Remarks

Normal view is the only view with multiple panes. All other document window views have only a single pane, which is the document window.
Panes Collection Object

A collection of Pane objects that represent the slide, outline, and notes panes in the document window for normal view, or the single pane of any other view in the document window.
Using the Panes Collection

Use the **Panes** property to return the **Panes** collection. The following example tests for the number of panes in the active window. If the value is one, indicating any view other than normal view, then normal view is activated and the vertical pane divider is set to divide the document window at 15% outline pane and 85% slide pane.

```
With ActiveWindow
    If .Panes.Count = 1 Then
        .ViewType = ppViewNormal
        .SplitHorizontal = 15
    End If
End With
```
Remarks

In normal view, the **Panes** collection contains three members. All other document window views have only a single pane, resulting in a **Panes** collection with one member.
ParagraphFormat Object

Multiple objects \ParagraphFormat \BulletFormat

Represents the paragraph formatting of a text range.
Using the ParagraphFormat Object

Use the `ParagraphFormat` property to return the `ParagraphFormat` object. The following example left aligns the paragraphs in shape two on slide one in the active presentation.

```vba
```
PictureFormat Object

Shapes (Shape) \ PictureFormat

Contains properties and methods that apply to pictures and OLE objects. The LinkFormat object contains properties and methods that apply to linked OLE objects only. The OLEFormat object contains properties and methods that apply to OLE objects whether or not they're linked.
Using the PictureFormat Object

Use the **PictureFormat** property to return a **PictureFormat** object. The following example sets the brightness, contrast, and color transformation for shape one on myDocument and crops 18 points off the bottom of the shape. For this example to work, shape one must be either a picture or an OLE object.

```vba
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(1).PictureFormat
    .Brightness = 0.3
    .Contrast = 0.7
    .ColorType = msoPictureGrayScale
    .CropBottom = 18
End With
```
PlaceholderFormat Object

Shapes (Shape) \- PlaceholderFormat

Contains properties that apply specifically to placeholders, such as placeholder type.
Using the PlaceholderFormat Object

Use the **PlaceholderFormat** property to return a **PlaceholderFormat** object. The following example adds text to placeholder one on slide one in the active presentation if that placeholder exists and is a horizontal title placeholder.

```vbnet
With ActivePresentation.Slides(1).Shapes.Placeholders
    If .Count > 0 Then
        With .Item(1)
            Select Case .PlaceholderFormat.Type
                Case ppPlaceholderTitle
                    .TextFrame.TextRange = "Title Text"
                Case ppPlaceholderCenterTitle
                    .TextFrame.TextRange = "Centered Title Text"
                Case Else
                    MsgBox "There's no horizontal " 
                    "title on this slide"
            End Select
        End With
    End If
End With
```
Placeholders Collection Object

Shapes (Shape) — Placeholders (Shape)

A collection of all the Shape objects that represent placeholders on the specified slide. Each Shape object in the Placeholders collection represents a placeholder for text, a chart, a table, an organizational chart, or some other type of object. If the slide has a title, the title is the first placeholder in the collection.
Using the Placeholders Collection

Use the **Placeholders** property to return the **Placeholders** collection. Use **Placeholders(index)**, where **index** is the placeholder index number, to return a **Shape** object that represents a single placeholder. Note that for any slide that has a title, **Shapes.Title** is equivalent to **Shapes.Placeholders(1)**. The following example adds a new slide with a Bulleted List slide layout to the beginning of the presentation, sets the text for the title, and then adds two paragraphs to the text placeholder.

```
Set sObj = ActivePresentation.Slides.Add(1, ppLayoutText).Shapes
sObj.Title.TextFrame.TextRange.Text = "This is the title text"
sObj.Placeholders(2).TextFrame.TextRange.Text = _
    "Item 1" & Chr(13) & "Item 2"
```

You can delete individual placeholders by using the **Delete** method, and you can restore deleted placeholders by using the **AddPlaceholder** method, but you cannot add any more placeholders to a slide than it had when it was created. To change the number of placeholders on a given slide, set the **Layout** property.
PlaySettings Object

Contains information about how the specified media clip will be played during a slide show.
Using the PlaySettings Object

Use the **PlaySettings** property to return the **PlaySettings** object. The following example inserts a movie named "Clock.avi" into slide one in the active presentation. It then sets it to be played automatically after the previous animation or slide transition, specifies that the slide show continue while the movie plays, and specifies that the movie object be hidden during a slide show except when it's playing.

```vba
Set clockMovie = ActivePresentation.Slides(1).Shapes _
    .AddMediaObject(FileName:="C:\WINNT\clock.avi", _
    Left:=20, Top:=20)
With clockMovie.AnimationSettings.PlaySettings
    .PlayOnEntry = True
    .PauseAnimation = False
    .HideWhileNotPlaying = True
End With
```
Presentation Object

Multiple objects \( \text{Presentations (Presentation)} \)
\[ \text{Multiple objects} \]

Represents a PowerPoint presentation. The \textbf{Presentation} object is a member of the \textbf{Presentations} collection. The \textbf{Presentations} collection contains all the \textbf{Presentation} objects that represent open presentations in PowerPoint.
Using the Presentation Object

This section describes how to:

- Return a presentation that you specify by name or index number
- Return the presentation in the active window
- Return the presentation in any document window or slide show window you specify
Returning a presentation that you specify by name or index number

Use `Presentations(index)`, where `index` is the presentation's name or index number, to return a single `Presentation` object. The name of the presentation is the file name, with or without the file name extension, and without the path. The following example adds a slide to the beginning of Sample Presentation.

`Presentations("Sample Presentation").Slides.Add 1, 1`

Note that if multiple presentations with the same name are open, the first presentation in the collection with the specified name is returned.
Returning the presentation in the active window

Use the `ActivePresentation` property to return the presentation in the active window. The following example saves the active presentation.

```vba
ActivePresentation.Save
```

Note that if an embedded presentation is in-place active, the `ActivePresentation` property returns the embedded presentation.
Returning the presentation in any document window or slide show window you specify

Use the **Presentation** property to return the presentation that's in the specified document window or slide show window. The following example displays the name of the slide show running in slide show window one.

```
MsgBox SlideShowWindows(1).Presentation.Name
```
Presentations Collection Object

Application  Presentations (Presentation)

Multiple objects

A collection of all the Presentation objects in PowerPoint. Each Presentation object represents a presentation that's currently open in PowerPoint.
Using the Presentations Collection

Use the **Presentations** property to return the **Presentations** collection. Use the **Add** method to create a new presentation and add it to the collection. The following example creates a new presentation, adds a slide to the presentation, and then saves the presentation.

```vba
Set newPres = Presentations.Add(True)
newPres.Slides.Add 1, 1
newPres.SaveAs "Sample"
```

Use **Presentations(index)**, where *index* is the presentation's name or index number, to return a single **Presentation** object. The following example prints presentation one.

```vba
Presentations(1).PrintOut
```

Use the **Open** method to open a presentation and add it to the **Presentations** collection. The following example opens the file Sales.ppt as a read-only presentation.

```vba
Presentations.Open FileName:="sales.ppt", ReadOnly:=True
```
Remarks

The **Presentations** collection doesn't include open add-ins, which are a special kind of hidden presentation. You can, however, return a single open add-in if you know its file name. For example `Presentations("oscar.ppa")` will return the open add-in named "Oscar.ppa" as a **Presentation** object. However, it is recommended that the **AddIns** collection be used to return open add-ins.
PrintOptions Object

Contains print options for a presentation.

**Note** Specifying the optional arguments *From, To, Copies*, and *Collate* for the **PrintOut** method will set the corresponding properties of the **PrintOptions** object.
Using the PrintOptions Object

Use the `PrintOptions` property to return the `PrintOptions` object. The following example prints two uncollated color copies of all the slides (whether visible or hidden) in the active presentation. The example also scales each slide to fit the printed page and frames each slide with a thin border.

```vba
With ActivePresentation
    With .PrintOptions
        .NumberOfCopies = 2
        .Collate = False
        .PrintColorType = ppPrintColor
        .PrintHiddenSlides = True
        .FitToPage = True
        .FrameSlides = True
        .OutputType = ppPrintOutputSlides
    End With
    .PrintOut
End With
```

Use the `RangeType` property to specify whether to print the entire presentation or only a specified part of it. If you want to print only certain slides, set the `RangeType` property to `ppPrintSlideRange`, and use the `Ranges` property to specify which pages to print. The following example prints slides 1, 4, 5, and 6 in the active presentation.

```vba
With ActivePresentation
    With .PrintOptions
        .RangeType = ppPrintSlideRange
        With .Ranges
            .Add 1, 1
            .Add 4, 6
        End With
    End With
    .PrintOut
End With
```
PrintRange Object

PrintOptions | PrintRanges (PrintRange)

Represents a single range of consecutive slides or pages to be printed. The PrintRange object is a member of the PrintRanges collection. The PrintRanges collection contains all the print ranges that have been defined for the specified presentation.
Using the PrintRange Object

Use `Ranges(index)`, where `index` is the print range index number, to return a single `PrintRange` object. The following example displays a message that indicates the starting and ending slide numbers for print range one in the active presentation.

```vba
With ActivePresentation.PrintOptions.Ranges
    If .Count > 0 Then
        With .Item(1)
            MsgBox "Print range 1 starts on slide " & .Start & ": and ends on slide " & .End
        End With
    End If
End With
```

Use the `Add` method to create a `PrintRange` object and add it to the `PrintRanges` collection. The following example defines three print ranges that represent slide 1, slides 3 through 5, and slides 8 and 9 in the active presentation and then prints the slides in these ranges.

```vba
With ActivePresentation.PrintOptions.RangeType = ppPrintSlideRange
    With .Ranges
        .ClearAll
        .Add 1, 1
        .Add 3, 5
        .Add 8, 9
    End With
End With
ActivePresentation.PrintOut
```
Remarks

You can set print ranges in the PrintRanges collection independent of the RangeType setting; these ranges are retained as long as the presentation they're contained in is loaded. The ranges in the PrintRanges collection are applied when the RangeType property is set to ppPrintSlideRange.
PrintRanges Collection Object

A collection of all the PrintRange objects in the specified presentation. Each PrintRange object represents a range of consecutive slides or pages to be printed.
Using the PrintRanges Collection

Use the **Ranges** property to return the **PrintRanges** collection. The following example clears all previously defined print ranges from the collection for the active presentation.

```vba
ActivePresentation.PrintOptions.Ranges.ClearAll
```

Use the **Add** method to create a **PrintRange** object and add it to the **PrintRanges** collection. The following example defines three print ranges that represent slide 1, slides 3 through 5, and slides 8 and 9 in the active presentation and then prints the slides in these ranges.

```vba
With ActivePresentation.PrintOptions
    .RangeType = ppPrintSlideRange
    With .Ranges
        .ClearAll
        .Add 1, 1
        .Add 3, 5
        .Add 8, 9
    End With
End With
ActivePresentation.PrintOut
```

Use **Ranges(index)**, where *index* is the print range index number, to return a single **PrintRange** object. The following example displays a message that indicates the starting and ending slide numbers for print range one in the active presentation.

```vba
With ActivePresentation.PrintOptions.Ranges
    If .Count > 0 Then
        With .Item(1)
            MsgBox "Print range 1 starts on slide " & .Start & _
            " and ends on slide " & .End
        End With
    End If
End With
```
PropertyEffect Object

AnimationBehavior ⊑ PropertyEffect
  ⊑ AnimationPoints

Represents a property effect for an AnimationBehavior object.
Using the PropertyEffect object

Use the **PropertyEffect** property of the **AnimationBehavior** object to return a **PropertyEffect** object. The following example refers to the property effect for a specified animation behavior.

```vba
ActivePresentation.Slides(1).TimeLine.MainSequence.Item(1) _.Behaviors(1).PropertyEffect
```

Use the **Points** property to access the animation points of a particular animation behavior. If you want to change only two states of an animation behavior, use the **From** and **To** properties. This example adds a new shape to the and sets the property effect to animate the fill color from blue to red.

```vba
Sub AddShapeSetAnimFill()
    Dim effBlinds As Effect
    Dim shpRectangle As Shape
    Dim animProperty As AnimationBehavior

    Set shpRectangle = ActivePresentation.Slides(1).Shapes _
        .AddShape(Type:=msoShapeRectangle, Left:=100, _
        Top:=100, Width:=50, Height:=50)
    Set effBlinds = ActivePresentation.Slides(1).TimeLine.MainSequence _
        .AddEffect(Shape:=shpRectangle, effectId:=msoAnimEffectBlinds)

    effBlinds.Timing.Duration = 3

    Set animProperty = effBlinds.Behaviors.Add(msoAnimTypeProperty)

    With animProperty.PropertyEffect
        .Property = msoAnimColor
        .From = RGB(Red:=0, Green:=0, Blue:=255)
        .To = RGB(Red:=255, Green:=0, Blue:=0)
    End With

End Sub
```
PublishObject Object

Presentation → PublishObjects (PublishObject)

Represents a complete or partial loaded presentation that is available for publishing to HTML. The PublishObject object is a member of the PublishObjects collection.
Using the PublishObject Object

Use **PublishObjects(index)**, where *index* is always "1", to return the single object for a loaded presentation. There can be only one **PublishObject** object for each loaded presentation. This example publishes slides three through five of presentation two to HTML. It names the published presentation Mallard.htm.

```vba
With Presentations(2).PublishObjects(1)
    .FileName = "C:\Test\Mallard.htm"
    .SourceType = ppPublishSlideRange
    .RangeStart = 3
    .RangeEnd = 5
    .Publish
End With
```
Remarks

You can specify the content and attributes of the published presentation by setting various properties of the **PublishObject** object. For example, the **SourceType** property defines the portion of a loaded presentation to be published. The **RangeStart** property and the **RangeEnd** property specify the range of slides to publish, and the **SpeakerNotes** property designates whether or not to publish the speaker's notes.
PublishObjects Collection Object

A collection of PublishObject objects representing the set of complete or partial loaded presentations that are available for publishing to HTML.
Using the PublishObjects Collection

Use the **PublishObjects** property to return the **PublishObjects** collection. This example publishes slides three through five of the active presentation to HTML. It names the published presentation Mallard.htm.

```vba
With ActivePresentation.PublishObjects(1)
    .FileName = "C:\Test\Mallard.htm"
    .SourceType = ppPublishSlideRange
    .RangeStart = 3
    .RangeEnd = 5
    .Publish
End With
```

Use **Item(index)**, where *index* is always "1", to return the single **PublishObject** object for a loaded presentation. There can be only one **PublishObject** object for each loaded presentation.

This example defines the **PublishObject** object to be the entire active presentation by setting the **SourceType** property to **ppPublishAll**.

```vba
ActivePresentation.PublishObjects.Item(1).SourceType = ppPublishAll
```
Remarks

You can specify the content and attributes of the published presentation by setting various properties of the **PublishObject** object. For example, the **SourceType** property defines the portion of a loaded presentation to be published. The **RangeStart** property and the **RangeEnd** property specify the range of slides to publish, and the **SpeakerNotes** property designates whether or not to publish the speaker's notes.

You cannot add to the **PublishObjects** collection.
RGBColor Object

ColorScheme \rightarrow RGBColor

Represents a single color in a color scheme.
Using the RGBColor Object

Use the **Colors** method to return an **RGBColor** object. You can set an **RGBColor** object to another **RGBColor** object. You can use the **RGB** property to set or return the explicit red-green-blue value for an **RGBColor** object, with the exception of the **RGBColor** objects defined by the **ppNotSchemeColor** and **ppSchemeColorMixed** constants. The **RGB** property can be returned, but not set, for these two objects. The following example sets the background color in color scheme one in the active presentation to red and sets the title color to the title color that's defined for color scheme two.

```vba
With ActivePresentation.ColorSchemes
  .Item(1).Colors(ppBackground).RGB = RGB(255, 0, 0)
  .Item(1).Colors(ppTitle) = .Item(2).Colors(ppTitle)
End With
```
RotationEffect Object

AnimationBehavior ↓ RotationEffect

Represents a rotation effect for an AnimationBehavior object.
Using the RotationEffect object

Use the RotationEffect property of the AnimationBehavior object to return a RotationEffect object. The following example refers to the rotation effect for a given animation behavior.

ActivePresentation.Slides(1).TimeLine.MainSequence.Item.Behaviors(1)

Use the By, From, and To properties of the RotationEffect object to affect an object's animation rotation. The following example adds a new shape to the first slide and sets the rotation animation behavior.

Sub AddRotation()
    Dim shpNew As Shape
    Dim effNew As Effect
    Dim aniNew As AnimationBehavior

    Set shpNew = ActivePresentation.Slides(1).Shapes.
        .AddShape(Type:=msoShape5pointStar, Left:=0, 
                  Top:=0, Width:=100, Height:=100)
    Set effNew = ActivePresentation.Slides(1).TimeLine.MainSequence.
        .AddEffect(Shape:=shpNew, effectId:=msoAnimEffectCustom)
    Set aniNew = effNew.Behaviors.Add(msoAnimTypeRotation)

    With aniNew.RotationEffect
        'Rotate 270 degrees from current position
        .By = 270
    End With
End Sub
Row Object

Represents a row in a table. The Row object is a member of the Rows collection. The Rows collection includes all the rows in the specified table.
Using the Row Object

Use `Rows(index)`, where `index` is a number that represents the position of the row in the table, to return a single Row object. This example deletes the first row from the table in shape five on slide two of the active presentation.

`ActivePresentation.Slides(2).Shapes(5).Table.Rows(1).Delete`

Use the `Select` method to select a row in a table. This example selects row one of the specified table.

`ActivePresentation.Slides(2).Shapes(5).Table.Rows(1).Select`
Remarks

Use the **Cells** property to modify the individual cells in a **Row** object. This example selects the second row in the table and applies a dashed line style to the bottom border.

```
ActiveWindow.Selection.ShapeRange.Table.Rows(2) .Cells.Borders(ppBorderBottom).DashStyle = msoLineDash
```
Rows Collection Object

Table | Rows (Row)
     | CellRange (Cell)

A collection of Row objects that represent the rows in a table.
Using the Rows Collection

Use the **Rows** property to return the **Rows** collection. This example changes the height of all rows in the specified table to 160 points.

```vba
Dim i As Integer
With ActivePresentation.Slides(2).Shapes(4).Table
    For i = 1 To .Rows.Count
        .Rows.Height = 160
    Next i
End With
```

Use the **Add** method to add a row to a table. This example inserts a row before the second row in the referenced table.

```vba
ActivePresentation.Slides(2).Shapes(5).Table.Rows.Add (2)
```

Use **Rows(index)**, where *index* is a number that represents the position of the row in the table, to return a single **Row** object. This example deletes the first row from the table in shape five on slide two.

```vba
ActivePresentation.Slides(2).Shapes(5).Table.Rows(1).Delete
```
Ruler Object

Multiple objects

- Ruler
- RulerLevels (RulerLevel)
- TabStops (TabStop)

Represents the ruler for the text in the specified shape or for all text in the specified text style. Contains tab stops and the indentation settings for text outline levels.
Using the Ruler Object

Use the **Ruler** property of the **TextFrame** object to return the **Ruler** object that represents the ruler for the text in the specified shape. Use the **TabStops** property to return the **TabStops** object that contains the tab stops on the ruler. Use the **Levels** property to return the **RulerLevels** object that contains the indentation settings for text outline levels. The following example sets a left-aligned tab stop at 2 inches (144 Points) and sets a hanging indent for the text in object two on slide one in the active presentation.

```vba
With ActivePresentation.Slides(1).Shapes(2).TextFrame.Ruler
    .TabStops.Add ppTabStopLeft, 144
    .Levels(1).FirstMargin = 0
    .Levels(1).LeftMargin = 36
End With
```

Use the **Ruler** property of the **TextStyle** object to return the **Ruler** object that represents the ruler for one of the four defined text styles (title text, body text, notes text, or default text). The following example sets the first-line indent and hanging indent for outline level one in body text on the slide master for the active presentation.

```vba
With ActivePresentation.SlideMaster.TextStyles(ppBodyStyle).Ruler.Levels(1)
    .FirstMargin = 9
    .LeftMargin = 54
End With
```
RulerLevel Object

Contains first-line indent and hanging indent information for an outline level. The RulerLevel object is a member of the RulerLevels collection. The RulerLevels collection contains a RulerLevel object for each of the five available outline levels.
Using the RulerLevel Object

Use `RulerLevels(index)`, where `index` is the outline level, to return a single `RulerLevel` object. The following example sets the first-line indent and hanging indent for outline level one in body text on the slide master for the active presentation.

```vba
With ActivePresentation.SlideMaster._
    .TextStyles(ppBodyStyle).Ruler.Levels(1)
    .FirstMargin = 9
    .LeftMargin = 54
End With
```

The following example sets the first-line indent and hanging indent for outline level one in shape two on slide one in the active presentation.

```vba
With ActivePresentation.SlideMaster.Shapes(2)._ 
    .TextFrame.Ruler.Levels(1)
    .FirstMargin = 9
    .LeftMargin = 54
End With
```
RulerLevels Collection Object

**Ruler Levels (RulerLevel)**

A collection of all the **RulerLevel** objects on the specified ruler. Each **RulerLevel** object represents the first-line and left indent for text at a particular outline level. This collection always contains five members — one for each of the available outline levels.
Using the RulerLevels Collection

Use the **Levels** property to return the **RulerLevels** collection. The following example sets the margins for the five outline levels in body text in the active presentation.

```vbnet
With ActivePresentation.SlideMaster.TextStyles(ppBodyStyle).Ruler
    .Levels(1).FirstMargin = 0
    .Levels(1).LeftMargin = 40
    .Levels(2).FirstMargin = 60
    .Levels(2).LeftMargin = 100
    .Levels(3).FirstMargin = 120
    .Levels(3).LeftMargin = 160
    .Levels(4).FirstMargin = 180
    .Levels(4).LeftMargin = 220
    .Levels(5).FirstMargin = 240
    .Levels(5).LeftMargin = 280
End With
```
ScaleEffect Object

AnimationBehavior ↪ ScaleEffect

Represents a scaling effect for an AnimationBehavior object.
Using the ScaleEffect object

Use the ScaleEffect property of the AnimationBehavior object to return a ScaleEffect object. The following example refers to the scale effect for a given animation behavior.

ActivePresentation.Slides(1).TimeLine.MainSequence.Item.Behaviors(1)

Use the ByX, ByY, FromX, FromY, ToX, and ToY properties of the ScaleEffect object to manipulate an object's scale. This example scales the first shape on the first slide starting at zero increasing in size until it reaches 100 percent of its original size. This example assumes that there is a shape on the first slide.

Sub ChangeScale()
    Dim shpFirst As Shape
    Dim effNew As Effect
    Dim aniScale As AnimationBehavior

    Set shpFirst = ActivePresentation.Slides(1).Shapes(1)
    Set effNew = ActivePresentation.Slides(1).TimeLine.MainSequence.AddEffect(Shape:=shpFirst, effectId:=msoAnimEffectCustom)
    Set aniScale = effNew.Behaviors.Add(msoAnimTypeScale)

    With aniScale.ScaleEffect
        'Starting size
        .FromX = 0
        .FromY = 0

        'Size after scale effect
        .ToX = 100
        .ToY = 100
    End With
End Sub
Selection Object

- DocumentWindows (DocumentWindow)
- ShapeRange (Shape)
- SlideRange (Slide)
- TextRange

Represents the selection in the specified document window.
Using the Selection Object

Use the `Selection` property to return the `Selection` object. The following example places a copy of the selection in the active window on the Clipboard.

```vbnet
ActiveWindow.Selection.Copy
```

Use the `ShapeRange`, `SlideRange`, or `TextRange` property to return a range of shapes, slides, or text from the selection.

The following example sets the fill foreground color for the selected shapes in window two, assuming that there's at least one shape selected, and assuming that all selected shapes have a fill whose forecolor can be set.

```vbnet
With Windows(2).Selection.ShapeRange.Fill
    .Visible = True
    .ForeColor.RGB = RGB(255, 0, 255)
End With
```

The following example sets the text in the first selected shape in window two if that shape contains a text frame.

```vbnet
With Windows(2).Selection.ShapeRange(1)
    If .HasTextFrame Then
        .TextFrame.TextRange = "Current Choice"
    End If
End With
```

The following example cuts the selected text in the active window and places it on the Clipboard.

```vbnet
ActiveWindow.Selection.TextRange.Cut
```

The following example duplicates all the slides in the selection (if you're in slide view, this duplicates the current slide).

```vbnet
ActiveWindow.Selection.SlideRange.Duplicate
```

If you don't have an object of the appropriate type selected when you use one of these properties (for instance, if you use the `ShapeRange` property when there are no shapes selected), an error occurs. Use the `Type` property to determine
what kind of object or objects are selected. The following example checks to see whether the selection contains slides. If the selection does contain slides, the example sets the background for the first slide in the selection.

With Windows(2).Selection
    If .Type = ppSelectionSlides Then
        With .SlideRange(1)
            .FollowMasterBackground = False
            .Background.Fill.PresetGradient _
                msoGradientHorizontal, 1, msoGradientLateSunset
        End With
    End If
End With
Remarks

The Selection object is deleted whenever you change slides in an active slide view (the Type property will return ppSelectionNone).
Sequence Collection

Multiple objects

Sequence

Effect

Represents a collection of Effect objects for a slide's interactive animation sequences. The Sequence collection is a member of the Sequences collection.
Using the Sequence collection

Use the `MainSequence` property of the `Timeline` object to return a `Sequence` object.

Use the `AddEffect` method to add a new `Sequence` object. This example adds a shape and an animation sequence to the first shape on the first slide in the active presentation.

```vba
Sub NewEffect()
    Dim effNew As Effect
    Dim shpFirst As Shape

    Set shpFirst = ActivePresentation.Slides(1).Shapes(1)
    Set effNew = ActivePresentation.Slides(1).TimeLine.MainSequence.
    (Shape:=shpFirst, effectId:=msoAnimEffectBlinds)
End Sub
```
Sequences Collection

Represents a collection of Sequence objects. Use a Sequence object to add, find, modify, and clone animation effects.
Using the Sequences collection

Use the `InteractiveSequences` property of the `TimeLine` object to return a `Sequences` collection. Use the `Add` method to add an interactive animation sequence. The following example adds two shapes on the first slide of the active presentation and sets interactive effect for the star shape so that when you click on the bevel shape, the star shape is be animated.

```vba
Sub AddNewSequence()
    Dim shp1 As Shape
    Dim shp2 As Shape
    Dim interEffect As Effect

    Set shp1 = ActivePresentation.Slides(1).Shapes.AddShape _
        (Type:=msoShape32pointStar, Left:=100, _
        Top:=100, Width:=200, Height:=200)
    Set shp2 = ActivePresentation.Slides(1).Shapes.AddShape _
        (Type:=msoShapeBevel, Left:=400, _
        Top:=200, Width:=150, Height:=100)

    With ActivePresentation.Slides(1).TimeLine.InteractiveSequences.Add(1)
        Set interEffect = .AddEffect(shp2, msoAnimEffectBlinds, _
            trigger:=msoAnimTriggerOnShapeClick)
        interEffect.Shape = shp1
    End With
End Sub
```
ShadowFormat Object

Represents shadow formatting for a shape.
Using the ShadowFormat Object

Use the **Shadow** property to return a **ShadowFormat** object. The following example adds a shadowed rectangle to **myDocument**. The semitransparent, blue shadow is offset 5 points to the right of the rectangle and 3 points above it.

```vbs
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes.AddShape(msoShapeRectangle, _
    50, 50, 100, 200).Shadow
    .ForeColor.RGB = RGB(0, 0, 128)
    .OffsetX = 5
    .OffsetY = -3
    .Transparency = 0.5
    .Visible = True
End With
```
Shape Object

Multiple objects \[\triangleleft \text{Shape} \\triangleleft \text{Multiple objects}\]

Represents an object in the drawing layer, such as an AutoShape, freeform, OLE object, or picture.

**Note**  There are three objects that represent shapes: the **Shapes** collection, which represents all the shapes on a document; the **ShapeRange** collection, which represents a specified subset of the shapes on a document (for example, a **ShapeRange** object could represent shapes one and four on the document, or it could represent all the selected shapes on the document); the **Shape** object, which represents a single shape on a document. If you want to work with several shape at the same time or with shapes within the selection, use a **ShapeRange** collection. For an overview of how to work with either a single shape or with more than one shape at a time, see [Working with Shapes (Drawing Objects)](Working%20with%20Shapes%20(Drawing%20Objects)).
Using the Shape Object

This section describes how to:

- Return an existing shape on a slide, indexed by name or number.
- Return a newly created shape on a slide.
- Return a shape within the selection.
- Return the slide title and other placeholders on a slide.
- Return the shapes attached to the ends of a connector.
- Return the default shape for a presentation.
- Return a newly created freeform.
- Return a single shape from within a group.
- Return a newly formed group of shapes.
**Returning an Existing Shape on a Slide**

Use **Shapes(index)**, where *index* is the shape name or the index number, to return a **Shape** object that represents a shape on a slide. The following example horizontally flips shape one and the shape named Rectangle 1 on myDocument.

```vba
Set myDocument = ActivePresentation.Slides(1)
myDocument.Shapes(1).Flip msoFlipHorizontal
myDocument.Shapes("Rectangle 1").Flip msoFlipHorizontal
```

Each shape is assigned a default name when you add it to the **Shapes** collection. To give the shape a more meaningful name, use the **Name** property. The following example adds a rectangle to myDocument, gives it the name Red Square, and then sets its foreground color and line style.

```vba
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes.AddShape(Type:=msoShapeRectangle, _
    Top:=144, Left:=144, Width:=72, Height:=72)
    .Name = "Red Square"
    .Fill.ForeColor.RGB = RGB(255, 0, 0)
    .Line.DashStyle = msoLineDashDot
End With
```
Returning a Newly Created Shape on a Slide

To add a shape to a slide and return a Shape object that represents the newly created shape, use one of the following methods of the Shapes collection:

AddCallout, AddComment, AddConnector, AddCurve, AddLabel, AddLine, AddMediaObject, AddOLEObject, AddPicture, AddPlaceholder, AddPolyline, AddShape, AddTable, AddTextbox, AddTextEffect, AddTitle.
Returning a Shape Within the Selection

Use `Selection.ShapeRange(index)`, where `index` is the shape name or the index number, to return a `Shape` object that represents a shape within the selection. The following example sets the fill for the first shape in the selection in the active window, assuming that there's at least one shape in the selection.

```
ActiveWindow.Selection.ShapeRange(1).Fill =
    .ForeColor.RGB = RGB(255, 0, 0)
```
Returning the Slide Title and Other Placeholders on a Slide

Use `Shapes.Title` to return a `Shape` object that represents an existing slide title. Use `Shapes.AddTitle` to add a title to a slide that doesn't already have one and return a `Shape` object that represents the newly created title. Use `Shapes.Placeholders(index)`, where `index` is the placeholder's index number, to return a `Shape` object that represents a placeholder. If you have not changed the layering order of the shapes on a slide, the following three statements are equivalent, assuming that slide one has a title.

```vba
```
Returning the Shapes Attached to the Ends of a Connector

To return a Shape object that represents one of the shapes attached by a connector, use the **BeginConnectedShape** or **EndConnectedShape** property.
Returning the Default Shape for a Presentation

To return a Shape object that represents the default shape for a presentation, use the DefaultShape property.
Returning a newly created freeform

Use the `BuildFreeform` and `AddNodes` methods to define the geometry of a new freeform, and use the `ConvertToShape` method to create the freeform and return the `Shape` object that represents it.
Returning a Single Shape from Within a Group

Use `GroupItems(index)`, where `index` is the shape name or the index number within the group, to return a `Shape` object that represents a single shape in a grouped shape.
Returning a Newly Formed Group of Shapes

Use the **Group** or **Regroup** method to group a range of shapes and return a single **Shape** object that represents the newly formed group. After a group has been formed, you can work with the group the same way you work with any other shape.
ShapeNode Object

Shapes (Shape) → ShapeNodes (ShapeNode)

Represents the geometry and the geometry-editing properties of the nodes in a user-defined freeform. Nodes include the vertices between the segments of the freeform and the control points for curved segments. The ShapeNode object is a member of the ShapeNodes collection. The ShapeNodes collection contains all the nodes in a freeform.
Using the ShapeNode Object

Use **Nodes(index)**, where *index* is the node index number, to return a single **ShapeNode** object. If node one in shape three on **myDocument** is a corner point, the following example makes it a smooth point. For this example to work, shape three must be a freeform.

```vba
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(3)
    If .Nodes(1).EditingType = msoEditingCorner Then
        .Nodes.SetEditingType 1, msoEditingSmooth
    End If
End With
```
ShapeNodes Collection Object

- **Shapes (Shape)** | **ShapeNodes (ShapeNode)**

A collection of all the **ShapeNode** objects in the specified freeform. Each **ShapeNode** object represents either a node between segments in a freeform or a control point for a curved segment of a freeform. You can create a freeform manually or by using the **BuildFreeform** and **ConvertToShape** methods.
Using the ShapeNodes Collection

Use the Nodes property to return the ShapeNodes collection. The following example deletes node four in shape three on myDocument. For this example to work, shape three must be a freeform with at least four nodes.

```vba
Set myDocument = ActivePresentation.Slides(1)
myDocument.Shapes(3).Nodes.Delete 4
```

Use the Insert method to create a new node and add it to the ShapeNodes collection. The following example adds a smooth node with a curved segment after node four in shape three on myDocument. For this example to work, shape three must be a freeform with at least four nodes.

```vba
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(3).Nodes
    .Insert 4, msoSegmentCurve, msoEditingSmooth, 210, 100
End With
```

Use Nodes(index), where index is the node index number, to return a single ShapeNode object. If node one in shape three on myDocument is a corner point, the following example makes it a smooth point. For this example to work, shape three must be a freeform.

```vba
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(3)
    If .Nodes(1).EditingType = msoEditingCorner Then
        .Nodes.SetEditingType 1, msoEditingSmooth
    End If
End With
```
ShapeRange Collection Object

Multiple objects \( \text{ShapeRange (Shape)} \)

\( \text{Multiple objects} \)

Represents a shape range, which is a set of shapes on a document. A shape range can contain as few as a single shape or as many as all the shapes on the document. You can include whichever shapes you want — chosen from among all the shapes on the document or all the shapes in the selection — to construct a shape range. For example, you could construct a ShapeRange collection that contains the first three shapes on a document, all the selected shapes on a document, or all the freeforms on a document.

For an overview of how to work with either a single shape or with more than one shape at a time, see Working with Shapes (Drawing Objects).
Using the ShapeRange Collection

This section describes how to:

- Return a set of shapes you specify by name or index number.
- Return all or some of the selected shapes on a document.
Returning a Set of Shapes You Specify by Name or Index Number

Use **Shapes.Range(index)**, where *index* is the name or index number of the shape or an array that contains either names or index numbers of shapes, to return a **ShapeRange** collection that represents a set of shapes on a document. You can use the **Array** function to construct an array of names or index numbers. The following example sets the fill pattern for shapes one and three on myDocument.

```vba
Set myDocument = ActivePresentation.Slides(1)
myDocument.Shapes.Round(Array(1, 3)).Fill _
    .Patterned msoPatternHorizontalBrick
```

The following example sets the fill pattern for the shapes named "Oval 4" and "Rectangle 5" on myDocument.

```vba
Set myDocument = ActivePresentation.Slides(1)
Set myRange = myDocument.Shapes _
    .Range(Array("Oval 4", "Rectangle 5"))
myRange.Fill.Patterned msoPatternHorizontalBrick
```

Although you can use the **Range** method to return any number of shapes or slides, it's simpler to use the **Item** method if you want to return only a single member of the collection. For example, `Shapes(1)` is simpler than `Shapes.Range(1)`.
Returning All or Some of the Selected Shapes on a Document

Use the `ShapeRange` property of the `Selection` object to return all the shapes in the selection. The following example sets the fill foreground color for all the shapes in the selection in window one, assuming that there's at least one shape in the selection.

```vba
Windows(1).Selection.ShapeRange.Fill.ForeColor.RGB = RGB(255, 0, 255)
```

Use `Selection.ShapeRange(index)`, where `index` is the shape name or the index number, to return a single shape within the selection. The following example sets the fill foreground color for shape two in the collection of selected shapes in window one, assuming that there are at least two shapes in the selection.

```vba
Windows(1).Selection.ShapeRange(2).Fill.ForeColor.RGB = RGB(255, 0, 255)
```
Shapes Collection Object

Multiple objects

A collection of all the Shape objects on the specified slide. Each Shape object represents an object in the drawing layer, such as an AutoShape, freeform, OLE object, or picture.

Note If you want to work with a subset of the shapes on a document — for example, to do something to only the AutoShapes on the document or to only the selected shapes — you must construct a ShapeRange collection that contains the shapes you want to work with. For an overview of how to work either with a single shape or with more than one shape at a time, see Working with Shapes (Drawing Objects).
Using the Shapes Collection

Use the **Shapes** property to return the **Shapes** collection. The following example selects all the shapes in the active presentation.

```vba
ActivePresentation.Slides(1).Shapes.SelectAll
```

**Note** If you want to do something (like delete or set a property) to all the shapes on a document at the same time, use the **Range** method with no argument to create a **ShapeRange** object that contains all the shapes in the **Shapes** collection, and then apply the appropriate property or method to the **ShapeRange** object.

Use the **AddCallout**, **AddComment**, **AddConnector**, **AddCurve**, **AddLabel**, **AddLine**, **AddMediaObject**, **AddOLEObject**, **AddPicture**, **AddPlaceholder**, **AddPolyline**, **AddShape**, **AddTable**, **AddTextbox**, **AddTextEffect**, or **AddTitle** method to create a new shape and add it to the **Shapes** collection. Use the **BuildFreeform** method in conjunction with the **ConvertToShape** method to create a new freeform and add it to the collection. The following example adds a rectangle to the active presentation.

```vba
ActivePresentation.Slides(1).Shapes.AddShape Type:=msoShapeRectangle, Left:=50, Top:=50, Width:=100, Height:=200
```

Use **Shapes(index)**, where *index* is the shape's name or index number, to return a single **Shape** object. The following example sets the fill to a preset shade for shape one in the active presentation.

```vba
ActivePresentation.Slides(1).Shapes(1).Fill _
 .PresetGradient Style:=msoGradientHorizontal, Variant:=1, _
 .PresetGradientType:=msoGradientBrass
```

Use **Shapes.Range(index)**, where *index* is the shape's name or index number or an array of shape names or index numbers, to return a **ShapeRange** collection that represents a subset of the **Shapes** collection. The following example sets the fill pattern for shapes one and three in the active presentation.

```vba
ActivePresentation.Slides(1).Shapes.Range(Array(1, 3)).Fill _
 .Patterned Pattern:=msoPatternHorizontalBrick
Use `Shapes.Placeholders(index)`, where `index` is the placeholder number, to return a `Shape` object that represents a placeholder. If the specified slide has a title, use `Shapes.Placeholders(1)` or `Shapes.Title` to return the title placeholder. The following example adds a slide to the active presentation and then adds text to both the title and the subtitle (the subtitle is the second placeholder on a slide with this layout).

```vbnet
With ActivePresentation.Slides.Add(Index:=1, Layout:=ppLayoutTitle).
    .Title.TextFrame.TextRange = "This is the title text"
    .Placeholders(2).TextFrame.TextRange = "This is subtitle text"
End With
```
Slide Object

Multiple objects  \[ \rightarrow \text{Slide} \]
\[ \rightarrow \text{Multiple objects} \]

Represents a slide. The `Slides` collection contains all the `Slide` objects in a presentation.

**Note** Don't be confused if you're trying to return a reference to a single slide but you end up with a `SlideRange` object. A single slide can be represented either by a `Slide` object or by a `SlideRange` collection that contains only one slide, depending on how you return a reference to the slide. For example, if you create and return a reference to a slide by using the `Add` method, the slide is represented by a `Slide` object. However, if you create and return a reference to a slide by using the `Duplicate` method, the slide is represented by a `SlideRange` collection that contains a single slide. Because all the properties and methods that apply to a `Slide` object also apply to a `SlideRange` collection that contains a single slide, you can work with the returned slide in the same way, regardless of whether it's represented by a `Slide` object or a `SlideRange` collection.
Using the Slide Object

This section describes how to:

- Return a slide that you specify by name, index number, or slide ID number
- Return a slide in the selection
- Return the slide that's currently displayed in any document window or slide show window you specify
- Create a new slide
Returning a slide that you specify by name, index number, or slide ID number

Use `Slides(index)`, where `index` is the slide name or index number, or use `Slides.FindBySlideID(index)`, where `index` is the slide ID number, to return a single `Slide` object. The following example sets the layout for slide one in the active presentation.

```vbnet
ActivePresentation.Slides(1).Layout = ppLayoutTitle
```

The following example sets the layout for the slide with the ID number 265.

```vbnet
ActivePresentation.Slides.FindBySlideID(265).Layout = ppLayoutTitle
```
Returning a slide in the selection

Use `Selection.SlideRange(index)`, where `index` is the slide name or index number within the selection, to return a single `Slide` object. The following example sets the layout for slide one in the selection in the active window, assuming that there's at least one slide selected.

```
ActiveWindow.Selection.SlideRange(1).Layout = ppLayoutTitle
```

If there's only one slide selected, you can use `Selection.SlideRange` to return a `SlideRange` collection that contains the selected slide. The following example sets the layout for slide one in the current selection in the active window, assuming that there's exactly one slide selected.

```
ActiveWindow.Selection.SlideRange.Layout = ppLayoutTitle
```
Returning the slide that's currently displayed in any document window or slide show window you specify

Use the Slide property to return the slide that's currently displayed in the specified document window or slide show window view. The following example copies the slide that's currently displayed in document window two to the Clipboard.

Windows(2).View.Slide.Copy
Creating a new slide

Use the **Add** method to create a new slide and add it to the presentation. The following example adds a title slide to the beginning of the active presentation.

```
ActivePresentation.Slides.Add 1, ppLayoutTitleOnly
```
SlideRange Collection Object

Multiple objects \rightarrow \texttt{SlideRange (Slide)}
\rightarrow \texttt{Multiple objects}

A collection that represents a notes page or a slide range, which is a set of slides that can contain as little as a single slide or as much as all the slides in a presentation. You can include whichever slides you want — chosen from all the slides in the presentation or from all the slides in the selection — to construct a slide range. For example, you could construct a \texttt{SlideRange} collection that contains the first three slides in a presentation, all the selected slides in the presentation, or all the title slides in the presentation.
Using the SlideRange Collection

This section describes how to:

- Return a set of slides that you specify by name or index number
- Return all or some of the selected slides in a presentation
- Return a notes page
- Apply properties and methods to a slide range
Returning a set of slides that you specify by name or index number

Use `Slides.Range(index)`, where `index` is the name or index number of the slide or an array that contains either names or index numbers of slides, to return a `SlideRange` collection that represents a set of slides in a presentation. You can use the `Array` function to construct an array of names or index numbers. The following example sets the background fill for slides one and three in the active presentation.

```vba
With ActivePresentation.Slides.Range(Array(1, 3))
    .FollowMasterBackground = False
    .Background.Fill.PresetGradient msoGradientHorizontal, 1, msoGradientLateSunset
End With
```

The following example sets the background fill for the slides named "Intro" and "Big Chart" in the active presentation. Note that slides are assigned automatically generated names of the form `Slide n` (where `n` is an integer) when they're created. To assign a more meaningful name to a slide, use the `Name` property.

```vba
With ActivePresentation.Slides.Range(Array("Intro", "Big Chart"))
    .FollowMasterBackground = False
    .Background.Fill.PresetGradient msoGradientHorizontal, 1, msoGradientLateSunset
End With
```

Although you can use the `Range` method to return any number of slides, it's simpler to use the `Item` method if you only want to return a single member of the `SlideRange` collection. For example, `Slides(1)` is simpler than `Slides.Range(1)`. 
Returning all or some of the selected slides in a presentation

Use the **SlideRange** property of the **Selection** object to return all the slides in the selection. The following example sets the background fill for all the selected slides in window one, assuming that there's at least one slide selected.

```vbnet
With Windows(1).Selection.SlideRange
  .FollowMasterBackground = False
  .Background.Fill.PresetGradient msoGradientHorizontal, 1, msoGradientLateSunset
End With
```

Use **Selection.SlideRange(index)**, where *index* is the slide name or index number, to return a single slide from the selection. The following example sets the background fill for slide two in the collection of selected slides in window one, assuming that there are at least two slides selected.

```vbnet
With Windows(1).Selection.SlideRange(2)
  .FollowMasterBackground = False
  .Background.Fill.PresetGradient msoGradientHorizontal, 1, msoGradientLateSunset
End With
```
Returning a notes page

Use the NotesPage property to return a SlideRange collection that represents the specified notes page. The following example inserts text into placeholder two (the notes area) on the notes page for slide one in the active presentation.

ActivePresentation.Slides(1).NotesPage.Shapes _
  .Placeholders(2).TextFrame.TextRange.InsertAfter "Added Text"
Applying a property or method to a slide range

Just as you can work with several slides at the same time in the user interface by selecting them and applying a command, you can work with several slides at the same time programmatically by constructing a **SlideRange** collection and applying properties or methods to it. And just as some commands in the user interface that work on single slides aren't valid when multiple slides are selected, some properties and methods that work on a **Slide** object or on a **SlideRange** collection that contains only one slide will fail if they're applied to a **SlideRange** collection that contains more than one slide. In general, if you can't do something manually when more than one slide is selected (such as return the individual shapes on one of the slides), you can't do it programmatically by using a **SlideRange** collection that contains more than one slide.

For those operations that work in the user interface whether you have a single slide or multiple slides selected (such as copying the selection to the Clipboard or setting the slide background fill), the associated properties and methods will work on a **SlideRange** collection that contains more than one slide. Here are some general guidelines for how these properties and methods behave when they're applied to multiple slides.

- Applying a method to a **SlideRange** collection is equivalent to applying the method to all the **Slide** objects in that range as a group.
- Setting the value of a property of the **SlideRange** collection is equivalent to setting the value of the property in each slide in that range individually (for a property that takes an enumerated type, setting the value to the "Mixed" value has no effect).
- A property of the **SlideRange** collection that returns an enumerated type returns the value of the property for an individual slide in the collection if all slides in the collection have the same value for that property. If the slides in the collection don't all have the same value for the property, the property returns the "Mixed" value.
- A property of the **SlideRange** collection that returns a simple data type (such as **Long**, **Single**, or **String**) returns the value of the property for an individual slide in the collection if all slides in the collection have the same value for that property. If the slides in the collection don't all have the same value for the property, the property will return –2 or generate an error. For
example, using the Name property on a SlideRange object that contains multiple slides will generate an error because each slide has a different value for its Name property.

- Some formatting properties of slides aren't set by properties and methods that apply directly to the SlideRange collection, but by properties and methods that apply to an object contained in the SlideRange collection, such as the ColorScheme object. If the contained object represents operations that can be performed on multiple objects in the user interface, you'll be able to return the object from a SlideRange collection that contains more than one slide, and its properties and methods will follow the preceding rules. For example, you can use the ColorScheme property to return the ColorScheme object that represents the color schemes used on all the slides in the specified SlideRange collection. Setting properties for this ColorScheme object will also set these properties for the ColorScheme objects on all the individual slides in the SlideRange collection.
Slides Collection Object

Presentation \rightarrow Slides (Slide)
\rightarrow Multiple objects

A collection of all the Slide objects in the specified presentation.
Using the Slides Collection

This section describes how to:

- Create a slide and add it to the collection
- Return a single slide that you specify by name, index number, or slide ID number
- Return a subset of the slides in the presentation
- Apply a property or method to all the slides in the presentation at the same time
Creating a slide and adding it to the collection

Use the Slides property to return a Slides collection. Use the Add method to create a new slide and add it to the collection. The following example adds a new slide to the active presentation.

ActivePresentation.Slides.Add 2, ppLayoutBlank
Returning a single slide that you specify by name, index number, or slide ID number

Use Slides(index), where index is the slide name or index number, or use the Slides.FindBySlideID(index), where index is the slide ID number, to return a single Slide object. The following example sets the layout for slide one in the active presentation.

ActivePresentation.Slides(1).Layout = ppLayoutTitle

The following example sets the layout for the slide named "Big Chart" in the active presentation. Note that slides are assigned automatically generated names of the form Sliden (where n is an integer) when they're created. To assign a more meaningful name to a slide, use the Name property.

ActivePresentation.Slides("Big Chart").Layout = ppLayoutTitle
Returning a subset of the slides in the presentation

Use `Slides.Range(index)`, where `index` is the slide index number or name or an array of slide index numbers or an array of slide names, to return a `SlideRange` object that represents a subset of the `Slides` collection. The following example sets the background fill for slides one and three in the active presentation.

```vbnet
With ActivePresentation.Slides.Range(Array(1, 3))
    .FollowMasterBackground = False
    .Background.Fill.PresetGradient msoGradientHorizontal, _
        1, msoGradientLateSunset
End With
```
Applying a property or method to all the slides in the presentation at the same time

If you want to do something to all the slides in your presentation at the same time (such as delete all of them or set a property for all of them), use `Slides.Range` with no argument to construct a `SlideRange` collection that contains all the slides in the `Slides` collection, and then apply the appropriate property or method to the `SlideRange` collection. The following example sets the background fill for all the slides in the active presentation.

```vbnet
With ActivePresentation.Slides.Range
    .FollowMasterBackground = False
    .Background.Fill.PresetGradient msoGradientHorizontal, _
      1, msoGradientLateSunset
End With
```
SlideShowSettings Object

Presentation — SlideShowSettings
   — Multiple objects

Represents the slide show setup for a presentation.
Using the SlideShowSettings Object

Use the SlideShowSettings property to return the SlideShowSettings object. The first section in the following example sets all the slides in the active presentation to advance automatically after five seconds. The second section sets the slide show to start on slide two, end on slide four, advance slides by using the timings set in the first section, and run in a continuous loop until the user presses ESC. Finally, the example runs the slide show.

For Each s In ActivePresentation.Slides
    With s.SlideShowTransition
        .AdvanceOnTime = True
        .AdvanceTime = 5
    End With
Next

With ActivePresentation.SlideShowSettings
    .RangeType = ppShowSlideRange
    .StartingSlide = 2
    .EndingSlide = 4
    .AdvanceMode = ppSlideShowUseSlideTimings
    .LoopUntilStopped = True
    .Run
End With
SlideShowTransition Object

Multiple objects SlideShowTransition, SoundEffect

Contains information about how the specified slide advances during a slide show.
Using the SlideShowTransition Object

Use the `SlideShowTransition` property to return the `SlideShowTransition` object. The following example specifies a Fast Strips Down-Left transition accompanied by the Bass.wav sound for slide one in the active presentation and specifies that the slide advance automatically five seconds after the previous animation or slide transition.

```vbnet
With ActivePresentation.Slides(1).SlideShowTransition
    .Speed = ppTransitionSpeedFast
    .EntryEffect = ppEffectStripsDownLeft
    .SoundEffect.ImportFromFile "c:sndsys\bass.wav"
    .AdvanceOnTime = True
    .AdvanceTime = 5
End With
ActivePresentation.SlideShowSettings.AdvanceMode = _
    ppSlideShowUseSlideTimings
```
Show All
SlideShowView Object

SlideShowWindows (SlideShowWindow) → SlideShowView
  → ColorFormat
  → Slide

Represents the view in a slide show window.
Using the SlideShowView Object

Use the View property of the SlideShowWindow object to return the SlideShowView object. The following example sets slide show window one to display the first slide in the presentation.

SlideShowWindows(1).View.First

Use the Run method of the SlideShowSettings object to create a SlideShowWindow object, and then use the View property to return the SlideShowView object the window contains. The following example runs a slide show of the active presentation, changes the pointer to a pen, and sets the pen color for the slide show to red.

With ActivePresentation.SlideShowSettings.Run.View  
  .PointerType = ppSlideShowPointerPen
End With
SlideShowWindow Object

Multiple objects SlideShowWindow Multiple objects

Represents a window in which a slide show runs.
Using the SlideShowWindow Object

Use `SlideShowWindows(index)`, where `index` is the slide show window index number, to return a single `SlideShowWindow` object. The following example activates slide show window two.

```vbnet
SlideShowWindows(2).Activate
```

Use the `Run` method to create a new slide show window and return a reference to this slide show window. The following example runs a slide show of the active presentation and reduces the height of the slide show window just enough so that you can see the taskbar (for screens with a resolution of 800 by 600).

```vbnet
With ActivePresentation.SlideShowSettings
    .ShowType = ppShowTypeSpeaker
    With .Run
        .Height = 300
        .Width = 400
    End With
End With
```

Use the `View` property to return the view in the specified slide show window. The following example sets the view in slide show window one to display slide three in the presentation.

```vbnet
SlideShowWindows(1).View.GotoSlide 3
```

Use the `Presentation` property to return the presentation that's currently running in the specified slide show window. The following example displays the name of the presentation that's currently running in slide show window one.

```vbnet
MsgBox SlideShowWindows(1).Presentation.Name
```
SlideShowWindows Collection Object

Application | SlideShowWindows (SlideShowWindow)
- Presentation
- SlideShowView

A collection of all the SlideShowWindow objects that represent the open slide shows in PowerPoint.
Using the SlideShowWindows Collection

Use the SlideShowWindows property to return the SlideShowWindows collection. Use SlideShowWindows(index), where index is the window index number, to return a single SlideShowWindow object. The following example reduces the height of slide show window one if it's a full-screen window.

With SlideShowWindows(1)
    If .IsFullScreen Then
        .Height = .Height - 20
    End If
End With

Use the Run method to create a new slide show window and add it to the SlideShowWindows collection. The following example runs a slide show of the active presentation.

ActivePresentation.SlideShowSettings.Run
SoundEffect Object

Multiple objects `SoundEffect`

Represents the sound effect that accompanies an animation or slide transition in a slide show.
Using the SoundEffect Object

Use the `SoundEffect` property of the `AnimationSettings` object to return the `SoundEffect` object that represents the sound effect that accompanies an animation. The following example specifies that the animation of the title on slide one in the active presentation be accompanied by the sound in the Bass.wav file.

```vba
With ActivePresentation.Slides(1).Shapes(1).AnimationSettings
    .TextLevelEffect = ppAnimateByAllLevels
    .SoundEffect.ImportFromFile "c:sndsys\bass.wav"
End With
```

Use the `SoundEffect` property of the `SlideShowTransition` object to return the `SoundEffect` object that represents the sound effect that accompanies a slide transition.

The following example specifies that the transition to slide one in the active presentation be accompanied by the sound in the Bass.wav file.

```vba
ActivePresentation.Slides(1).SlideShowTransition.SoundEffect _
    .ImportFromFile "c:sndsys\bass.wav"
```
Table Object

```
Shapes (Shape)  ↓ Table
    ↓ Columns (Column)
    ↓ Rows (Row)
```

Represents a table shape on a slide. The **Table** object is a member of the **Shapes** collection. The **Table** object contains the **Columns** collection and the **Rows** collection.
Using the Table Object

Use **Shapes(index)**, where *index* is a number, to return a shape containing a table. Use the **HasTable** property to see if a shape contains a table. This example walks through the shapes on slide one, checks to see if each shape has a table, and then sets the mouse click action for each table shape to advance to the next slide.

```vba
With ActivePresentation.Slides(2).Shapes
    For i = 1 To .Count
        If .Item(i).HasTable Then
            .Item(i).ActionSettings(ppMouseClick) _.Action = ppActionNextSlide
        End If
    Next
End With
```

Use the **Cell** method of the **Table** object to access the contents of each cell. This example inserts the text "Cell 1" in the first cell of the table in shape five on slide three.

```vba
ActivePresentation.Slides(3).Shapes(5).Table _.Cell(1, 1).Shape.TextFrame.TextRange _.Text = "Cell 1"
```

Use the **AddTable** method to add a table to a slide. This example adds a 3x3 table on slide two in the active presentation.

```vba
ActivePresentation.Slides(2).Shapes.AddTable(3, 3)
```
TabStop Object

 Represents a single tab stop. The TabStop object is a member of the TabStops collection. The TabStops collection represents all the tab stops on one ruler.
Using The Tabstop Object

Use TabStops(index), where index is the tab stop index number, to return a single TabStop object. The following example clears tab stop one for the text in shape two on slide one in the active presentation.

ActivePresentation.Slides(1).Shapes(2).TextFrame _.Ruler.TabStops(1).Clear
**TabStops Collection Object**

*Ruler* → *TabStops (TabStop)*

A collection of all the *TabStop* objects on one ruler.
Using the TabStops Collection

Use the **TabStops** property to return the **TabStops** collection. The following example clears all the tab stops for the text in shape two on slide one in the active presentation.

```vba
With ActivePresentation.Slides(1).Shapes(2) .TextFrame.Ruler.TabStops
    For t = .Count To 1 Step -1
        .Item(t).Clear
    Next
End With
```

Use the **Add** method to create a tab stop and add it to the **TabStops** collection. The following example adds a tab stop to the body-text style on the slide master for the active presentation. The new tab stop will be positioned 2 inches (144 points) from the left edge of the ruler and will be left aligned.

```vba
ActivePresentation.SlideMaster .TextStyles(ppBodyStyle).Ruler.TabStops.Add ppTabStopLeft, 144
```
Tags Object

Multiple objects

Represents a tag or a custom property that you can create for a shape, slide, or presentation. Each Tags object contains the name of a custom property and a value for that property.

Create tags when you want to be able to selectively work with specific members of a collection, based on an attribute that isn't already represented by a built-in property. For example, if you want to be able to categorize slides in a presentation based on what region of the country/region they apply to, you could create a Region tag and assign a Region value to each slide in the presentation. You could then selectively perform an operation on some of the slides, based on the values of their Region tags, such as hiding all the slides with the Region value "East."
Using the Tags Object

Use the `Add` method to add a tag to an object. The following example adds a tag with the name "Region" and with the value "East" to slide one in the active presentation.

```vba
ActivePresentation.Slides(1).Tags.Add "Region", "East"
```

Use `Tags(index)`, where `index` is the name of a tag, to return the tag value. The following example tests the value of the Region tag for all slides in the active presentation and hides any slides that don't pertain to the East Coast (denoted by the value "East").

```vba
For Each s In ActivePresentation.Slides
    If s.Tags("region") <> "east" Then
        s.SlideShowTransition.Hidden = True
    End If
Next
```
**TextEffectFormat Object**

Shapes (Shape) - TextEffectFormat

Contains properties and methods that apply to WordArt objects.
Using the TextEffectFormat Object

Use the TextEffect property to return a TextEffectFormat object. The following example sets the font name and formatting for shape one on myDocument. For this example to work, shape one must be a WordArt object.

```vba
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(1).TextEffect
    .FontName = "Courier New"
    .FontBold = True
    .FontItalic = True
End With
```
Show All
TextFrame Object

Multiple objects

- TextFrame
- Ruler
- TextRange

Represents the text frame in a Shape object. Contains the text in the text frame as well as the properties and methods that control the alignment and anchoring of the text frame.
Using the TextFrame Object

Use the **TextFrame** property to return a **TextFrame** object. The following example adds a rectangle to `myDocument`, adds text to the rectangle, and then sets the margins for the text frame.

```vba
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes
    .AddShape(msoShapeRectangle, 0, 0, 250, 140).TextFrame.TextRange.Text = "Here is some test text"
    .MarginBottom = 10
    .MarginLeft = 10
    .MarginRight = 10
    .MarginTop = 10
End With
```

Use the **HasTextFrame** property to determine whether a shape has a text frame, and use the **HasText** property to determine whether the text frame contains text, as shown in the following example.

```vba
Set myDocument = ActivePresentation.Slides(1)
For Each s In myDocument.Shapes
    If s.HasTextFrame Then
        With s.TextFrame
            If .HasText Then MsgBox .TextRange.Text
        End With
    End If
Next
```
**TextRange Object**

- **Multiple objects**
  - `TextRange`
  - `ActionSettings (ActionSetting)`
  - `Font`
  - `ParagraphFormat`
  - `TextRange`

Contains the text that's attached to a shape, as well as properties and methods for manipulating the text.
Using the TextRange Object

This section describes how to:

- Return the text range in any shape you specify.
- Return a text range from the selection.
- Return particular characters, words, lines, sentences, or paragraphs from a text range.
- Find and replace text in a text range.
- Insert text, the date and time, or the slide number into a text range.
- Position the insertion point wherever you want in a text range.
Returning a Text Range from Any Shape You Specify

Use the TextRange property of the TextFrame object to return a TextRange object for any shape you specify. Use the Text property to return the string of text in the TextRange object. The following example adds a rectangle to myDocument and sets the text it contains.

```vba
Set myDocument = ActivePresentation.Slides(1)
myDocument.Shapes.AddShape(msoShapeRectangle, 0, 0, 250, 140) _
    .TextFrame.TextRange.Text = "Here is some test text"
```

Because the Text property is the default property of the TextRange object, the following two statements are equivalent.

```vba
ActivePresentation.Slides(1).Shapes(1).TextFrame _
    .TextRange.Text = "Here is some test text"
ActivePresentation.Slides(1).Shapes(1).TextFrame _
    .TextRange = "Here is some test text"
```

Use the HasTextFrame property to determine whether a shape has a text frame, and use the HasText property to determine whether the text frame contains text.
Returning a Text Range from the Selection

Use the **TextRange** property of the **Selection** object to return the currently selected text. The following example copies the selection to the Clipboard.

```vba
ActiveWindow.Selection.TextRange.Copy
```
Returning Particular Characters, Words, Lines, Sentences, or Paragraphs from a Text Range

Use one of the following methods to return a portion of the text of a TextRange object: Characters, Lines, Paragraphs, Runs, Sentences, or Words.
Finding and Replacing Text in a Text Range

Use the **Find** and **Replace** methods to find and replace text in a text range.
Inserting Text, the Date and Time, or the Slide Number into a Text Range

Use one of the following methods to insert characters into a TextRange object: InsertAfter, InsertBefore, InsertDateTime, InsertSlideNumber, or InsertSymbol.
TextStyle Object

Master — TextStyles (TextStyle)
  — Ruler
  — TextFrame
  — TextStyleLevels (TextStyleLevel)

Represents one of three text styles: title text, body text, or default text. Each text style contains a TextFrame object that describes how text is placed within the text bounding box, a Ruler object that contains tab stops and outline indent formatting information, and a TextStyleLevels collection that contains outline text formatting information. The TextStyle object is a member of the TextStyles collection.
Using the TextStyle Object

Use TextStyles(index), where index is either ppBodyStyle, ppDefaultStyle, or ppTitleStyle, to return a single TextStyle object. The following example sets the font name and font size for level-one body text on all the slides in the active presentation.

With ActivePresentation.SlideMaster _
    .TextStyles(ppBodyStyle).Levels(1)
    With .Font
        .Name = "Arial"
        .Size = 36
    End With
End With
TextStyleLevel Object

TextStyle (TextStyle) ↩ TextStyleLevels (TextStyleLevel)
  ↳ Font
  ↳ ParagraphFormat

Contains character and paragraph formatting information for an outline level. The TextStyleLevel object is a member of the TextStyleLevels collection. The TextStyleLevels collection contains one TextStyleLevel object for each of the five outline levels.
Using the TextStyleLevel Object

Use `Levels(index)`, where `index` is a number from 1 through 5 that corresponds to the outline level, to return a single `TextStyleLevel` object. The following example sets the font name and font size, the space before paragraphs, and the paragraph alignment for level-one body text on all the slides in the active presentation.

```vba
With ActivePresentation.SlideMaster.TextStyles(ppBodyStyle).Levels(1)
    With .Font
        .Name = "Arial"
        .Size = 36
    End With
    With .ParagraphFormat
        .LineRuleBefore = False
        .SpaceBefore = 14
        .Alignment = ppAlignJustify
    End With
End With
```
TextStyleLevels Collection Object

TextStyleLevels (TextStyleLevel)

Font

ParagraphFormat

A collection of all the outline text levels. This collection always contains five members, each of which is represented by a TextStyleLevel object.
Using the TextStyleLevels Collection

Use **Levels(index)**, where *index* is a number from 1 through 5 that corresponds to the outline level, to return a single **TextStyleLevel** object. The following example sets the font name and font size for level-one body text on all the slides in the active presentation.

```vba
With ActivePresentation.SlideMaster._
    .TextStyles(ppBodyStyle).Levels(1)
        .Font.Name = "Arial"
        .Size = 36
    End With
End With
```

The following example sets the font size for text at each outline level for the notes body area on all the notes pages in the active presentation.

```vba
With ActivePresentation.NotesMaster.TextStyles(ppBodyStyle).Levels._
    .Item(1).Font.Size = 34
    .Item(2).Font.Size = 30
    .Item(3).Font.Size = 25
    .Item(4).Font.Size = 20
    .Item(5).Font.Size = 15
End With
```
TextStyles Collection Object

A collection of three text styles — title text, body text, and default text — each of which is represented by a `TextStyle` object. Each text style contains a `TextFrame` object that describes how text is placed within the text bounding box, a `Ruler` object that contains tab stops and outline indent formatting information, and a `TextStyleLevels` collection that contains outline text formatting information.
Using the TextStyles Collection

Use `TextStyles(index)`, where `index` is either `ppBodyStyle`, `ppDefaultStyle`, or `ppTitleStyle`, to return a single `TextStyle` object. This example sets the margins for the notes body area on all the notes pages in the active presentation.

```vbnet
With ActivePresentation.NotesMaster_
    .TextStyles(ppBodyStyle).TextFrame
        .MarginBottom = 50
        .MarginLeft = 50
        .MarginRight = 50
        .MarginTop = 50
End With
```
ThreeDFormat Object

Represents a shape's three-dimensional formatting.
Using The ThreeDFormat Object

Use the **ThreeD** property to return a **ThreeDFormat** object. The following example adds an oval to **myDocument** and then specifies that the oval be extruded to a depth of 50 points and that the extrusion be purple.

```vba
Set myDocument = ActivePresentation.Slides(1)
Set myShape = myDocument.Shapes.AddShape(msoShapeOval, 90, 90, 90, 40)
With myShape.ThreeD
    .Visible = True
    .Depth = 50
    'RGB value for purple
    .ExtrusionColor.RGB = RGB(255, 100, 255)
End With
```
Remarks

You cannot apply three-dimensional formatting to some kinds of shapes, such as beveled shapes or multiple-disjoint paths. Most of the properties and methods of the ThreeDFormat object for such a shape will fail.
TimeLine Object

Multiple objects

Stores animation information for a **Master**, **Slide** or **SlideRange** object.
Using the TimeLine object

Use the TimeLine property of the Master, Slide, or SlideRange object to return a TimeLine object.

The TimeLine object's MainSequence property gains access to the main animation sequence, while the InteractiveSequences property gains access to the collection of interactive animation sequences of a slide or slide range. To reference a timeline object, use syntax similar to these code examples:

ActivePresentation.Slides(1).TimeLine.MainSequence
ActivePresentation.SlideMaster.TimeLine.InteractiveSequences
ActiveWindow.Selection.SlideRange.TimeLine.InteractiveSequences
Timing Object

Multiple objects Timing Shape

Represents timing properties for an animation effect.
Using the Timing object

To return a **Timing** object, use the **Timing** property of the **AnimationBehavior** or **Effect** object. The following example sets timing duration information for the main animation.

```
ActiveWindow.Selection.SlideRange(1).Timeline_ 
    .MainSequence(1).Timing.Duration = 5
```

Use the following read/write properties of the **Timing** object to manipulate animation timing effects.

<table>
<thead>
<tr>
<th>Use this...</th>
<th>To change this...</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Accelerate</strong></td>
<td>Percentage of the duration over which acceleration should take place</td>
</tr>
<tr>
<td><strong>AutoReverse</strong></td>
<td>Whether an effect should play forward and then reverse, thereby doubling the duration</td>
</tr>
<tr>
<td><strong>Decelerate</strong></td>
<td>Percentage of the duration over which acceleration should take place</td>
</tr>
<tr>
<td><strong>Duration</strong></td>
<td>Length of animation (in seconds)</td>
</tr>
<tr>
<td><strong>RepeatCount</strong></td>
<td>Number of times to repeat the animation</td>
</tr>
<tr>
<td><strong>RepeatDuration</strong></td>
<td>How long should the repeats last (in seconds)</td>
</tr>
<tr>
<td><strong>Restart</strong></td>
<td>Restart behavior of an animation node</td>
</tr>
<tr>
<td><strong>RewindAtEnd</strong></td>
<td>Whether an objects return to its beginning position after an effect has ended</td>
</tr>
<tr>
<td><strong>SmoothStart</strong></td>
<td>Whether an effect accelerates when it starts</td>
</tr>
<tr>
<td><strong>SmoothEnd</strong></td>
<td>Whether an effect decelerates when it ends</td>
</tr>
<tr>
<td><strong>TriggerDelayTime</strong></td>
<td>Delay time from when the trigger is enabled (in seconds)</td>
</tr>
<tr>
<td><strong>TriggerShape</strong></td>
<td>Which shape is associated with the timing effect</td>
</tr>
<tr>
<td><strong>TriggerType</strong></td>
<td>How the timing effect is triggered</td>
</tr>
</tbody>
</table>
View Object

*DocumentWindow*  *View*  *Multiple objects*

Represents the current editing *view* in the specified document window.


Using the View Object

Use the View property of the DocumentWindow object to return the View object. The following example sets the size of window one and then sets the zoom to fit the new window size.

With Windows(1)
  .Height = 200
  .Width = 250
  .View.ZoomToFit = True
End With

Note The View object can represent any of the document window views: normal view, slide view, outline view, slide sorter view, notes page view, slide master view, handout master view, or notes master view. Some properties and methods of the View object work only in certain views. If you try to use a property or method that's inappropriate for a View object, an error occurs.
WebOptions Object

Contains presentation-level attributes used by Microsoft PowerPoint when you save or publish a complete or partial presentation as a Web page or open a Web page. You can return or set attributes either at the application (global) level or at the presentation level. (Note that attribute values can be different from one presentation to another, depending on the attribute value at the time the presentation was saved.) Presentation-level attribute settings override application-level attribute settings. Application-level attributes are contained in the DefaultWebOptions object.
Using the WebOptions Object

Use the **WebOptions** property to return the **WebOptions** object. The following example checks to see whether Portable Network Graphics (PNG) is allowed as an image format for presentation one. If PNG is allowed, it sets the text color for the outline pane to white and the background color for the outline and slide panes to black.

```vba
Set objAppWebOptions = Presentations(1).WebOptions
With objAppWebOptions
    If .AllowPNG = True Then
        .FrameColors = ppFrameColorsWhiteTextOnBlack
    End If
End With
```
Activate Method

Activates the specified object.

expression.Activate

expression  Required. An expression that returns a DocumentWindow, Pane, OLEFormat, Application, or SlideShowWindow object.
Example

This example activates the document window immediately following the active window in the document window order.

Windows(2). Activate
Add Method

- Add method as it applies to the AddIns object.

Returns an AddIn object that represents an add-in file added to the list of add-ins.

expression.Add(Filename)

expression Required. An expression that returns an AddIns object.

Filename Required String. The full name of the file (including the path and file name extension) that contains the add-in you want to add to the list of add-ins.
Remarks

This method doesn't load the new add-in. You must set the **Loaded** property to load the add-in.

- **Add method as it applies to the **AnimationBehaviors** object.**

Returns an **AnimationBehavior** object that represents a new animation behavior.

```
expression.Add(Type, Index)
```

**expression**  Required. An expression that returns an **AnimationBehaviors** object.

**Type**  Required **MsoAnimType**. The behavior of the animation.

MsoAnimType can be one of these MsoAnimType constants.

- `msoAnimTypeColor`
- `msoAnimTypeMixed`
- `msoAnimTypeMotion`
- `msoAnimTypeNone`
- `msoAnimTypeProperty`
- `msoAnimTypeRotation`
- `msoAnimTypeScale`

**Index**  Optional **Long**. The placement of the animation in relation to other animation behaviors. The default value is -1 which means that if the **Index** argument is omitted, the new animation behavior is added to the end of existing animation behaviors.

- **Add method as it applies to the **AnimationPoints** and **Sequences** objects.**

Returns an **AnimationPoint** or **Sequence** object that represents a new animation point or sequence.

```
expression.Add(Index)
```
expression  Required. An expression that returns one of the above objects.

Index  Optional Long. The position of the animation point or sequence in relation to other animation points or sequences. The default value is -1 which means that if the Index argument is omitted, the new animation point or sequence is added to the end of existing animation points or sequence.

- Add method as it applies to the ColorSchemes object.

Adds a color scheme to the collection of available schemes. Returns a ColorScheme object that represents the added color scheme.

expression.Add(Scheme)

expression  Required. An expression that returns a ColorSchemes object.

Scheme  Optional ColorScheme object. The color scheme to add. Can be a ColorScheme object from any slide or master, or an item in the ColorSchemes collection from any open presentation. If this argument is omitted, the first ColorScheme object (the first standard color scheme) in the specified presentation's ColorSchemes collection is used.
Remarks

The new color scheme is based on the colors used on the specified slide or master or on the colors in the specified color scheme from an open presentation.

The ColorSchemes collection can contain up to 16 color schemes. If you need to add another color scheme and the ColorSchemes collection is already full, use the Delete method to remove an existing color scheme.

Note that although Microsoft PowerPoint automatically checks whether a color scheme is a duplicate before adding it through the user interface, it doesn't check before adding a color scheme through a Visual Basic procedure. Your procedure must do its own checking to avoid adding redundant color schemes.

- Add method as it applies to the Columns object.

Add method as it applies to the Columns object.

Adds a new column to an existing table. Returns a Column object that represents the new table column.

expression.Add(BeforeColumn)

expression Required. An expression that returns a Columns object.

BeforeColumn Optional Long. The index number specifying the table column before which the new column will be inserted. This argument must be a Long from 1 to the number of columns in the table. The default value is -1 which means that if the BeforeColumn argument is omitted, then the new column is added as the last column in the table.

- Add method as it applies to the Comments object.

Add method as it applies to the Comments object.

Returns a Comment object that represents a new comment added to a slide.

expression.Add(Left, Top, Author, AuthorInitials, Text)

expression Required. An expression that returns a Comments object.

Left Required Single. The position, measured in points, of the left edge of the comment, relative to the left edge of the presentation.
Top  Required Single. The position, measured in points, of the top edge of the comment, relative to the top edge of the presentation.

Author  Required String. The author of the comment.

AuthorInitials  Required String. The author's initials.

Text  Required String. The comment's text.

- Add method as it applies to the Designs object.

Returns a Design object that represents a new slide design.

evaluation.Add(designName, Index)

evaluation  Required. An expression that returns a Designs object.

designName  Required String. The name of the design.

Index  Optional Integer. The index number of the design. The default value is -1 which means that if the Index argument is omitted, then the new slide design is added at the end of existing slide designs.

- Add method as it applies to the ExtraColors object.

Adds a color to the extra colors available to a presentation if the color hasn't already been added.

evaluation.Add(Type)

evaluation  Required. An expression that returns an ExtraColors object.

Type  Required MsoRGBType. The red-green-blue (RGB) value of the color to be added.

- Add method as it applies to the NamedSlideShows object.

Creates a new named slide show and adds it to the collection of named slide shows in the specified presentation. Returns a NamedSlideShow object that represents the new named slide show.
expression.Add(Name, SafeArrayOfSlideIDs)

expression Required. An expression that returns a NamedSlideShows object.

Name Required String. The name of the slide show.

SafeArrayOfSlideIDs Required Variant. Contains the unique slide IDs of the slides to be displayed in a slide show.
Remarks

The name you specify when you add a named slide show is the name you use as an argument to the Run method to run the named slide show.

- **Add method as it applies to the Presentations object.**

Creates a presentation. Returns a Presentation object that represents the new presentation.

`expression.Add(WithWindow)`

**expression** Required. An expression that returns a Presentations collection.

**WithWindow** Optional MsoTriState. MsoTrue creates the presentation in a visible window.

MsoTriState can be one of these MsoTriState constants.
- **msoCTrue**
- **msoFalse** The new presentation isn't visible.
- **msoTriStateMixed**
- **msoTriStateToggle**
- **msoTrue** Default. Creates the presentation in a visible window.

- **Add method as it applies to the PrintRanges object.**

Returns a PrintRange object that represents a consecutive run of slides to be printed.

`expression.Add(Start, End)`

**expression** Required. An expression that returns a PrintRanges object.

**Start** Required Long. The first slide in the range of slides to be printed. Must be less than or equal to the value of the **End** argument.

**End** Required Long. The last slide in the range of slides to be printed. Must be greater than or equal to the value of the **Start** argument.
Remarks

The **RangeType** property of the **PrintOptions** object must be set to **ppPrintSlideRange** for the ranges in the **PrintRanges** collection to be applied.

If you don't want to print an entire presentation, add print ranges to specify which slides you want to print. You must add one print range for each consecutive run of slides to be printed. For example, if you want to print slide 1, slides 3 through 5, and slides 8 and 9, you must add three print range objects. For more information, see the example for this method.

Use the **ClearAll** method to clear previously-defined print ranges.

- **Add method as it applies to the Rows object.**

Returns a **Row** object that represents a new row added to an existing table.

```
expression.Add(BeforeRow)
```

*expression* Required. An expression that returns a **Rows** object.

**BeforeRow** Optional **Long**. The index number specifying the table row before which the new row will be inserted. This argument must be an integer value from 1 to the number of rows in the table. The default value is -1 which means that if the **BeforeRow** argument is omitted, then the new row is added as the last row in the table.

- **Add method as it applies to the Slides object.**

Creates a new slide and adds it to the collection of slides in the specified presentation. Returns a **Slide** object that represents the new slide.

```
expression.Add(Index, Layout)
```

*expression* Required. An expression that returns a **Slides** collection.

**Index** Required **Long**. The index number the new slide will have within the **Slides** collection. This value cannot exceed the number of existing slides + 1. If set to 1, the new slide becomes the first slide in the presentation.
Layout  Required **PpSlideLayout**. The type of slide to create.

PpSlideLayout can be one of these PpSlideLayout constants.

- ppLayoutBlank
- ppLayoutChart
- ppLayoutChartAndText
- ppLayoutClipartAndText
- ppLayoutClipArtAndVerticalText
- ppLayoutFourObjects
- ppLayoutLargeObject
- ppLayoutMediaClipAndText
- ppLayoutMixed
- ppLayoutObject
- ppLayoutObjectAndText
- ppLayoutObjectOverText
- ppLayoutOrgchart
- ppLayoutTable
- ppLayoutText
- ppLayoutTextAndChart
- ppLayoutTextAndClipart
- ppLayoutTextAndMediaClip
- ppLayoutTextAndObject
- ppLayoutTextAndTwoObjects
- ppLayoutTextOverObject
- ppLayoutTitle
- ppLayoutTitleOnly
- ppLayoutTwoColumnText
- ppLayoutTwoObjectsAndText
- ppLayoutTwoObjectsOverText
- ppLayoutVerticalText
- ppLayoutVerticalTitleAndText
- ppLayoutVerticalTitleAndTextOverChart
Remarks

To alter the layout of an existing slide, use the Layout property.

- Add method as it applies to the TabStops object.

Adds a tab stop to the ruler for the specified text. Returns a TabStop object that represents the new tab stop.

expression.Add(Type, Position)

expression   Required. An expression that returns a TabStops collection.

Type   Required PpTabStopType. Specifies the way text will be aligned with the new tab stop.

PpTabStopType can be one of these PpTabStopType constants.

- ppTabStopCenter
- ppTabStopDecimal
- ppTabStopLeft
- ppTabStopMixed
- ppTabStopRight

Position   Required Single. The position of the new tab stop, in points.

- Add method as it applies to the Tags object.

Creates a tag for the specified object. If the tag already exists, this method replaces the existing tag value.

expression.Add(Name, Value)

expression   Required. An expression that returns a Tags object.

Name   Required String. The new tag name. Use "name" as the string for this argument to set the value of the name tag.

Value   Required String. The new tag value.
Remarks

The Tags object contains a pair of strings — the tag name and the tag value — for each tag. Use the Add method to create a tag, and use the Name and Value methods to return a tag's name and value components.
Example

- **As it applies to the **AddIns** object.**

This example adds MyTools.ppa to the list of add-ins.

```vba
Set myAddIn = Application.AddIns.Add(FileName:="c:\my\documents\mytools.ppa")
MsgBox myAddIn.Name & " has been added to the list"
```

- **As it applies to the **ColorSchemes** object.**

This example adds a new color scheme to the collection of standard color schemes for the active presentation. The new color scheme is based on the colors used in slide two in the active presentation.

```vba
With ActivePresentation
    Set newClrScheme = .Slides(2).ColorScheme .ColorSchemes.Add Scheme:=newClrScheme
End With
```

- **As it applies to the **Columns** object.**

This example creates a new column before column one in the table represented by shape five on slide two. It then sets the width of the new column to 72 points (one inch).

```vba
With ActivePresentation.Slides(2).Shapes(5).Table .Columns.Add(1).Width = 72
End With
```

- **As it applies to the **NamedSlideShows** object.**

This example adds to the active presentation a named slide show Quick Show that contains slides 2, 7, and 9. The example then runs this slide show.

```vba
Dim qSlides(1 To 3) As Long
With ActivePresentation
    With .Slides
        qSlides(1) = .Item(2).SlideID
        qSlides(2) = .Item(7).SlideID
        qSlides(3) = .Item(9).SlideID
    End With
End With
```
End With
With .SlideShowSettings
  .NamedSlideShows.Add Name:="Quick Show", SafeArrayOfSlideIDs
  .RangeType = ppShowNamedSlideShow
  .SlideShowName = "Quick Show"
  .Run
End With
End With

As it applies to the **Presentations** object.

This example creates a presentation, adds a slide to it, and then saves the presentation.

With Presentations.Add
  .Slides.Add Index:=1, Layout:=ppLayoutTitle
  .SaveAs "Sample"
End With

As it applies to the **PrintRanges** object.

This example clears any previously defined print ranges and then prints slide 1, slides 3 through 5, and slides 8 and 9 in the active presentation.

With ActivePresentation.PrintOptions
  .RangeType = ppPrintSlideRange
  With .Ranges
    .ClearAll
    .Add Start:=1, End:=1
    .Add Start:=3, End:=5
    .Add Start:=8, End:=9
  End With
End With
ActivePresentation.PrintOut

As it applies to the **Rows** object.

This example creates a row at the end of an existing table and sets the height of the new row to 54 points (.75 inches).

With ActivePresentation.Slides(2).Shapes(5).Table
  .Rows.Add.Height = 54
End With
This example adds a slide that contains a title placeholder at the beginning of the active presentation.

ActivePresentation.Slides.Add Index:=1, Layout:=ppLayoutTitleOnly

This example adds a blank slide at the end of the active presentation.

With ActivePresentation.Slides
  .Add Index:=.Count + 1, Layout:=ppLayoutBlank
End With

This example sets a left-aligned tab stop at 2 inches (144 points) for the text in shape two on slide one in the active presentation.

Application.ActivePresentation.Slides(1).Shapes(2).TextFrame ._
  .Ruler.TabStops.Add Type:=ppTabStopLeft, Position:=144

This example adds a tag named Priority and sets the value of the name tag for slide one in the active presentation.

With Application.ActivePresentation.Slides(1).Tags
  'Sets value for name tag
  .Add Name:="Name", Value:="New Figures"
  'Adds "Priority" tag with value "Low"
  .Add Name:="Priority", Value:="Low"
End With

This example adds an extra color to the active presentation (if the color hasn't already been added).

ActivePresentation.ExtraColors.Add RGB(Red:=69, Green:=32, Blue:=155
AddBaseline Method

Adds a base line to a presentation to allow tracking of changes for a later merge.

\[expression.AddBaseline(FileName)\]

**expression** Required. An expression that returns a [Presentation](#) object.

**FileName** Optional [String](#). The full path of a file to use as the base line for this presentation. If **FileName** is not specified, then the presentation represented by **expression** is used as its own base line.
Remarks

This method generates an error if the presentation already has a baseline, or is a merged author document.
Example

The following line of code adds a base line to the active presentation.

Sub SetBaseline()
    ActivePresentation.AddBaseline
End Sub
AddCallout Method

Creates a borderless line callout. Returns a Shape object that represents the new callout.

expression.AddCallout(Type, Left, Top, Width, Height)

expression  Required. An expression that returns one of the objects in the Applies To list.

Type  Required MsoCalloutType. The type of callout line.

MsoCalloutType can be one of these MsoCalloutType constants.

msoCalloutOne  A single-segment callout line that can be either horizontal or vertical.
msoCalloutTwo  A single-segment callout line that rotates freely.
msoCalloutThree  A two-segment line.
msoCalloutFour  A three-segment line.

Left  Required Single. The position, measured in points, of the left edge of the callout's bounding box relative to the left edge of the slide.

Top  Required Single. The position, measured in points, of the top edge of the callout's bounding box relative to the top edge of the slide.

Width  Required Single. The width of the callout's bounding box, measured in points.

Height  Required Single. The height of the callout's bounding box, measured in points.
Remarks

You can insert a greater variety of callouts by using the AddShape method.
Example

This example adds a borderless callout with a freely-rotating one-segment callout line to myDocument and then sets the callout angle to 30 degrees.

Sub NewCallout()
    Dim sldOne As Slide
    Set sldOne = ActivePresentation.Slides(1)
End Sub
AddComment Method

Adds a comment. Returns a Shape object that represents the new comment.

expression.AddComment(Left, Top, Width, Height)

expression Required. An expression that returns a Shapes object.

Left, Top Optional Single. The position (in points) of the upper-left corner of the comment bounding box relative to the upper-left corner of the document. By default, the comment is placed in the upper-left corner of the document.

Width, Height Optional Single. The width and height of the comment, in points. By default, the comment is 100 points high and 100 points wide.
Example

This example adds a comment that contains the text "Test Comment" to myDocument.

```vbnet
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes.AddComment(100, 100, 150, 150)
End With
```
AddConnector Method

Creates a connector. Returns a Shape object that represents the new connector. When a connector is added, it's not connected to anything. Use the BeginConnect and EndConnect methods to attach the beginning and end of a connector to other shapes in the document.

expression.AddConnector(Type, BeginX, BeginY, EndX, EndY)

description

expression Required. An expression that returns one of the objects in the Applies To list.

Type Required MsoConnectorType. The type of connector.

MsoConnectorType can be one of these MsoConnectorType constants.

msoConnectorCurve
msoConnectorElbow
msoConnectorStraight
msoConnectorTypeMixed

BeginX Required Single. The horizontal position, measured in points, of the connector's starting point relative to the left edge of the slide.

BeginY Required Single. The vertical position, measured in points, of the connector's starting point relative to the top edge of the slide.

EndX Required Single. The horizontal position, measured in points, of the connector's ending point relative to the left edge of the slide.

EndY Required Single. The vertical position, measured in points, of the connector's ending point relative to the top edge of the slide.
Remarks

When you attach a connector to a shape, the size and position of the connector are automatically adjusted, if necessary. Therefore, if you're going to attach a connector to other shapes, the position and dimensions you specify when adding the connector are irrelevant.
**Example**

This example adds two rectangles to myDocument and connects them with a curved connector. Note that when you attach the connector to the rectangles, the size and position of the connector are automatically adjusted; therefore, the position and dimensions you specify when adding the callout are irrelevant (dimensions must be nonzero).

```vba
Sub NewConnector()
    Dim shpShapes As Shapes
    Dim shpFirst As Shape
    Dim shpSecond As Shape

    Set shpShapes = ActivePresentation.Slides(1).Shapes
    Set shpFirst = shpShapes.AddShape(Type:=msoShapeRectangle, _
        Left:=100, Top:=50, Width:=200, Height:=100)
    Set shpSecond = shpShapes.AddShape(Type:=msoShapeRectangle, _
        Left:=300, Top:=300, Width:=200, Height:=100)
    With shpShapes.AddConnector(Type:=msoConnectorCurve, BeginX:=0, _
        BeginY:=0, EndX:=100, EndY:=100).ConnectorFormat.
        BeginConnect ConnectedShape:=shpFirst, ConnectionSite:=1
        .EndConnect ConnectedShape:=shpSecond, ConnectionSite:=1
        .Parent.RerouteConnections
    End With
End Sub
```
AddCurve Method

Creates a Bézier curve. Returns a Shape object that represents the new curve.

expression.AddCurve(SafeArrayOfPoints)

expression  Required. An expression that returns one of the objects in the Applies To list.

SafeArrayOfPoints  Required Variant. An array of coordinate pairs that specifies the vertices and control points of the curve. The first point you specify is the starting vertex, and the next two points are control points for the first Bézier segment. Then, for each additional segment of the curve, you specify a vertex and two control points. The last point you specify is the ending vertex for the curve. Note that you must always specify $3n + 1$ points, where $n$ is the number of segments in the curve.
Example

The following example adds a two-segment Bézier curve to myDocument.

Dim pts(1 To 7, 1 To 2) As Single
pts(1, 1) = 0
pts(1, 2) = 0
pts(2, 1) = 72
pts(2, 2) = 72
pts(3, 1) = 100
pts(3, 2) = 40
pts(4, 1) = 20
pts(4, 2) = 50
pts(5, 1) = 90
pts(5, 2) = 120
pts(6, 1) = 60
pts(6, 2) = 30
pts(7, 1) = 150
pts(7, 2) = 90
Set myDocument = ActivePresentation.Slides(1)
myDocument.Shapes.AddCurve SafeArrayOfPoints:=pts
AddDiagram Method

Returns a **Shape** object that represents a diagram added to a slide, slide master, or slide range.

expression.AddDiagram(*Type*, *Left*, *Top*, *Width*, *Height*)

*expression*  Required. An expression that returns one of the objects in the Applies To list.

*Type*  Required **MsoDiagramType**. The type of diagram.

**MsoDiagramType** can be one of these **MsoDiagramType** constants.

- msoDiagramCycle Shows a process with a continuous cycle.
- msoDiagramMixed Not used with this method.
- msoDiagramOrgChart Shows hierarchical relationships.
- msoDiagramPyramid Show foundation-based relationships.
- msoDiagramRadial Shows relationships of a core element.
- msoDiagramTarget Shows steps toward a goal.
- msoDiagramVenn Shows areas of overlap between elements.

*Left*  Required **Single**. The position, measured in points, of the left edge of the diagram canvas's bounding box, relative to the left edge of the page.

*Top*  Required **Single**. The position, measured in points, of the top edge of the diagram canvas's bounding box, relative to the top edge of the page.

*Width*  Required **Single**. The width, measured in points, of the diagram canvas's bounding box.

*Height*  Required **Single**. The height, measured in points, of the diagram canvas's bounding box.
**Example**

The following example adds a pyramid diagram with four nodes to the first slide in the active presentation.

```vba
Sub CreatePyramidDiagram()
    Dim dgnNode As DiagramNode
    Dim shpDiagram As Shape
    Dim intNodes As Integer

    'Adds pyramid diagram and first child node
    Set shpDiagram = ActivePresentation.Slides(1).Shapes.AddDiagram(Type:=msoDiagramPyramid, Left:=10, _
                                                                       Top:=15, Width:=400, Height:=475)

    'Adds three more child nodes to pyramid diagram
    For intNodes = 1 To 3
        dgnNode.AddNode
    Next intNodes

End Sub
```
Show All
AddEffect Method

Returns an Effect object that represents a new animation effect added to a sequence of animation effects.

expression.AddEffect(Shape, effectId, Level, trigger, Index)

expression Required. An expression that returns one of the objects in the Applies To list.

Shape Required Shape object. The shape to which the animation effect is added.

effectId Required MsoAnimEffect. The animation effect to be applied.

MsoAnimEffect can be one of these MsoAnimEffect constants.
msoAnimEffectAppear
msoAnimEffectArcUp
msoAnimEffectAscend
msoAnimEffectBlast
msoAnimEffectBlinds
msoAnimEffectBoldFlash
msoAnimEffectBoldReveal
msoAnimEffectBoomerang
msoAnimEffectBounce
msoAnimEffectBox
msoAnimEffectBrushOnColor
msoAnimEffectBrushOnUnderline
msoAnimEffectCenterRevolve
msoAnimEffectChangeFillColor
msoAnimEffectChangeFont
msoAnimEffectChangeFontColor
msoAnimEffectChangeFontSize
msoAnimEffectChangeFontStyle
msoAnimEffectChangeLineColor
msoAnimEffectCheckerboard
msoAnimEffectCircle
msoAnimEffectColorBlend
msoAnimEffectColorReveal
msoAnimEffectColorWave
msoAnimEffectComplementaryColor
msoAnimEffectComplementaryColor2
msoAnimEffectContrastingColor
msoAnimEffectCrawl
msoAnimEffectCredits
msoAnimEffectCustom
msoAnimEffectDarken
msoAnimEffectDesaturate
msoAnimEffectDescend
msoAnimEffectDiamond
msoAnimEffectDissolve
msoAnimEffectEaseIn
msoAnimEffectExpand
msoAnimEffectFade
msoAnimEffectFadedAscend
msoAnimEffectFadedSwivel
msoAnimEffectFadedZoom
msoAnimEffectFlashBulb
msoAnimEffectFlashOnce
msoAnimEffectFlicker
msoAnimEffectFlip
msoAnimEffectFloat
msoAnimEffectFly
msoAnimEffectFold
msoAnimEffectGlide
msoAnimEffectGrowAndTurn
msoAnimEffectGrowShrink
msoAnimEffectGrowWithColor
msoAnimEffectLighten
msoAnimEffectLightSpeed
msoAnimEffectMediaPause
msoAnimEffectMediaPlay
msoAnimEffectMediaStop
msoAnimEffectPath4PointStar
msoAnimEffectPath5PointStar
msoAnimEffectPath6PointStar
msoAnimEffectPath8PointStar
msoAnimEffectPathArcDown
msoAnimEffectPathArcLeft
msoAnimEffectPathArcRight
msoAnimEffectPathArcUp
msoAnimEffectPathBean
msoAnimEffectPathBounceLeft
msoAnimEffectPathBounceRight
msoAnimEffectPathBuzzsaw
msoAnimEffectPathCircle
msoAnimEffectPathCrescentMoon
msoAnimEffectPathCurvedSquare
msoAnimEffectPathCurvedX
msoAnimEffectPathCurvyLeft
msoAnimEffectPathCurvyRight
msoAnimEffectPathCurvyStar
msoAnimEffectPathDecayingWave
msoAnimEffectPathDiagonalDownRight
msoAnimEffectPathDiagonalUpRight
msoAnimEffectPathDiamond
msoAnimEffectPathDown
msoAnimEffectPathEqualTriangle
msoAnimEffectPathFigure8Four
msoAnimEffectPathFootball
msoAnimEffectPathFunnel
msoAnimEffectPathHeart
msoAnimEffectPathHeartbeat
msoAnimEffectPathHexagon
msoAnimEffectPathHorizontalFigure8
msoAnimEffectPathInvertedSquare
msoAnimEffectPathInvertedTriangle
msoAnimEffectPathLeft
msoAnimEffectPathLoopdeLoop
msoAnimEffectPathNeutron
msoAnimEffectPathOctagon
msoAnimEffectPathParallelogram
msoAnimEffectPathPeanut
msoAnimEffectPathPentagon
msoAnimEffectPathPlus
msoAnimEffectPathPointyStar
msoAnimEffectPathRightTriangle
msoAnimEffectPathSCurve1
msoAnimEffectPathSCurve2
msoAnimEffectPathSineWave
msoAnimEffectPathSpiralLeft
msoAnimEffectPathSpiralRight
msoAnimEffectPathSpring
msoAnimEffectPathSquare
msoAnimEffectPathStairsDown
msoAnimEffectPathSwoosh
msoAnimEffectPathTeardrop
msoAnimEffectPathTrapezoid
msoAnimEffectPathTurnDown
msoAnimEffectPathTurnRight
msoAnimEffectPathTurnUp
msoAnimEffectPathTurnUpRight
msoAnimEffectPathVerticalFigure8
msoAnimEffectPathWave
msoAnimEffectPathZigzag
msoAnimEffectPeek
msoAnimEffectPinwheel
msoAnimEffectPlus
msoAnimEffectRandomBars
msoAnimEffectRandomEffects
msoAnimEffectRiseUp
msoAnimEffectShimmer
msoAnimEffectSling
msoAnimEffectSpin
msoAnimEffectSpinner
msoAnimEffectSpiral
msoAnimEffectSplit
msoAnimEffectStretch
msoAnimEffectStretchy
msoAnimEffectStrips
msoAnimEffectStyleEmphasis
msoAnimEffectSwish
msoAnimEffectSwivel
msoAnimEffectTeeter
msoAnimEffectThinLine
msoAnimEffectTransparency
msoAnimEffectUnfold
msoAnimEffectVerticalGrow
msoAnimEffectWave
msoAnimEffectWedge
msoAnimEffectWheel
msoAnimEffectWhip
msoAnimEffectWipe
msoAnimEffectZip
msoAnimEffectZoom

**Level** Optional **MsoAnimateByLevel**. For charts, diagrams, or text, the level to which the animation effect will be applied. The default value is **msoAnimationLevelNone**.

**MsoAnimateByLevel** can be one of these **MsoAnimateByLevel** constants.  
**msoAnimateChartAllAtOnce**  
**msoAnimateChartByCategory**  
**msoAnimateChartByCategoryElements**  
**msoAnimateChartBySeries**  
**msoAnimateChartBySeriesElements**  
**msoAnimateDiagramAllAtOnce**  
**msoAnimateDiagramBreadthByLevel**  
**msoAnimateDiagramBreadthByNode**  
**msoAnimateDiagramClockwise**  
**msoAnimateDiagramClockwiseIn**  
**msoAnimateDiagramClockwiseOut**  
**msoAnimateDiagramCounterClockwise**  
**msoAnimateDiagramCounterClockwiseIn**  
**msoAnimateDiagramCounterClockwiseOut**  
**msoAnimateDiagramDepthByBranch**  
**msoAnimateDiagramDepthByNode**  
**msoAnimateDiagramDown**  
**msoAnimateDiagramInByRing**  
**msoAnimateDiagramOutByRing**  
**msoAnimateDiagramUp**  
**msoAnimateLevelMixed**  
**msoAnimateTextByAllLevels**  
**msoAnimateTextByFifthLevel**  
**msoAnimateTextByFirstLevel**  
**msoAnimateTextByFourthLevel**  
**msoAnimateTextBySecondLevel**  
**msoAnimateTextByThirdLevel**
msoAnimationLevelNone

**trigger**  Optional  **MsoAnimTriggerType**. The action that triggers the animation effect. The default value is **msoAnimTriggerOnPageClick**.

**MsoAnimTriggerType** can be one of these **MsoAnimTriggerType** constants.
- msoAnimTriggerAfterPrevious
- msoAnimTriggerMixed
- msoAnimTriggerNone
- msoAnimTriggerOnPageClick
- msoAnimTriggerOnShapeClick
- msoAnimTriggerWithPrevious

**Index**  Optional  **Long**. The position at which the effect will be placed in the collection of animation effects. The default value is -1 (added to the end).
**Example**

The following example adds a bouncing animation to the first shape range on the first slide. This example assumes a shape range containing one or more shapes is selected on the first slide.

```vba
Sub AddBouncingAnimation()
    Dim sldActive As Slide
    Dim shpSelected As Shape

    Set sldActive = ActiveWindow.Selection.SlideRange(1)
    Set shpSelected = ActiveWindow.Selection.ShapeRange(1)

    ' Add a bouncing animation.
    sldActive.TimeLine.MainSequence.AddEffect
        Shape:=shpSelected, effectId:=msoAnimEffectBounce

End Sub
```
AddLabel Method

Creates a label. Returns a Shape object that represents the new label.

expression.AddLabel(Orientation, Left, Top, Width, Height)

expression  Required. An expression that returns one of the objects in the Applies To list.

Orientation  Required MsoTextOrientation. The text orientation. Some of these constants may not be available to you, depending on the language support (U.S. English, for example) that you’ve selected or installed.

Left  Required Single. The position, measured in points, of the left edge of the label relative to the left edge of the slide.

Top  Required Single. The position, measured in points, of the top edge of the label relative to the top edge of the slide.

Width  Required Single. The width of the label, measured in points.

Height  Required Single. The height of the label, measured in points.
Example

This example adds a vertical label that contains the text "Test Label" to myDocument.

Set myDocument = ActivePresentation.Slides(1)
    Left:=100, Top:=100, Width:=60, Height:=150).TextFrame _
    .TextRange.Text = "Test Label"
AddLine Method

Creates a line. Returns a Shape object that represents the new line.

expression.AddLine(BeginX, BeginY, EndX, EndY)

expression Required. An expression that returns one of the objects in the Applies To list.

BeginX Required Single. The horizontal position, measured in points, of the line's starting point relative to the left edge of the slide.

BeginY Required Single. The vertical position, measured in points, of the line's starting point relative to the top edge of the slide.

EndX Required Single. The horizontal position, measured in points, of the line's ending point relative to the left edge of the slide.

EndY Required Single. The vertical position, measured in points, of the line's ending point relative to the top edge of the slide.
Example

This example adds a blue dashed line to myDocument.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes.AddLine(BeginX:=10, BeginY:=10, _
   .DashStyle = msoLineDashDotDot
   .ForeColor.RGB = RGB(50, 0, 128)
End With
AddMediaObject Method

Creates a media object. Returns a **Shape** object that represents the new media object.

```
expression.AddMediaObject(FileName, Left, Top, Width, Height)
```

**expression**  Required. An expression that returns a **Shapes** object.

**FileName**  Required **String**. The file from which the media object is to be created. If the path isn't specified, the current working folder is used.

**Left, Top**  Optional **Single**. The position (in points) of the upper-left corner of the media object's bounding box relative to the upper-left corner of the document.

**Width, Height**  Optional **Single**. The width and height of the media object's bounding box, in points.
Example

This example adds the movie named "Clock.avi" to myDocument.

Set myDocument = ActivePresentation.Slides(1)
myDocument.Shapes.AddMediaObject FileName:="C:\WINNT\clock.avi", _
    Left:=5, Top:=5, Width:=100, Height:=100
AddNode Method

- AddNode method as it applies to the DiagramNodeChildren object.

Adds a DiagramNode object to a collection of child diagram nodes.

expression.AddNode(Index)

expression  Required. An expression that returns a DiagramNodeChildren object.

Index  Optional Variant. The index location of where to add the new diagram node; 0 adds before all nodes; -1 adds after all nodes; any other Index will add after that node in the collection.

- AddNode method as it applies to the DiagramNode object.

Returns a DiagramNode object that represents a node added to a diagram.

expression.AddNode(Pos)

expression  Required. An expression that returns a DiagramNode object.

Pos  Optional MsoRelativeNodePosition. Specifies where the node will be added, relative to the calling node.

MsoRelativeNodePosition can be one of these MsoRelativeNodePosition constants.

msoAfterLastSibling
msoAfterNode default
msoBeforeFirstSibling
msoBeforeNode
The following example adds nodes to a newly-created diagram.

Sub CreatePyramidDiagram()
    Dim dgnNode As DiagramNode
    Dim shpDiagram As Shape
    Dim intNodes As Integer

    'Adds the pyramid diagram and first node
    Set shpDiagram = ActivePresentation.Slides(1).Shapes._
        .AddDiagram(Type:=msoDiagramPyramid, Left:=10, _
            Top:=15, Width:=400, Height:=475)

    'Adds three more nodes to pyramid diagram
    For intNodes = 1 To 3
        dgnNode.AddNode
    Next intNodes
End Sub
AddNodes Method

 Inserts a new segment at the end of the freeform that's being created, and adds the nodes that define the segment. You can use this method as many times as you want to add nodes to the freeform you're creating. When you finish adding nodes, use the ConvertToShape method to create the freeform you've just defined. To add nodes to a freeform after it's been created, use the Insert method of the ShapeNodes collection.

expression.AddNodes(SegmentType, EditingType, X1, Y1, X2, Y2, X3, Y3)

expression Required. An expression that returns a FreeformBuilder object.

SegmentType Required MsoSegmentType. The type of segment to be added. MsoSegmentType can be one of these MsoSegmentType constants.

msoSegmentCurve
msoSegmentLine

EditingType Required MsoEditingType. The editing property of the vertex. If SegmentType is msoSegmentLine, EditingType must be msoEditingAuto.

MsoEditingType can be one of these MsoEditingType constants (cannot be msoEditingSmooth or msoEditingSymmetric).

msoEditingAuto
msoEditingCorner

X1 Required Single. If the EditingType of the new segment is msoEditingAuto, this argument specifies the horizontal distance (in points) from the upper-left corner of the document to the end point of the new segment. If the EditingType of the new node is msoEditingCorner, this argument specifies the horizontal distance (in points) from the upper-left corner of the document to the first control point for the new segment.
Required Single. If the EditingType of the new segment is msoEditingAuto, this argument specifies the vertical distance (in points) from the upper-left corner of the document to the end point of the new segment. If the EditingType of the new node is msoEditingCorner, this argument specifies the vertical distance (in points) from the upper-left corner of the document to the first control point for the new segment.

Optional Single. If the EditingType of the new segment is msoEditingCorner, this argument specifies the horizontal distance (in points) from the upper-left corner of the document to the second control point for the new segment. If the EditingType of the new segment is msoEditingAuto, don't specify a value for this argument.

Optional Single. If the EditingType of the new segment is msoEditingCorner, this argument specifies the vertical distance (in points) from the upper-left corner of the document to the end point of the new segment. If the EditingType of the new segment is msoEditingAuto, don't specify a value for this argument.

Optional Single. If the EditingType of the new segment is msoEditingCorner, this argument specifies the vertical distance (in points) from the upper-left corner of the document to the end point of the new segment. If the EditingType of the new segment is msoEditingAuto, don't specify a value for this argument.
Example

This example adds a freeform with five vertices to the first slide in the active presentation.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes.BuildFreeform(msoEditingCorner, 360, 200)
  .AddNodes SegmentType:=msoSegmentCurve, EditingType:=msoEditingCorner,
  .AddNodes SegmentType:=msoSegmentCurve, EditingType:=msoEditingAuto,
     X1:=480, Y1:=200
  .AddNodes SegmentType:=msoSegmentLine, EditingType:=msoEditingAuto,
     X1:=480, Y1:=400
  .AddNodes SegmentType:=msoSegmentLine, EditingType:=msoEditingAuto,
     X1:=360, Y1:=200
  .ConvertToShape
End With
AddPeriods Method

Adds a period at the end of each paragraph in the specified text.

expression.AddPeriods

expression Required. An expression that returns a TextRange object.
Remarks

This method doesn't add another period at the end of a paragraph that already ends with a period.
Example

This example adds a period at the end of each paragraph in shape two on slide one in the active presentation.

Show All
AddPicture Method

Creates a picture from an existing file. Returns a **Shape** object that represents the new picture.

```vba
expression.AddPicture(FileName, LinkToFile, SaveWithDocument, Left, Top, Width, Height)
```

*expression* Required. An expression that returns one of the objects in the Applies To list.

**FileName** Required **String**. The file from which the OLE object is to be created.

**LinkToFile** Required **MsoTriState**. Determines whether the picture will be linked to the file from which it was created.

MsoTriState can be one of these MsoTriState constants.

- **msoCTrue**
- **msoFalse** Makes the picture an independent copy of the file.
- **msoTriStateMixed**
- **msoTriStateToggle**
- **msoTrue** Links the picture to the file from which it was created.

**SaveWithDocument** Required **MsoTriState**. Determines whether the linked picture will be saved with the document into which it's inserted. This argument must be **msoTrue** if **LinkToFile** is **msoFalse**.

MsoTriState can be one of these MsoTriState constants.

- **msoCTrue**
- **msoFalse** Stores only the link information in the document.
- **msoTriStateMixed**
- **msoTriStateToggle**
**msoTrue** Saves the linked picture with the document into which it's inserted.

**Left**  Required **Single**. The position, measured in points, of the left edge of the picture relative to the left edge of the slide.

**Top**  Required **Single**. The position, measured in points, of the top edge of the picture relative to the top edge of the slide.

**Width**  Optional **Single**. The width of the picture, measured in points.

**Height**  Optional **Single**. The height of the picture, measured in points.
Example

This example adds a picture created from the file Music.bmp to myDocument. The inserted picture is linked to the file from which it was created and is saved with myDocument.

```vba
Set myDocument = ActivePresentation.Slides(1)
myDocument.Shapes.AddPicture FileName:="c:\microsoft office\" & _
"clipart\music.bmp", LinkToFile:=msoTrue, SaveWithDocument:=msoTrue,
Left:=100, Top:=100, Width:=70, Height:=70
```
AddPlaceholder Method

Restores a previously deleted placeholder on a slide. Returns a Shape object that represents the restored placeholder.

**Note** If you haven't previously deleted the specified placeholder, this method causes an error.

`expression.AddPlaceholder(Type, Left, Top, Width, Height)`

**expression** Required. An expression that returns a Shapes object.

**Type** Required PpPlaceholderType. The type of placeholder. Placeholders of type ppPlaceholderVerticalBody or ppPlaceholderVerticalTitle are found only on slides of layout type ppLayoutVerticalText, ppLayoutClipArtAndVerticalText, ppLayoutVerticalTitleAndText, or ppLayoutVerticalTitleAndTextOverChart. You cannot create slides with any of these layouts from the user interface; you must create them programmatically by using the Add method or by setting the Layout property of an existing slide.

PpPlaceholderType can be one of these PpPlaceholderType constants:

- ppPlaceholderBitmap
- ppPlaceholderBody
- ppPlaceholderCenterTitle
- ppPlaceholderChart
- ppPlaceholderDate
- ppPlaceholderFooter
- ppPlaceholderHeader
- ppPlaceholderMediaClip
- ppPlaceholderMixed
- ppPlaceholderObject
- ppPlaceholderOrgChart
- ppPlaceholderSlideNumber
ppPlaceholderSubtitle
ppPlaceholderTable
ppPlaceholderTitle
ppPlaceholderVerticalBody
ppPlaceholderVerticalTitle

**Left, Top**  Optional **Single**. The position (in points) of the upper-left corner of the placeholder relative to the upper-left corner of the document.

**Width, Height**  Optional **Single**. The width and height of the placeholder, in points.
Remarks

If more than one placeholder of a specified type has been deleted from the slide, the AddPlaceholder method will add them back to the slide, one by one, starting with the placeholder that has the lowest original index number.
Example

Suppose that slide two in the active presentation originally had a title at the top of the slide that's been deleted, either manually or with the following line of code.

ActivePresentation.Slides(2).Shapes.Placeholders(1).Delete

This example restores the deleted placeholder to slide two.

Application.ActivePresentation.Slides(2) _
.Shapes.AddPlaceholder ppPlaceholderTitle
AddPolyline Method

Creates an open polyline or a closed polygon drawing. Returns a Shape object that represents the new polyline or polygon.

expression.AddPolyline(SafeArrayOfPoints)

expression  Required. An expression that returns one of the objects in the Applies To list.

SafeArrayOfPoints  Required Variant. An array of coordinate pairs that specifies the polyline drawing's vertices.
Remarks

To form a closed polygon, assign the same coordinates to the first and last vertices in the polyline drawing.
Example

This example adds a triangle to myDocument. Because the first and last points have the same coordinates, the polygon is closed and filled. The color of the triangle's interior will be the same as the default shape's fill color.

Dim triArray(1 To 4, 1 To 2) As Single
triArray(1, 1) = 25
triArray(1, 2) = 100
triArray(2, 1) = 100
triArray(2, 2) = 150
triArray(3, 1) = 150
triArray(3, 2) = 50
triArray(4, 1) = 25  ' Last point has same coordinates as first
triArray(4, 2) = 100
Set myDocument = ActivePresentation.Slides(1)
myDocument.Shapes.AddPolyline SafeArrayOfPoints:=triArray
Show All
AddShape Method

Creates an AutoShape. Returns a Shape object that represents the new AutoShape.

expression.AddShape(Type, Left, Top, Width, Height)

expression Required. An expression that returns one of the objects in the Applies To list.

Type Required MsoAutoShapeType. Specifies the type of AutoShape to create.

MsoAutoShapeType can be one of these MsoAutoShapeType constants.

msoShapeFlowchartConnector
msoShapeFlowchartData
msoShapeFlowchartDecision
msoShapeFlowchartDelay
msoShapeFlowchartDirectAccessStorage
msoShapeFlowchartDisplay
msoShapeFlowchartDocument
msoShapeFlowchartExtract
msoShapeFlowchartInternalStorage
msoShapeFlowchartMagneticDisk
msoShapeFlowchartManualInput
msoShapeFlowchartManualOperation
msoShapeFlowchartMerge
msoShapeFlowchartMultidocument
msoShapeFlowchartOffpageConnector
msoShapeFlowchartOr
msoShapeFlowchartPredefinedProcess
msoShapeFlowchartPreparation
msoShapeUpDownArrow
msoShapeUpDownArrowCallout
msoShapeUpRibbon
msoShapeUTurnArrow
msoShapeVerticalScroll
msoShapeWave
msoShapeFlowchartCollate
msoShape16pointStar
msoShape24pointStar
msoShape32pointStar
msoShape4pointStar
msoShape5pointStar
msoShape8pointStar
msoShapeActionButtonBackorPrevious
msoShapeActionButtonBeginning
msoShapeActionButtonCustom
msoShapeActionButtonDocument
msoShapeActionButtonEnd
msoShapeActionButtonForwardorNext
msoShapeActionButtonHelp
msoShapeActionButtonHome
msoShapeActionButtonInformation
msoShapeActionButtonMovie
msoShapeActionButtonReturn
msoShapeActionButtonSound
msoShapeArc
msoShapeBalloon
msoShapeBentArrow
msoShapeBentUpArrow
msoShapeBevel
msoShapeBlockArc
msoShapeCan
msoShapeChevron
Left  Required Single. The position, measured in points, of the left edge of the AutoShape relative to the left edge of the slide.

Top  Required Single. The position, measured in points, of the top edge of the AutoShape relative to the top edge of the slide.

Width  Required Single. The width of the AutoShape, measured in points.

Height  Required Single. The height of the AutoShape, measured in points.
Remarks

To change the type of an AutoShape that you've added, set the `AutoShapeType` property.
Example

This example adds a rectangle to myDocument.

Set myDocument = ActivePresentation.Slides(1)
myDocument.Shapes.AddShape Type:=msoShapeRectangle, _
    Left:=50, Top:=50, Width:=100, Height:=200
AddTable Method

Adds a table shape to a slide.

expression.AddTable(NumRows, NumColumns, Left, Top, Width, Height)

expression  Required. An expression that returns a Shape object.

NumRows  Required Long. The number of rows in the table.

NumColumns  Required Long. The number of columns in the table.

Left  Optional Single. The distance (in points) from the left edge of the slide to the left edge of the table.

Top  Optional Single. The distance (in points) from the top edge of the slide to the top edge of the table.

Width  Optional Single. The width (in points) of the new table.

Height  Optional Single. The height (in points) of the new table.
Example

This example creates a new table on slide two of the active presentation. The table has three rows and four columns. It is 10 points from the left edge of the slide, and 10 points from the top edge. The width of the new table is 288 points, which makes each of the four columns one inch wide (there are 72 points per inch). The height is set to 216 points, which makes each of the three rows one inch tall.

`ActivePresentation.Slides(2).Shapes _
  .AddTable(3, 4, 10, 10, 288, 216)`
AddTextbox Method

Creates a text box. Returns a Shape object that represents the new text box.

expression.AddTextbox(Orientation, Left, Top, Width, Height)

expression Required. An expression that returns one of the objects in the Applies To list.

Orientation Required MsoTextOrientation. The text orientation. Some of these constants may not be available to you, depending on the language support (U.S. English, for example) that you’ve selected or installed.

Left Required Single. The position, measured in points, of the left edge of the text box relative to the left edge of the slide.

Top Required Single. The position, measured in points, of the top edge of the text box relative to the top edge of the slide.

Width Required Single. The width of the text box, measured in points.

Height Required Single. The height of the text box, measured in points.
Example

This example adds a text box that contains the text "Test Box" to myDocument.

Set myDocument = ActivePresentation.Slides(1)
myDocument.Shapes.AddTextbox(Type:=msoTextOrientationHorizontal, _
    Left:=100, Top:=100, Width:=200, Height:=50).TextFrame _
    .TextRange.Text = "Test Box"
AddTextEffect Method

Creates a WordArt object. Returns a Shape object that represents the new WordArt object.

\[ \text{expression}.\text{AddTextEffect}(\text{PresetTextEffect, Text, FontName, FontSize, FontBold, FontItalic, Left, Top}) \]

**expression** Required. An expression that returns one of the objects in the Applies To list.

**PresetTextEffect** Required \[ \text{MsoPresetTextEffect} \]. The preset text effect.

MsoPresetTextEffect can be one of these MsoPresetTextEffect constants:

- msoTextEffect1
- msoTextEffect2
- msoTextEffect3
- msoTextEffect4
- msoTextEffect5
- msoTextEffect6
- msoTextEffect7
- msoTextEffect8
- msoTextEffect9
- msoTextEffect10
- msoTextEffect11
- msoTextEffect12
- msoTextEffect13
- msoTextEffect14
- msoTextEffect15
- msoTextEffect16
- msoTextEffect17
- msoTextEffect18
```
msOTextEffect19
msOTextEffect20
msOTextEffect21
msOTextEffect22
msOTextEffect23
msOTextEffect24
msOTextEffect25
msOTextEffect26
msOTextEffect27
msOTextEffect28
msOTextEffect29
msOTextEffect30
msOTextEffectMixed
```

**Text**  Required **String**. The text in the WordArt.

**Font Name**  Required **String**. The name of the font used in the WordArt.

**FontSize**  Required **Single**. The size (in points) of the font used in the WordArt.

**FontBold**  Required **MsoTriState**. Determines whether the font used in the WordArt is set to bold.

MsoTriState can be one of these MsoTriState constants.

- **msoCTrue**
- **msoFalse**
- **msoTriStateMixed**
- **msoTriStateToggle**
- **msoTrue**  Sets the font used in the WordArt to bold.

**FontItalic**  Required **MsoTriState**. Determines whether the font used in the WordArt is set to italic.

MsoTriState can be one of these MsoTriState constants.

- **msoCTrue**
msoFalse
msoTriStateMixed
msoTriStateToggle
msoTrue  Sets the font used in the WordArt to italic.

*Left*  Required **Single**. The position, measured in points, of the left edge of the WordArt's bounding box relative to the left edge of the slide.

*Top*  Required **Single**. The position, measured in points, of the top edge of the WordArt's bounding box relative to the top edge of the slide.
Remarks

When you add WordArt to a document, the height and width of the WordArt are automatically set based on the size and amount of text you specify.
Example

This example adds WordArt that contains the text "Test" to myDocument.

```vba
Set myDocument = ActivePresentation.Slides(1)
Set newWordArt = myDocument.Shapes._
    .AddTextEffect(PresetTextEffect:=msoTextEffect1, _
    Text:="Test", FontName:="Arial Black", FontSize:=36, _
    FontBold:=msoFalse, FontItalic:=msoFalse, Left:=10, Top:=10)
```
AddTitle Method

Restores a previously deleted title placeholder to a slide. Returns a Shape object that represents the restored title.

**Note** This method will cause an error if you haven't previously deleted the title placeholder from the specified slide. Use the HasTitle property to determine whether the title placeholder has been deleted.

`expression.AddTitle`

*expression* Required. An expression that returns a Shapes object.
Example

This example restores the title placeholder to slide one in the active presentation if this placeholder has been deleted. The text of the restored title is "Restored title."

```vbnet
With ActivePresentation.Slides(1)
    If .Layout <> ppLayoutBlank Then
        With .Shapes
            If Not .HasTitle Then
                .AddTitle.TextFrame.TextRange.Text = "Restored title"
            End If
        End With
    End If
End With
```
AddTitleMaster Method

- Adds a title master to the specified presentation. Returns a Master object that represents the title master. If the presentation already has a title master, an error occurs.

expression.AddTitleMaster

eexpression Required. An expression that returns one of the objects in the Applies To list.
Example

This example adds a title master to the active presentation if it doesn't already have one.

With Application.ActivePresentation
    If Not .HasTitleMaster Then .AddTitleMaster
End With
AddToFavorites Method

Add a shortcut to the Favorites folder in the Windows program folder representing either the current selection in the specified presentation (for the Presentation object) or the specified hyperlink’s target document (for the Hyperlink object).

expression.AddToFavorites

description

expression Required. An expression that returns one of the objects in the Applies To list.
Remarks

The shortcut name is the friendly name of the document, if that's available; otherwise, the shortcut name is as calculated in HLINK.DLL.
Example

This example adds a hyperlink to the active presentation to the Favorites folder in the Windows program folder.

Application.ActivePresentation.AddToFavorites
Align Method

Aligns the shapes in the specified range of shapes.

`expression.Align(AlignCmd, RelativeTo)`

(expression Required. An expression that returns a `ShapeRange` object.

**AlignCmd** Required [MsoAlignCmd]. Specifies the way the shapes in the specified shape range are to be aligned.

MsoAlignCmd can be one of these MsoAlignCmd constants.
- `msoAlignBottoms`
- `msoAlignCenters`
- `msoAlignLefts`
- `msoAlignMiddles`
- `msoAlignRights`
- `msoAlignTops`

**RelativeTo** Required [MsoTriState]. Determines whether shapes are aligned relative to the edge of the slide.

MsoTriState can be one of these MsoTriState constants.
- `msoCTrue`
- `msoFalse` Aligns shapes relative to one another.
- `msoTriStateMixed`
- `msoTriStateToggle`
- `msoTrue` Aligns shapes relative to the edge of the slide.
Example

This example aligns the left edges of all the shapes in the specified range in myDocument with the left edge of the leftmost shape in the range.

Set myDocument = ActivePresentation.Slides(1)
Apply Method

Applies to the specified shape formatting that's been copied by using the **PickUp** method.

`expression.Apply`

`expression` Required. An expression that returns a **Shape** or **ShapeRange** object.
Example

This example copies the formatting of shape one on myDocument, and then applies the copied formatting to shape two.

```
Set myDocument = ActivePresentation.Slides(1)
With myDocument
  .Shapes(1).PickUp
  .Shapes(2).Apply
End With
```
ApplyTemplate Method

Applies a design template to the specified presentation.

expression.ApplyTemplate(FileName)

expression Required. An expression that returns a Presentation object.

FileName Required String. Specifies the name of the design template.

Note If you refer to an uninstalled presentation design template in a string, a run-time error is generated. The template is not installed automatically regardless of your FeatureInstall property setting. To use the ApplyTemplate method for a template that is not currently installed, you first must install the additional design templates. To do so, install the Additional Design Templates for PowerPoint by running the Microsoft Office installation program (available through the Add/Remove Programs icon in Windows Control Panel).
Example

This example applies the "Professional" design template to the active presentation.

```
Application.ActivePresentation.ApplyTemplate _
   "c:\program files\microsoft office\templates" & _
   "\presentation designs\professional.pot"
```
Arrange Method

Arranges all open document windows in the workspace.

expression.Arrange(arrangeStyle)

expression Required. An expression that returns one of the objects in the Applies To list.

arrangeStyle Optional PpArrangeStyle. Specifies whether to cascade or tile the windows.

PpArrangeStyle can be one of these PpArrangeStyle constants.

ppArrangeCascade
ppArrangeTiled default
Example

This example creates a new window and then arranges all open document windows.

Application.ActiveWindow.NewWindow
Windows.Arrange ppArrangeCascade
AutomaticLength Method

Specifies that the first segment of the callout line (the segment attached to the text callout box) be scaled automatically when the callout is moved. Use the CustomLength method to specify that the first segment of the callout line retain the fixed length returned by the Length property whenever the callout is moved. Applies only to callouts whose lines consist of more than one segment (types msoCalloutThree and msoCalloutFour).

expression.AutomaticLength

expression Required. An expression that returns a CalloutFormat object.
Remarks

Applying this method sets the `AutoLength` property to `True`. 
Example

This example toggles between an automatically scaling first segment and one with a fixed length for the callout line for shape one on myDocument. For the example to work, shape one must be a callout.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(1).Callout
    If .AutoLength Then
        .CustomLength 50
    Else
        .AutomaticLength
    End If
End With
Background Method

Specifies that the shape's fill should match the slide background. If you change the slide background after applying this method to a fill, the fill will also change.
Remarks

Note that applying the **Background** method to a shape's fill isn't the same as setting a transparent fill for the shape, nor is it always the same as applying the same fill to the shape as you apply to the background. The second example demonstrates this.
Example

This example sets the fill of shape one on slide one in the active presentation to match the slide background.

ActivePresentation.Slides(1).Shapes(1).Fill.Background

This example sets the background for slide one in the active presentation to a preset gradient, adds a rectangle to the slide, and then places three ovals in front of the rectangle. The first oval has a fill that matches the slide background, the second has a transparent fill, and the third has the same fill applied to it as was applied to the background. Notice the difference in the appearances of these three ovals.

With ActivePresentation.Slides(1)
    .FollowMasterBackground = False
    .Background.Fill.PresetGradient = msoGradientHorizontal, 1, msoGradientDaybreak
    With .Shapes
        .AddShape msoShapeRectangle, 50, 200, 600, 100
        .AddShape(msoShapeOval, 75, 150, 150, 100).Fill.Background
        .AddShape(msoShapeOval, 275, 150, 150, 100).Fill.Transparency = 1
        .AddShape(msoShapeOval, 475, 150, 150, 100).Fill.PresetGradient = msoGradientHorizontal, 1, msoGradientDaybreak
    End With
End With
**BeginConnect Method**

Attaches the beginning of the specified connector to a specified shape. If there's already a connection between the beginning of the connector and another shape, that connection is broken. If the beginning of the connector isn't already positioned at the specified connecting site, this method moves the beginning of the connector to the connecting site and adjusts the size and position of the connector. Use the **EndConnect** method to attach the end of the connector to a shape.

```expression```
BeginConnect(ConnectedShape, ConnectionSite)
```

*expression* Required. An expression that returns a **ConnectorFormat** object.

**ConnectedShape** Required **Shape** object. The shape to attach the beginning of the connector to. The specified **Shape** object must be in the same **Shapes** collection as the connector.

**ConnectionSite** Required **Long**. A connection site on the shape specified by **ConnectedShape**. Must be an integer between 1 and the integer returned by the **ConnectionSiteCount** property of the specified shape. If you want the connector to automatically find the shortest path between the two shapes it connects, specify any valid integer for this argument and then use the **RerouteConnections** method after the connector is attached to shapes at both ends.
Remarks

When you attach a connector to an object, the size and position of the connector are automatically adjusted, if necessary.
Example

This example adds two rectangles to the first slide in the active presentation and connects them with a curved connector. Notice that the `RerouteConnections` method makes it irrelevant what values you supply for the `ConnectionSite` arguments used with the `BeginConnect` and `EndConnect` methods.

```vba
Set myDocument = ActivePresentation.Slides(1)
Set s = myDocument.Shapes
Set firstRect = s.AddShape(msoShapeRectangle, 100, 50, 200, 100)
Set secondRect = s.AddShape(msoShapeRectangle, 300, 300, 200, 100)
With s.AddConnector(msoConnectorCurve, 0, 0, 100, 100)
    .BeginConnect ConnectedShape:=firstRect, ConnectionSite:=1
    .EndConnect ConnectedShape:=secondRect, ConnectionSite:=1
    .Parent.RerouteConnections
End With
```
**BeginDisconnect Method**

Detaches the beginning of the specified connector from the shape it's attached to. This method doesn't alter the size or position of the connector: the beginning of the connector remains positioned at a connection site but is no longer connected. Use the **EndDisconnect** method to detach the end of the connector from a shape.

```
expression.BeginDisconnect
```

**expression** Required. An expression that returns a **ConnectorFormat** object.
Example

This example adds two rectangles to the first slide in the active presentation, attaches them with a connector, automatically reroutes the connector along the shortest path, and then detaches the connector from the rectangles.

Set myDocument = ActivePresentation.Slides(1)
Set s = myDocument.Shapes
Set firstRect = s.AddShape(msoShapeRectangle, 100, 50, 200, 100)
Set secondRect = s.AddShape(msoShapeRectangle, 300, 300, 200, 100)
With s.AddConnector(msoConnectorCurve, 0, 0, 0, 0).ConnectorFormat
    .BeginConnect firstRect, 1
    .EndConnect secondRect, 1
    .Parent.RerouteConnections
    .BeginDisconnect
    .EndDisconnect
End With
BuildFreeform Method

Builds a freeform object. Returns a FreeformBuilder object that represents the freeform as it is being built. Use the AddNodes method to add segments to the freeform. After you have added at least one segment to the freeform, you can use the ConvertToShape method to convert the FreeformBuilder object into a Shape object that has the geometric description you've defined in the FreeformBuilder object.

expression.BuildFreeform(EditingType, X1, Y1)

expression  Required. An expression that returns one of the objects in the Applies To list.

EditingType  Required MsoEditingType. The editing property of the first node. MsoEditingType can be one of the following MsoEditingType constants (cannot be msoEditingSmooth or msoEditingSymmetric). msoEditingAuto msoEditingCorner

X1  Required Single. The horizontal position, measured in points, of the first node in the freeform drawing relative to the left edge of the slide.

Y1  Required Single. The vertical position, measured in points, of the first node in the freeform drawing relative to the top edge of the slide.
Example

This example adds a freeform with four segments to myDocument.

```vba
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes.BuildFreeform(EditingType:=msoEditingCorner,
  X1=360, Y1=200)
  .AddNodes SegmentType:=msoSegmentCurve, EditingType:=msoEditingCorner,
  .AddNodes SegmentType:=msoSegmentCurve, EditingType:=msoEditingAuto,
    X1:=480, Y1:=200
  .AddNodes SegmentType:=msoSegmentLine, EditingType:=msoEditingAuto,
    X1:=480, Y1:=400
  .AddNodes SegmentType:=msoSegmentLine, EditingType:=msoEditingAuto,
    X1:=360, Y1:=200
.ConvertToShape
End With
```
CanCheckIn Method

True if Microsoft PowerPoint can check in a specified presentation to a server. Read/write Boolean.

expression.CanCheckIn

expression  Required. An expression that returns one of the objects in the Applies To list.
Remarks

To take advantage of the collaboration features built into PowerPoint, presentations must be stored on a Microsoft SharePoint Portal Server.
Example

This example checks the server to see if the specified presentation can be checked in and, if it can be, closes the presentation and checks it back into server.

Sub CheckInPresentation(strPresentation As String)
    If Presentations(strPresentation).CanCheckIn = True Then
        Presentations(strPresentation).CheckIn
        MsgBox strPresentation & " has been checked in."
    Else
        MsgBox strPresentation & " cannot be checked in " & _
        "at this time. Please try again later."
    End If
End Sub

To call the subroutine above, use the following subroutine and replace the "http://servername/workspace/report.ppt" file name with an actual file located on a server mentioned in the Remarks section above.

Sub CheckPPTIn()
    Call CheckInPresentation(strPresentation:= _
                            "http://servername/workspace/report.ppt")
End Sub
CanCheckOut Method

True if Microsoft PowerPoint can check out a specified presentation from a server. Read/write Boolean.

expression.CanCheckOut(FileName)

description    Required. An expression that returns one of the objects in the Applies To list.

FileName    Required String. The server path and name of the presentation.
Remarks

To take advantage of the collaboration features built into PowerPoint, presentations must be stored on a Microsoft SharePoint Portal Server.
Example

This example verifies that a presentation is not checked out by another user and that it can be checked out. If the presentation can be checked out, it copies the presentation to the local computer for editing.

Sub CheckOutPresentation(strPresentation As String)
    If Presentations.CanCheckOut(strPresentation) = True Then
        Presentations.CheckOut FileName:=strPresentation
    Else
        MsgBox "You are unable to check out this " & _
               "presentation at this time."
    End If
End Sub

To call the subroutine above, use the following subroutine and replace the "http://servername/workspace/report.ppt" file name with an actual file located on a server mentioned in the Remarks section above.

Sub CheckPPTOut()
    Call CheckOutPresentation(strPresentation:= _
                               "http://servername/workspace/report.doc")
End Sub
Cell Method

Returns a **Cell** object that represents a cell in a table.

\[ \textit{expression}.\textit{Cell(Row, Column)} \]

**expression**  Required. An expression that returns a **Table** object.

**Row**  Required **Long**. The number of the row in the table to return. Can be an integer between 1 and the number of rows in the table.

**Column**  Required **Long**. The number of the column in the table to return. Can be an integer between 1 and the number of columns in the table.
Example

This example creates a 3x3 table on a new slide in a new presentation and inserts text into the first cell of the table.

```vba
With Presentations.Add
    With .Slides.Add(1, ppLayoutBlank)
        .Shapes.AddTable(3, 3).Select
        .Shapes(1).Table.Cell(1, 1).Shape.TextFrame.TextRange.Text = "Cell 1"
    End With
End With
```

This example sets the thickness of the bottom border of the cell in row 2, column 1 to two points.

```vba
ActivePresentation.Slides(2).Shapes(5).Table.Cell(2, 1).Borders(ppBorderBottom).Weight = 2
```
ChangeCase Method

Changes the case of the specified text.

`expression.ChangeCase(Type)`

`expression` Required. An expression that returns a `TextRange` object.

`Type` Required `PpChangeCase`. Specifies the way the case will be changed.

PpChangeCase can be one of these PpChangeCase constants.

- `ppCaseLower`
- `ppCaseSentence`
- `ppCaseTitle`
- `ppCaseToggle`
- `ppCaseUpper`
Example

This example sets title case capitalization for the title on slide one in the active presentation.

Characters Method

- Returns a TextRange object that represents the specified subset of text characters. For information about counting or looping through the characters in a text range, see the TextRange object.

expression.Characters(Start, Length)

expression  Required. An expression that returns a TextRange object.

Start  Optional Long. The first character in the returned range.

Length  Optional Long. The number of characters to be returned.
Remarks

If both Start and Length are omitted, the returned range starts with the first character and ends with the last paragraph in the specified range.

If Start is specified but Length is omitted, the returned range contains one character.

If Length is specified but Start is omitted, the returned range starts with the first character in the specified range.

If Start is greater than the number of characters in the specified text, the returned range starts with the last character in the specified range.

If Length is greater than the number of characters from the specified starting character to the end of the text, the returned range contains all those characters.
Example

This example sets the text for shape two on slide one in the active presentation and then makes the second character a subscript character with a 20-percent offset.

Dim charRange As TextRange
With Application.ActivePresentation.Slides(1).Shapes(2)
    Set charRange = .TextFrame.TextRange.InsertBefore("H2O")
    charRange.Characters(2).Font.BaselineOffset = -0.2
End With

This example formats every subscript character in shape two on slide one as bold.

With Application.ActivePresentation.Slides(1).Shapes(2) _
    .TextFrame.TextRange
    For i = 1 To .Characters.Count
        With .Characters(i).Font
            If .Subscript Then .Bold = True
        End With
    Next
End With
CheckIn Method

Returns a presentation from a local computer to a server, and sets the local file to read-only so that it cannot be edited locally.

expression.CheckIn(SaveChanges, Comments, MakePublic)

expression Required. An expression that returns one of the objects in the Applies To list.

SaveChanges Optional Boolean. True saves the presentation to the server location. The default value is False.

Comments Optional Variant. Comments for the revision of the presentation being checked in (only applies if SaveChanges equals True).

MakePublic Optional Variant. True allows the user to perform a publish on the presentation after being checked in. This submits the document for the approval process, which can eventually result in a version of the presentation being published to users with read-only rights to the presentation (only applies if SaveChanges equals True).
Remarks

To take advantage of the collaboration features built into Microsoft PowerPoint, presentations must be stored on a Microsoft SharePoint Portal Server.
Example

This example checks the server to see if the specified presentation can be checked in and, if so, closes the presentation and checks it back into server.

Sub CheckInPresentation(strPresentation As String)
    If Presentations(strPresentation).CanCheckIn = True Then
        Presentations(strPresentation).CheckIn
        MsgBox strPresentation & " has been checked in."
    Else
        MsgBox strPresentation & " cannot be checked in " & _
        "at this time. Please try again later."
    End If
End Sub

To call the subroutine above, use the following subroutine and replace the "http://servername/workspace/report.ppt" file name with an actual file located on a server mentioned in the Remarks section above.

Sub CheckInPresentation()
    Call CheckInPresentation(strPresentation:="http://servername/workspace/report.ppt")
End Sub
CheckOut Method

Copies a specified presentation from a server to a local computer for editing. Returns a String that represents the local path and filename of the presentation checked out.

_expression_.CheckOut(_FileName_)

_expression_ Required. An expression that returns one of the objects in the Applies To list.

_FileName_ Required String. The server path and name of the presentation.
Remarks

To take advantage of the collaboration features built into Microsoft PowerPoint, presentations must be stored on a Microsoft SharePoint Portal Server.
Example

This example verifies that a presentation is not checked out by another user and that it can be checked out. If the presentation can be checked out, it copies the presentation to the local computer for editing.

Sub CheckOutPresentation(strPresentation As String)
    Dim strFileName As String
    With Presentations
        If .CanCheckOut(strPresentation) = True Then
            .CheckOut FileName:=strPresentation
            .Open FileName:=strFileName
        Else
            MsgBox "You are unable to check out this " & _
            "presentation at this time."
        End If
    End With
End Sub

To call the subroutine above, use the following subroutine and replace the "http://servername/workspace/report.ppt" file name for an actual file located on a server mentioned in the Remarks section above.

Sub CheckPPTOut()
    Call CheckOutPresentation(strPresentation:= _
                              "http://servername/workspace/report.doc")
End Sub
Clear Method

Clears the specified tab stop from the ruler and deletes it from the **TabStops** collection.
Example

This example clears all tab stops for the text in shape two on slide one in the active presentation.

With Application.ActivePresentation.Slides(1).Shapes(2).TextFrame _.Ruler.TabStops
    For i = .Count To 1 Step -1
        .Item(i).Clear
    Next
End With
ClearAll Method

Clears all the print ranges from the PrintRanges collection. Use the Add method of the PrintRanges collection to add print ranges to the collection.

eexpression.ClearAll
eexpression Required. An expression that returns a PrintRange object.
Example

This example clears any previously defined print ranges in the active presentation; creates new print ranges that contain slide 1, slides 3 through 5, and slides 8 and 9; prints the newly defined slide ranges; and then clears the new print ranges.

With ActivePresentation.PrintOptions
    .RangeType = ppPrintSlideRange
    With .Ranges
        .ClearAll
        .Add 1, 1
        .Add 3, 5
        .Add 8, 9
        .ClearAll
    End With
End With
Clone Method

- **Clone method as it applies to the **Designs** object.**

  Creates a copy of a **Design** object.

  \[expression.\text{Clone}(p\text{Original}, \text{Index})\]

  \[expression\] Required. An expression that returns a **Designs** object.

  \[p\text{Original}\] Required **Design** object. The original design.

  \[\text{Index}\] Optional **Long**. The index location in the **Designs** collection into which the design will be copied. If \[\text{Index}\] is omitted, the cloned design is added to the end of the **Designs** collection.

- **Clone method as it applies to the **Sequence** object.**

  Creates a copy of an **Effect** object, and adds it to the **Sequences** collection at the specified index.

  \[expression.\text{Clone}(\text{Effect}, \text{Index})\]

  \[expression\] Required. An expression that returns a **Sequence** object.

  \[\text{Effect}\] Required **Effect** object. The animation effect to be cloned.

  \[\text{Index}\] Optional **Long**. The position at which the cloned animation effect will be added to the **Sequences** collection. The default value is -1 (added to the end).
Example

As it applies to the **Designs** object.

This example creates a design and clones the newly created design.

Sub CloneDesign()
    Dim dsnDesign1 As Design
    Dim dsnDesign2

    Set dsnDesign1 = ActivePresentation.Designs _
        .Add(designName:="Design1")

    Set dsnDesign2 = ActivePresentation.Designs _
        .Clone(pOriginal:=dsnDesign1, Index:=1)
End Sub

As it applies to the **Sequence** object.

This example copies an animation effect. This example assumes an animation effect named "effDiamond" exists.

Sub CloneEffect()
    ActivePresentation.Slides(1).TimeLine.MainSequence _
        .Clone Effect:=effDiamond, Index:=-1
End Sub
Show All
CloneNode Method

Clones a diagram node.

(expression.CloneNode(CopyChildren, TargetNode, Pos))

expression Required. An expression that returns one of the objects in the Applies To list.

CopyChildren Required Boolean. True to include the diagram node's children.

TargetNode Optional DiagramNode object. An expression that returns a DiagramNode that will be the source for the cloned diagram node.

Pos Optional MsoRelativeNodePosition. If TargetNode is specified, where the node will be added, relative to TargetNode.

MsoRelativeNodePosition can be one of these MsoRelativeNodePosition constants.
msoAfterLastSibling
msoAfterNode default
msoBeforeFirstSibling
msoBeforeNode
Example

The following example creates a diagram and clones the newest-created node.

Sub CloneANode()

    Dim dgnNode As DiagramNode
    Dim shpDiagram As Shape
    Dim intNodes As Integer

    'Adds cycle diagram and first child node
    Set shpDiagram = ActivePresentation.Slides(1).Shapes.AddDiagram
        (Type:=msoDiagramCycle, Left:=10, Top:=15, 
        Width:=400, Height:=475)

    'Adds three additional nodes to diagram
    For intNodes = 1 To 3
        dgnNode.AddNode
    Next intNodes

    'Automatically formats the diagram
    dgnNode.Diagram.AutoFormat = msoTrue

    'Clones the first child node without cloning associated child nodes
    dgnNode.CloneNode CopyChildren:=False

End Sub
Close Method

Closes the specified document window, presentation, or open freeform drawing.

Caution  When you use this method, PowerPoint will close an open presentation without prompting the user to save their work. To prevent the loss of work, use the Save method or the SaveAs method before you use the Close method.

expression.Close

document expression  Required. An expression that returns a DocumentWindow or Presentation object.
Example

This example closes all windows except the active window.

With Application.Windows
    For i = 2 To .Count
        .Item(i).Close
    Next
End With

This example closes Pres1.ppt without saving changes.

With Application.Presentations("pres1.ppt")
    .Saved = True
    .Close
End With

This example closes all open presentations.

With Application.Presentations
    For i = .Count To 1 Step -1
        .Item(i).Close
    Next
End With
Colors Method

Returns an **RGBColor** object that represents a single color in a color scheme.

```
expression.Colors(SchemeColor)
```

*expression* Required. An expression that returns a **ColorScheme** object.

*SchemeColor* Required **PpColorSchemeIndex**. The individual color in the specified color scheme.

PpColorSchemeIndex can be one of these PpColorSchemeIndex constants.

- ppAccent1
- ppAccent2
- ppAccent3
- ppBackground
- ppFill
- ppForeground
- ppNotSchemeColor
- ppSchemeColorMixed
- ppShadow
- ppTitle
Example

This example sets the title color for slides one and three in the active presentation.

```
Set mySlides = ActivePresentation.Slides.Range(Array(1, 3))
mySlides.ColorScheme.Colors(ppTitle).RGB = RGB(0, 255, 0)
```
Convert Method

Converts a diagram to a different diagram type.

expression.Convert(Type)

expression Required. An expression that returns one of the objects in the Applies To list.

Type Required MsoDiagramType. The type of diagram to convert to.

MsoDiagramType can be one of these MsoDiagramType constants.

msoDiagramCycle
msoDiagramMixed
msoDiagramOrgChart
msoDiagramPyramid
msoDiagramRadial
msoDiagramTarget
msoDiagramVenn
Remarks

This method generates an error if the value of the target diagram's Type property is an organization chart (msoDiagramTypeOrgChart).
Example

The following example adds a pyramid diagram to a slide and converts it to a radial diagram.

Sub ConvertPyramidDiagram()
    Dim dgnNode As DiagramNode
    Dim shpDiagram As Shape
    Dim intNodes As Integer

    'Adds pyramid diagram and first child node
    Set shpDiagram = ActivePresentation.Slides(1).Shapes.AddDiagram
        (Type:=msoDiagramPyramid, Left:=10, Top:=15, _
         Width:=400, Height:=475)

    'Adds three additional child nodes
    For intNodes = 1 To 3
        dgnNode.AddNode
    Next intNodes

    'Automatically formats the diagram and converts it to a radial diagram
    With dgnNode.Diagram
        .AutoFormat = msoTrue
        .Convert  Type:=msoDiagramRadial
    End With
End Sub
**ConvertToAfterEffect Method**

Specifies what an effect should do after it is finished. Returns an `Effect` object that represents an after effect.

`expression.ConvertedToAfterEffect(Effect, After, DimColor, DimSchemeColor)`

*expression* Required. An expression that returns a `Sequence` object.

*Effect* Required `Effect` object. The effect to which the after effect will be added.

*After* Required `MsoAnimAfterEffect`. The behavior of the after effect.

MsoAnimAfterEffect can be one of these MsoAnimAfterEffect constants.

- `msoAnimAfterEffectDim`
- `msoAnimAfterEffectHide`
- `msoAnimAfterEffectHideOnNextClick`
- `msoAnimAfterEffectMixed`
- `msoAnimAfterEffectNone`

*DimColor* Optional `MsoRGBType`. A single color to apply the after effect.

*DimSchemeColor* Optional `PpColorSchemeIndex`. A predefined color scheme to apply to the after effect.

PpColorSchemeIndex can be one of these PpColorSchemeIndex constants.

- `ppAccent1`
- `ppAccent2`
- `ppAccent3`
- `ppBackground`
- `ppFill`
- `ppForeground`
- `ppNotSchemeColor default`
Remarks

Do not use both the \texttt{DimColor} and \texttt{DimSchemeColor} arguments in the same call to this method. An after effect may have one color, or use a predefined color scheme, but not both.
Example

The following example sets a dim color for an after effect on the first shape on the first slide in the active presentation. This example assume there is a shape on the first slide.

Sub ConvertToDim()

    Dim shpSelected As Shape
    Dim sldActive As Slide
    Dim effConvert As Effect

    Set sldActive = ActivePresentation.Slides(1)
    Set shpSelected = sldActive.Shapes(1)

    ' Add an animation effect.
    Set effConvert = sldActive.TimeLine.MainSequence.AddEffect _
    (Shape:=shpSelected, effectId:=msoAnimEffectBounce)

    ' Add a dim after effect.
    Set effConvert = sldActive.TimeLine.MainSequence.ConvertToAfterE _
    (Effect:=effConvert, After:=msoAnimAfterEffectDim, _
    DimColor:=RGB(Red:=255, Green:=255, Blue:=255))

End Sub
ConvertToAnimateBackground Method

Determines whether the background will animate separately from, or in addition to, its accompanying text. Returns an Effect object representing the newly-modified animation effect.

expression.ConvertToAnimateBackground(Effect, AnimateBackground)

expression Required. An expression that returns a Sequence object.

Effect Required Effect object. The animation effect to be applied to the background.

AnimateBackground Required MsoTriState. Determines whether the text will animate separately from the background.

MsoTriState can be one of these MsoTriState constants.

msoCTrue
msoFalse Animates text separately from the background.

msoTriStateMixed
msoTriStateToggle

msoTrue Animates text along with the background.
Example

This example creates a text effect for the first shape on the first slide in the active presentation, and animates the text in the shape separately from the background. This example assumes there is a shape on the first slide, and that the shape has text inside of it.

Sub AnimateText()

    Dim timeMain As TimeLine
    Dim shpActive As Shape

    Set shpActive = ActivePresentation.Slides(1).Shapes(1)
    Set timeMain = ActivePresentation.Slides(1).TimeLine

    ' Add a blast effect to the text, and animate the text separately
    ' from the background.
    timeMain.MainSequence.ConvertToAnimateBackground
    Effect:=timeMain.MainSequence.AddEffect(Shape:=shpActive, _
        effectid:=msoAnimEffectBlast), _
        AnimateBackGround:=msoFalse

End Sub
ConvertToAnimateInReverse Method

Determines whether text will be animated in reverse order. Returns an Effect object representing the text animation.

expression.ConvertToAnimateInReverse(Effect, animateInReverse)

expression Required. An expression that returns a Sequence object.

Effect Required Effect object. The animation effect to which the reversal will apply.

animateInReverse Required MsoTriState. Determines the text animation order.

MsoTriState can be one of these MsoTriState constants.

msoCTrue
msoFalse The text animates in normal order.
msoTriStateMixed
msoTriStateToggle
msoTrue The text animates in reverse order.
Example

This example creates a shape with text on a slide and adds a random animation to the shape, ensuring the shape's text animates in reverse.

Sub AnimateInReverse()
    Dim sldActive As Slide
    Dim timeMain As TimeLine
    Dim shpRect As Shape

    ' Create a slide, add a rectangular shape to the slide, and access the slide's animation timeline.
    With ActivePresentation
        Set sldActive = .Slides.Add(Index:=1, Layout:=ppLayoutBlank)
        Set shpRect = sldActive.Shapes.AddShape(Type:=msoShapeRectangle,
            Left:=100, Top:=100, Width:=300, Height:=150)
        Set timeMain = sldActive.TimeLine
    End With

    shpRect.TextFrame.TextRange.Text = "This is a rectangle."

    ' Add a random animation effect to the rectangle, and animate the text in reverse.
    With timeMain.MainSequence
        .ConvertToAnimateInReverse _
            Effect:=.AddEffect(Shape:=shpRect, effectId:=msoAnimEffe _
                AnimateInReverse:=msoTrue
    End With

End Sub
ConvertToBuildLevel Method

Changes the build level information for a specified animation effect. Returns an Effect object that represents the build level information.

expression.ConvertToBuildLevel(Effect, Level)

expression  Required. An expression that returns a Sequence object.

Effect  Required Effect object. The specified animation effect.

Level  Required MsoAnimateByLevel. The animation build level.

MsoAnimateByLevel can be one of these MsoAnimateByLevel constants:

msoAnimateChartAllAtOnce
msoAnimateChartByCategory
msoAnimateChartByCategoryElements
msoAnimateChartBySeries
msoAnimateChartBySeriesElements
msoAnimateDiagramAllAtOnce
msoAnimateDiagramBreadthByLevel
msoAnimateDiagramBreadthByNode
msoAnimateDiagramClockwise
msoAnimateDiagramClockwiseIn
msoAnimateDiagramClockwiseOut
msoAnimateDiagramCounterClockwise
msoAnimateDiagramCounterClockwiseIn
msoAnimateDiagramCounterClockwiseOut
msoAnimateDiagramDepthByBranch
msoAnimateDiagramDepthByNode
msoAnimateDiagramDown
msoAnimateDiagramInByRing
msoAnimateDiagramOutByRing
msoAnimateDiagramUp
msoAnimateLevelMixed
msoAnimateTextByAllLevels
msoAnimateTextByFifthLevel
msoAnimateTextByFirstLevel
msoAnimateTextByFourthLevel
msoAnimateTextBySecondLevel
msoAnimateTextByThirdLevel
msoAnimationLevelNone
Remarks

Changing build level information for an effect invalidates any existing effects.
Example

The following example changes the build level information for an animation effect, making the original effect invalid.

Sub ConvertBuildLevel()
    Dim sldFirst As Slide
    Dim shpFirst As Shape
    Dim effFirst As Effect
    Dim effConvert As Effect

    Set sldFirst = ActiveWindow.Selection.SlideRange(1)
    Set shpFirst = sldFirst.Shapes(1)
    Set effFirst = sldFirst.TimeLine.MainSequence._
                   .AddEffect(Shape:=shpFirst, EffectID:=msoAnimEffectAscend)
    Set effConvert = sldFirst.TimeLine.MainSequence._
                   .ConvertToBuildLevel(Effect:=effFirst, _
                                     Level:=msoAnimateTextByFirstLevel)
End Sub
ConvertToShape Method

Creates a shape that has the geometric characteristics of the specified FreeformBuilder object. Returns a Shape object that represents the new shape.

**Note**  You must apply the AddNodes method to a FreeformBuilder object at least once before you use the ConvertToShape method.

```
expression.ConvertToShape
```

expression  Required. An expression that returns a FreeformBuilder object.
Example

This example adds a freeform with five vertices to the first slide in the active presentation.

```vba
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes.BuildFreeform(msoEditingCorner, 360, 200)
  .AddNodes msoSegmentCurve, _
    msoEditingCorner, 380, 230, 400, 250, 450, 300
  .AddNodes msoSegmentCurve, msoEditingAuto, 480, 200
  .AddNodes msoSegmentLine, msoEditingAuto, 480, 400
  .AddNodes msoSegmentLine, msoEditingAuto, 360, 200
  .ConvertToShape
End With
```
ConvertToTextUnitEffect Method

Returns an Effect object that represents how text should animate.

\( expression \).\( ConvertToTextUnitEffect(Effect, unitEffect) \)

expression Required. An expression that returns a Sequence object.

Effect Required Effect object. The animation effect to which the text unit effect applies.

unitEffect Required MsoAnimTextUnitEffect. How the text should animate.

MsoAnimTextUnitEffect can be one of these MsoAnimTextUnitEffect constants.

msoAnimTextUnitEffectByCharacter
msoAnimTextUnitEffectByParagraph
msoAnimTextUnitEffectByWord
msoAnimTextUnitEffectMixed
Example

This example adds an animation to a given shape and animates its accompanying text by character.

Sub NewTextUnitEffect()
    Dim shpFirst As Shape
    Dim tmlMain As TimeLine

    Set shpFirst = ActivePresentation.Slides(1).Shapes(1)
    Set tmlMain = ActivePresentation.Slides(1).TimeLine

    tmlMain.MainSequence.ConvertToTextUnitEffect
        Effect:=tmlMain.MainSequence.AddEffect(Shape:=shpFirst, _
            EffectID:=msoAnimEffectRandomEffects), _
        unitEffect:=msoAnimTextUnitEffectByCharacter
End Sub
Copy Method

Copies the specified object to the Clipboard.

*expression*.Copy

*expression*  Required. An expression that returns a **Selection**, **Shape**, **ShapeRange**, **Slide**, **SlideRange**, or **TextRange** object.
Remarks

Use the *Paste* method to paste the contents of the Clipboard.
Example

This example copies the selection in window one to the Clipboard and then pastes it into the view in window two. If the Clipboard contents cannot be pasted into the view in window two — for example, if you try to paste a shape into slide sorter view — this example fails.

`Windows(1).Selection.Copy`  
`Windows(2).View.Paste`  

This example copies shapes one and two on slide one in the active presentation to the Clipboard and then pastes the copies onto slide two.

`With ActivePresentation`  
`    .Slides(1).Shapes.Range(Array(1, 2)).Copy`  
`    .Slides(2).Shapes.Paste`  
`End With`  

This example copies slide one in the active presentation to the Clipboard.

`ActivePresentation.Slides(1).Copy`  

This example copies the text in shape one on slide one in the active presentation to the Clipboard.

CreateNewDocument Method

Creates a new Web presentation associated with the specified hyperlink.

expression.CreateNewDocument(FileName, EditNow, Overwrite)

expression Required. An expression that returns a Hyperlink object.

FileName Required String. The path and file name of the document.

EditNow Required MsoTriState. Determines whether the document is opened immediately in its associated editor.

MsoTriState can be one of these MsoTriState constants.

msoCTrue
msoFalse Do not open the document immediately.
msoTriStateMixed
msoTriStateToggle
msoTrue Default. Open the document immediately in its associated editor to modify it.

Overwrite Required MsoTriState. Determines whether any existing file of the same name in the same folder is overwritten.

MsoTriState can be one of these MsoTriState constants.

msoCTrue
msoFalse Default. Preserve any existing file of the same name in the same folder, requiring a new file name to be specified in the FileName argument.
msoTriStateMixed
msoTriStateToggle
msoTrue Overwrite any existing file of the same name in the same folder.
Example

This example creates a new Web presentation to be associated with hyperlink one on slide one. The new presentation is called Brittany.ppt, and it overwrites any file of the same name in the HTMLPres folder. The new presentation document is loaded into Microsoft PowerPoint immediately for editing.

ActivePresentation.Slides(1).Hyperlinks(1).CreateNewDocument _
  FileName:="C:\HTMLPres\Brittany.ppt", _
  EditNow:=msoTrue, _
  Overwrite:=msoTrue
CustomDrop Method

Sets the vertical distance (in points) from the edge of the text bounding box to the place where the callout line attaches to the text box. This distance is measured from the top of the text box unless the AutoAttach property is set to True and the text box is to the left of the origin of the callout line (the place that the callout points to). In this case the drop distance is measured from the bottom of the text box.

expression.CustomDrop(Drop)

expression Required. An expression that returns a CalloutFormat object.

Drop Required Single. The drop distance, in points.
Example

This example sets the custom drop distance to 14 points, and specifies that the drop distance always be measured from the top. For the example to work, shape three must be a callout.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(3).Callout
    .CustomDrop 14
    .AutoAttach = False
End With
CustomLength Method

Specifies that the first segment of the callout line (the segment attached to the text callout box) retain a fixed length whenever the callout is moved. Use the AutomaticLength method to specify that the first segment of the callout line be scaled automatically whenever the callout is moved. Applies only to callouts whose lines consist of more than one segment (types msoCalloutThree and msoCalloutFour).

`expression.CustomLength(Length)`

`expression` Required. An expression that returns a CalloutFormat object.

`Length` Required Single. The length of the first segment of the callout, in points.
Remarks

Applying this method sets the AutoLength property to False and sets the Length property to the value specified for the Length argument.
Example

This example toggles between an automatically scaling first segment and one with a fixed length for the callout line for shape one on myDocument. For the example to work, shape one must be a callout.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(1).Callout
    If .AutoLength Then
        .CustomLength 50
    Else
        .AutomaticLength
    End If
End With
Cut Method

Deletes the specified object and places it on the Clipboard.

expression.Cut

expression  Required. An expression that returns a Selection, Shape, ShapeRange, Slide, SlideRange, or TextRange object.
Example

This example deletes the selection in window one and places a copy of it on the Clipboard.

\[\text{Windows(1).Selection.} \textbf{Cut}\]

This example deletes shapes one and two from slide one in the active presentation, places copies of them on the Clipboard, and then pastes the copies onto slide two.

\[\text{With ActivePresentation} \\\ \text{.Slides(1).Shapes.Range(Array(1, 2)).} \textbf{Cut} \\\ \text{.Slides(2).Shapes.Paste} \]
\[\text{End With}\]

This example deletes slide one from the active presentation and places a copy of it on the Clipboard.

\[\text{ActivePresentation.Slides(1).} \textbf{Cut}\]

This example deletes the text in shape one on slide one in the active presentation and places a copy of it on the Clipboard.

\[\text{ActivePresentation.Slides(1).Shapes(1).TextFrame.TextRange.} \textbf{Cut}\]
Delete Method

- Delete method as it applies to the ShapeNodes object.

Deletes a shape node.

\[ \text{expression}.\text{Delete} \left( \text{Index} \right) \]

expression Required. An expression that returns a ShapeNodes object.

Index Required Long. Specifies the node to be deleted. The segment following that node will also be deleted. If the node is a control point of a curve, the curve and all of its nodes will be deleted.

- Delete method as it applies to the Tags object.

Deletes a tag.

\[ \text{expression}.\text{Delete} \left( \text{Name} \right) \]

expression Required. An expression that returns a Tags object.

Name Required String. Specifies the name of the tag to be deleted.

- Delete method as it applies to the all other objects in the Applies To list.

Deletes the specified object.

\[ \text{expression}.\text{Delete} \]

expression Required. An expression that returns one of the objects in the Applies To list except for the ShapeNodes and Tags objects.
Remarks

Attempting to delete the only existing row or column in a table will result in a run-time error.
Example

As it applies to the **Shape** object.

This example deletes all freeform shapes from slide one in the active presentation.

```vba
With Application.ActivePresentation.Slides(1).Shapes
    For intShape = .Count To 1 Step -1
        With .Item(intShape)
            If .Type = msoFreeform Then .Delete
        End With
    Next
End With
```
DeleteText Method

Deletes the text associated with the specified shape.

expression.DeleteText

expression  Required. An expression that returns a TextFrame object.
Example

If shape two on myDocument contains text, this example deletes the text.

Set myDocument = ActivePresentation.Slides(1)
This keyword is not implemented. It is reserved for future use.
Distribute Method

Evenly distributes the shapes in the specified range of shapes. You can specify whether you want to distribute the shapes horizontally or vertically and whether you want to distribute them over the entire slide or just over the space they originally occupy.

(expression).Distribute(DistributeCmd, RelativeTo)

expression Required. An expression that returns a ShapeRange object.

DistributeCmd Required MsoDistributeCmd. Specifies whether shapes in the range are to be distributed horizontally or vertically.

MsoDistributeCmd can be one of these MsoDistributeCmd constants.

msoDistributeHorizontally
msoDistributeVertically

RelativeTo Required MsoTriState. Determines whether shapes are distributed evenly over the entire horizontal or vertical space on the slide.

MsoTriState can be one of these MsoTriState constants.

msoCTrue
msoFalse Distributes the shapes within the horizontal or vertical space that the range of shapes originally occupies.

msoTriStateMixed
msoTriStateToggle
msoTrue Distributes the shapes evenly over the entire horizontal or vertical space on the slide.
Example

This example defines a shape range that contains all the AutoShapes on the myDocument and then horizontally distributes the shapes in this range.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes
    numShapes = .Count
    If numShapes > 1 Then
        numAutoShapes = 0
        ReDim autoShpArray(1 To numShapes)
        For i = 1 To numShapes
            If .Item(i).Type = msoAutoShape Then
                numAutoShapes = numAutoShapes + 1
                autoShpArray(numAutoShapes) = .Item(i).Name
            End If
        Next
        If numAutoShapes > 1 Then
            ReDim Preserve autoShpArray(1 To numAutoShapes)
            Set asRange = .Range(autoShpArray)
            asRange.Distribute msoDistributeHorizontally, msoFalse
        End If
    End If
End With
DoVerb Method

Requests that an OLE object perform one of its verbs. Use the `ObjectVerbs` property to determine the available verbs for an OLE object.

`expression.DoVerb(Index)`

*expression*  Required. An expression that returns an `OLEFormat` object.

*Index*  Optional *Integer*. The verb to perform. If this argument is omitted, the default verb is performed.
Example

This example performs the default verb for shape three on slide one in the active presentation if shape three is a linked or embedded OLE object.

With ActivePresentation.Slides(1).Shapes(3)
    If .Type = msoEmbeddedOLEObject Or _
        .Type = msoLinkedOLEObject Then
        .OLEFormat.DoVerb
    End If
End With

This example performs the verb "Open" for shape three on slide one in the active presentation if shape three is an OLE object that supports the verb "Open."

With ActivePresentation.Slides(1).Shapes(3)
    If .Type = msoEmbeddedOLEObject Or _
        .Type = msoLinkedOLEObject Then
        For Each sVerb In .OLEFormat.ObjectVerbs
            nCount = nCount + 1
            If sVerb = "Open" Then
                .OLEFormat.DoVerb nCount
                Exit For
            End If
        Next
    End If
End With
DrawLine Method

Draws a line in the specified slide show view.

expression.DrawLine(BeginX, BeginY, EndX, Height)

expression  Required. An expression that returns a SlideShowView object.

BeginX, BeginY  Required Single. The position (in points) of the line's starting point relative to the upper-left corner of the slide.

EndX, EndY  Required Single. The position (in points) of the line's ending point relative to the upper-left corner of the slide.
Example

This example draws a line in slide show window one.

SlideShowWindows(1).View.DrawLine 5, 5, 250, 250
Duplicate Method

- Duplicate method as it applies to the **Shape** and **ShapeRange** objects.

Creates a duplicate of the specified **Shape** or **ShapeRange** object, adds the new shape or range of shapes to the **Shapes** collection immediately after the shape or range of shapes specified originally, and then returns the new **Shape** or **ShapeRange** object.

`expression.Duplicate`

`expression` Required. An expression that returns one of the above objects.

- Duplicate method as it applies to the **Slide** and **SlideRange** objects.

Creates a duplicate of the specified **Slide** or **SlideRange** object, adds the new slide or range of slides to the **Slides** collection immediately after the slide or slide range specified originally, and then returns a **Slide** or **SlideRange** object that represents the duplicate slide or slides.

`expression.Duplicate`

`expression` Required. An expression that returns one of the above objects.
Example

- As it applies to the **Shape** and **ShapeRange** objects.

This example adds a new, blank slide at the end of the active presentation, adds a diamond shape to the new slide, duplicates the diamond, and then sets properties for the duplicate. The first diamond will have the default fill color for the active color scheme; the second diamond will be offset from the first one and will have the default shadow color.

```vba
Set mySlides = ActivePresentation.Slides  
Set newSlide = mySlides.Add(mySlides.Count + 1, ppLayoutBlank)  
Set firstObj = newSlide.Shapes._AddShape(msoShapeDiamond, 10, 10, 250, 350)  
With firstObj.Duplicate  
  .Left = 150  
  .Fill.ForeColor.SchemeColor = ppShadow  
End With
```

- As it applies to the **Slide** and **SlideRange** objects.

This example creates a duplicate of slide one in the active presentation and then sets the background shading and the title text of the new slide. The new slide will be slide two in the presentation.

```vba
Set newSlide = ActivePresentation.Slides(1).Duplicate  
With newSlide  
  .Background.Fill.PresetGradient msoGradientVertical,  
  1, msoGradientGold  
End With
```
**EndConnect Method**

Attaches the end of the specified connector to a specified shape. If there's already a connection between the end of the connector and another shape, that connection is broken. If the end of the connector isn't already positioned at the specified connecting site, this method moves the end of the connector to the connecting site and adjusts the size and position of the connector. Use the `BeginConnect` method to attach the beginning of the connector to a shape.

`expression.EndConnect(ConnectedShape, ConnectionSite)`

`expression` Required. An expression that returns a `ConnectorFormat` object.

**ConnectedShape** Required `Shape` object. The shape to attach the end of the connector to. The specified `Shape` object must be in the same `Shapes` collection as the connector.

**ConnectionSite** Required `Long`. A connection site on the shape specified by `ConnectedShape`. Must be an integer between 1 and the integer returned by the `ConnectionSiteCount` property of the specified shape. If you want the connector to automatically find the shortest path between the two shapes it connects, specify any valid integer for this argument and then use the `RerouteConnections` method after the connector is attached to shapes at both ends.
Remarks

When you attach a connector to an object, the size and position of the connector are automatically adjusted, if necessary.
Example

This example adds two rectangles to the first slide in the active presentation and connects them with a curved connector. Notice that the `RerouteConnections` method makes it irrelevant what values you supply for the `ConnectionSite` arguments used with the `BeginConnect` and `EndConnect` methods.

```vba
Set myDocument = ActivePresentation.Slides(1)
Set s = myDocument.Shapes
Set firstRect = s.AddShape(msoShapeRectangle, 100, 50, 200, 100)
Set secondRect = s.AddShape(msoShapeRectangle, 300, 300, 200, 100)
With s.AddConnector(msoConnectorCurve, 0, 0, 100, 100)
    .ConnectorFormat
    .BeginConnect ConnectedShape:=firstRect, ConnectionSite:=1
    .EndConnect ConnectedShape:=secondRect, ConnectionSite:=1
    .Parent.RerouteConnections
End With
```
EndDisconnect Method

Detaches the end of the specified connector from the shape it's attached to. This method doesn't alter the size or position of the connector: the end of the connector remains positioned at a connection site but is no longer connected. Use the BeginDisconnect method to detach the beginning of the connector from a shape.

expression.EndDisconnect

expression  Required. An expression that returns a ConnectorFormat object.
Example

This example adds two rectangles to the first slide in the active presentation, attaches them with a connector, automatically reroutes the connector along the shortest path, and then detaches the connector from the rectangles.

```vba
Set myDocument = ActivePresentation.Slides(1)
Set s = myDocument.Shapes
Set firstRect = s.AddShape(msoShapeRectangle, 100, 50, 200, 100)
Set secondRect = s.AddShape(msoShapeRectangle, 300, 300, 200, 100)
With s.AddConnector(msoConnectorCurve, 0, 0, 0, 0).ConnectorFormat
    .BeginConnect firstRect, 1
    .EndConnect secondRect, 1
    .Parent.RerouteConnections
    .BeginDisconnect
    .EndDisconnect
End With
```
EndNamedShow Method

Switches from running a custom, or named, slide show to running the entire presentation of which the custom show is a subset. When the slide show advances from the current slide, the next slide displayed will be the next one in the entire presentation, not the next one in the custom slide show.

expression.EndNamedShow

expression Required. An expression that returns a SlideShowView object.
**Example**

If a custom slide show is currently running in slide show window one, this example redefines the slide show to include all the slides in the presentation from which the slides in the custom show were selected.

`SlideShowWindows(1).View.EndNamedShow`
EndReview Method

Terminates a review of a file that has been sent for review using the SendForReview method or that has been automatically placed in a review cycle.

expression.EndReview

expression Required. An expression that returns one of the objects in the Applies To list.
Example

This example terminates the review of the active presentation. When executed, this procedure displays a message asking if you want to end the review. This example assumes the active presentation is in a review cycle.

Sub EndPPTRev()
    ActivePresentation.EndReview
End Sub
EraseDrawing Method

Removes lines drawn during a slide show using either the `DrawLine` method or the pen tool.

`expression.EraseDrawing`

`expression` Required. An expression that returns a `SlideShowView` object.
Example

This example erases any lines that have been drawn in slide show window one using either the `DrawLine` method or the pen tool.

`SlideShowWindows(1).View.EraseDrawing`
Exit Method

- Ends the specified slide show.

expression.Exit

expression  Required. An expression that returns a SlideShowView object.
Example

This example ends the slide show that's running in slide show window one.

`SlideShowWindows(1).View.Exit`
Export Method

- Export method as it applies to the Slide and SlideRange objects.
Export method as it applies to the `Presentation` object.
Example

- As it applies to the Presentation object.
- As it applies to the Slide object.
Find Method

Finds the specified text in a text range, and returns a TextRange object that represents the first text range where the text is found. Returns Nothing if no match is found.

expression.Find(FindWhat, After, MatchCase, WholeWords)

expression  Required. An expression that returns a TextRange object.

FindWhat  Required String. The text to search for.

After  Optional Long. The position of the character (in the specified text range) after which you want to search for the next occurrence of FindWhat. For example, if you want to search from the fifth character of the text range, specify 4 for After. If this argument is omitted, the first character of the text range is used as the starting point for the search.

MatchCase  Optional MsoTriState. MsoTrue for the search to distinguish between uppercase and lowercase characters.

MsoTriState can be one of these MsoTriState constants.

msoCTrue
msoFalse  Default.

msoTriStateMixed
msoTriStateToggle
msoTrue  Search matches the case of the letters in the FindWhat argument.

WholeWords  Optional MsoTriState. MsoTrue for the search to find only whole words and not parts of larger words as well.

MsoTriState can be one of these MsoTriState constants.

msoCTrue
msoFalse  Default.
msTriStateMixed
msTriStateToggle
msTrue Search finds only whole words, not parts of larger words.
Example

This example finds every occurrence of "CompanyX" in the active presentation and formats it as bold.

For Each sld In Application.ActivePresentation.Slides
    For Each shp In sld.Shapes
        If shp.HasTextFrame Then
            Set txtRng = shp.TextFrame.TextRange
            Set foundText = txtRng.Find(FindWhat:="CompanyX")
            Do While Not (foundText Is Nothing)
                With foundText
                    .Font.Bold = True
                    Set foundText = _
                        txtRng.Find(FindWhat:="CompanyX", _
                        After:=.Start + .Length - 1)
                End With
            Loop
        End If
    Next
Next
FindBySlideID Method

Returns a Slide object that represents the slide with the specified slide ID number. Each slide is automatically assigned a unique slide ID number when it's created. Use the SlideID property to return a slide's ID number.

expression.FindBySlideID(SlideID)

expression  Required. An expression that returns a Slides collection.

SlideID  Required Long. Specifies the ID number of the slide you want to return. PowerPoint assigns this number when the slide is created.
Remarks

Unlike the SlideIndex property, the SlideID property of a Slide object won't change when you add slides to the presentation or rearrange the slides in the presentation. Therefore, using the FindBySlideID method with the slide ID number can be a more reliable way to return a specific Slide object from a Slides collection than using the Item method with the slide's index number.
Example

This example demonstrates how to retrieve the unique ID number for a Slide object and then use this number to return that Slide object from the Slides collection.

Set gslides = ActivePresentation.Slides

'Get slide ID
graphSlideID = gslides.Add(2, ppLayoutChart).SlideID
gslides.FindBySlideID(graphSlideID)_.SlideShowTransition.EntryEffect = _
ppEffectCoverLeft 'Use ID to return specific slide
FindFirstAnimationFor Method

Returns an Effect object that represents the first animation for a given shape.

expression.FindFirstAnimationFor(Shape)

expression Required. An expression that returns one of the objects in the Applies To list.

Shape Required Shape object. The shape for which to find the first animation.
Example

The following example finds and deletes the first animation for a the first shape on the first slide. This example assumes that at least one animation effect exists for the specified shape.

Sub FindFirstAnimation()
    Dim sldFirst As Slide
    Dim shpFirst As Shape
    Dim effFirst As Effect

    Set sldFirst = ActivePresentation.Slides(1)
    Set shpFirst = sldFirst.Shapes(1)

    Set effFirst = sldFirst.TimeLine.MainSequence_.FindFirstAnimationFor(Shape:=shpFirst)
    effFirst.Delete
End Sub
FindFirstAnimationForClick Method

- Returns an Effect object that represents the first animation started by the specified click number.

expression.FindFirstAnimationForClick(Click)

expression  Required. An expression that returns one of the objects in the Applies To list.

Click  Required Long. The specified click number.
Example

The following example finds the first animation for the first click on the first slide and changes the effect to a bounce.

Sub FindFirstAnimationClick()
    Dim sldFirst As Slide
    Dim effClick As Effect

    Set sldFirst = ActivePresentation.Slides(1)

    Set effClick = sldFirst.TimeLine.MainSequence .FindFirstAnimationForClick(Click:=1)
    effClick.EffectType = msoAnimEffectBounce
End Sub
First Method

Sets the specified slide show view to display the first slide in the presentation.

expression.First

eexpression Required. An expression that returns a SlideShowView object.
Remarks

If you use the First method to switch from one slide to another during a slide show, when you return to the original slide, its animation picks up where it left off.
Example

This example sets slide show window one to display the first slide in the presentation.

`SlideShowWindows(1).View.First`
FitToPage Method

Adjusts the size of the specified document window to accommodate the information that's currently displayed.

`expression.FitToPage`

`expression`  Required. An expression that returns a `DocumentWindow` object.
**Example**

This example exits the current slide show, sets the view in the active window to slide view, sets the zoom to 25 percent, and adjusts the size of the window to fit the slide displayed there.

```vba
Application.SlideShowWindows(1).View.Exit
With Application.ActiveWindow
    .ViewType = ppViewSlide
    .View.Zoom = 25
    .FitToPage
End With
```
Flip Method

Flips the specified shape around its horizontal or vertical axis.

expression.\texttt{Flip(FlipCmd)}

- \textit{expression}\quad Required. An expression that returns a \texttt{Shape} or \texttt{ShapeRange} object.

- \textit{FlipCmd}\quad Required \texttt{MsoFlipCmd}. Specifies whether the shape is to be flipped horizontally or vertically.

\texttt{MsoFlipCmd} can be one of these \texttt{MsoFlipCmd} constants.

\texttt{msoFlipHorizontal}
\texttt{msoFlipVertical}
Example

This example adds a triangle to myDocument, duplicates the triangle, and then flips the duplicate triangle vertically and makes it red.

```
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes _
    .AddShape(msoShapeRightTriangle, 10, 10, 50, 50).Duplicate
    .Fill.ForeColor.RGB = RGB(255, 0, 0)
    .Flip msoFlipVertical
End With
```
Follow Method

Displays the HTML document associated with the specified hyperlink in a new Web browser window.

expression.Follow

expression Required. An expression that returns a Hyperlink object.
Example

This example loads the document associated with the first hyperlink on slide one in a new instance of the Web browser.

ActivePresentation.Slides(1).Hyperlinks(1).Follow
FollowHyperlink Method

Displays a cached document, if it has already been downloaded. Otherwise, this method resolves the hyperlink, downloads the target document and displays it in the appropriate application.

`expression.FollowHyperlink(Address, SubAddress, NewWindow, AddHistory, ExtraInfo, Method, HeaderInfo)`

`expression` Required. An expression that returns a `Presentation` object.

`Address` Required `String`. The address of the target document.

`SubAddress` Optional `String`. The location in the target document. By default, this argument is an empty string.

`NewWindow` Optional `Boolean`. `True` to have the target application opened in a new window. The default value is `False`.

`AddHistory` Optional `Boolean`. `True` to add the link to the current day's history folder.

`ExtraInfo` Optional `String`. String or byte array that specifies information for HTTP. This argument can be used, for example, to specify the coordinates of an image map or the contents of a form. It can also indicate a FAT file name. The `Method` argument determines how this extra information is handled.

`Method` Optional `MsoExtraInfoMethod`. Specifies how `ExtraInfo` is posted or appended.

MsoExtraInfoMethod can be one of these MsoExtraInfoMethod constants.

`msoMethodGet` Default. `ExtraInfo` is a `String` that is appended to the address.

`msoMethodPost` `ExtraInfo` is posted as a `String` or byte array.

`HeaderInfo` Optional `String`. A string that specifies header information for the HTTP request. The default value is an empty string. You can combine several
header lines into a single string by using the following syntax: "string1" & vbCr & "string2". The specified string is automatically converted into ANSI characters. Note that the HeaderInfo argument may overwrite default HTTP header fields.
Example

This example loads the document at example.microsoft.com in a new window and adds it to the history folder.

ActivePresentation.FollowHyperlink
  Address:="http://example.microsoft.com",
  NewWindow:=True, AddHistory:=True
GotoNamedShow Method

Switches to the specified custom, or named, slide show during another slide show. When the slide show advances from the current slide, the next slide displayed will be the next one in the specified custom slide show, not the next one in current slide show.

expression.GotoNamedShow(SlideShowName)

expression  Required. An expression that returns a SlideShowView object.

**SlideShowName**  Required **String**. The name of the custom slide show to be switched to.
**Example**

This example redefines the slide show running in slide show window one to include only the slides in the custom slide show named "Quick Show."

`SlideShowWindows(1).View.GotoNamedShow "Quick Show"`
Show All
GotoSlide Method

- **GotoSlide method as it applies to the View object.**

Switches to the specified slide.

expression.GotoSlide(Index)

*expression*  Required. An expression that returns a **View** object.

*Index*  Required **Integer**. The number of the slide to switch to.

- **GotoSlide method as it applies to the SlideShowView object.**

Switches to the specified slide during a slide show. You can specify whether you want the animation effects to be rerun.

expression.GotoSlide(Index, ResetSlide)

*expression*  Required. An expression that returns a **SlideShowView** object.

*Index*  Required **Integer**. The number of the slide to switch to.

*ResetSlide*  Optional **MsoTriState**. If you switch from one slide to another during a slide show with *ResetSlide* set to **msoFalse**, when you return to the first slide, its animation picks up where it left off. If you switch from one slide to another with *ResetSlide* set to **msoTrue**, when you return to the first slide, its entire animation starts over. The default value is **msoTrue**.

MsoTriState can be one of these MsoTriState constants.

**msoCTrue**

**msoFalse**

**msoTriStateMixed**
msoTriStateToggle
msoTrue Default.
**Example**

This example switches from the current slide to the slide three in slide show window one. If you switch back to the current slide during the slide show, its entire animation will start over.

```vba
With SlideShowWindows(1).View
    .GotoSlide 3
End With
```

This example switches from the current slide to the slide three in slide show window one. If you switch back to the current slide during the slide show, its animation will pick up where it left off.

```vba
With SlideShowWindows(1).View
    .GotoSlide 3, msoFalse
End With
```
Group Method

Groups the shapes in the specified range. Returns the grouped shapes as a single Shape object.

expression.Group

expression  Required. An expression that returns a ShapeRange object.
Remarks

Because a group of shapes is treated as a single shape, grouping and ungrouping shapes changes the number of items in the **Shapes** collection and changes the index numbers of items that come after the affected items in the collection.
Example

This example adds two shapes to myDocument, groups the two new shapes, sets the fill for the group, rotates the group, and sends the group to the back of the drawing layer.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes
    .AddShape(msoShapeCan, 50, 10, 100, 200).Name = "shpOne"
    .AddShape(msoShapeCube, 150, 250, 100, 200).Name = "shpTwo"
With .Range(Array("shpOne", "shpTwo")).Group
    .Fill.PresetTextured msoTextureBlueTissuePaper
    .Rotation = 45
    .ZOrder msoSendToBack
End With
End With
Help Method

Displays a Help topic.

\textit{expression}.Help(\textit{HelpFile}, \textit{ContextID})

\textit{expression}   Required. An expression that returns an \textbf{Application} object.

\textit{HelpFile}   Optional \textbf{String}. The name of the Help file you want to display. Can be either a .chm or an .hlp file. If this argument isn't specified, Microsoft PowerPoint Help is used.

\textit{ContextID}   Optional \textbf{Long}. The context ID number for the Help topic. If this argument isn't specified or if it specifies a context ID number that is not associated with a Help topic, the \textbf{Help Topics} dialog box is displayed.
Example

This example displays topic number 65527 in the Help file MyHelpFile.chm.

```
Application.Help "MyHelpFile.chm", 65527
```
**ImportFromFile Method**

Specifies the sound that will be played whenever the specified shape is clicked or animated or whenever the specified slide transition occurs.

`expression.ImportFromFile(FullName)`

*expression* Required. An expression that returns a **SoundEffect** object.

*FullName* Required **String**. The name of the specified sound file.
Example

This example specifies that the file Dudududu.wav will start to play at the transition to slide two in the active presentation and will continue to play until the next sound starts.

With ActivePresentation.Slides(2).SlideShowTransition
  .SoundEffect.ImportFromFile "c:\sndsys\dudududu.wav"
  .LoopSoundUntilNext = True
End With
IncrementBrightness Method

Changes the brightness of the picture by the specified amount. Use the Brightness property to set the absolute brightness of the picture.

expression.IncrementBrightness(Increment)

expression Required. An expression that returns a PictureFormat object.

Increment Required Single. Specifies how much to change the value of the Brightness property for the picture. A positive value makes the picture brighter; a negative value makes the picture darker.
Remarks

You cannot adjust the brightness of a picture past the upper or lower limit for the **Brightness** property. For example, if the **Brightness** property is initially set to 0.9 and you specify 0.3 for the **Increment** argument, the resulting brightness level will be 1.0, which is the upper limit for the **Brightness** property, instead of 1.2.
Example

This example creates a duplicate of shape one on myDocument and then moves and darkens the duplicate. For the example to work, shape one must be either a picture or an OLE object.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(1).Duplicate
  .PictureFormat.IncrementBrightness -0.2
  .IncrementLeft 50
  .IncrementTop 50
End With
IncrementContrast Method

Changes the contrast of the picture by the specified amount. Use the Contrast property to set the absolute contrast for the picture.

expression.IncrementContrast(Increment)

expression Required. An expression that returns a PictureFormat object.

Increment Required Single. Specifies how much to change the value of the Contrast property for the picture. A positive value increases the contrast; a negative value decreases the contrast.
Remarks

You cannot adjust the contrast of a picture past the upper or lower limit for the *Contrast* property. For example, if the *Contrast* property is initially set to 0.9 and you specify 0.3 for the *Increment* argument, the resulting contrast level will be 1.0, which is the upper limit for the *Contrast* property, instead of 1.2.
Example

This example increases the contrast for all pictures on myDocument that aren't already set to maximum contrast.

Set myDocument = ActivePresentation.Slides(1)
For Each s In myDocument.Shapes
    If s.Type = msoPicture Then
        s.PictureFormat.IncrementContrast 0.1
    End If
Next
IncrementLeft Method

Moves the specified shape horizontally by the specified number of points.

\textit{expression}.\texttt{IncrementLeft(Increment)}

\textit{expression} Required. An expression that returns a \texttt{Shape} object.

\textit{Increment} Required \texttt{Single}. Specifies how far the shape is to be moved horizontally, in points. A positive value moves the shape to the right; a negative value moves it to the left.
Example

This example duplicates shape one on myDocument, sets the fill for the duplicate, moves it 70 points to the right and 50 points up, and rotates it 30 degrees clockwise.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(1).Duplicate
        .Fill.PresetTextured msoTextureGranite
        .IncrementLeft 70
        .IncrementTop -50
        .IncrementRotation 30
End With
IncrementOffsetX Method

Changes the horizontal offset of the shadow by the specified number of points. Use the OffsetX property to set the absolute horizontal shadow offset.

expression.IncrementOffsetX(Increment)

expression  Required. An expression that returns a ShadowFormat object.

Increment  Required Single. Specifies how far the shadow offset is to be moved horizontally, in points. A positive value moves the shadow to the right; a negative value moves it to the left.
Example

This example moves the shadow for shape three on myDocument to the left by 3 points.

Set myDocument = ActivePresentation.Slides(1)  
**Increment_OffsetY Method**

Changes the vertical offset of the shadow by the specified number of points. Use the **OffsetY** property to set the absolute vertical shadow offset.

*expression*.Increment_OffsetY(*Increment*)

*expression*  Required. An expression that returns a **ShadowFormat** object.

*Increment*  Required **Single**. Specifies how far the shadow offset is to be moved vertically, in points. A positive value moves the shadow down; a negative value moves it up.
Example

This example moves the shadow for shape three on myDocument up by 3 points.

```vba
Set myDocument = ActivePresentation.Slides(1)
```
**IncrementRotation Method**

Changes the rotation of the specified shape around the z-axis, by the specified number of degrees. Use the Rotation property to set the absolute rotation of the shape.

`expression.IncrementRotation(Increment)`

*expression*  Required. An expression that returns a Shape object.

*Increment*  Required Single. Specifies how far the shape is to be rotated horizontally, in degrees. A positive value rotates the shape clockwise; a negative value rotates it counterclockwise.
Remarks

To rotate a three-dimensional shape around the x-axis or the y-axis, use the `IncrementRotationX` method or the `IncrementRotationY` method.
Example

This example duplicates shape one on myDocument, sets the fill for the duplicate, moves it 70 points to the right and 50 points up, and rotates it 30 degrees clockwise.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(1).Duplicate
  .Fill.PresetTextured msoTextureGranite
  .IncrementLeft 70
  .IncrementTop -50
  .IncrementRotation 30
End With
IncrementRotationX Method

Changes the rotation of the specified shape around the x-axis by the specified number of degrees. Use the RotationX property to set the absolute rotation of the shape around the x-axis.

expression.IncrementRotationX(Increment)

**expression**  Required. An expression that returns a ThreeDFormat object.

**Increment**  Required Single. Specifies how much (in degrees) the rotation of the shape around the x-axis is to be changed. Can be a value from –90 through 90. A positive value tilts the shape up; a negative value tilts it down.
Remarks

You cannot adjust the rotation around the x-axis of the specified shape past the upper or lower limit for the RotationX property (90 degrees to –90 degrees). For example, if the RotationX property is initially set to 80 and you specify 40 for the Increment argument, the resulting rotation will be 90 (the upper limit for the RotationX property) instead of 120.

To change the rotation of a shape around the y-axis, use the IncrementRotationY method. To change the rotation around the z-axis, use the IncrementRotation method.
Example

This example tilts shape one on myDocument up 10 degrees. Shape one must be an extruded shape for you to see the effect of this code.

Set myDocument = ActivePresentation.Slides(1)
myDocument.Shapes(1).ThreeD.IncrementRotationX 10
IncrementRotationY Method

Changes the rotation of the specified shape around the y-axis by the specified number of degrees. Use the RotationY property to set the absolute rotation of the shape around the y-axis.

expression.IncrementRotationY(Increment)

expression Required. An expression that returns a ThreeDFormat object.

Increment Required Single. Specifies how much (in degrees) the rotation of the shape around the y-axis is to be changed. Can be a value from –90 through 90. A positive value tilts the shape to the left; a negative value tilts it to the right.
**Remarks**

To change the rotation of a shape around the x-axis, use the **IncrementRotationX** method. To change the rotation around the z-axis, use the **IncrementRotation** method.

You cannot adjust the rotation around the y-axis of the specified shape past the upper or lower limit for the **RotationY** property (90 degrees to –90 degrees). For example, if the **RotationY** property is initially set to 80 and you specify 40 for the **Increment** argument, the resulting rotation will be 90 (the upper limit for the **RotationY** property) instead of 120.
Example

This example tilts shape one on myDocument 10 degrees to the right. Shape one must be an extruded shape for you to see the effect of this code.

```vbnet
Set myDocument = ActivePresentation.Slides(1)
myDocument.Shapes(1).ThreeD.IncrementRotationY -10
```
IncrementTop Method

Moves the specified shape vertically by the specified number of points.

\[ \text{expression}\texttt{.IncrementTop(Increment)} \]

*expression* Required. An expression that returns a **Shape** object.

*Increment* Required **Single**. Specifies how far the shape object is to be moved vertically, in points. A positive value moves the shape down; a negative value moves it up.
Example

This example duplicates shape one on myDocument, sets the fill for the duplicate, moves it 70 points to the right and 50 points up, and rotates it 30 degrees clockwise.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(1).Duplicate
  .Fill.PresetTextured msoTextureGranite
  .IncrementLeft 70
  .IncrementTop -50
  .IncrementRotation 30
End With
Show All
Insert Method

Inserts a new segment after the specified node of the freeform.

expression.Insert(Index, SegmentType, EditingType, X1, Y1, X2, Y2, X3, Y3)

expression  Required. An expression that returns a ShapeNodes object.

Index  Required Long. The node that the new node is to be inserted after.

SegmentType  Required MsoSegmentType. The type of segment to be added.

MsoSegmentType can be one of these MsoSegmentType constants.

msoSegmentCurve
msoSegmentLine

EditingType  Required MsoEditingType. The editing property of the vertex.

MsoEditingType can be one of these MsoEditingType constants (cannot be msoEditingSmooth or msoEditingSymmetric).

msoEditingAuto
msoEditingCorner

X1  Required Single. If the EditingType of the new segment is msoEditingAuto, this argument specifies the horizontal distance (in points) from the upper-left corner of the document to the end point of the new segment. If the EditingType of the new node is msoEditingCorner, this argument specifies the horizontal distance (in points) from the upper-left corner of the document to the first control point for the new segment.

Y1  Required Single. If the EditingType of the new segment is msoEditingAuto, this argument specifies the vertical distance (in points) from the upper-left corner of the document to the end point of the new segment. If the EditingType of the new node is msoEditingCorner, this argument specifies the
vertical distance (in points) from the upper-left corner of the document to the first control point for the new segment.

**X2** Optional *Single*. If the *EditingType* of the new segment is *msoEditingCorner*, this argument specifies the horizontal distance (in points) from the upper-left corner of the document to the second control point for the new segment. If the *EditingType* of the new segment is *msoEditingAuto*, don't specify a value for this argument.

**Y2** Optional *Single*. If the *EditingType* of the new segment is *msoEditingCorner*, this argument specifies the vertical distance (in points) from the upper-left corner of the document to the second control point for the new segment. If the *EditingType* of the new segment is *msoEditingAuto*, don't specify a value for this argument.

**X3** Optional *Single*. If the *EditingType* of the new segment is *msoEditingCorner*, this argument specifies the horizontal distance (in points) from the upper-left corner of the document to the end point of the new segment. If the *EditingType* of the new segment is *msoEditingAuto*, don't specify a value for this argument.

**Y3** Optional *Single*. If the *EditingType* of the new segment is *msoEditingCorner*, this argument specifies the vertical distance (in points) from the upper-left corner of the document to the end point of the new segment. If the *EditingType* of the new segment is *msoEditingAuto*, don't specify a value for this argument.
Example

This example adds a smooth node with a curved segment after node four in shape three on myDocument. Shape three must be a freeform drawing with at least four nodes.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(3).Nodes
  .Insert Index:=4, SegmentType:=msoSegmentCurve, _
    EditingType:=msoEditingSmooth, X1:=210, Y1:=100
End With
InsertAfter Method

Appends a string to the end of the specified text range. Returns a TextRange object that represents the appended text. When used without an argument, this method returns a zero-length string at the end of the specified range.

expression.InsertAfter(NewText)

expression  Required. An expression that returns a TextRange object.

NewText  Optional String. The text to be inserted. The default value is an empty string.
Example

This example appends the string ": Test version" to the end of the title on slide one in the active presentation.

```vba
With Application.ActivePresentation.Slides(1).Shapes(1)
    .TextFrame.TextRange.InsertAfter ": Test version"
End With
```

This example appends the contents of the Clipboard to the end of the title on slide one.

```vba
Application.ActivePresentation.Slides(1).Shapes(1).TextFrame._
    .TextRange.InsertAfter.Paste
```
InsertBefore Method

Appends a string to the beginning of the specified text range. Returns a TextRange object that represents the appended text. When used without an argument, this method returns a zero-length string at the end of the specified range.

expression.InsertBefore(NewText)

expression  Required. An expression that returns a TextRange object.

NewText  Optional String. The text to be appended. The default value is an empty string.
Example

This example appends the string "Test version: " to the beginning of the title on slide one in the active presentation.

```vba
With Application.ActivePresentation.Slides(1).Shapes(1)
    .TextFrame.TextRange.InsertBefore "Test version: 
End With
```

This example appends the contents of the Clipboard to the beginning of the title on slide one in the active presentation.

```vba
```
InsertDateTime Method

Inserts the date and time in the specified text range. Returns a TextRange object that represents the inserted text.

expression.InsertDateTime(DateTimeFormat, InsertAsField)

expression Required. An expression that returns a TextRange object.

DateTimeFormat Required PpDateTimeFormat. A format for the date and time.

PpDateTimeFormat can be one of these PpDateTimeFormat constants.

- ppDateTimeddddMMMMMddyyyy
- ppDateTimeEd MMMyyyy
- ppDateTimeEd MMMyy
- ppDateTimeFormatMixed
- ppDateTimeHmm
- ppDateTimeHmmmAMPM
- ppDateTimeHmmmss
- ppDateTimeHmmmssAMPM
- ppDateTimeMdyy
- ppDateTimeMddyyHmmm
- ppDateTimeMMdyyyyhmmAMPM
- ppDateTimeMMMddyyyy
- ppDateTimeMMyyyy
- ppDateTimeMMyy

InsertAsField Optional MsoTriState. Determines whether the inserted date and time will be updated each time the presentation is opened.

MsoTriState can be one of these MsoTriState constants.
msoCTrue
msoFalse Default.
msoTriStateMixed
msoTriStateToggle
msoTrue Updates the inserted date and time each time the presentation is opened.
Example

This example inserts the date and time after the first sentence of the first paragraph in shape two on slide one in the active presentation.

Set sh = Application.ActivePresentation.Slides(1).Shapes(2)
Set sentOne = sh.TextFrame.TextRange.Paragraphs(1).Sentences(1)
sentOne.InsertAfter.InsertDateTime ppDateTimeMdyy
InsertFromFile Method

Inserts slides from a file into a presentation, at the specified location. Returns an integer that represents the number of slides inserted.

```
expression.InsertFromFile(FileName, Index, SlideStart, SlideEnd)
```

**expression**  Required. An expression that returns a `Slides` collection.

**FileName**  Required `String`. The name of the file that contains the slides you want to insert.

**Index**  Required `Long`. The index number of the `Slide` object in the specified `Slides` collection you want to insert the new slides after.

**SlideStart**  Optional `Long`. The index number of the first `Slide` object in the `Slides` collection in the file denoted by `FileName`.

**SlideEnd**  Optional `Long`. The index number of the last `Slide` object in the `Slides` collection in the file denoted by `FileName`. 
Example

This example inserts slides three through six from C:\Ppt\Sales.ppt after slide two in the active presentation.

ActivePresentation.Slides.InsertFromFile _
"c:\ppt\sales.ppt", 2, 3, 6
InsertSlideNumber Method

Inserts the slide number of the current slide into the specified text range. Returns a TextRange object that represents the slide number.

expression.InsertSlideNumber

expression  Required. An expression that returns a TextRange object.
Remarks

The inserted slide number is automatically updated when the slide number of the current slide changes.
**Example**

This example inserts the slide number of the current slide after the first sentence of the first paragraph in shape two on slide one in the active presentation.

```vba
Set sh = Application.ActivePresentation.Slides(1).Shapes(2)
Set sentOne = sh.TextFrame.TextRange.Paragraphs(1).Sentences(1)
sentOne.InsertAfter.**InsertSlideNumber**
```
Show All
InsertSymbol Method

Returns a TextRange object that represents a symbol inserted into the specified text range.

expression.InsertSymbol(FontName, CharNumber, Unicode)

expression Required. An expression that returns a TextRange object.

FontName Required String. The font name.

CharNumber Required Long. The Unicode or ASCII character number.

Unicode Optional MsoTriState. Specifies whether the CharNumber argument represents an ASCII or Unicode character.

MsoTriState can be one of these MsoTriState constants.

msoCTrue Doesn't apply to this method.
msoFalse Default. The CharNumber argument represents an ASCII character number.
msoTriStateMixed Doesn't apply to this method.
msoTriStateToggle Doesn't apply to this method.
msoTrue The CharNumber argument represents a Unicode character.
Example

This example inserts the Registered Trademark symbol after the first sentence of the first paragraph in a new text box on the first slide in the active presentation.

Sub Symbol()
    Dim txtBox As Shape

        'Add text box
        Set txtBox = Application.ActivePresentation.Slides(1) _
                    .Shapes.AddTextbox(Orientation:=msoTextOrientationHorizontal _
                               Left:=100, Top:=100, Width:=100, Height:=100)

        'Add symbol to text box
        txtBox.TextFrame.TextRange.InsertSymbol _
        FontName:="Symbol", CharNumber:=226

End Sub
Item Method

- Item method as it applies to the **ActionSettings** object.

Returns a single action setting from the specified **ActionSettings** collection.

*expression*.**Item**(Index)

*expression*  Required. An expression that returns an **ActionSettings** collection.

**Index**  Required **PpMouseActivation**. The action setting for a MouseClick or MouseOver event.

PpMouseActivation can be one of these PpMouseActivation constants.

- **ppMouseClick**  The action setting for when the user clicks the shape.
- **ppMouseOver**  The action setting for when the mouse pointer is positioned over the specified shape.

- Item method as it applies to the **AddIns**, **CanvasShapes**, **Designs**, **DiagramNodeChildren**, **DiagramNodes**, **Fonts**, **GroupShapes**, **NamedSlideShows**, **Presentations**, **ShapeNodes**, **ShapeRange**, **Shapes**, **SlideRange**, and **Slides** objects.

Returns a single object from the specified collection.

*expression*.**Item**(Index)

*expression*  Required. An expression that returns one of the above objects.

**Index**  Required **Variant**. The name or index number of the single object in the collection to be returned.


Returns a single object from the specified collection.

\[expression.Item(Index)\]

*expression*  Required. An expression that returns an AnimationBehaviors collection.

*Index*  Required *Long*. The index number of the single object in the collection to be returned.

- Item method as it applies to the **Borders** object.

Returns a **LineFormat** object for the specified border.

\[expression.Item(BorderType)\]

*expression*  Required. An expression that returns a **Borders** collection.

*BorderType*  Required **PpBorderType**. Specifies which border of a cell or cell range is to be returned.

PpBorderType can be one of these PpBorderType constants.

- **ppBorderBottom**
- **ppBorderDiagonalDown**
- **ppBorderDiagonalUp**
- **ppBorderLeft**
- **ppBorderRight**
- **ppBorderTop**

- Item method as it applies to the **Tags** object.

Returns a single tag from the specified **Tags** collection.

\[expression.Item(Name)\]

*expression*  Required. An expression that returns a **Tags** object.
Name Required **String**. The name of the single tag in the collection to be returned.

- Item method as it applies to the **TextStyles** object.

Returns a single text style from the specified **TextStyles** collection.

```plaintext
expression.Item(Type)
```

*expression* Required. An expression that returns a **TextStyles** collection.

**Type** Required **PpTextStyleType**. The text style type.

PpTextStyleType can be one of these PpTextStyleType constants.

- **ppBodyStyle**
- **ppDefaultStyle**
- **ppTitleStyle**
Remarks

The **Item** method is the **default member** for a collection. For example, the following two lines of code are equivalent:

```vbnet
ActivePresentation.Slides.Item(1)
ActivePresentation.Slides(1)
```

For more information about returning a single member of a collection, see [Returning an Object from a Collection](#).
Example

- **As it applies to the **ActionSettings** object.**

This example sets shape three on slide one to play the sound of applause and uses the **AnimateAction** property to specify that the shape's color is to be momentarily inverted when the shape is clicked during a slide show.

```
With ActivePresentation.Slides.Item(1).Shapes _
    .Item(3).ActionSettings.Item(ppMouseClick)
    .SoundEffect.Name = "applause"
    .AnimateAction = True
End With
```

- **As it applies to the **RulerLevels** object.**

This example sets the first-line indent and the hanging indent for outline level one in body text on the slide master for the active presentation.

```
With ActivePresentation.SlideMaster.TextStyles.Item(ppBodyStyle)  
    With .Ruler.Levels.Item(1) ' sets indents for level 1
        .FirstMargin = 9
        .LeftMargin = 54
    End With
End With
```

- **As it applies to the **Shapes** object.**

This example sets the foreground color to red for the shape named "Rectangle 1" on slide one in the active presentation.

```
ActivePresentation.Slides.Item(1).Shapes.Item("rectangle 1").Fill _
    .ForeColor.RGB = RGB(128, 0, 0)
```

- **As it applies to the **Tags** object.**

This example hides all slides in the active presentation that don't have the value "east" for the "region" tag.

```
For Each s In ActivePresentation.Slides  
    If s.Tags.Item("region") <> "east" Then
```
s.SlideShowTransition.Hidden = True
End If
Next
LargeScroll Method

Scrolls through the specified document window by pages.

expression.LargeScroll(Down, Up, ToRight,ToLeft)

expression Required. An expression that returns a DocumentWindow object.

Down  Optional Long. Specifies the number of pages to scroll down.

Up   Optional Long. Specifies the number of pages to scroll up.

ToRight  Optional Long. Specifies the number of pages to scroll right.

ToLeft  Optional Long. Specifies the number of pages to scroll left.
Remarks

If no arguments are specified, this method scrolls down one page. If Down and Up are both specified, their effects are combined. For example, if Down is 2 and Up is 4, this method scrolls up two pages. Similarly, if Right and Left are both specified, their effects are combined.

Any of the arguments can be a negative number.
Example

This example scrolls the active window down three pages.

Application.ActiveWindow.LargeScroll Down:=3
Last Method

Sets the specified slide show view to display the last slide in the presentation.

expression.Last

expression Required. An expression that returns a SlideShowView object.
Remarks

If you use the **Last** method to switch from one slide to another during a slide show, when you return to the original slide, its animation picks up where it left off.
**Example**

This example sets slide show window one to display the last slide in the presentation.

`SlideShowWindows(1).View.Last`
**Lines Method**

Returns a **TextRange** object that represents the specified subset of text lines. For information about counting or looping through the lines in a text range, see the **TextRange** object.

```
expression.Lines(Start, Length)
```

*expression*  Required. An expression that returns a **TextRange** object.

*Start*  Optional **Long**. The first line in the returned range.

*Length*  Optional **Long**. The number of lines to be returned.
Remarks

If both `Start` and `Length` are omitted, the returned range starts with the first line and ends with the last paragraph in the specified range.

If `Start` is specified but `Length` is omitted, the returned range contains one line.

If `Length` is specified but `Start` is omitted, the returned range starts with the first line in the specified range.

If `Start` is greater than the number of lines in the specified text, the returned range starts with the last line in the specified range.

If `Length` is greater than the number of lines from the specified starting line to the end of the text, the returned range contains all those lines.
Example

This example formats as italic the first two lines of the second paragraph in shape two on slide one in the active presentation.

Load Method

Returns a Design object that represents a design loaded into the master list of the specified presentation.

expression.Load(TemplateName, Index)

expression   Required. An expression that returns one of the objects in the Applies To list.

TemplateName   Required String. The path to the design template.

Index   Optional Long. The index number of the design template in the collection of design templates. The default is -1, which means the design template is added to the end of the list of designs in the presentation.
Example

This example add a design template to the beginning of the collection of design templates in the active presentation. This example assumes the "artsy.pot" template is located at the specified path.

Sub LoadDesign()
    ActivePresentation.Designs.Load TemplateName:="C:\Program Files\Microsoft Office\Templates\Presentation Designs\Balance.pot"
End Sub
LtrRun Method

Sets the direction of text in a text range to read from left to right.

\textit{expression}.\textit{LtrRun}

\textit{expression}  Required. An expression that returns a \texttt{TextRange} object.
Remarks

This method makes it possible to use text from both left-to-right and right-to-left languages in the same presentation.
Example

The following example finds all of the shapes on slide one that contain text and changes the text to read from left to right.

ActiveWindow.ViewType = ppViewSlide
For Each sh In ActivePresentation.Slides(1).Shapes
    If sh.HasTextFrame Then
        sh.TextFrame.TextRange.LtrRun
    End If
Next
Merge Method

- Merge method as it applies to the Cell object.

Merges one table cell with another. The result is a single table cell.

\[ expression . \text{Merge}(\text{MergeTo}) \]

expression Required. An expression that returns a Cell object.

MergeTo Required Cell object. Cell object to be merged with. Use the syntax .Cell(row, column).

- Merge method as it applies to the Presentation object.

Merges one presentation into another presentation.

\[ expression . \text{Merge}(\text{Path}) \]

expression Required. An expression that returns one of the above objects.

Path Required String. The full path of a file to merge with this presentation.
Remarks

This method returns an error if the filename cannot be opened, or the presentation has a baseline.
Example

This example merges the first two cells of row one in the specified table.

With ActivePresentation.Slides(2).Shapes(5).Table.Cell(1, 1).Merge MergeTo:=.Cell(1, 2)
End With
MoveAfter Method

Moves one animation effect to after another animation effect.

\[ expression.MoveAfter(Effect) \]

*expression* Required. An expression that returns one of the objects in the Applies To list.

*Effect* Required *Effect* object. The effect after which the effect in *expression* will be moved.
Example

The following example moves one effect to after another.

Sub MoveEffect()
    Dim effOne As Effect
    Dim effTwo As Effect
    Dim shpFirst As Shape

    Set shpFirst = ActivePresentation.Slides(1).Shapes(1)
    Set effOne = ActivePresentation.Slides(1).TimeLine.MainSequence. (Shape:=shpFirst, effectId:=msoAnimEffectBlinds)
    Set effTwo = ActivePresentation.Slides(1).TimeLine.MainSequence. (Shape:=shpFirst, effectId:=msoAnimEffectBlast)
    effOne.MoveAfter Effect:=effTwo
End Sub
MoveBefore Method

- Moves one animation effect to before another animation effect.

expression.MoveBefore(Effect)

expression Required. An expression that returns one of the objects in the Applies To list.

Effect Required Effect object. The effect before which the effect in expression will be moved.
**Example**

The following example moves one effect in front of another one.

```vba
Sub MoveEffect()
    Dim effOne As Effect
    Dim effTwo As Effect
    Dim shpFirst As Shape

    Set shpFirst = ActivePresentation.Slides(1).Shapes(1)
    Set effOne = ActivePresentation.Slides(1).TimeLine.MainSequence.
        (Shape:=shpFirst, effectId:=msoAnimEffectBlinds)
    Set effTwo = ActivePresentation.Slides(1).TimeLine.MainSequence.
        (Shape:=shpFirst, effectId:=msoAnimEffectBlast)

    effTwo.MoveBefore Effect:=effOne
End Sub
```
MoveNode Method

Moves a diagram node, and any of its child nodes, within a diagram.

expression.MoveNode(TargetNode, Pos)

expression Required. An expression that returns one of the objects in the Applies To list.

TargetNode Required DiagramNode object. The source diagram node for the move.

Pos Required MsoRelativeNodePosition. Specifies where the node will be added, relative to TargetNode.

MsoRelativeNodePosition can be one of these MsoRelativeNodePosition constants.
msAfterLastSibling
msAfterNode
msBeforeFirstSibling
msBeforeNode
Example

The following example moves the second diagram node of a newly-created diagram to after the fourth node.

```
Sub MoveDiagramNode()
    Dim dgnNode As DiagramNode
    Dim shpDiagram As Shape
    Dim intCount As Integer

    'Add pyramid diagram to the current document
    Set shpDiagram = ActivePresentation.Slides(1).Shapes.
       .AddDiagram(Type:=msoDiagramPyramid,
                         Left:=10,
                         Top:=15,
                         Width:=400,
                         Height:=475)

    'Add four child nodes to the pyramid diagram

    For intCount = 1 To 3
        dgnNode.AddNode
    Next intCount

    'Move the second node to after where the fourth node is currently located.
        TargetNode:=dgnNode.Diagram.Notes(4),
        Pos:=msoAfterLastSibling

End Sub
```
**MoveTo Method**

Moves the specified object to a specific location within the same collection, renumbering all other items in the collection appropriately.

\[ expression.MoveTo(toPos) \]

*expression*  Required. An expression that returns one of the objects in the Applies To list.

*toPos*  Required *Long*. The index to which to move the animation effect.
Example

This example moves an animation effect to the second in the animation effects collection for the specified shape.

Sub MoveEffect()
    Dim sldFirst as Slide
    Dim shpFirst As Shape
    Dim effAdd As Effect

    Set sldFirst = ActivePresentation.Slides(1)
    Set shpFirst = sldFirst.Shapes(1)

    Set effAdd = sldFirst.TimeLine.MainSequence.AddEffect _
            (Shape:=shpFirst, effectId:=msoAnimEffectBlinds)

    effAdd.MoveTo toPos:=2
End Sub

This example moves the second slide in the active presentation to the first slide.

Sub MoveSlideToNewLocation()
    ActivePresentation.Slides(2).MoveTo toPos:=1
End Sub
Name Method

Returns the name of the specified tag as a **String**.

*expression*.Name(*Index*)

*expression*  Required. An expression that returns a **Tags** collection.

*Index*  Required **Long**. The tag number.
Example

This example displays the name and value for each tag associated with slide one in the active presentation.

```
With Application.ActivePresentation.Slides(1).Tags
    For i = 1 To .Count
        MsgBox "Tag #" & i & ": Name = " & .Name(i)
        MsgBox "Tag #" & i & ": Value = " & .Value(i)
    Next
End With
```

This example searches through the tags for each slide in the active presentation. If there's a tag named "PRIORITY," a message box displays the tag value. If there isn't a tag named "PRIORITY," the example adds this tag with the value "Unknown."

```
For Each s In Application.ActivePresentation.Slides
    With s.Tags
        found = False
        For i = 1 To .Count
            If .Name(i) = "PRIORITY" Then
                found = True
                slNum = .Parent.SlideIndex
                MsgBox "Slide " & slNum & " priority: " & .Value(i)
            End If
        Next
        If Not found Then
            slNum = .Parent.SlideIndex
            .Add "Name", "New Figures"
            .Add "Priority", "Unknown"
            MsgBox "Slide " & slNum & " priority tag added: Unknown"
        End If
    End With
Next
```
NewWindow Method

**Presentation** object: Opens a new window that contains the specified presentation. Returns a **DocumentWindow** object that represents the new window.

**DocumentWindow** object: Opens a new window that contains the same document that's displayed in the specified window. Returns a **DocumentWindow** object that represents the new window.

`expression.NewWindow`

`expression` Required. An expression that returns one of the objects in the Applies To list.
Example

This example creates a new window with the contents of the active window (this activates the new window) and then switches back to the first window.

Set oldW = Application.ActiveWindow
Set newW = oldW.NewWindow
oldW.Activate
Next Method

Displays the slide immediately following the slide that's currently displayed. If the last slide is displayed, the Next method closes the slide show in speaker mode and returns to the first slide in kiosk mode. Use the View property of the SlideShowWindow object to return the SlideShowView object.

expression.Next

expression Required. An expression that returns one of the items in the Applies To list.
Example

This example shows the slide immediately following the currently displayed slide on slide show window one.

`SlideShowWindows(1).View.Next`
NextNode Method

- Returns a **DiagramNode** object that represents the next diagram node in a collection of diagram nodes.

  \[expression\.NextNode\]

  \*expression\*  Required. An expression that returns one of the objects in the Applies To list.
Example

The following example creates an organization chart, and adds child nodes to the middle diagram node.

Sub AddChildrenToMiddle()
    Dim dgnNode As DiagramNode
    Dim dgnNext As DiagramNode
    Dim shpOrgChart As Shape
    Dim intNodes As Integer

    'Add organization chart and first child node
    Set shpOrgChart = ActivePresentation.Slides(1).Shapes _
        .AddDiagram(Type:=msoDiagramOrgChart, Left:=10, _
        Top:=15, Width:=400, Height:=475)

    'Add three additional nodes to root node
    For intNodes = 1 To 3
        dgnNode.Children.AddNode
    Next intNodes

    'Set dgnNode variable to the middle node
    Set dgnNext = dgnNode.Children.Item(1).NextNode

    'Add three child nodes to middle node
    For intNodes = 1 To 3
        dgnNext.Children.AddNode
    Next intNodes
End Sub
This keyword is not implemented. It is reserved for future use.
OneColorGradient Method

Sets the specified fill to a one-color gradient.

expression.OneColorGradient(Style, Variant, Degree)

expression Required. An expression that returns a FillFormat object.

Style Required MsoGradientStyle. The gradient style.

MsoGradientStyle can be one of these MsoGradientStyle constants.

msoGradientDiagonalDown
msoGradientDiagonalUp
msoGradientFromCenter
msoGradientFromCorner
msoGradientFromTitle
msoGradientHorizontal
msoGradientMixed
msoGradientVertical

Variant Required Long. The gradient variant. Can be a value from 1 to 4, corresponding to the four variants on the Gradient tab in the Fill Effects dialog box. If Style is msoGradientFromTitle or msoGradientFromCenter, this argument can be either 1 or 2.

Degree Required Single. The gradient degree. Can be a value from 0.0 (dark) to 1.0 (light).
Example

This example adds a rectangle with a one-color gradient fill to myDocument.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes _
    .AddShape(msoShapeRectangle, 90, 90, 90, 80).Fill
    .ForeColor.RGB = RGB(0, 128, 128)
    .OneColorGradient msoGradientHorizontal, 1, 1
End With
Open Method

Opens the specified presentation. Returns a `Presentation` object that represents the opened presentation.

`expression.Open(FileName, ReadOnly, Untitled, WithWindow, OpenConflictDocument)`

`expression`  Required. An expression that returns a `Presentations` collection.

`FileName`  Required `String`. The name of the file to open.

`ReadOnly`  Optional `MsoTriState`. Specifies whether the file is opened with read/write or read-only status.

MsoTriState can be one of these MsoTriState constants.

`msoCTrue`  Default. Opens the file with read/write status.

`msoFalse`  Default. The file name automatically becomes the title of the opened presentation.

`msoTriStateMixed`  Opens the file with read-only status.

`msoTriStateToggle`  Opens the file without a title. This is equivalent to creating a copy of the file.
**WithWindow** Optional [MsoTriState](#). Specifies whether the file is visible.

MsoTriState can be one of these MsoTriState constants.

- **msoCTrue**
- **msoFalse** Hides the opened presentation.
- **msoTriStateMixed**
- **msoTriStateToggle**
- **msoTrue** Default. Opens the file in a visible window.

**OpenConflictDocument** Optional [MsoTriState](#). Specifies whether to open the conflict file for a presentation with an offline conflict.

MsoTriState can be one of these MsoTriState constants.

- **msoCTrue**
- **msoFalse** Default. Opens the server file and ignores the conflict document.
- **msoTriStateMixed**
- **msoTriStateToggle**
- **msoTrue** Opens the conflict file and overwrites the server file.
Remarks

With the proper file converters installed, Microsoft PowerPoint opens files with the following MS-DOS file extensions: .ch3, .cht, .doc, .htm, .html, .mcw, .pot, .ppa, .pps, .ppt, .pre, .rtf, .sh3, .shw, .txt, .wk1, .wk3, .wk4, .wpd, .wpf, .wps, and .xls.
Example

This example opens a presentation with read-only status.

Presentations.Open FileName:="c:\My Documents\pres1.ppt", _
ReadOnly:=msoTrue
Paragraphs Method

- Returns a **TextRange** object that represents the specified subset of text paragraphs. For information about counting or looping through the paragraphs in a text range, see the **TextRange** object.

  expression.**Paragraphs**(Start, Length)

  **expression**  Required. An expression that returns a **TextRange** object.

  **Start**  Optional **Long**. The first paragraph in the returned range.

  **Length**  Optional **Long**. The number of paragraphs to be returned.
Remarks

If both \textit{Start} and \textit{Length} are omitted, the returned range starts with the first paragraph and ends with the last paragraph in the specified range.

If \textit{Start} is specified but \textit{Length} is omitted, the returned range contains one paragraph.

If \textit{Length} is specified but \textit{Start} is omitted, the returned range starts with the first paragraph in the specified range.

If \textit{Start} is greater than the number of paragraphs in the specified text, the returned range starts with the last paragraph in the specified range.

If \textit{Length} is greater than the number of paragraphs from the specified starting paragraph to the end of the text, the returned range contains all those paragraphs.
Example

This example formats as italic the first two lines of the second paragraph in shape two on slide one in the active presentation.

Paste Method

- Paste method as it applies to the Shapes object.

Pastes the shapes, slides, or text on the Clipboard into the specified Shapes collection, at the top of the z-order. Each pasted object becomes a member of the specified Shapes collection. If the Clipboard contains entire slides, the slides will be pasted as shapes that contain the images of the slides. If the Clipboard contains a text range, the text will be pasted into a newly created TextFrame shape. Returns a ShapeRange object that represents the pasted objects.

expression.Paste

expression  Required. An expression that returns one of the above objects.

- Paste method as it applies to the Slides object.

Pastes the slides on the Clipboard into the Slides collection for the presentation. Specify where you want to insert the slides with the Index argument. Returns a SlideRange object that represents the pasted objects. Each pasted slide becomes a member of the specified Slides collection.

expression.Paste(Index)

expression  Required. An expression that returns one of the above objects.

Index  Optional Integer. The index number of the slide that the slides on the Clipboard are to be pasted before. If this argument is omitted, the slides on the Clipboard are pasted after the last slide in the presentation.

- Paste method as it applies to the TextRange object.
Pastes the text on the Clipboard into the specified text range, and returns a TextRange object that represents the pasted text.

`expression.Paste`

`expression` Required. An expression that returns one of the above objects.

- Paste method as it applies to the View object.

Pastes the contents of the Clipboard into the active view. Attempting to paste an object into a view that won't accept it causes an error. For information about views and the objects you can paste into them, see the "Remarks" section.

`expression.Paste`

`expression` Required. An expression that returns one of the above objects.
Remarks

Use the **ViewType** property to set the view for a window before pasting the Clipboard contents into it. The following table shows what you can paste into each view.

<table>
<thead>
<tr>
<th>Into this view</th>
<th>You can paste the following from the Clipboard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slide view or notes page view</td>
<td>Shapes, text, or entire slides. If you paste a slide from the Clipboard, an image of the slide will be inserted onto the slide, master, or notes page as an embedded object. If one shape is selected, the pasted text will be appended to the shape's text; if text is selected, the pasted text will replace the selection; if anything else is selected, the pasted text will be placed in it's own text frame. Pasted shapes will be added to the top of the z-order and won't replace selected shapes.</td>
</tr>
<tr>
<td>Outline view</td>
<td>Text or entire slides. You cannot paste shapes into outline view. A pasted slide will be inserted before the slide that contains the insertion point.</td>
</tr>
<tr>
<td>Slide sorter view</td>
<td>Entire slides. You cannot paste shapes or text into slide sorter view. A pasted slide will be inserted at the insertion point or after the last slide selected in the presentation.</td>
</tr>
</tbody>
</table>
Example

As it applies to the **Shapes** object.

This example copies shape one on slide one in the active presentation to the Clipboard and then pastes it into slide two.

```vba
With ActivePresentation
  .Slides(1).Shapes(1).Copy
  .Slides(2).Shapes.Paste
End With
```

This example cuts the text in shape one on slide one in the active presentation, places it on the Clipboard, and then pastes it after the first word in shape two on the same slide.

```vba
With ActivePresentation.Slides(1)
End With
```

As it applies to the **Slides** object.

This example cuts slides three and five from the Old Sales presentation and then inserts them before slide four in the active presentation.

```vba
Presentations("Old Sales").Slides.Range(Array(3, 5)).Cut
ActivePresentation.Slides.Paste 4
```

As it applies to the **View** object.

This example copies the selection in window one to the Clipboard and copies it into the view in window two. If the Clipboard contents cannot be pasted into the
view in window two — for example, if you try to paste a shape into slide sorter view — this example fails.

```
Windows(1).Selection.Copy
Windows(2).View.**Paste**
```

This example copies the selection in window one to the Clipboard, makes sure that window one is in slide view, and then copies the Clipboard contents into the view in window two.

```
Windows(1).Selection.Copy
With Windows(2)
    .ViewType = ppViewSlide
    .View.**Paste**
End With
```
Show All
PasteSpecial Method

Pastes the contents of the Clipboard using a special format. Although the syntax for using this method is the same for all objects in the Applies To list, the behavior is slightly different, depending on the object calling the PasteSpecial method.

<table>
<thead>
<tr>
<th>Object</th>
<th>Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shapes</td>
<td>Adds the shape to the collection of shapes in the specified format. If the specified data type is a text data type, then a new text box is created with the text. If the paste succeeds, the PasteSpecial method returns a ShapeRange object representing the shape range that was pasted. Replaces the text range with the contents of the Clipboard in the format specified. Valid data types for this object are ppPasteText, ppPasteHTML, and ppPasteRTF (any other format generates an error). If the paste succeeds, this method returns a TextRange object representing the text range that was pasted.</td>
</tr>
<tr>
<td>TextRange</td>
<td>Pastes the current contents of the Clipboard into the view represented by the View object. Valid views for the PasteSpecial method are the same as those for the Paste method. If the data type can’t be pasted into the view (for example, trying to paste a picture into Slide Sorter View), then an error occurs.</td>
</tr>
<tr>
<td>View</td>
<td></td>
</tr>
</tbody>
</table>

expression.PasteSpecial(DataType, DisplayAsIcon, IconFileName, IconIndex, IconLabel, Link)

expression Required. An expression that returns one of the above objects.

DataType Optional PpPasteDataType. A format for the Clipboard contents when they're inserted into the document. The default value varies, depending on the contents in the Clipboard. An error occurs if the specified data type in the DataType argument is not supported by the clipboard contents.
PpPasteDataType can be one of these PpPasteDataType constants.
ppPasteBitmap
ppPasteDefault default
ppPasteEnhancedMetafile
ppPasteGIF
ppPasteHTML
ppPasteJPG
ppPasteMetafilePicture
ppPasteOLEObject
ppPastePNG
ppPasteRTF
ppPasteShape
ppPasteText

DisplayAsIcon Optional MsoTriState. MsoTrue to display the embedded object (or link) as an icon.

MsoTriState can be one of these MsoTriState constants.
msOCTrue Does not apply to this method.
msOFALSE default Does not display the embedded object (or link) as an icon.
msOCTriStateMixed Does not apply to this method.
msOCTriStateToggle Does not apply to this method.
msOCTrue Displays the embedded object (or link) as an icon.

IconFileName Optional String. If DisplayAsIcon is set to msoTrue, this argument is the path and file name for the file in which the icon to be displayed is stored. If DisplayAsIcon is set to msoFalse, this argument is ignored.

IconIndex Optional Long. If DisplayAsIcon is set to msoTrue, this argument is a number that corresponds to the icon you want to use in the program file specified by IconFilename. Icons appear in the Change Icon dialog box, accessed from the Standard toolbar (Insert menu, Object command, Create New option): 0 (zero) corresponds to the first icon, 1 corresponds to the second icon, and so on. If this argument is omitted, the first (default) icon is used. If DisplayAsIcon is set to msoFalse, then this argument is ignored. If IconIndex is outside the valid range, then the default icon (index 0) is used.
**IconLabel** Optional String. If **DisplayAsIcon** is set to **msoTrue**, this argument is the text that appears below the icon. If this label is missing, Microsoft PowerPoint generates an icon label based on the Clipboard contents. If **DisplayAsIcon** is set to **msoFalse**, then this argument is ignored.

**Link** Optional **MsoTriState**. Determines whether to create a link to the source file of the Clipboard contents. An error occurs if the Clipboard contents do not support a link.

**MsoTriState** can be one of these **MsoTriState** constants.

- **msoCTrue** Does not apply to this method.
- **msoFalse** default Does not create a link to the source file of the Clipboard contents.
- **msoTriStateMixed** Does not apply to this method.
- **msoTriStateToggle** Does not apply to this method.
- **msoTrue** Creates a link to the source file of the Clipboard contents.
Remarks

An error occurs if there is no data on the Clipboard when the **PasteSpecial** method is called.
Example

The following example pastes a bitmap image as an icon into another window. This example assumes there are two open windows, and a bitmap image in the first window is currently selected.

Sub PasteOLEObject()
    Windows(1).Selection.Copy
    Windows(2).View.PasteSpecial DataType:=ppPasteOLEObject, _
       DisplayAsIcon:=msoTrue, IconLabel:="New Bitmap Image"
End Sub
Patterned Method

Sets the specified fill to a pattern.

\textit{expression.Patterned(Pattern)}

\textit{expression} Required. An expression that returns a \textbf{FillFormat} object.

\textit{Pattern} Required \textbf{MsoPatternType}. The pattern to be used for the specified fill.

MsoPatternType can be one of these MsoPatternType constants.
\texttt{msPattern10Percent}
\texttt{msPattern20Percent}
\texttt{msPattern25Percent}
\texttt{msPattern30Percent}
\texttt{msPattern40Percent}
\texttt{msPattern50Percent}
\texttt{msPattern5Percent}
\texttt{msPattern60Percent}
\texttt{msPattern70Percent}
\texttt{msPattern75Percent}
\texttt{msPattern80Percent}
\texttt{msPattern90Percent}
\texttt{msPatternDarkDownwardDiagonal}
\texttt{msPatternDarkHorizontal}
\texttt{msPatternDarkUpwardDiagonal}
\texttt{msPatternDashedDownwardDiagonal}
\texttt{msPatternDashedHorizontal}
\texttt{msPatternDashedUpwardDiagonal}
\texttt{msPatternDashedVertical}
\texttt{msPatternDiagonalBrick}
msoPatternDivot
msoPatternDottedDiamond
msoPatternDottedGrid
msoPatternHorizontalBrick
msoPatternLargeCheckerBoard
msoPatternLargeConfetti
msoPatternLargeGrid
msoPatternLightDownwardDiagonal
msoPatternLightHorizontal
msoPatternLightUpwardDiagonal
msoPatternLightVertical
msoPatternMixed
msoPatternNarrowHorizontal
msoPatternNarrowVertical
msoPatternOutlinedDiamond
msoPatternPlaid
msoPatternShingle
msoPatternSmallCheckerBoard
msoPatternSmallConfetti
msoPatternSmallGrid
msoPatternSolidDiamond
msoPatternSphere
msoPatternTrellis
msoPatternWave
msoPatternWeave
msoPatternWideDownwardDiagonal
msoPatternWideUpwardDiagonal
msoPatternZigZag
msoPatternDarkVertical
Remarks

Use the **BackColor** and **ForeColor** properties to set the colors used in the pattern.
Example

This example adds an oval with a patterned fill to myDocument:

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes.AddShape(msoShapeOval, 60, 60, 80, 40).Fill
  .ForeColor.RGB = RGB(128, 0, 0)
  .BackColor.RGB = RGB(0, 0, 255)
  .Patterned msoPatternDarkVertical
End With
PickUp Method

Copies the formatting of the specified shape. Use the Apply method to apply the copied formatting to another shape.

expression.PickUp

expression Required. An expression that returns a Shape or ShapeRange object.
Example

This example copies the formatting of shape one on myDocument, and then applies the copied formatting to shape two.

Set myDocument = ActivePresentation.Slides(1)
With myDocument
  .Shapes(1).PickUp
  .Shapes(2).Apply
End With
Picture Method

Sets the graphics file to be used for bullets in a bulleted list when the Type property of the BulletFormat object is set to ppBulletPicture.

expression.Picture (Picture)

expression Required. An expression that returns a BulletFormat object of type ppBulletPicture.

Picture Required String. The path and file name of a valid graphics file.
Remarks

Valid graphics files include files with the following extensions: .bmp, .cdr, .cgm, .drw, .dx, .emf, .eps, .gif, .jpg, .jpeg, .pcd, .pct, .pcx, .pict, .png, .tga, .tiff, .wmf, and .wpg.
Example

This example sets the bullets in the text box specified by shape two on slide one to a bitmap picture of a blue rivet.

With ActivePresentation.Slides(1).Shapes(2).TextFrame
        .Type = ppBulletPicture
        .Picture ("C:\Windows\Blue Rivets.bmp")
    End With
End With
Play Method

Plays the specified sound effect.

`expression.Play`

`expression`  Required. An expression that returns a `SoundEffect` object.
**Example**

This example plays the sound effect that's been set for the transition to slide two in the active presentation.

`ActivePresentation.Slides(2).SlideShowTransition.SoundEffect.Play`
PointsToScreenPixelsX Method

Converts a horizontal measurement from points to pixels. Used to return a horizontal screen location for a text frame or shape. Returns the converted measurement as a Single.

expression.PointsToScreenPixelsX(Points)

expression Required. An expression that returns a DocumentWindow object.

Points Required Single. The horizontal measurement (in points) to be converted to pixels.
Example

This example converts the width and height of the selected text frame bounding box from points to pixels, and returns the values to myXparm and myYparm.

With ActiveWindow
    myXparm = .PointsToScreenPixelsX _
              (.Selection.TextRange.BoundWidth)
    myY parm = .PointsToScreenPixelsY _
              (.Selection.TextRange.BoundHeight)
End With
PointsToScreenPixelsY Method

Converts a vertical measurement from points to pixels. Used to return a vertical screen location for a text frame or shape. Returns the converted measurement as a Single.

\[ \text{expression} \cdot \text{PointsToScreenPixelsY(Points)} \]

expression Required. An expression that returns a DocumentWindow object.

Points Required Single. The vertical measurement (in points) to be converted to pixels.
Example

This example converts the width and height of the selected text frame bounding box from points to pixels, and returns the values to myXparm and myYparm.

With ActiveWindow
    myXparm = .PointsToScreenPixelsX _
               (.Selection.TextRange.BoundWidth)
    myYparm = .PointsToScreenPixelsY _
               (.Selection.TextRange.BoundHeight)
End With
PresetDrop Method

Specifies whether the callout line attaches to the top, bottom, or center of the callout text box or whether it attaches at a point that's a specified distance from the top or bottom of the text box.

```
expression.PresetDrop(DropType)
```

*expression*  Required. An expression that returns a `CalloutFormat` object.

*DropType*  Required `MsoCalloutDropType`. The starting position of the callout line relative to the text bounding box.

*MsoCalloutDropType* can be one of these `MsoCalloutDropType` constants.

- `msoCalloutDropBottom`
- `msoCalloutDropCenter`
- `msoCalloutDropCustom` Specifying this constant will cause your code to fail.
- `msoCalloutDropMixed`
- `msoCalloutDropTop`
Example

This example specifies that the callout line attach to the top of the text bounding box for shape one on myDocument. For the example to work, shape one must be a callout.

```vba
Set myDocument = ActivePresentation.Slides(1)
myDocument.Shapes(1).Callout.PresetDrop msoCalloutDropTop
```

This example toggles between two preset drops for shape one on myDocument. For the example to work, shape one must be a callout.

```vba
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(1).Callout
    If .DropType = msoCalloutDropTop Then
        .PresetDrop msoCalloutDropBottom
    ElseIf .DropType = msoCalloutDropBottom Then
        .PresetDrop msoCalloutDropTop
    End If
End With
```
PresetGradient Method

Sets the specified fill to a preset gradient.

expression.PresetGradient(Style, Variant, PresetGradientType)

expression Required. An expression that returns a FillFormat object.

Style Required MsoGradientStyle. The gradient style.

MsoGradientStyle can be one of these MsoGradientStyle constants.
msGradientDiagonalDown
msGradientDiagonalUp
msGradientFromCenter
msGradientFromCorner
msGradientFromTitle
msGradientHorizontal
msGradientMixed
msGradientVertical

Variant Required Integer. The gradient variant. Can be a value from 1 to 4, corresponding to the four variants on the Gradient tab in the Fill Effects dialog box. If Style is msGradientFromTitle or msGradientFromCenter, this argument can be either 1 or 2.

PresetGradientType Required MsoPresetGradientType. The gradient type.

MsoPresetGradientType can be one of these MsoPresetGradientType constants.
msGradientBrass
msGradientCalmWater
msGradientChrome
msGradientChromeII
msGradientDaybreak
msoGradientDesert
msoGradientEarlySunset
msoGradientFire
msoGradientFog
msoGradientGold
msoGradientGoldII
msoGradientHorizon
msoGradientLateSunset
msoGradientMahogany
msoGradientMoss
msoGradientNightfall
msoGradientOcean
msoGradientParchment
msoGradientPeacock
msoGradientRainbow
msoGradientRainbowII
msoGradientSapphire
msoGradientSilver
msoGradientWheat
msoPresetGradientMixed
Example

This example adds a rectangle with a preset gradient fill to myDocument.

```
Set myDocument = ActivePresentation.Slides(1)
myDocument.Shapes.AddShape(msoShapeRectangle, 90, 90, 140, 80) ._
.Fill.PresetGradient msoGradientHorizontal, 1, msoGradientBrass
```
PresetTextured Method

Sets the specified fill to a preset texture.

expression.PresetTextured(PresetTexture)

expression Required. An expression that returns a FillFormat object.

PresetTexture Required MsoPresetTexture. The preset texture.

MsoPresetTexture can be one of these MsoPresetTexture constants.

msoPresetTextureMixed
msoTextureBlueTissuePaper
msoTextureBouquet
msoTextureBrownMarble
msoTextureCanvas
msoTextureCork
msoTextureDenim
msoTextureFishFossil
msoTextureGranite
msoTextureGreenMarble
msoTextureMediumWood
msoTextureNewsprint
msoTextureOak
msoTexturePaperBag
msoTexturePapyrus
msoTextureParchment
msoTexturePinkTissuePaper
msoTexturePurpleMesh
msoTextureRecycledPaper
msoTextureSand
msoTextureStationery
msoTextureWalnut
msoTextureWaterDroplets
msoTextureWhiteMarble
msoTextureWovenMat
Example

This example adds a rectangle with a green-marble textured fill to myDocument.

```vbnet
Set myDocument = ActivePresentation.Slides(1)
myDocument.Shapes.AddShape(msoShapeCan, 90, 90, 40, 80) _.Fill.PresetTextured msoTextureGreenMarble
```
Previous Method

Show the slide immediately preceding the slide that's currently displayed. If you are currently on the first slide in a kiosk slide show, the Previous method takes you to the last slide in a slide show; otherwise, it has no effect if the first slide in the presentation is currently displayed. Use the View property of the SlideShowWindow object to return the SlideShowView object.

expression.Previous

expression Required. An expression that returns one of the items in the Applies To list.
Example

This example shows the slide immediately preceding the currently displayed slide on slide show window one.

`SlideShowWindows(1).View.Previous`
PrevNode Method

- Returns a DiagramNode object that represents the previous diagram node in a collection of diagram nodes.

expression.PrevNode

expression Required. An expression that returns one of the objects in the Applies To list.
Example

The following example adds additional child nodes to the first child node, which is the node previous to the second node, in a newly-created diagram.

Sub AddNodeToFirstChild()
    Dim dgnNode As DiagramNode
    Dim dgnPrev As DiagramNode
    Dim shpOrgChart As Shape
    Dim intNodes As Integer

    'Adds org chart and root node
    Set shpOrgChart = ActivePresentation.Slides(1).Shapes _
        .AddDiagram(Type:=msoDiagramOrgChart, Left:=10, _
        Top:=15, Width:=400, Height:=475)

    'Adds three child nodes to root node
    For intNodes = 1 To 3
        dgnNode.Children.AddNode
    Next intNodes

    'Sets dgnPrev equal to first child node (the node previous to the second child node)

    'Adds three child nodes to first child node
    For intNodes = 1 To 3
        dgnPrev.Children.AddNode
    Next intNodes

End Sub
PrintOut Method

Prints the specified presentation.

\textit{expression}.PrintOut(\textit{From, To, PrintToFile, Copies, Collate})

\textit{expression}  Required. An expression that returns a \textbf{Presentation} object.

\textbf{From}  Optional \textbf{Integer}. The number of the first page to be printed. If this argument is omitted, printing starts at the beginning of the presentation. Specifying the \textit{To} and \textit{From} arguments sets the contents of the \textbf{PrintRanges} object and sets the value of the \textbf{RangeType} property for the presentation.

\textbf{To}  Optional \textbf{Integer}. The number of the last page to be printed. If this argument is omitted, printing continues to the end of the presentation. Specifying the \textit{To} and \textit{From} arguments sets the contents of the \textbf{PrintRanges} object and sets the value of the \textbf{RangeType} property for the presentation.

\textbf{PrintToFile}  Optional \textbf{String}. The name of the file to print to. If you specify this argument, the file is printed to a file rather than sent to a printer. If this argument is omitted, the file is sent to a printer.

\textbf{Copies}  Optional \textbf{Integer}. The number of copies to be printed. If this argument is omitted, only one copy is printed. Specifying this argument sets the value of the \textbf{NumberOfCopies} property.

\textbf{Collate}  Optional \textbf{MsoTriState}. If this argument is omitted, multiple copies are collated. Specifying this argument sets the value of the \textbf{Collate} property.

\begin{verbatim}
MsoTriState can be one of these MsoTriState constants.
\textbf{msoCTrue}
\textbf{msoFalse}
\textbf{msoTriStateMixed}
\textbf{msoTriStateToggle}
\end{verbatim}
**msoTrue** Prints a complete copy of the presentation before the first page of the next copy is printed.
Example

This example prints two uncollated copies of each slide — whether visible or hidden — from slide two to slide five in the active presentation.

With Application.ActivePresentation
  .PrintOptions.PrintHiddenSlides = True
  .PrintOut From:=2, To:=5, Copies:=2, Collate:=msoFalse
End With

This example prints a single copy of all slides in the active presentation to the file Testprnt.prn.

Application.ActivePresentation.PrintOut _
  PrintToFile:="TestPrnt"
Publish Method

Creates a Web presentation (HTML format) from any loaded presentation. You can view the published presentation in a Web browser.

expression.Publish

expression Required. An expression that returns a PublishObject object.
Remarks

You can specify the content and attributes of the published presentation by setting various properties of the PublishObject object. For example, the SourceType property defines the portion of a loaded presentation to be published. The RangeStart property and the RangeEnd property specify the range of slides to publish, and the SpeakerNotes property designates whether or not to publish the speaker's notes.
Example

This example publishes slides three through five of the active presentation to HTML. It names the published presentation Mallard.htm.

With ActivePresentation.PublishObjects(1)
    .FileName = "C:\Test\Mallard.htm"
    .SourceType = ppPublishSlideRange
    .RangeStart = 3
    .RangeEnd = 5
    .Publish
End With
Quit Method

Quits PowerPoint. This is equivalent to clicking **Exit** on the **File** menu.

`expression.Quit`

*expression*  Required. An expression that returns an **Application** object.
Remarks

To avoid being prompted to save changes, use either the `Save` or `SaveAs` method to save all open presentations before calling the `Quit` method.
**Example**

This example saves all open presentations and then quits PowerPoint.

```vbnet
With Application
    For Each w In .Presentations
        w.Save
    Next w
    .Quit
End With
```
Range Method

- Range method as it applies to the Shapes object.

Returns a ShapeRange object that represents a subset of the shapes in a Shapes collection.

expression.Range(Index)

expression Required. An expression that returns a Shapes collection object.

Index Optional Variant. The individual shapes that are to be included in the range. Can be an Integer that specifies the index number of the shape, a String that specifies the name of the shape, or an array that contains either integers or strings. If this argument is omitted, the Range method returns all the objects in the specified collection.

- Range method as it applies to the GroupShapes object.

Returns a ShapeRange object.

expression.Range(Index)

expression Required. An expression that returns one of the above objects.

Index Required Variant. The individual shapes that are to be included in the range. Can be an Integer that specifies the index number of the shape, a String that specifies the name of the shape, or an array that contains either integers or strings. If this argument is omitted, the Range method returns all the objects in the specified collection.

- Range method as it applies to the Slides object.

Returns a SlideRange object that represents a subset of the slides in a Slides collection.
expression.Range(Index)

expression Required. An expression that returns a Slides collection object.

Index Optional Variant. The individual slides that are to be included in the range. Can be an Integer that specifies the index number of the slide, a String that specifies the name of the slide, or an array that contains either integers or strings. If this argument is omitted, the Range method returns all the objects in the specified collection.
Remarks

Although you can use the **Range** method to return any number of shapes or slides, it's simpler to use the **Item** method if you only want to return a single member of the collection. For example, **Shapes(1)** is simpler than **Shapes.Range(1)**, and **Slides(2)** is simpler than **Slides.Range(2)**.

To specify an array of integers or strings for **Index**, you can use the **Array** function. For example, the following instruction returns two shapes specified by name.

```vba
Dim myArray() As Variant, myRange As Object
myArray = Array("Oval 4", "Rectangle 5")
Set myRange = ActivePresentation.Slides(1).Shapes.Range(myArray)
```
Example

- **As it applies to the Shapes object.**

This example sets the fill pattern for shapes one and three on `myDocument`.

```vba
Set myDocument = ActivePresentation.Slides(1)
myDocument.Shapes.Range(Array(1, 3)).Fill _
    .Patterned msoPatternHorizontalBrick
```

This example sets the fill pattern for the shapes named Oval 4 and Rectangle 5 on the first slide.

```vba
Dim myArray() As Variant, myRange As Object
myArray = Array("Oval 4", "Rectangle 5")
Set myRange = ActivePresentation.Slides(1).Shapes.Range(myArray)
myRange.Fill.Patterned msoPatternHorizontalBrick
```

This example sets the fill pattern for all shapes on the first slide.

```vba
ActivePresentation.Slides(1).Shapes.Range.Fill _
    .Patterned Pattern:=msoPatternHorizontalBrick
```

This example sets the fill pattern for shape one on the first slide.

```vba
Set myDocument = ActivePresentation.Slides(1)
Set myRange = myDocument.Shapes.Range(1)
myRange.Fill.Patterned msoPatternHorizontalBrick
```

This example creates an array that contains all the AutoShapes on the first slide, uses that array to define a shape range, and then distributes all the shapes in that range horizontally.

```vba
With myDocument.Shapes
    numShapes = .Count
    'Continues if there are shapes on the slide
    If numShapes > 1 Then
        numAutoShapes = 0
        ReDim autoShpArray(1 To numShapes)
        For i = 1 To numShapes
```
'Counts the number of AutoShapes on the Slide
If .Item(i).Type = msoAutoShape Then
    numAutoShapes = numAutoShapes + 1
    autoShpArray(numAutoShapes) = .Item(i).Name
End If
Next

'Adds AutoShapes to ShapeRange
If numAutoShapes > 1 Then
    ReDim Preserve autoShpArray(1 To numAutoShapes)
    Set asRange = .Range(autoShpArray)
    asRange.Distribute msoDistributeHorizontally, False
End If
End If
End With

As it applies to the Slides object.

This example sets the title color for slides one and three.

Set mySlides = ActivePresentation.Slides.Range(Array(1, 3))
mySlides.ColorScheme.Colors(ppTitle).RGB = RGB(0, 255, 0)

This example sets the title color for the slides named Slide6 and Slide8.

Set mySlides = ActivePresentation.Slides.Range(Array("Slide6", "Slide8"))
mySlides.ColorScheme.Colors(ppTitle).RGB = RGB(0, 255, 0)

This example sets the title color for all the slides in the active presentation.

Set mySlides = ActivePresentation.Slides.Range
mySlides.ColorScheme.Colors(ppTitle).RGB = RGB(255, 0, 0)

This example creates an array that contains all the title slides in the active presentation, uses that array to define a slide range, and then sets the title color for all slides in that range.

Dim MyTitleArray() As Long
Set pSlides = ActivePresentation.Slides
ReDim MyTitleArray(1 To pSlides.Count)
For Each pSlide In pSlides
    If pSlide.Layout = ppLayoutTitle Then
        nCounter = nCounter + 1
        MyTitleArray(nCounter) = pSlide.SlideIndex
    End If
Next
End If
Next pSlide
ReDim Preserve MyTitleArray(1 To nCounter)

Set rngTitleSlides = ActivePresentation.Slides.Range(MyTitleArray)
rngTitleSlides.ColorScheme.Colors(ppTitle).RGB = RGB(255, 123, 99)
RangeFromPoint Method

Returns the Shape object that is located at the point specified by the screen position coordinate pair. If no shape is located at the coordinate pair specified, then the method returns Nothing.

(expression.RangeFromPoint(x, y))

expression Required. An expression that returns a DocumentWindow object.

x Required Long. The horizontal distance (in pixels) from the left edge of the screen to the point.

y Required Long. The vertical distance (in pixels) from the top of the screen to the point.
Example

This example adds a new five-point star to slide one using the coordinates (288, 100). It then converts those coordinates from points to pixels, uses the **RangeFromPoint** method to return a reference to the new object, and changes the fill color of the star.

```vba
Dim myPointX As Integer, myPointY As Integer
Dim myShape As Object

ActivePresentation.Slides(1).Shapes.AddShape(msoShape5pointStar, 288, 100, 100, 72).Select
myPointX = ActiveWindow.PointsToScreenPixelsX(288)
myPointY = ActiveWindow.PointsToScreenPixelsY(100)
Set myShape = ActiveWindow.RangeFromPoint(myPointX, myPointY)
myShape.Fill.ForeColor.RGB = RGB(80, 160, 130)
```
Regroup Method

Regroups the group that the specified shape range belonged to previously. Returns the regrouped shapes as a single Shape object.

expression.Reggroup

type: Required. An expression that returns a ShapeRange object.
Remarks

The **Regroup** method only restores the group for the first previously grouped shape it finds in the specified **ShapeRange** collection. Therefore, if the specified shape range contains shapes that previously belonged to different groups, only one of the groups will be restored.

Note that because a group of shapes is treated as a single shape, grouping and ungrouping shapes changes the number of items in the **Shapes** collection and changes the index numbers of items that come after the affected items in the collection.
Example

This example regroups the shapes in the selection in the active window. If the shapes haven't been previously grouped and ungrouped, this example will fail.

ActiveWindow.Selection.ShapeRange.Regroup
Show All
ReloadAs Method

Reloads a presentation based on a specified HTML document encoding.

expression.ReloadAs (cp)

expression Required. An expression that returns one of the objects in the Applies To list.

cp Required MsoEncoding. The document encoding to use when reloading the Web page.

MsoEncoding can be one of these MsoEncoding constants.

msoEncodingArabicAutoDetect
msoEncodingAutoDetect
msoEncodingCyrillicAutoDetect
msoEncodingGreekAutoDetect
msoEncodingJapaneseAutoDetect
msoEncodingKoreanAutoDetect
msoEncodingSimplifiedChineseAutoDetect
msoEncodingTraditionalChineseAutoDetect
Example

This example reloads the active presentation using Western encoding.

ActivePresentation.ReloadAs (msoEncodingWestern)
Remove Method

Removes an add-in from the collection of add-ins.

\[expression.\text{Remove}(\text{Index})\]

*expression*  Required. An expression that returns an \textbf{AddIns} object.

*Index*  Required \textbf{Variant}. The name of the add-in to be removed from the collection.
Example

This example removes the add-in named "MyTools" from the list of available add-ins.

AddIns.Remove "mytools"
RemoveBaseline Method

Removes the base line from the presentation.

`expression.RemoveBaseline`

`expression` Required. An expression that returns one of the objects in the Applies To list.
Remarks

This method generates an error if the presentation is an author presentation or if there is no base line.
Example

The following line of code removes the base line from the active presentation.

```
Sub RmvBaseline()
    ActivePresentation.RemoveBaseline
End Sub
```
RemovePeriods Method

Removes the period at the end of each paragraph in the specified text.

expression.RemovePeriods

expression  Required. An expression that returns a TextRange object.
Example

This example removes the period at the end of each paragraph in shape two on slide one in the active presentation.

Application.ActivePresentation.Slides(1) _.Shapes(2).TextFrame.TextRange _.RemovePeriods
Replace Method

- Replace method as it applies to the TextRange object.

Finds specific text in a text range, replaces the found text with a specified string, and returns a TextRange object that represents the first occurrence of the found text. Returns Nothing if no match is found.

expression.Replace(FindWhat, ReplaceWhat, After, MatchCase, WholeWords)

expression Required. An expression that returns one of the above objects.

FindWhat Required String. The text to search for.

ReplaceWhat Required String. The text you want to replace the found text with.

After Optional Integer. The position of the character (in the specified text range) after which you want to search for the next occurrence of FindWhat. For example, if you want to search from the fifth character of the text range, specify 4 for After. If this argument is omitted, the first character of the text range is used as the starting point for the search.

MatchCase Optional MsoTriState. Determines whether a distinction is made on the basis of case.

MsoTriState can be one of these MsoTriState constants.

msoCTrue
msoFalse Default.

msoTriStateMixed
msoTriStateToggle

msoTrue Distinguish between uppercase and lowercase characters.

WholeWords Optional MsoTriState. Determines whether only whole words are
found.

MsoTriState can be one of these MsoTriState constants.

- msoCTrue
- msoFalse Default.
- msoTriStateMixed
- msoTriStateToggle
- msoTrue Find only whole words, and not parts of larger words.

- Replace method as it applies to the Fonts object.

Replaces a font in the Fonts collection.

expression.Replace(Original, Replacement)

expression  Required. An expression that returns one of the above objects.

Original  Required String. The name of the font to replace.

Replacement  Required String. The the name of the replacement font.
Example

- As it applies to the **TextRange** object.

This example replaces every whole-word occurrence of "like" in all of the shapes in the active presentation with "NOT LIKE".

```vba
Sub ReplaceText()
    Dim oSld As Slide
    Dim oShp As Shape
    Dim oTxtRng As TextRange
    Dim oTmpRng As TextRange

    Set oSld = Application.ActivePresentation.Slides(1)
    For Each oShp In oSld.Shapes
        Set oTxtRng = oShp.TextFrame.TextRange
        Set oTmpRng = oTxtRng.Replace(FindWhat:="like", _
            Replacewhat:="NOT LIKE", WholeWords:=True)
        Do While Not oTmpRng Is Nothing
            Set oTxtRng = oTxtRng.Characters(oTmpRng.Start + oTmpRng._
                oTxtRng.Length)
            Set oTmpRng = oTxtRng.Replace(FindWhat:="like", _
                Replacewhat:="NOT LIKE", WholeWords:=True)
        Loop
    Next oShp
End Sub
```

- As it applies to the **Fonts** object.

This example replaces the Times New Roman font with the Courier font in the active presentation.

```vba
```
ReplaceNode Method

Replaces a target diagram node with the source diagram node. The target diagram node is deleted, and the source diagram node, including any of its child nodes, are moved to where the target diagram node was.

\[ expression.\text{ReplaceNode}(\text{TargetNode}) \]

\textit{expression}  Required. An expression that returns one of the objects in the Applies To list.

\textit{TargetNode}  Required \textit{DiagramNode} object. The diagram node to be replaced.
Example

The following example replaces the last diagram node of a newly-created diagram with the second node.

Sub ReplaceLastNode()

    Dim dgnNode As DiagramNode
    Dim shpRadial As Shape
    Dim intNodes As Integer

    'Adds radial diagram and root node
    Set shpRadial = ActivePresentation.Slides(1).Shapes.AddDiagram _
        (Type:=msoDiagramRadial, Left:=10, Top:=15, _
        Width:=400, Height:=475)

    'Adds three additional child nodes
    For intNodes = 1 To 3
        dgnNode.Children.AddNode
    Next intNodes

    'Displays the number of nodes in the diagram
    MsgBox "The number of nodes in the diagram : " & _
        dgnNode.Diagram.Nodes.Count

    'Second node replaces the last node.
    dgnNode.Diagram.Nodes(2).ReplaceNode _
        TargetNode:=dgnNode.Diagram.Nodes(4)

    'Node count is three because the replaced node was deleted
    MsgBox "The number of nodes in the diagram : " & _
        dgnNode.Diagram.Nodes.Count

End Sub
ReplyWithChanges Method

Sends an e-mail message to the author of a presentation that has been sent out for review, notifying them that a reviewer has completed review of the presentation.

expression.ReplyWithChanges(ShowMessage)

expression  Required. An expression that returns one of the objects in the Applies To list.

ShowMessage  Optional Boolean. True to display the message prior to sending. False to automatically send the message without displaying it first. The default is True.
Remarks

Use the **SendForReview** method to start a collaborative review of a presentation. If the **ReplyWithChanges** method is executed on a presentation that is not part of a collaborative review cycle, the user will receive an error message.
**Example**

This example sends a message to the author of a review document that a reviewer has completed a review, without first displaying the e-mail message to the reviewer. This example assumes that the active presentation is part of a collaborative review cycle.

Sub ReplyMsg()
    ActivePresentation.ReplyWithChanges ShowMessage:=False
End Sub
RerouteConnections Method

Reroutes connectors so that they take the shortest possible path between the shapes they connect. To do this, the **RerouteConnections** method may detach the ends of a connector and reattach them to different connecting sites on the connected shapes.

This method reroutes all connectors attached to the specified shape; if the specified shape is a connector, it's rerouted.

\[expression.RerouteConnections\]

**expression** Required. An expression that returns a **Shape** or **ShapeRange** object.
Remarks

If this method is applied to a connector, only that connector will be rerouted. If this method is applied to a connected shape, all connectors to that shape will be rerouted.
Example

This example adds two rectangles to myDocument, connects them with a curved connector, and then reroutes the connector so that it takes the shortest possible path between the two rectangles. Note that the `RerouteConnections` method adjusts the size and position of the connector and determines which connecting sites it attaches to, so the values you initially specify for the `ConnectionSite` arguments used with the `BeginConnect` and `EndConnect` methods are irrelevant.

```vba
Set myDocument = ActivePresentation.Slides(1)
Set s = myDocument.Shapes
Set firstRect = s.AddShape(msoShapeRectangle, 100, 50, 200, 100)
Set secondRect = s.AddShape(msoShapeRectangle, 300, 300, 200, 100)
Set newConnector = s._
    .AddConnector(msoConnectorCurve, 0, 0, 100, 100)
With newConnector.ConnectorFormat
    .BeginConnect firstRect, 1
    .EndConnect secondRect, 1
End With
newConnector.RerouteConnections
```
ResetRotation Method

 Resets the extrusion rotation around the x-axis and the y-axis to 0 (zero) so that the front of the extrusion faces forward. This method doesn't reset the rotation around the z-axis.

 `expression.ResetRotation`

 `expression`  Required. An expression that returns a `ThreeDFormat` object.
Remarks

To set the extrusion rotation around the x-axis and the y-axis to anything other than 0 (zero), use the RotationX and RotationY properties of the ThreeDFormat object. To set the extrusion rotation around the z-axis, use the Rotation property of the Shape object that represents the extruded shape.


**Example**

This example resets the rotation around the x-axis and the y-axis to 0 (zero) for the extrusion of shape one on `myDocument`.

```vba
Set myDocument = ActivePresentation.Slides(1)
myDocument.Shapes(1).ThreeD.ResetRotation
```
ResetSlideTime Method

Resets the elapsed time (represented by the SlideElapsedTime property) for the slide that's currently displayed to 0 (zero).

expression.ResetSlideTime

expression Required. An expression that returns a SlideShowView object.
Example

This example resets the elapsed time for the slide that's currently displayed in slide show window one to 0 (zero).

`SlideShowWindows(1).View.ResetSlideTime`
RotatedBounds Method

Returns the coordinates of the vertices of the text bounding box for the specified text range.

\textit{expression.}\texttt{RotatedBounds}(X1, Y1, X2, Y2, X3, Y3, X4, Y4)

\textit{expression} Required. An expression that returns a TextRange object.

\textbf{X1, Y1} Required \textbf{Single}. Returns the position (in points) of the first vertex of the bounding box for the text within the specified text range.

\textbf{X2, Y2} Required \textbf{Single}. Returns the position (in points) of the second vertex of the bounding box for the text within the specified text range.

\textbf{X3, Y3} Required \textbf{Single}. Returns the position (in points) of the third vertex of the bounding box for the text within the specified text range.

\textbf{X4, Y4} Required \textbf{Single}. Returns the position (in points) of the fourth vertex of the bounding box for the text within the specified text range.
Example

This example uses the values returned by the arguments of the **RotatedBounds** method to draw a freeform that has the dimensions of the text bounding box for the third word in the text range in shape one on slide one in the active presentation.

```vba
Dim x1 As Single, y1 As Single
Dim x2 As Single, y2 As Single
Dim x3 As Single, y3 As Single
Dim x4 As Single, y4 As Single
Dim myDocument As Slide

Set myDocument = ActivePresentation.Slides(1)
    x1, y1, x2, y2, x3, y3, x4, y4
With myDocument.Shapes.BuildFreeform(msoEditingCorner, x1, y1)
    .AddNodes msoSegmentLine, msoEditingAuto, x2, y2
    .AddNodes msoSegmentLine, msoEditingAuto, x3, y3
    .AddNodes msoSegmentLine, msoEditingAuto, x4, y4
    .AddNodes msoSegmentLine, msoEditingAuto, x1, y1
    .ConvertToShape.ZOrder msoSendToBack
End With
```
RtlRun Method

Sets the direction of text in a text range to read from right to left.

expression.RtlRun

expression Required. An expression that returns a TextRange object.
Remarks

This method makes it possible to use text from both left-to-right and right-to-left languages in the same presentation.
Example

The following example finds all of the shapes on slide one that contain text and changes the text to read from right to left.

ActiveWindow.ViewType = ppViewSlide
For Each sh In ActivePresentation.Slides(1).Shapes
    If sh.HasTextFrame Then
        sh.TextFrame.TextRange.RtlRun
    End If
Next
Run Method

- Run method as it applies to the SlideShowSettings object.

Runs a slide show of the specified presentation. Returns a SlideShowWindow object.

expression.Run

expression  Required. An expression that returns one of the above objects.
Remarks

To run a custom slide show, set the `RangeType` property to `ppShowNamedSlideShow`, and set the `SlideShowName` property to the name of the custom show you want to run.

- **Run method as it applies to the **Application** object.**

Runs a Visual Basic procedure.

`expression.Run(MacroName, safeArrayOfParams)`

- `expression` Required. An expression that returns one of the above objects.

  - **MacroName** Required **String**. The name of the procedure to be run. The string can contain the following: a loaded presentation or add-in file name followed by an exclamation point (!), a valid module name followed by a period (.), and the procedure name. For example, the following is a valid **MacroName** value: "MyPres.ppt!Module1.Test."

  - **safeArrayOfParams** Required **Variant**. The argument to be passed to the procedure. You cannot specify an object for this argument, and you cannot use named arguments with this method. Arguments must be passed by position.
Example

➤ As it applies to the `SlideShowSettings` object.

This example starts a full-screen slide show of the active presentation, with shortcut keys disabled.

```
With ActivePresentation.SlideShowSettings
    .ShowType = ppShowSpeaker
    .Run.View.AcceleratorsEnabled = False
End With
```

This example runs the named slide show "Quick Show."

```
With ActivePresentation.SlideShowSettings
    .RangeType = ppShowNamedSlideShow
    .SlideShowName = "Quick Show"
    .Run
End With
```

➤ As it applies to the `Application` object.

In this example, the `Main` procedure defines an array and then runs the macro `TestPass`, passing the array as an argument.

```
Sub Main()
    Dim x(1 To 2)
    x(1) = "hi"
    x(2) = 7
    Application.Run "TestPass", x
End Sub

Sub TestPass(x)
    MsgBox x(1)
    MsgBox x(2)
End Sub
```
Runs Method

Returns a **TextRange** object that represents the specified subset of text runs. A text run consists of a range of characters that share the same font attributes. For information about counting or looping through the runs in a text range, see the **TextRange** object.

```
expression.Runs(Start, Length)
```

**expression** Required. An expression that returns a **TextRange** object.

**Start** Optional **Long**. The first run in the returned range.

**Length** Optional **Long**. The number of runs to be returned.
Remarks

If both \textit{Start} and \textit{Length} are omitted, the returned range starts with the first run and ends with the last paragraph in the specified range.

If \textit{Start} is specified but \textit{Length} is omitted, the returned range contains one run.

If \textit{Length} is specified but \textit{Start} is omitted, the returned range starts with the first run in the specified range.

If \textit{Start} is greater than the number of runs in the specified text, the returned range starts with the last run in the specified range.

If \textit{Length} is greater than the number of runs from the specified starting run to the end of the text, the returned range contains all those runs.

A run consists of all characters from the first character after a font change to the second-to-last character with the same font attributes. For example, consider the following sentence:

This \textit{italic} word is not \textbf{bold}.

In the preceding sentence, the first run consists of the word "This" only if the space after the word "This" isn't formatted as italic (if the space is italic, the first run is only the first three characters, or "Thi"). Likewise, the second run contains the word "italic" only if the space after the word is formatted as italic.
Example

This example formats the second run in shape two on slide one in the active presentation as bold italic if it's already italic.

With Application.ActivePresentation.Slides(1).Shapes(2) _
   .TextFrame.TextRange
   With .Runs(2).Font
      If .Italic Then
         .Bold = True
      End If
   End With
End With
Save Method

Saves the specified presentation.

\textit{expression}.\texttt{Save}

\textit{expression}  Required. An expression that returns a \texttt{Presentation} object.
Remarks

Use the `SaveAs` method to save a presentation that hasn't been previously saved. To determine whether a presentation has been saved, test for a nonempty value for the `FullName` or `Path` property. If a document with the same name as the specified presentation already exists on disk, that document will be overwritten. No warning message will be displayed.

To mark the presentation as saved without writing it to disk, set the `Saved` property to `True`. 
**Example**

This example saves the active presentation if it's been changed since the last time it was saved.

```vba
With Application.ActivePresentation
    If Not .Saved And .Path <> "" Then .Save
End With
```
SaveAs Method

Saves a presentation that's never been saved, or saves a previously saved presentation under a different name.

expression.SaveAs(Filename, FileFormat, EmbedFonts)

expression Required. An expression that returns a Presentation object.

Filename Required String. Specifies the name to save the file under. If you don't include a full path, PowerPoint saves the file in the current folder.

FileFormat Optional PpSaveAsFileType. Specifies the saved file format. If this argument is omitted, the file is saved in the format of a presentation in the current version of PowerPoint (ppSaveAsPresentation).

PpSaveAsFileType can be one of these PpSaveAsFileType constants.

ppSaveAsHTMLv3
ppSaveAsAddIn
ppSaveAsBMP
ppSaveAsDefault
ppSaveAsGIF
ppSaveAsHTML
ppSaveAsHTMLDual
ppSaveAsJPG
ppSaveAsMetaFile
ppSaveAsPNG
ppSaveAsPowerPoint3
ppSaveAsPowerPoint4
ppSaveAsPowerPoint4FarEast
ppSaveAsPowerPoint7
ppSaveAsPresentation Default.
ppSaveAsRTF
ppSaveAsShow
ppSaveAsTemplate
ppSaveAsTIF
ppSaveAsWebArchive

*EmbedFonts* Optional **MsoTriState**. Specifies whether PowerPoint embeds TrueType fonts in the saved presentation.

MsoTriState can be one of these MsoTriState constants.

- **msoCTrue**
- **msoFalse**
- **msoTriStateMixed** Default.
- **msoTriStateToggle**
- **msoTrue** PowerPoint embeds TrueType fonts in the saved presentation.
Example

This example saves a copy of the active presentation under the name "New Format Copy.ppt." By default, this copy is saved in the format of a presentation in the current version of PowerPoint. The presentation is then saved as a PowerPoint 4.0 file named "Old Format Copy."

With Application.ActivePresentation
    .SaveCopyAs "New Format Copy"
    .SaveAs "Old Format Copy", ppSaveAsPowerPoint4
End With
SaveCopyAs Method

Saves a copy of the specified presentation to a file without modifying the original.

expression.SaveCopyAs(FileName, FileFormat, EmbedTrueTypeFonts)

expression Required. An expression that returns a Presentation object.

FileName Required String. Specifies the name to save the file under. If you don't include a full path, PowerPoint saves the file in the current folder.

FileFormat Optional PpSaveAsFileType. The file format.

PpSaveAsFileType can be one of these PpSaveAsFileType constants.

ppSaveAsHTMLv3
ppSaveAsAddIn
ppSaveAsBMP
ppSaveAsDefault default
ppSaveAsGIF
ppSaveAsHTML
ppSaveAsHTMLDual
ppSaveAsJPG
ppSaveAsMetaFile
ppSaveAsPNG
ppSaveAsPowerPoint3
ppSaveAsPowerPoint4
ppSaveAsPowerPoint4FarEast
ppSaveAsPowerPoint7
ppSaveAsPresentation
ppSaveAsRTF
ppSaveAsShow
EmbedTrueTypeFonts  Optional  MsoTriState. Specifies whether TrueType fonts are embedded.

MsoTriState can be one of these MsoTriState constants:

msoCTrue
msoFalse
msoTriStateMixed  default
msoTriStateToggle
msoTrue
Example

This example saves a copy of the active presentation under the name "New Format Copy.ppt." By default, this copy is saved in the format of a presentation in the current version of PowerPoint. The presentation is then saved as a PowerPoint 4.0 file named "Old Format Copy."

With Application.ActivePresentation
    .SaveCopyAs "New Format Copy"
    .SaveAs "Old Format Copy", ppSaveAsPowerPoint4
End With
ScaleHeight Method

Scales the height of the shape by a specified factor. For pictures and OLE objects, you can indicate whether you want to scale the shape relative to the original size or relative to the current size. Shapes other than pictures and OLE objects are always scaled relative to their current height.

expression.ScaleHeight(Factor, RelativeToOriginalSize, fScale)

expression Required. An expression that returns a Shape or ShapeRange object.

Factor Required Single. Specifies the ratio between the height of the shape after you resize it and the current or original height. For example, to make a rectangle 50 percent larger, specify 1.5 for this argument.

RelativeToOriginalSize Required MsoTriState. Specifies whether the shape is scaled relative to its current or original size.

MsoTriState can be one of these MsoTriState constants.

msoCTrue
msoFalse Scales the shape relative to its current size.
msoTriStateMixed
msoTriStateToggle
msoTrue Scales the shape relative to its original size. You can specify msoTrue for this argument only if the specified shape is a picture or an OLE object.

fScale Optional MsoScaleFrom. The part of the shape that retains its position when the shape is scaled.

MsoScaleFrom can be one of these MsoScaleFrom constants.
msoScaleFromBottomRight
msoScaleFromMiddle
msoScaleFromTopLeft Default.
Example

This example scales all pictures and OLE objects on myDocument to 175 percent of their original height and width, and it scales all other shapes to 175 percent of their current height and width.

Set myDocument = ActivePresentation.Slides(1)
For Each s In myDocument.Shapes
    Select Case s.Type
        Case msoEmbeddedOLEObject, msoLinkedOLEObject, _, msoOLEControlObject, msoLinkedPicture, msoPicture
            s.ScaleHeight 1.75, msoTrue
            s.ScaleWidth 1.75, msoTrue
        Case Else
            s.ScaleHeight 1.75, msoFalse
            s.ScaleWidth 1.75, msoFalse
    End Select
Next
ScaleWidth Method

Scales the width of the shape by a specified factor. For pictures and OLE objects, you can indicate whether you want to scale the shape relative to the original size or relative to the current size. Shapes other than pictures and OLE objects are always scaled relative to their current width.

expression.ScaleWidth(Factor, RelativeToOriginalSize, fScale)

expression Required. An expression that returns a Shape or ShapeRange object.

Factor Required Single. Specifies the ratio between the width of the shape after you resize it and the current or original width. For example, to make a rectangle 50 percent larger, specify 1.5 for this argument.

RelativeToOriginalSize Required MsoTriState. Specifies whether a shape is scaled relative to its current or original size.

MsoTriState can be one of these MsoTriState constants.

msoCTrue
msoFalse Scales the shape relative to its current size.
msoTriStateMixed
msoTriStateToggle
msoTrue Scales the shape relative to its original size. You can specify msoTrue for this argument only if the specified shape is a picture or an OLE object.

fScale Optional MsoScaleFrom. The part of the shape that retains its position when the shape is scaled.

MsoScaleFrom can be one of these MsoScaleFrom constants.
msoScaleFromBottomRight
msoScaleFromMiddle
msoScaleFromTopLeft Default.
Example

This example scales all pictures and OLE objects on myDocument to 175 percent of their original height and width, and it scales all other shapes to 175 percent of their current height and width.

Set myDocument = ActivePresentation.Slides(1)
For Each s In myDocument.Shapes
    Select Case s.Type
    Case msoEmbeddedOLEObject, msoLinkedOLEObject, _
        msoOLEControlObject, msoLinkedPicture, msoPicture
        s.ScaleHeight 1.75, msoTrue
        s.ScaleWidth 1.75, msoTrue
    Case Else
        s.ScaleHeight 1.75, msoFalse
        s.ScaleWidth 1.75, msoFalse
    End Select
ScrollIntoView Method

Scrolls the document window so that items within a specified rectangular area are displayed in the document window or pane.

(expression).ScrollIntoView(Left, Top, Width, Height, Start)

expression  Required. An expression that returns a DocumentWindow object.

Left  Required Long. The horizontal distance (in points) from the left edge of the document window to the rectangle.

Top  Required Long. The vertical distance (in points) from the top of the document window to the rectangle.

Width  Required Long. The width of the rectangle (in points).

Height  Required Long. The height of the rectangle (in points).

Start  Optional MsoTriState. Determines the starting position of the rectangle in relation to the document window.

MsoTriState can be one of these MsoTriState constants.

msoCTrue

msoFalse  The bottom right of the rectangle is to appear at the bottom right of the document window.

msoTriStateMixed

msoTriStateToggle

msoTrue  Default. The top left of the rectangle is to appear at the top left of the document window.
Remarks

If the bounding rectangle is larger than the document window, the `Start` argument specifies which end of the rectangle displays or gets initial focus. This method cannot be used with outline or slide sorter views.
Example

This example brings into view a 100x200 point area beginning 50 points from the left edge of the slide, and 20 points from the top of the slide. The top left corner of the rectangle is positioned at the top left corner of the active document window.

ActiveWindow.ScrollIntoView Left:=50, Top:=20, _
Width:=100, Height:=200
Show All
Select Method

- Select method as it applies to the Cell, Column, Row, Slide, SlideRange, and TextRange objects.

Selects the specified object.

expression.Select

expression Required. An expression that returns one of the above objects.

- Select method as it applies to the Shape and ShapeRange objects.

Selects the specified object.

expression.Select(Replace)

expression Required. An expression that returns one of the above objects.

Replace Optional MsoTriState. Specifies whether the selection replaces any previous selection.

MsoTriState can be one of these MsoTriState constants.

msoCTrue
msoFalse The selection is added to the previous selection.

msoTriStateMixed
msoTriStateToggle
msoTrue Default. The selection replaces any previous selection.
Remarks

If you try to make a selection that isn't appropriate for the view, your code will fail. For example, you can select a slide in slide sorter view but not in slide view.
Example

- **As it applies to the** [Cell, Column, Row, Slide, SlideRange, and TextRange objects**]

This example selects the first five characters in the title of slide one in the active presentation.

```
```

This example selects slide one in the active presentation.

```
ActivePresentation.Slides(1).Select
```

This example selects a table that has been added to a new slide in a new presentation. The table has three rows and three columns.

```
End With
```

- **As it applies to the** [Shape and ShapeRange objects**]

This example selects shapes one and three on slide one in the active presentation.

```
ActivePresentation.Slides(1).Shapes.Range(Array(1, 3)).Select
```

This example adds shapes two and four on slide one in the active presentation to the previous selection.

```
ActivePresentation.Slides(1).Shapes.Range(Array(2, 4)).Select False
```
SelectAll Method

Selects all shapes (in a Shapes collection) or all diagram nodes (in a DiagramNodes or DiagramNodeChildren collection).

expression.SelectAll

expression  Required. An expression that returns one of the objects in the Applies To list.
Example

This example selects all the shapes on myDocument.

Set myDocument = ActivePresentation.Slides(1)
myDocument.Shapes.SelectAll
SendForReview Method

Sends a presentation in an e-mail message for review to the specified recipients.

expression.SendForReview(Recipients, Subject, ShowMessage, IncludeAttachment)

expression Required. An expression that returns one of the objects in the Applies To list.

Recipients Optional String. A string that lists the people to whom to send the message. These can be unresolved names and aliases in an e-mail phone book or full e-mail addresses. Separate multiple recipients with a semicolon (;). If left blank and ShowMessage is False, you will receive an error message, and the message will not be sent.

Subject Optional String. A string for the subject of the message. If left blank, the subject will be: Please review "filename".

ShowMessage Optional Boolean. A Boolean value that indicates whether the message should be displayed when the method is executed. The default value is True. If set to False, the message is automatically sent to the recipients without first showing the message to the sender.

IncludeAttachment Optional Variant. A Boolean value that indicates whether the message should include an attachment or a link to a server location. The default value is True. If set to False, the document must be stored at a shared location.
Remarks

The `SendForReview` method starts a collaborative review cycle. Use the `EndReview` method to end a review cycle.
Example

This example automatically sends the active presentation as an attachment in an e-mail message to the specified recipients.

Sub WebReview()
    ActivePresentation.SendForReview _
        Recipients:="someone@microsoft.com; amy jones", _
        Subject:="Please review this document.", _
        ShowMessage:=False, _
        IncludeAttachment:=True
End Sub
## Sentences Method

Returns a [TextRange](#) object that represents the specified subset of text sentences. For information about counting or looping through the sentences in a text range, see the [TextRange](#) object.

`expression.Sentences(Start, Length)`

- `expression` Required. An expression that returns a [TextRange](#) object.
- `Start` Optional [Long](#). The first sentence in the returned range.
- `Length` Optional [Long](#). The number of sentences to be returned.
Remarks

If both \textit{Start} and \textit{Length} are omitted, the returned range starts with the first sentence and ends with the last paragraph in the specified range.

If \textit{Start} is specified but \textit{Length} is omitted, the returned range contains one sentence.

If \textit{Length} is specified but \textit{Start} is omitted, the returned range starts with the first sentence in the specified range.

If \textit{Start} is greater than the number of sentences in the specified text, the returned range starts with the last sentence in the specified range.

If \textit{Length} is greater than the number of sentences from the specified starting sentence to the end of the text, the returned range contains all those sentences.
Example

This example formats as bold the second sentence in the second paragraph in shape two on slide one in the active presentation.

This keyword is not implemented. It is reserved for future use.
SetEditingType Method

Sets the editing type of the node specified by `Index`. If the node is a control point for a curved segment, this method sets the editing type of the node adjacent to it that joins two segments. Note that, depending on the editing type, this method may affect the position of adjacent nodes.

\[
expression.SetEditingType(Index, EditingType)
\]

`expression` Required. An expression that returns a `ShapeNodes` object.

`Index` Required `Long`. The node whose editing type is to be set.

`EditingType` Required `MsoEditingType`. The editing type.

MsoEditingType can be one of these MsoEditingType constants.

- `msoEditingAuto`
- `msoEditingCorner`
- `msoEditingSmooth`
- `msoEditingSymmetric`
Example

This example changes all corner nodes to smooth nodes in shape three on myDocument. Shape three must be a freeform drawing.

```vba
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(3).Nodes
    For n = 1 to .Count
        If .Item(n).EditingType = msoEditingCorner Then
            .SetEditingType n, msoEditingSmooth
        End If
    Next
End With
```
SetExtrusionDirection Method

Sets the direction that the extrusion's sweep path takes away from the extruded shape.

\textit{expression}.\texttt{SetExtrusionDirection(\textit{PresetExtrusionDirection})}

\textit{expression}  Required. An expression that returns a \texttt{ThreeDFormat} object.

\textit{PresetExtrusionDirection}  Required \texttt{MsoPresetExtrusionDirection}. Specifies the extrusion direction.

\texttt{MsoPresetExtrusionDirection} can be one of these \texttt{MsoPresetExtrusionDirection} constants.

\texttt{msoExtrusionBottom}
\texttt{msoExtrusionBottomLeft}
\texttt{msoExtrusionBottomRight}
\texttt{msoExtrusionLeft}
\texttt{msoExtrusionNone}
\texttt{msoExtrusionRight}
\texttt{msoExtrusionTop}
\texttt{msoExtrusionTopLeft}
\texttt{msoExtrusionTopRight}
\texttt{msoPresetExtrusionDirectionMixed}
Remarks

This method sets the `PresetExtrusionDirection` property to the direction specified by the `PresetExtrusionDirection` argument.
Example

This example specifies that the extrusion for shape one on myDocument extend toward the top of the shape and that the lighting for the extrusion come from the left.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(1).ThreeD
  .Visible = True
  .SetExtrusionDirection msoExtrusionTop
  .PresetLightingDirection = msoLightingLeft
End With
SetPasswordEncryptionOptions Method

Sets the options Microsoft PowerPoint uses for encrypting presentations with passwords.

expression.SetPasswordEncryptionOptions(PasswordEncryptionProvider, PasswordEncryptionFileProperties, PasswordEncryptionKeyLength, PasswordEncryptionAlgorithm)

expression  Required. An expression that returns one of the objects in the Applies To list.

PasswordEncryptionProvider  Required String. The name of the encryption provider.

PasswordEncryptionAlgorithm  Required String. The name of the encryption algorithm. PowerPoint supports stream-encrypted algorithms.

PasswordEncryptionKeyLength  Required Long. The encryption key length. Must be a multiple of 8, starting at 40.

PasswordEncryptionFileProperties  Required MsoTriState. MsoTrue for PowerPoint to encrypt file properties.

MsoTriState can be one of these MsoTriState constants.

msoCTrue  Not used with this method.
msoFalse
msoTriStateMixed  Not used with this method.
msoTriStateToggle  Not used with this method.
msoTrue
Example

This example sets the password encryption options if the file properties are not encrypted for password-protected documents.

Sub PasswordSettings()
    With ActivePresentation
        If .PasswordEncryptionFileProperties = msoFalse Then
            .SetPasswordEncryptionOptions _
                PasswordEncryptionProvider:="Microsoft RSA SChannel"
                PasswordEncryptionAlgorithm:="RC4", _
                PasswordEncryptionKeyLength:=56, _
                PasswordEncryptionFileProperties:=True
        End If
    End With
End Sub
SetPosition Method

Sets the location of the node specified by Index. Note that, depending on the editing type of the node, this method may affect the position of adjacent nodes.

expression.SetPosition(Index, X1, Y1)

expression  Required. An expression that returns a ShapeNodes object.

Index  Required Long. The node whose position is to be set.

X1, Y1  Required Single. The position (in points) of the new node relative to the upper-left corner of the document.
Example

This example moves node two in shape three on myDocument to the right 200 points and down 300 points. Shape three must be a freeform drawing.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(3).Nodes
    pointsArray = .Item(2).Points
    currXvalue = pointsArray(1, 1)
    currYvalue = pointsArray(1, 2)
    .SetPosition 2, currXvalue + 200, currYvalue + 300
End With
SetSegmentType Method

Sets the segment type of the segment that follows the node specified by `Index`. If the node is a control point for a curved segment, this method sets the segment type for that curve. Note that this may affect the total number of nodes by inserting or deleting adjacent nodes.

`expression.SetSegmentType(Index, SegmentType)`

`expression` Required. An expression that returns a `ShapeNodes` object.

`Index` Required `Long`. The node whose segment type is to be set.

`SegmentType` Required `MsoSegmentType`. Specifies if the segment is straight or curved.

`MsoSegmentType` can be one of these `MsoSegmentType` constants.

`msoSegmentCurve`
`msoSegmentLine`
Example

This example changes all straight segments to curved segments in shape three on myDocument. Shape three must be a freeform drawing.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(3).Nodes
    n = 1
    While n <= .Count
        If .Item(n).SegmentType = msoSegmentLine Then
            .SetSegmentType n, msoSegmentCurve
        End If
        n = n + 1
    Wend
End With
SetShapesDefaultProperties Method

Applies the formatting for the specified shape to the default shape. Shapes created after this method has been used will have this formatting applied to them by default.

\[expression\text{.}SetShapesDefaultProperties\]

\[expression\] Required. An expression that returns a Shape object.
**Example**

This example adds a rectangle to myDocument, formats the rectangle's fill, applies the rectangle's formatting to the default shape, and then adds another smaller rectangle to the document. The second rectangle has the same fill as the first one.

```vbnet
Set mydocument = ActivePresentation.Slides(1)
With mydocument.Shapes
    With .AddShape(msoShapeRectangle, 5, 5, 80, 60)
        With .Fill
            .ForeColor.RGB = RGB(0, 0, 255)
            .BackColor.RGB = RGB(0, 204, 255)
            .Patterned msoPatternHorizontalBrick
        End With
        ' Sets formatting for default shapes
        .SetShapesDefaultProperties
    End With
    ' New shape has default formatting
    .AddShape msoShapeRectangle, 90, 90, 40, 30
End With
```
SetThreeDFormat Method

Sets the preset extrusion format. Each preset extrusion format contains a set of preset values for the various properties of the extrusion.

`expression.SetThreeDFormat(PresetThreeDFormat)`

expression  Required. An expression that returns a ThreeDFormat object.

**PresetThreeDFormat**  Required **MsoPresetThreeDFormat**. Specifies a preset extrusion format that corresponds to one of the options (numbered from left to right, from top to bottom) displayed when you click the 3-D button on the Drawing toolbar.

MsoPresetThreeDFormat can be one of these MsoPresetThreeDFormat constants.

**msoPresetThreeDFormatMixed**  Specifying this constant causes an error.

- `msoThreeD1`
- `msoThreeD2`
- `msoThreeD3`
- `msoThreeD4`
- `msoThreeD5`
- `msoThreeD6`
- `msoThreeD7`
- `msoThreeD8`
- `msoThreeD9`
- `msoThreeD10`
- `msoThreeD11`
- `msoThreeD12`
- `msoThreeD13`
- `msoThreeD14`
- `msoThreeD15`
msoThreeD16
msoThreeD17
msoThreeD18
msoThreeD19
msoThreeD20
Remarks

This method sets the `PresetThreeDFormat` property to the format specified by the `PresetThreeDFormat` argument.
Example

This example adds an oval to myDocument and sets its extrusion format to 3D Style 12.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes
    .AddShape(msoShapeOval, 30, 30, 50, 25).ThreeD.Visible = True
    .SetThreeDFormat msoThreeD12
End With
SmallScroll Method

Scrolls through the specified document window by lines and columns.

expression.SmallScroll(Down, Up, ToRight,ToLeft)

expression Required. An expression that returns a DocumentWindow object.

Down Optional Long. Specifies the number of lines to scroll down.

Up Optional Long. Specifies the number of lines to scroll up.

ToRight Optional Long. Specifies the number of columns to scroll right.

ToLeft Optional Long. Specifies the number of columns to scroll left.
Remarks

If no arguments are specified, this method scrolls down one line. If *Down* and *Up* are both specified, their effects are combined. For example, if *Down* is 2 and *Up* is 4, this method scrolls up two lines. Similarly, if *Right* and *Left* are both specified, their effects are combined.

Any of the arguments can be a negative number.
Example

This example scrolls down three lines in the active window.

Application.ActiveWindow.SmallScroll Down:=3
Solid Method

Sets the specified fill to a uniform color. Use this method to convert a gradient, textured, patterned, or background fill back to a solid fill.

expression.Solid

expression Required. An expression that returns a FillFormat object.
Example

This example converts all fills on *myDocument* to uniform red fills.

```vba
Set myDocument = ActivePresentation.Slides(1)
For Each s In myDocument.Shapes
    With s.Fill
        .Solid
        .ForeColor.RGB = RGB(255, 0, 0)
    End With
Next
```
Split Method

Splits a single table cell into multiple cells.

expression.Split NumRows, NumColumns

expression Required. An expression that returns a Cell object.

NumRows Required Long. Number of rows that the cell is being split into.

NumColumns Required Long. Number of columns that the cell is being split into.
Example

This example splits the first cell in the referenced table into two cells, one directly above the other.

ActivePresentation.Slides(2).Shapes(5).Table.Cell(1, 1).Split 2, 1
SwapNode Method

Swaps the source diagram node with the target diagram node. Any child diagram nodes are moved along with their corresponding root nodes unless specified otherwise.

(expression.SwapNode(TargetNode, SwapChildren))

**expression**  Required. An expression that returns one of the objects in the Applies To list.

**TargetNode**  Required **DiagramNode** object. The target diagram node.

**SwapChildren**  Optional **Boolean**. **True** (default) if all child diagram nodes are moved along with their corresponding target or source diagram nodes. **False** to swap just the target and source diagram nodes, inheriting the other's child diagram nodes.
**Example**

The following example swaps the first and third nodes in a newly-created diagram.

```vba
Sub SwapTwoNodes()
    Dim dgnNode As DiagramNode
    Dim shpDiagram As Shape
    Dim intNodes As Integer

    'Adds radial diagram and first node
    Set shpDiagram = ActivePresentation.Slides(1).Shapes.AddDiagram(Type:=msoDiagramRadial, Left:=10, Top:=15, Width:=400, Height:=475)

    'Adds three additional nodes
    For intNodes = 1 To 3
        dgnNode.Children.AddNode
    Next intNodes

    'Swaps the first and the third nodes

End Sub
```
**ToggleVerticalText Method**

Switches the text flow in the specified WordArt from horizontal to vertical, or vice versa.

`expression.ToggleVerticalText`

`expression` Required. An expression that returns a `TextEffectFormat` object.
Remarks

Using the **ToggleVerticalText** method swaps the values of the **Width** and **Height** properties of the **Shape** object that represents the WordArt and leaves the **Left** and **Top** properties unchanged.

The **Flip** method and **Rotation** property of the **Shape** object and the **RotatedChars** property and **ToggleVerticalText** method of the **TextEffectFormat** object all affect the character orientation and the direction of text flow in a **Shape** object that represents WordArt. You may have to experiment to find out how to combine the effects of these properties and methods to get the result you want.
Example

This example adds WordArt that contains the text "Test" to myDocument, and switches from horizontal text flow (the default for the specified WordArt style, msoTextEffect1) to vertical text flow.

Set myDocument = ActivePresentation.Slides(1)
Set newWordArt = myDocument.Shapes.AddTextEffect _
   (PresetTextEffect:=msoTextEffect1, Text:="Test", _
   FontName:="Arial Black", FontSize:=36, _
   FontBold:=False, FontItalic:=False, Left:=100, Top:=100)
newWordArt.TextEffect.ToggleVerticalText
TransferChildren Method

Moves the child nodes of one diagram node to another diagram node.

expression.TransferChildren(ReceivingNode)

expression Required. An expression that returns one of the objects in the Applies To list.

ReceivingNode Required DiagramNode object. The target (receiving) diagram node.
Example

The following example transfers the child nodes from the first node to the third node of a newly-created diagram.

Sub TransferChildNodes()

    Dim dgnNode As DiagramNode
    Dim shpDiagram As Shape
    Dim intNodes As Integer

    'Adds org chart and root node
    Set shpDiagram = ActivePresentation.Slides(1).Shapes _
        .AddDiagram(Type:=msoDiagramOrgChart, Left:=10, _
        Top:=15, Width:=400, Height:=475)

    'Adds three child nodes to root node
    For intNodes = 1 To 3
        dgnNode.Children.AddNode
    Next intNodes

    'Adds three child nodes to first child node
    For intNodes = 1 To 3
    Next intNodes

    ' Transfers children of the first node to the third node
    dgnNode.Children.Item(1).TransferChildren(1).TransferChildren _
    ReceivingNode:=dgnNode.Children.Item(3)

End Sub
TrimText Method

Returns a **TextRange** object that represents the specified text minus any trailing spaces.

*expression.TrimText*

*expression*  Required. An expression that returns a **TextRange** object.
Example

This example inserts the string " Text to trim  " at the beginning of the text in shape two on slide one in the active presentation and then displays message boxes showing the string before and after it's trimmed.

With Application.ActivePresentation.Slides(1).Shapes(2) _
  .TextFrame.TextRange
With .InsertBefore(" Text to trim ")
  MsgBox "Untrimmed: " & """ & .Text & """
  MsgBox "Trimmed: " & """ & .TrimText.Text & """
End With
End With
TwoColorGradient Method

Sets the specified fill to a two-color gradient.

expression.TwoColorGradient(Style, Variant)

expression   Required. An expression that returns one of the objects in the Applies To list.

Style   Required MsoGradientStyle. The gradient style.

MsoGradientStyle can be one of these MsoGradientStyle constants.

msoGradientDiagonalDown
msoGradientDiagonalUp
msoGradientFromCenter
msoGradientFromCorner
msoGradientFromTitle
msoGradientHorizontal
msoGradientMixed
msoGradientVertical

Variant   Required Long. The gradient variant. Can be a value from 1 to 4, corresponding to the four variants on the Gradient tab in the Fill Effects dialog box. If Style is msoGradientFromTitle or msoGradientFromCenter, this argument can be either 1 or 2.
Example

This example adds a rectangle with a two-color gradient fill to myDocument, and sets the background and foreground color for the fill.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes.AddShape(Type:=msoShapeRectangle, Left:=0, _
    Top:=0, Width:=40, Height:=80).Fill
    .ForeColor.RGB = RGB(Red:=128, Green:=0, Blue:=0)
    .BackColor.RGB = RGB(Red:=0, Green:=170, Blue:=170)
    .TwoColorGradient Style:=msoGradientHorizontal, Variant:=1
End With
Ungroup Method

Ungroups any grouped shapes in the specified shape or range of shapes. Disassembles pictures and OLE objects within the specified shape or range of shapes. Returns the ungrouped shapes as a single ShapeRange object.

expression.Ungroup

expression Required. An expression that returns a ShapeRange object.
Remarks

Because a group of shapes is treated as a single object, grouping and ungrouping shapes changes the number of items in the Shapes collection and changes the index numbers of items that come after the affected items in the collection.
Example

This example ungroups any grouped shapes and disassembles any pictures or OLE objects on myDocument.

```vba
Set myDocument = ActivePresentation.Slides(1)
For Each s In myDocument.Shapes
    s.Ungroup
Next
```

This example ungroups any grouped shapes on myDocument without disassembling pictures or OLE objects on the slide.

```vba
Set myDocument = ActivePresentation.Slides(1)
For Each s In myDocument.Shapes
    If s.Type = msoGroup Then s.Ungroup
Next
```
Unselect Method

- Cancels the current selection.

expression.Unselect

expression  Required. An expression that returns a Selection object.
**Example**

This example cancels the current selection in window one.

`Windows(1).Selection.Unselect`
Update Method

Updates the specified linked OLE object. To update all the links in a presentation at once, use the UpdateLinks method.

expression.Update

type: expression

description: Required. An expression that returns a LinkFormat object.
Example

This example updates all linked OLE objects in the active presentation.

For Each sld In ActivePresentation.Slides
    For Each sh In sld.Shapes
        If sh.Type = msoLinkedOLEObject Then
            sh.LinkFormat.Update
        End If
    Next
Next
UpdateLinks Method

Updates linked OLE objects in the specified presentation.

`expression.UpdateLinks`

`expression` Required. An expression that returns a `Presentation` object.
Example

This example updates all OLE links in the active presentation.

ActivePresentation.\texttt{UpdateLinks}
UseDefaultFolderSuffix Method

Sets the folder suffix for the specified presentation to the default suffix for the language support you have selected or installed.

expression.UseDefaultFolderSuffix

description An expression that returns a WebOptions object.
Remarks

Microsoft PowerPoint uses the folder suffix when you save or publish a complete or partial presentation as a Web page, use long file names, and choose to save supporting files in a separate folder (that is, if the UseLongFileNames and OrganizeInFolder properties are set to True).

The suffix appears in the folder name after the presentation name. For example, if the presentation is called "Pres1" and the language is English, the folder name is Pres1_files. The folder suffixes for each language are listed in the FolderSuffix property topic.
Example

This example sets the folder suffix for the active presentation to the default suffix.

```
ActivePresentation.WebOptions.UseDefaultFolderSuffix
```
UserPicture Method

Fills the specified shape with one large image. If you want to fill the shape with small tiles of an image, use the **UserTextured** method.

*expression*.UserPicture(*PictureFile*)

*expression*  Required. An expression that returns a **FillFormat** object.

*PictureFile*  Required **String**. The name of the picture file.
Example

This example adds two rectangles to myDocument. The rectangle on the left is filled with one large image of the picture in Tiles.bmp; the rectangle on the right is filled with many small tiles of the picture in Tiles.bmp

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes
    .AddShape(msoShapeRectangle, 0, 0, 200, 100).Fill _
        .UserPicture "c:\windows\tiles.bmp"
    .AddShape(msoShapeRectangle, 300, 0, 200, 100).Fill _
        .UserTextured "c:\windows\tiles.bmp"
End With
UserTextured Method

Fills the specified shape with small tiles of an image. If you want to fill the shape with one large image, use the UserPicture method.

expression.UserTextured(TextureFile)

expression Required. An expression that returns a FillFormat object.

TextureFile Required String. The name of the picture file.
Example

This example adds two rectangles to myDocument. The rectangle on the left is filled with one large image of the picture in Tiles.bmp; the rectangle on the right is filled with many small tiles of the picture in Tiles.bmp

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes
    .AddShape(msoShapeRectangle, 0, 0, 200, 100).Fill _
        .UserPicture "c:\windows\tiles.bmp"
    .AddShape(msoShapeRectangle, 300, 0, 200, 100).Fill _
        .UserTextured "c:\windows\tiles.bmp"
End With
Value Method

- Returns the value of the specified tag as a **String**.

  \textit{expression}.Value(\textit{Index})

  \textit{expression}  Required. An expression that returns a **Tags** collection.

  \textit{Index}  Required **Long**. The tag number.
Example

This example displays the name and value for each tag associated with slide one in the active presentation.

```vba
With Application.ActivePresentation.Slides(1).Tags
    For i = 1 To .Count
        MsgBox "Tag #" & i & ": Name = " & .Name(i)
        MsgBox "Tag #" & i & ": Value = " & .Value(i)
    Next
End With
```

This example searches through the tags for each slide in the active presentation. If there's a tag named "PRIORITY," a message box displays the tag value. If there isn't a tag named "PRIORITY," the example adds this tag with the value "Unknown."

```vba
For Each s In Application.ActivePresentation.Slides
    With s.Tags
        found = False
        For i = 1 To .Count
            If .Name(i) = "PRIORITY" Then
                found = True
                slNum = .Parent.SlideIndex
                MsgBox "Slide " & slNum & " priority: " & .Value(i)
            End If
        Next
        If Not found Then
            slNum = .Parent.SlideIndex
            .Add "Name", "New Figures"
            .Add "Priority", "Unknown"
            MsgBox "Slide " & slNum & _
            " priority tag added: Unknown"
        End If
    End With
Next
```
WebPagePreview Method

Shows a preview of the presentation in the active Web browser.

expression.WebPagePreview

expression Required. An expression that returns a Presentation object.
Example

This example previews presentation two as a Web page.
Words Method

Returns a `TextRange` object that represents the specified subset of text words. For information about counting or looping through the words in a text range, see the `TextRange` object.

`expression.Words(Start, Length)`

- `expression` Required. An expression that returns a `TextRange` object.
- `Start` Optional `Long`. The first word in the returned range.
- `Length` Optional `Long`. The number of words to be returned.
Remarks

If both Start and Length are omitted, the returned range starts with the first word and ends with the last paragraph in the specified range.

If Start is specified but Length is omitted, the returned range contains one word.

If Length is specified but Start is omitted, the returned range starts with the first word in the specified range.

If Start is greater than the number of words in the specified text, the returned range starts with the last word in the specified range.

If Length is greater than the number of words from the specified starting word to the end of the text, the returned range contains all those words.
Example

This example formats as bold the second, third, and fourth words in the first paragraph in shape two on slide one in the active presentation.

ZOrder Method

Moves the specified shape in front of or behind other shapes in the collection (that is, changes the shape's position in the z-order).

expression.ZOrder(ZOrderCmd)

**expression** Required. An expression that returns a Shape object.

**ZOrderCmd** Required MsoZOrderCmd. Specifies where to move the specified shape relative to the other shapes.

MsoZOrderCmd can be one of these MsoZOrderCmd constants.

- msoBringForward
- msoBringInFrontOfText For use in Microsoft Word only.
- msoBringToFront
- msoSendBackward
- msoSendBehindText For use in Microsoft Word only.
- msoSendToBack
Remarks

Use the **ZOrderPosition** property to determine a shape's current position in the z-order.
Example

This example adds an oval to myDocument and then places the oval second from the back in the z-order if there is at least one other shape on the slide.

```
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes.AddShape(msoShapeOval, 100, 100, 100, 300)
    While .ZOrderPosition > 2
        .ZOrder msoSendBackward
    Wend
End With
```
Accelerate Property

Returns or sets a **Single** that represents the percent of the duration over which a timing acceleration should take place. For example, a value of 0.9 means that an acceleration should start slower than the default speed for 90% of the total animation time, with the last 10% of the animation at the default speed. Read/write.

*expression*.Accelerate

*expression*  Required. An expression that returns one of the objects in the Applies To list.
Remarks

To slow down an animation at the end, use the **Decelerate** property.
Example

This example adds a shape and adds an animation, starting out slow and matching the default speed after 30% of the animation sequence.

Sub AddShapeSetTiming()

    Dim effDiamond As Effect
    Dim shpRectangle As Shape

    'Adds rectangle and specifies effect to use for rectangle
    Set shpRectangle = ActivePresentation.Slides(1).Shapes.AddShape(Type:=msoShapeRectangle, _
        Left:=100, Top:=100, Width:=50, Height:=50)
    Set effDiamond = ActivePresentation.Slides(1).TimeLine.MainSequence.AddEffect(Shape:=shpRectangle, _
        effectId:=msoAnimEffectPathDiamond)

    'Specifies the acceleration for the effect
    With effDiamond.Timing
        .Accelerate = 0.3
    End With

End Sub
AcceleratorsEnabled Property

Determines whether shortcut key are enabled during a slide show. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants. (If shortcut keys are disabled during a slide show, you can neither use keys to navigate in the slide show nor press F1 to get a list of shortcut keys. You can still use the ESC key to exit the slide show.)

msoCTrue
msoFalse
msoTriStateMixed
msoTriStateToggle
msoTrue Default. Shortcut keys are enabled during a slide show.

expression.AcceleratorsEnabled

expression Required. An expression that returns one of the objects in the Applies To list.
Example

This example runs a slide show of the active presentation with shortcut keys disabled.

`ActivePresentation.SlideShowSettings.Run _.View.AcceleratorsEnabled = False`
Accent Property

Determines whether a vertical accent bar separates the callout text from the callout line. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.
- msoCTrue
- msoFalse
- msoTriStateMixed
- msoTriStateToggle
- msoTrue A vertical accent bar separates the callout text from the callout line.

expression.Accent

expression Required. An expression that returns one of the objects in the Applies To list.
Example

This example adds to myDocument an oval and a callout that points to the oval. The callout text won't have a border, but it will have a vertical accent bar that separates the text from the callout line.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes
    .AddShape msoShapeOval, 180, 200, 280, 130
    With .AddCallout(msoCalloutTwo, 420, 170, 170, 40)
        .TextFrame.TextRange.Text = "My oval"
        With .Callout
            .Accent = msoTrue
            .Border = msoFalse
        End With
    End With
End With
Accumulate Property

Sets or returns an MsoAnimAccumulate constant that represents whether animation behaviors accumulate. Read/write.

MsoAnimAccumulate can be one of these MsoAnimAccumulate constants. msoAnimAccumulateAlways Repetitions start with the current value. msoAnimAccumulateNone Default.

expression.Accumulate

expression Required. An expression that returns one of the objects in the Applies To list.
Remarks

Use this property in conjunction with the Additive property to combine animation effects.
Example

The following example allows a specified animation behavior to accumulate with other animation behaviors.

Sub SetAccumulate()
    Dim animBehavior As AnimationBehavior

    Set animBehavior = ActiveWindow.Selection.SlideRange(1).TimeLine.MainSequence(1).Behaviors(1)

    animBehavior.Accumulate = msoAnimAccumulateAlways

End Sub
**Action Property**

Returns or sets the type of action that will occur when the specified shape is clicked or the mouse pointer is positioned over the shape during a slide show. Can be one of the following *PpActionType* constants. Read/write *Long*.

- **ppActionEndShow**
- **ppActionFirstSlide**
- **ppActionHyperlink**
- **ppActionLastSlide**
- **ppActionLastSlideViewed**
- **ppActionMixed**
- **ppActionNamedSlideShow**
- **ppActionNextSlide**
- **ppActionNone**
- **ppActionOLEVerb**
- **ppActionPlay**
- **ppActionPreviousSlide**
- **ppActionRunMacro**
- **ppActionRunProgram**

You can use the *Action* property in conjunction with other properties of the *ActionSetting* object, as shown in the following table.

<table>
<thead>
<tr>
<th>If you set the Action property to this value</th>
<th>Use this property</th>
<th>To do this</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ppActionHyperlink</strong></td>
<td><strong>Hyperlink</strong></td>
<td>Set properties for the hyperlink that will be followed in response to a mouse action on the shape during a slide show.</td>
</tr>
<tr>
<td>Action Code</td>
<td>Parameter</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>----------------------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>ppActionRunProgram</td>
<td>Run</td>
<td>Return or set the name of the program to run in response to a mouse action on the shape during a slide show.</td>
</tr>
<tr>
<td>ppActionRunMacro</td>
<td>Run</td>
<td>Return or set the name of the macro to run in response to a mouse action on the shape during a slide show.</td>
</tr>
<tr>
<td>ppActionOLEVerb</td>
<td>ActionVerb</td>
<td>Set the OLE verb that will be invoked in response to a mouse action on the shape during a slide show.</td>
</tr>
<tr>
<td>ppActionNamedSlideShow</td>
<td>SlideShowName</td>
<td>Set the name of the custom slide show that will run in response to a mouse action on the shape during a slide show.</td>
</tr>
</tbody>
</table>
Example

This example sets shape three (an OLE object) on slide one in the active presentation to be played when the mouse passes over it during a slide show.

With ActivePresentation.Slides(1) _
  .Shapes(3).ActionSettings(ppMouseOver)
    .ActionVerb = "Play"
    .Action = ppActionOLEVerb
End With
ActionSettings Property

Returns an ActionSettings object that contains information about what action occurs when the user clicks or moves the mouse over the specified shape or text range during a slide show. Read-only.
Example

The following example sets the actions for clicking and moving the mouse over shape one on slide two in the active presentation.

Set myShape = ActivePresentation.Slides(2).Shapes(1)
myShape.ActionSettings(ppMouseClick).Action = ppActionLastSlide
myShape.ActionSettings(ppMouseOver).SoundEffect.Name = "applause"
**ActionVerb Property**

- **ActionVerb property as it applies to the PlaySettings object.**

  Returns or sets a string that contains the OLE verb that will be run when the specified OLE object is animated during a slide show. The default verb specifies the action that the OLE object runs — such as playing a wave file or displaying data so that the user can modify it — after the previous animation or slide transition. Read/write **String.**

- **ActionVerb property as it applies to the ActionSetting object.**

  Returns or sets a string that contains the OLE verb that will be run when the user clicks the specified shape or passes the mouse pointer over it during a slide show. The **Action** property must be set to **ppActionOLEVerb** first for this property to affect the slide show action. Read/write **String.**
Example

- **As it applies to the **PlaySettings** object.**

This example specifies that shape three on slide one in the active presentation will automatically open for editing when it's animated. Shape three must be an OLE object that contains a sound or movie object and that supports the "Edit" verb.

```vba
Set OLEobj = ActivePresentation.Slides(1).Shapes(3)
With OLEobj.AnimationSettings.PlaySettings
  .PlayOnEntry = True
  .ActionVerb = "Edit"
End With
```

- **As it applies to the **ActionSetting** object.**

This example sets shape three on slide one to be played whenever the mouse pointer passes over it during a slide show. Shape three must represent an OLE object that supports the "Play" verb.

```vba
With ActivePresentation.Slides(1).Shapes(3)
  .ActionSettings(ppMouseOver)
    .ActionVerb = "Play"
    .Action = ppActionOLEVerb
End With
```
Show All
Active Property

Returns whether the specified pane or window is active. Read-only 
*MsoTriState*. 

_MsoTriState_ can be one of these _MsoTriState_ constants. 

- *msoCTrue* 
- *msoFalse* 
- *msoTriStateMixed* 
- *msoTriStateToggle* 
- *msoTrue* The specified pane or window is active.

*expression*.**Active**

*expression*  Required. An expression that returns of the objects in the Applies To list.
Example

This example checks to see if the presentation file "test.ppt" is in the active window. If not, it saves the name of the presentation that is currently active in the variable oldWin and activates the "test.ppt" presentation.

With Application.Presentations("test.ppt").Windows(1)
    If Not .Active Then
        Set oldWin = Application.ActiveWindow
        .Activate
    End If
End With
ActivePane Property

Returns a `Pane` object that represents the active pane in the document window. Read-only.
Example

If the active pane is the slide pane, this example makes the notes pane the active pane. The notes pane is the third member of the Panes collection.

With ActiveWindow
    If .ActivePane.ViewType = ppViewSlide Then
        .Panes(3).Activate
    End If
End With
ActivePresentation Property

Returns a Presentation object that represents the presentation open in the active window. Read-only.

Note that if an embedded presentation is in-place active, the ActivePresentation property returns the embedded presentation.
Example

This example saves the loaded presentation to the application folder in a file named "TestFile."

```vba
MyPath = Application.Path & "\TestFile"
Application.ActivePresentation.SaveAs MyPath
```
ActivePrinter Property

Returns the name of the active printer. Read-only String.
Example

This example displays the name of the active printer.

MsgBox "The name of the active printer is " _ & Application.ActivePrinter
ActiveWindow Property

- Returns a DocumentWindow object that represents the active document window. Read-only.
Example

This example minimizes the active window.

Application.ActiveWindow.WindowState = ppWindowMinimized
Show All
AddIns Property

Returns the program-specific AddIns collection that represents all the add-ins listed in the Add-Ins dialog box (Tools menu). Read-only.

For information about returning a single member of a collection, see Returning an Object from a Collection.
Remarks

Microsoft PowerPoint-specific add-ins are identified by a .ppa file name extension. Component Object Model (COM) add-ins can be used universally across Microsoft programming products and have a .dll or .exe file name extension.
Example

This example adds the add-in named "Myaddin.ppa" to the list in the Add-Ins dialog box and loads the add-in automatically.

Set myAddIn = Application.AddIns.Add(FileName:="c:\myaddin.ppa")
myAddIn.Loaded = True
MsgBox myAddIn.Name & " has been added to the list"
Additive Property

Sets or returns an **MsoAnimAdditive** constant that represents whether the current animation behavior is combined with other running animations. Read/write.

**MsoAnimAdditive** can be one of these **MsoAnimAdditive** constants.

- **msoAnimAdditiveAddBase** Does not combine current animation with other animations. *Default.*
- **msoAnimAdditiveAddSum** Combines the current animation with other running animations.

`expression.Additive`

**expression** Required. An expression that returns one of the objects in the Applies To list.
Remarks

Combining animation behaviors particularly useful for rotation effects. For example, if the current animation changes rotation and another animation is also changing rotation, then if this property is set to `msoAnimAdditiveAddSum`, Microsoft PowerPoint will add together the rotations from both the animations.
Example

The following example allows the current animation behavior to be added to another animation behavior.

Sub SetAdditive()
    Dim animBehavior As AnimationBehavior
    Set animBehavior = ActiveWindow.Selection.SlideRange(1).TimeLine.MainSequence(1).Behaviors(1)
    animBehavior.Additive = msoAnimAdditiveAddSum
End Sub
Address Property

Returns or sets the Internet address (URL) to the target document. Read/write String.
Example

This example scans all shapes on the first slide for the URL to the Microsoft Web site.

Set myDocument = ActivePresentation.Slides(1)
For Each s In myDocument.Hyperlinks
    If s.Address = "http://www.microsoft.com/" Then
        MsgBox "You have a link to the Microsoft Home Page"
    End If
Next
Adjustments Property

Returns an Adjustments object that contains adjustment values for all the adjustments in the specified shape. Applies to any Shape or ShapeRange object that represents an AutoShape, WordArt, or a connector. Read-only.
Example

This example sets to 0.25 the value of adjustment one for shape three on myDocument.

```vba
Set myDocument = ActivePresentation.Slides(1)
myDocument.Shapes(3).Adjustments(1) = 0.25
```
**AdvanceMode Property**

- **AdvanceMode property as it applies to the AnimationSettings object.**

Returns or sets a value that indicates whether the specified shape animation advances only when clicked or automatically after a specified amount of time. Read/write **PpAdvanceMode**. If your shape doesn't become animated, make sure that the **TextLevelEffect** property is set to a value other than **ppAnimateLevelNone** and that the **Animate** property is set to **True**.

PpAdvanceMode can be one of these PpAdvanceMode constants.

- **ppAdvanceModeMixed**
- **ppAdvanceOnClick**
- **ppAdvanceOnTime**

`expression.AdvanceMode`

`expression` Required. An expression that returns one of the above objects.

- **AdvanceMode property as it applies to the SlideShowSettings object.**

Returns or sets a value that indicates how the slide show advances. Read/write **PpSlideShowAdvanceMode**.

PpSlideShowAdvanceMode can be one of these PpSlideShowAdvanceMode constants.

- **ppSlideShowManualAdvance**
- **ppSlideShowRehearseNewTimings**
- **ppSlideShowUseSlideTimings**

`expression.AdvanceMode`
expression Required. An expression that returns one of the above objects.

- **AdvanceMode property as it applies to the SlideShowView object.**

  Returns a value that indicates how the slide show in the specified view advances. Read-only **PpSlideShowAdvanceMode**.

  PpSlideShowAdvanceMode can be one of these PpSlideShowAdvanceMode constants.
  - **ppSlideShowManualAdvance**
  - **ppSlideShowRehearseNewTimings**
  - **ppSlideShowUseSlideTimings**

  **expression.AdvanceMode**

  expression Required. An expression that returns one of the above objects.
Example

As it applies to the **AnimationSettings** object.

This example sets shape two on slide one in the active presentation to become animated automatically after five seconds.

```vbnet
With ActivePresentation.Slides(1).Shapes(2).AnimationSettings
    .AdvanceMode = ppAdvanceOnTime
    .AdvanceTime = 5
    .TextLevelEffect = ppAnimateByAllLevels
    .Animate = True
End With
```
AdvanceOnClick Property

Determines whether the specified slide advances when it's clicked during a slide show. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.

msoCTrue
msoFalse
msoTriStateMixed
msoTriStateToggle
msoTrue The specified slide advances when it's clicked during a slide show.

expression.AdvanceOnClick

expression Required. An expression that returns one of the objects in the Applies To list.
Remarks

To set the slide to advance automatically after a certain amount of time elapses, set the AdvanceOnTime property to True and set the AdvanceTime property to the amount of time you want the slide to be shown. If you set both the AdvanceOnClick and the AdvanceOnTime properties to True, the slide will advance either when it's clicked or when the specified amount of time has elapsed — whichever comes first.
Example

This example sets slide one in the active presentation to advance after five seconds have passed or when the mouse is clicked — whichever occurs first.

With ActivePresentation.Slides(1).SlideShowTransition
    .AdvanceOnClick = msoTrue
    .AdvanceOnTime = msoTrue
    .AdvanceTime = 5
End With
AdvanceOnTime Property

Determines whether the specified slide advances automatically after a specified amount of time has elapsed. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.

msoCTrue
msoFalse
msoTriStateMixed
msoTriStateToggle
msoTrue The specified slide advances automatically after a specified amount of time has elapsed.

expression.AdvanceOnTime

expression Required. An expression that returns one of the objects in the Applies To list.
Remarks

Use the **AdvanceTime** property to specify the number of seconds after which the slide will automatically advance. Set the **AdvanceMode** property of the **SlideShowSettings** object to **ppSlideShowUseSlideTimings** to put the slide interval settings into effect for the entire slide show.
**Example**

This example sets slide one in the active presentation to advance after five seconds have passed or when the mouse is clicked — whichever occurs first.

```vba
With ActivePresentation.Slides(1).SlideShowTransition  
  .AdvanceOnClick = msoTrue 
  .AdvanceOnTime = msoTrue 
  .AdvanceTime = 5 
End With
```
AdvanceTime Property

- As it applies to the AnimationSettings object.

Returns or sets the amount of time, in seconds, after which the specified shape will become animated. Read/write Single.

- As it applies to the SlideShowTransition object.

Returns or sets the amount of time, in seconds, after which the specified slide transition will occur. Read/write Single.
Remarks

The specified slide animation won't start automatically after the amount of time you've specified unless the **AdvanceMode** property of the animation is set to **ppAdvanceOnTime**. The specified slide transition won't advance automatically unless the **AdvanceMode** property of the slide show settings is set to **ppSlideShowUseSlideTimings**.
Example

- As it applies to the **AnimationSettings** object.

This example sets shape two on slide one in the active presentation to become animated automatically after five seconds.

```vba
With ActivePresentation.Slides(1).Shapes(2).AnimationSettings
    .AdvanceMode = ppAdvanceOnTime
    .AdvanceTime = 5
    .TextLevelEffect = ppAnimateByAllLevels
    .Animate = True
End With
```
AfterEffect Property

- AfterEffect property as it applies to the EffectInformation object.

Returns an MsoAnimAfterEffect constant that indicates whether an after effect is dimmed, hidden, or unchanged after it runs. Read-only.

MsoAnimAfterEffect can be one of these MsoAnimAfterEffect constants.

- msoAnimAfterEffectDim
- msoAnimAfterEffectHide
- msoAnimAfterEffectHideOnNextClick
- msoAnimAfterEffectMixed
- msoAnimAfterEffectNone

expression.AfterEffect

type

expression Required. An expression that an EffectInformation object.

- AfterEffect property as it applies to the AnimationSettings object.

Returns or sets a PpAfterEffect constant that indicates whether the specified shape appears dimmed, hidden, or unchanged after it's been built. Read/write.

PpAfterEffect can be one of these PpAfterEffect constants.

- ppAfterEffectDim
- ppAfterEffectHide
- ppAfterEffectHideOnNextClick
- ppAfterEffectMixed
- ppAfterEffectNothing

expression.AfterEffect

type

expression Required. An expression that returns an AnimationSettings object.
Remarks

You won't see the after effect you set for a shape unless the shape gets animated and at least one other shape on the slide gets animated after it. For a shape to be animated, the TextLevelEffect property of the AnimationSettings object for the shape must be set to something other than ppAnimateLevelNone, or the EntryEffect property must be set to a constant other than ppEffectNone. In addition, the Animate property must be set to True. To change the build order of the shapes on a slide, use the AnimationOrder property.
Example

This example specifies that the title on slide one in the active presentation is to appear dimmed after the title is built. If the title is the last or only shape to be built on slide one, the text won't be dimmed.

With ActivePresentation.Slides(1).Shapes.Title.AnimationSettings
    .Animate = True
    .TextLevelEffect = ppAnimateByAllLevels
    .AfterEffect = ppAfterEffectDim
End With
Show All
Alignment Property

- Alignment property as it applies to the TextEffectFormat object.

Returns or sets the alignment for the specified WordArt. Read/write MsoTextEffectAlignment.

MsoTextEffectAlignment can be one of these MsoTextEffectAlignment constants.

- msoTextEffectAlignmentCentered
- msoTextEffectAlignmentLeft
- msoTextEffectAlignmentMixed
- msoTextEffectAlignmentRight
- msoTextEffectAlignmentStretchJustify
- msoTextEffectAlignmentWordJustify
- msoTextEffectAlignmentLetterJustify

expression.Alignment

expression Required. An expression that returns a TextEffectFormat object.

- Alignment property as it applies to the ParagraphFormat object.

Returns or sets the alignment for each paragraph in the specified paragraph format. Read/write PpParagraphAlignment.

PpParagraphAlignment can be one of these PpParagraphAlignment constants.

- ppAlignCenter
- ppAlignDistribute
- ppAlignJustify
- ppAlignJustifyLow
ppAlignLeft
ppAlignmentMixed
ppAlignRight
ppAlignThaiDistribute

expression.Alignment

expression  Required. An expression that returns a ParagraphFormat object.
Example

- **As it applies to the TextEffectFormat object.**

This example adds a WordArt object to slide one in the active presentation and then right aligns the WordArt.

```vba
Set mySh = Application.ActivePresentation.Slides(1).Shapes
Set myTE = mySh.AddTextEffect(PresetTextEffect:=msoTextEffect1, _
    Text:="Test Text", FontName:="Palatino", FontSize:=54, _
    FontBold:=True, FontItalic:=False, Left:=100, Top:=50)
myTE.TextEffect.Alignment = msoTextEffectAlignmentRight
```

- **As it applies to the ParagraphFormat object.**

This example left aligns the paragraphs in shape two on slide one in the active presentation.

```vba
```
AllowPNG Property

Determines whether PNG (Portable Network Graphics) is allowed as an output format when you save or publish a complete or partial presentation as a Web page. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.

**msoCTrue**
**msoFalse** Default. PNG is not allowed as an output format when you save or publish a complete or partial presentation as a Web page.

**msoTriStateMixed**
**msoTriStateToggle**
**msoTrue** PNG is allowed as an image format when you save or publish a complete or partial presentation as a Web page.

*expression*.AllowPNG

*expression*  Required. An expression that returns one of the objects in the Applies To list.
Remarks

If you save images in the PNG format as opposed to any other file format, you might improve the image quality or reduce the size of those image files, and therefore decrease the download time, assuming that the Web browsers you are targeting support the PNG format.
Example

This example enables PNG as an output format for the active presentation.

ActivePresentation.WebOptions.AllowPNG = msoTrue

Alternatively, PNG can be enabled as the global default for the application for newly created presentations.

Application.DefaultWebOptions.AllowPNG = msoTrue
AlternativeText Property

Returns or sets the alternative text associated with a shape in a Web presentation. Read/write String.
Example

The following example sets the alternative text for the selected shape in the active window. The selected shape is a picture of a mallard duck.

ActiveWindow.Selection.ShapeRange .AlternativeText = "This is a mallard duck."
AlwaysSaveInDefaultEncoding Property

Determines whether the default encoding is used when you save a Web page or plain text document, independent of the file's original encoding when opened. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.

- msoCTrue
- msoFalse Default. The original encoding of the file is used when you save a Web page or plain text document, independent of the file's original encoding when opened.
- msoTriStateMixed
- msoTriStateToggle
- msoTrue The default encoding is used when you save a Web page or plain text document, independent of the file's original encoding when opened.

expression. AlwaysSaveInDefaultEncoding

expression Required. An expression that returns one of the objects in the Applies To list.
Remarks

The **Encoding** property can be used to set the default encoding.
Example

This example sets the encoding to the default encoding. The encoding is used when you save the document as a Web page.

Application.DefaultWebOptions.AlwaysSaveInDefaultEncoding = msoTrue
Amount Property

Returns or sets a **Single** that represents the number of degrees an animated shape is rotated around the z-axis. A positive value indicates clockwise rotation; a negative value indicates counterclockwise rotation. Read/write.

*expression*.Amount

*expression*  Required. An expression that returns one of the objects in the Applies To list.
Example

The following example adds a shape, and a 90-degree spin animation to the shape.

Sub SetAnimEffect()
    Dim effSpin As Effect
    Dim shpCube As Shape

    Set shpCube = ActivePresentation.Slides(1).Shapes.AddShape _
        (Type:=msoShapeCube, Left:=100, Top:=100, _
        Width:=50, Height:=50)
    Set effSpin = ActivePresentation.Slides(1).TimeLine _
        .MainSequence.AddEffect(Shape:=shpCube, _
        effectId:=msoAnimEffectSpin)

    effSpin.Timing.Duration = 3
    effSpin.EffectParameters.Amount = -90
End Sub
Angle Property

Returns or sets the angle of the callout line. If the callout line contains more than one line segment, this property returns or sets the angle of the segment that is farthest from the callout text box. Read/write MsoCalloutAngleType.

MsoCalloutAngleType can be one of these MsoCalloutAngleType constants.

- msoCalloutAngle30
- msoCalloutAngle45
- msoCalloutAngle60
- msoCalloutAngle90
- msoCalloutAngleAutomatic Callout line maintains a fixed angle as you drag the callout.
- msoCalloutAngleMixed

expression.Angle

expression  Required. An expression that returns one of the objects in the Applies To list.
Example

This example sets to 90 degrees the callout angle for a callout named "co1" on myDocument.

Set myDocument = ActivePresentation.Slides(1)
myDocument.Shapes("co1").Callout.Angle = msoCalloutAngle90
Animate Property

Determines whether the specified shape is animated during a slide show. Read/write `MsoTriState`.

MsoTriState can be one of these MsoTriState constants.
- `msoCTrue`
- `msoFalse`
- `msoTriStateMixed`
- `msoTriStateToggle`
- `msoTrue` The specified shape is animated during a slide show.

`expression`.Animate

`expression` Required. An expression that returns one of the objects in the Applies To list.
Remarks

For a shape to be animated, the **TextLevelEffect** property of the **AnimationSettings** object for the shape must be set to something other than **ppAnimateLevelNone**, and either the **Animate** property must be set to **True**, or the **EntryEffect** property must be set to a constant other than **ppEffectNone**.
**Example**

This example specifies that the title on slide two in the active presentation appear dimmed after the title is built. If the title is the last or only shape to be built on slide two, the text won't be dimmed.

```vba
With ActivePresentation.Slides(2).Shapes.Title.AnimationSettings
    .TextLevelEffect = ppAnimateByAllLevels
    .AfterEffect = ppAfterEffectDim
    .Animate = msoTrue
End With
```
Show All
AnimateAction Property

- **MsoTrue** if the color of the specified shape is momentarily inverted when the specified mouse action occurs. Read/write **MsoTriState**.

MsoTriState can be one of these MsoTriState constants.
- **msoCTrue**
- **msoFalse**
- **msoTriStateMixed**
- **msoTriStateToggle**
- **msoTrue**

*expression*.AnimateAction

*expression*  Required. An expression that returns one of the objects in the Applies To list.
Example

This example sets shape three on slide one in the active presentation to play the sound of applause and to momentarily invert its color when it's clicked during a slide show.

```vba
With ActivePresentation.Slides(1) 
    .Shapes(3).ActionSettings(ppMouseClick) 
        .SoundEffect.Name = "applause" 
        .AnimateAction = msoTrue 
End With
```
AnimateBackground Property

- **AnimateBackground property as it applies to the AnimationSettings object.**

If the specified object is an AutoShape, **msoTrue** if the shape is animated separately from the text it contains. If the specified shape is a graph object, **msoTrue** if the background (the axes and gridlines) of the specified graph object is animated. Applies only to AutoShapes with text that can be built in more than one step or to graph objects. Read/write **MsoTriState**.

MsoTriState can be one of these MsoTriState constants.

- msoCTrue
- msoFalse
- msoTriStateMixed
- msoTriStateToggle
- msoTrue

**expression.AnimateBackground**

**expression** Required. An expression that returns an **AnimationSettings** object.

- **AnimateBackground property as it applies to the EffectInformation object.**

Returns **MsoTrue** if the specified effect is a background animation. Read-only **MsoTriState**.

MsoTriState can be one of these MsoTriState constants.

- msoCTrue
- msoFalse
- msoTriStateMixed
- msoTriStateToggle
- msoTrue
expression\text{.} \textit{AnimateBackground}

expression  Required. An expression that returns one of the above objects.
Remarks

Use the `TextLevelEffect` and `TextUnitEffect` properties to control the animation of text attached to the specified shape.

If this property is set to `MsoTrue` and the `TextLevelEffect` property is set to `ppAnimateByAllLevels`, the shape and its text will be animated simultaneously. If this property is set to `MsoTrue` and the `TextLevelEffect` property is set to anything other than `ppAnimateByAllLevels`, the shape will be animated immediately before the text is animated.

You won't see effects of setting this property unless the specified shape is animated. For a shape to be animated, the `TextLevelEffect` property for the shape must be set to something other than `ppAnimateLevelNone`, and either the `Animate` property must be set to `MsoTrue`, or the `EntryEffect` property must be set to a constant other than `ppEffectNone`. 
Example

- As it applies to the **AnimationSettings** object.

This example creates a rectangle that contains text. The example then specifies that the shape should fly in from the lower right, that the text should be built from first-level paragraphs, and that the shape should be animated separately from the text it contains. In this example, the **EntryEffect** property turns on animation.

```vba
Sub AnimateTextBox()
    With ActivePresentation.Slides(1).Shapes.AddShape _
        (Type:=msoShapeRectangle, Left:=50, Top:=200, _
         Width:=200, Height:=200)
        .TextFrame.TextRange = "Reason 1" & Chr(13) & _
                     "Reason 2" & Chr(13) & "Reason 3"
    With .AnimationSettings
        .EntryEffect = ppEffectFlyFromBottomRight
        .TextLevelEffect = ppAnimateByFirstLevel
        .TextUnitEffect = ppAnimateByParagraph
        .AnimateBackground = msoTrue
    End With
End With
End Sub
```

- As it applies to the **EffectInformation** object.

This example changes the direction of the animation if the background is currently animated.

```vba
Sub ChangeAnimationDirection()
    With ActivePresentation.Slides(1).TimeLine.MainSequence(1)
        If .EffectInformation.AnimateBackground = msoTrue Then
            .EffectParameters.Direction = msoAnimDirectionTopLeft
        End If
    End With
End Sub
```
AnimateTextInReverse Property

Determines whether the specified shape is built in reverse order. Applies only to shapes (such as shapes containing lists) that can be built in more than one step. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.

msoCTrue
msoFalse
msoTriStateMixed
msoTriStateToggle
msoTrue The specified shape is built in reverse order.

expression.AnimateTextInReverse

expression  Required. An expression that returns one of the objects in the Applies To list.
Remarks

You won't see effects of setting this property unless the specified shape gets animated. For a shape to be animated, the TextLevelEffect property of the AnimationSettings object for the shape must be set to something other than ppAnimateLevelNone and the Animate property must be set to True.
Example

This example adds a slide after slide one in the active presentation, sets the title text, adds a three-item list to the text placeholder, and sets the list to be built in reverse order.

```vba
With ActivePresentation.Slides.Add(2, ppLayoutText).Shapes
  .Item(1).TextFrame.TextRange.Text = "Top Three Reasons"
  With .Item(2)
    .TextFrame.TextRange = "Reason 1" & Chr(13) &
      "Reason 2" & Chr(13) & "Reason 3"
    With .AnimationSettings
      .Animate = msoTrue
      .TextLevelEffect = ppAnimateByFirstLevel
      .AnimateTextInReverse = msoTrue
    End With
  End With
End With
```
AnimationOrder Property

Returns or sets an integer that represents the position of the specified shape within the collection of shapes to be animated. Read/write Long.
Remarks

You won't see effects of setting this property unless the specified shape gets animated. For a shape to be animated, the **TextLevelEffect** property of the **AnimationSettings** object for the shape must be set to something other than **ppAnimateLevelNone** and the **Animate** property must be set to **True**.

**Note**  Setting the **AnimationOrder** property to a value that is less than the greatest existing **AnimationOrder** property value can shift the animation order.
Example

This example specifies that shape two on slide two in the active presentation be animated second.

ActivePresentation.Slides(2).Shapes(2).AnimationSettings.AnimationOrder = 2
AnimationSettings Property

Returns an AnimationSettings object that represents all the special effects you can apply to the animation of the specified shape.

`expression.AnimationSettings`

`expression` Required. An expression that returns one of the objects in the Applies To list.
Example

This example sets shape one on slide two in the active presentation to fly in from the left when the slide is built.

With ActivePresentation.Slides(2).Shapes(1).AnimationSettings
  .EntryEffect = ppEffectFlyFromLeft
  .TextLevelEffect = ppAnimateByAllLevels
End With
AnswerWizard Property

Returns the AnswerWizard object that contains the files used by the online Help search engine. Read-only.
Application Property

- Returns an `Application` object that represents the creator of the specified object.

`expression.Application`

`expression` Required. An expression that returns one of the objects in the Applies To list.
Example

In this example, a **Presentation** object is passed to the procedure. The procedure adds a slide to the presentation and then saves the presentation in the folder where Microsoft PowerPoint is running.

```vba
Sub AddAndSave(pptPres As Presentation)
    pptPres.Slides.Add 1, 1
    pptPres.SaveAs pptPres.Application.Path & "\Added Slide"
End Sub
```

This example displays the name of the application that created each linked OLE object on slide one in the active presentation.

```vba
For Each shpOle In ActivePresentation.Slides(1).Shapes
    If shpOle.Type = msoLinkedOLEObject Then
        MsgBox shpOle.OLEFormat.Application.Name
    End If
Next
```
Assistant Property

Some of the content in this topic may not be applicable to some languages. Returns an Assistant object that represents the Office Assistant. Read-only.
Example

This example displays the Office Assistant.

Application.AAssistant.Visible = True

This example moves the Office Assistant to the upper-left region of the screen.

Application.AAssistant.Move xLeft:=100, yTop:=100
Author Property

- Returns a String that represents the author as for a specified Comment object. Read-only.

expression.Author

expression Required. An expression that returns one of the objects in the Applies To list.
Remarks

This property only returns the author's name. To return the author's initials, use the **AuthorInitials** property. Specify the Author of a comment when you add a new comment to the presentation.
Example

The following example adds a comment to the first slide of the active presentation and then displays the author's name and initials in a message.

Sub GetAuthorName()
    With ActivePresentation.Slides(1)
        .Comments.Add Left:=100, Top:=100, Author:="Jeff Smith", _
            AuthorInitials:="JS", _
            Text:="This is a new comment added to the first slide."
        MsgBox "This comment was created by " & _
            .Comments(1).Author & " (" & .Comments(1).AuthorInitials
    End With
End Sub
AuthorIndex Property

Returns a `Long` representing the index number of a comment for a given author. The first comment for a given author has an index number of 1, their second comment has an index number of 2, and so on. Read-only.

`expression.AuthorIndex`

`expression` Required. An expression that returns one of the objects in the Applies To list.
**Example**

The following example provide information about the authors and their comment indexes for a given slide.

Sub GetCommentAuthorInfo()
  Dim cmtComment As Comment
  Dim strAuthorInfo As String

  With ActivePresentation.Slides(1)
    If .Comments.Count > 0 Then
      For Each cmtComment In .Comments
        strAuthorInfo = strAuthorInfo & "Comment Number: " & cmtComment.AuthorIndex & vbCrLf & "Made by: " & cmtComment.Author & vbCrLf & " Says: " & cmtComment.Text & vbCrLf & vbCrLf
      Next cmtComment
    End If
  End With

  MsgBox "The comments for this slide are as follows: " & vbCrLf & strAuthorInfo

End Sub
AuthorInitials Property

Returns the author's initials as a read-only String for a specified Comment object. Read-only.

expression.AuthorInitials

expression Required. An expression that returns one of the objects in the Applies To list.
Remarks

This property only returns the author's initials. To return the author's name use the Author property. Specify the author's initials when you add a new comment to the presentation.
Example

The following example returns the author's initials for a specified comment.

Sub GetAuthorName()
    With ActivePresentation.Slides(1)
        .Comments.Add Left:=100, Top:=100, Author:="Jeff Smith", _
        AuthorInitials:="JS", _
        Text:="This is a new comment added to the first slide."
        MsgBox .Comments(1).Author & .Comments(1).AuthorInitials
    End With
End Sub
AutoAttach Property

Determine whether the place where the callout line attaches to the callout text box changes depending on whether the origin of the callout line (where the callout points to) is to the left or right of the callout text box. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.

- msoCTrue
- msoFalse
- msoTriStateMixed
- msoTriStateToggle
- msoTrue The place where the callout line attaches to the callout text box changes depending on whether the origin of the callout line (where the callout points to) is to the left or right of the callout text box.
Remarks

When the value of this property is `msoTrue`, the drop value (the vertical distance from the edge of the callout text box to the place where the callout line attaches) is measured from the top of the text box when the text box is to the right of the origin, and it's measured from the bottom of the text box when the text box is to the left of the origin. When the value of this property is `msoFalse`, the drop value is always measured from the top of the text box, regardless of the relative positions of the text box and the origin. Use the `CustomDrop` method to set the drop value, and use the `Drop` property to return the drop value.

Setting this property affects a callout only if it has an explicitly set drop value — that is, if the value of the `DropType` property is `msoCalloutDropCustom`. By default, callouts have explicitly set drop values when they're created.
Example

This example adds two callouts to the first slide. One of the callouts is automatically attached and the other is not. If you change the callout line origin for the automatically attached callout to the right of the attached text box, the position of the text box changes. The callout that is not automatically attached does not display this behavior.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes
    With .AddCallout(msoCalloutTwo, 420, 170, 200, 50)
        .TextFrame.TextRange.Text = "auto-attached"
        .Callout.AutoAttach = msoTrue
    End With
    With .AddCallout(msoCalloutTwo, 420, 350, 200, 50)
        .TextFrame.TextRange.Text = "not auto-attached"
        .Callout.AutoAttach = msoFalse
    End With
End With
AutoCorrect Property

Returns an **AutoCorrect** object that represents the AutoCorrect functionality in Microsoft PowerPoint.

*expression*.**AutoCorrect**

*expression*  Required. An expression that returns one of the objects in the Applies To list.
Example

The following example disables display of the **AutoCorrect Options** and **AutoLayout Options** buttons.

```vba
Sub HideAutoCorrectOpButton()
    With Application.AutoCorrect
        .DisplayAutoCorrectOptions = msoFalse
        .DisplayAutoLayoutOptions = msoFalse
    End With
End Sub
```
AutoFormat Property

Sets or returns an **MsoTriState** constant that represents a diagram's automatic formatting state. Read/write.

**MsoTriState** can be one of these **MsoTriState** constants.
- **msoCTrue** Doesn't apply to this property.
- **msoFalse** Automatic formatting is not enabled.
- **msoTriStateMixed** Doesn't apply to this property.
- **msoTriStateToggle** Doesn't apply to this property.
- **msoTrue** Automatic formatting is enabled.

```
expression.AutoFormat
```

*expression*  Required. An expression that returns one of the objects in the Applies To list.
The following example creates a diagram, and enables automatic formatting.

Sub ConvertPyramidDiagram()
    Dim dgnNode As DiagramNode
    Dim shpDiagram As Shape
    Dim intNodes As Integer

    'Adds pyramid diagram and first child node
    Set shpDiagram = ActivePresentation.Slides(1).Shapes._
        .AddDiagram(Type:=msoDiagramPyramid, Left:=10, _
        Top:=15, Width:=400, Height:=475)

    'Adds three additional nodes
    For intNodes = 1 To 3
        dgnNode.AddNode
    Next intNodes

    'Automatically formats the diagram nodes and
    'converts pyramid diagram to radial diagram
    With dgnNode.Diagram
        .AutoFormat = msoTrue
        .Convert Type:=msoDiagramRadial
    End With
End Sub
AutoLayout Property

Sets or returns an **MsoTriState** constant that represents whether a diagram's components are automatically laid out. Read/write.

**MsoTriState** can be one of these **MsoTriState** constants.

- **msoCTrue** Doesn't apply to this property.
- **msoFalse** The diagram's components are not automatically laid out.
- **msoTriStateMixed** Doesn't apply to this property.
- **msoTriStateToggle** Doesn't apply to this property.
- **msoTrue** The diagram's components are automatically laid out.

```
expression.AutoLayout
```

*expression* Required. An expression that returns one of the objects in the Applies To list.
Example

The following example adds a diagram to a slide, converts it to a radial diagram, and arranges the diagram's nodes automatically.

Sub ConvertPyramidDiagram()
    Dim dgnNode As DiagramNode
    Dim shpDiagram As Shape
    Dim intNodes As Integer

    'Adds pyramid diagram and first child node
    Set shpDiagram = ActivePresentation.Slides(1).Shapes(
        .AddDiagram(Type:=msoDiagramPyramid, Left:=10, _
                      Top:=15, Width:=400, Height:=475)

    'Adds three additional nodes
    For intNodes = 1 To 3
        dgnNode.AddNode
    Next intNodes

    'Automatically places the diagram nodes and
    'converts pyramid diagram to radial diagram
    With dgnNode.Diagram
        .AutoLayout = msoTrue
        .Convert Type:=msoDiagramRadial
    End With

End Sub
AutoLength Property

Determines whether the first segment of the callout retains the fixed length specified by the Length property, or is scaled automatically, whenever the callout is moved. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants. Applies only to callouts whose lines consist of more than one segment (types msoCalloutThree and msoCalloutFour).

msoCTrue
msoFalse The first segment of the callout retains the fixed length specified by the Length property whenever the callout is moved.

msoTriStateMixed
msoTriStateToggle
msoTrue The first segment of the callout line (the segment attached to the text callout box) is scaled automatically whenever the callout is moved.
Remarks

This property is read-only. Use the **AutomaticLength** method to set this property to **msoTrue**, and use the **CustomLength** method to set this property to **msoFalse**.
Example

This example toggles between an automatically scaling first segment and one with a fixed length for the callout line for shape one on myDocument. For the example to work, shape one must be a callout.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(1).Callout
    If .AutoLength Then
        .CustomLength 50
    Else
        .AutomaticLength
    End If
End With
AutoLoad Property

Determines whether the specified add-in is automatically loaded each time PowerPoint is started. Read/write \texttt{MsoTriState}.

\texttt{MsoTriState} can be one of these \texttt{MsoTriState} constants.
\begin{itemize}
\item \texttt{msoCTrue}
\item \texttt{msoFalse}
\item \texttt{msoTriStateMixed}
\item \texttt{msoTriStateToggle}
\item \texttt{msoTrue}
\end{itemize}
\texttt{msoTrue} The specified add-in is automatically loaded each time PowerPoint is started.
Remarks

Setting this property to `msoTrue` automatically sets the `Registered` property to `msoTrue`. 
Example

This example displays the name of each add-in that's automatically loaded each time PowerPoint is started.

```
For Each myAddIn In AddIns
    If myAddIn.AutoLoad Then
        MsgBox myAddIn.Name
        afound = True
    End If
Next myAddIn
If afound <> True Then
    MsgBox "No add-ins were loaded automatically."
End If
```

This example specifies that the add-in named "MyTools" be loaded automatically each time PowerPoint is started.

```
Application.AddIns("mytools").AutoLoad = msoTrue
```
AutomationSecurity Property

Returns or sets an MsoAutomationSecurity constant that represents the security mode Microsoft PowerPoint uses when programmatically opening files. This property is automatically set to msoAutomationSecurityLow when the application is started. Therefore, to avoid breaking solutions that rely on the default setting, you should be careful to reset this property to msoAutomationSecurityLow after programmatically opening a file. Also, this property should be set immediately before and after opening a file programmatically to avoid malicious subversion. Read/write.

MsoAutomationSecurity can be one of these MsoAutomationSecurity constants.

- **msoAutomationSecurityByUI** Uses the security setting specified in the Security dialog box.
- **msoAutomationSecurityForceDisable** Disables all macros in all files opened programmatically without showing any security alerts.
- **msoAutomationSecurityLow** Enables all macros. This is the default value when the application is started.

expression.AutomationSecurity

*expression* Required. An expression that returns one of the objects in the Applies To list.
Remarks

The value of the `DisplayAlerts` property will not apply to security warnings. For example, if the user sets the `DisplayAlerts` property equal to `False` and the `AutomationSecurity` property to `msoAutomationSecurityByUI`, while the user is on Medium security level, then there will be security warnings while the macro is running. This allows the macro to trap file open errors, while still showing the security warning if the file open succeeds.
Example

This example captures the current automation security setting, changes the setting to disable macros, displays the Open dialog box, and after opening the selected presentation, sets the automation security back to its original setting.

Sub Security()
    Dim secAutomation As MsoAutomationSecurity

    secAutomation = Application.AutomationSecurity

    Application.FileDialog(msoFileDialogOpen).Show

    Application.AutomationSecurity = secAutomation

End Sub
AutoReverse Property

Sets or returns an **MsoTriState** that represents whether an effect should play forward and then reverse, thereby doubling the duration. Read/write.

**MsoTriState** can be one of these **MsoTriState** constants.

**msoCTrue** Doesn't apply to this property.

**msoFalse** Default. The effect does not play forward and then reverse.

**msoTriStateMixed** Doesn't apply to this property.

**msoTriStateToggle** Doesn't apply to this property.

**msoTrue** The effect plays forward and then reverse.

*expression*.AutoReverse

*expression*  Required. An expression that returns one of the objects in the Applies To list.
**Example**

The following example adds a shape and an animation effect to it; then sets the animation to reverse direction after finishing forward movement.

Sub SetEffectTiming()
    Dim effDiamond As Effect
    Dim shpRectangle As Shape

    'Adds rectangle and applies diamond effect
    Set shpRectangle = ActivePresentation.Slides(1).Shapes.AddShape
        (Type:=msoShapeRectangle, Left:=100,_
         Top:=100, Width:=50, Height:=50)
    Set effDiamond = ActivePresentation.Slides(1).TimeLine _
        .MainSequence.AddEffect(Shape:=shpRectangle, _
         effectId:=msoAnimEffectPathDiamond)

    'Sets the duration of and reverses the effect
    With effDiamond.Timing
        .Duration = 5 ' Length of effect.
        _AutoReverse = msoTrue
    End With
End Sub
AutoRotateNumbers Property

Returns or sets lateral compression. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants. 

**msoCTrue**
**msoFalse** Half-width numbers will not be compressed in lateral columns.
**msoTriStateMixed**
**msoTriStateToggle**
**msoTrue** Displays half-width numbers within vertical text in two-character lateral columns.
Example

This example sets the text direction of shape three on the first slide to vertical text, and sets lateral column compression.

```vba
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(3).TextFrame
    .Orientation = msoTextOrientationVerticalFarEast
    .TextRange.Font.AutoRotateNumbers = msoTrue
End With
```
AutoShapeType Property

Returns or sets the shape type for the specified Shape or ShapeRange object, which must represent an AutoShape other than a line, freeform drawing, or connector. Read/write MsoAutoShapeType.

MsoAutoShapeType can be one of these MsoAutoShapeType constants.

- msoShapeFlowchartConnector
- msoShapeFlowchartData
- msoShapeFlowchartDecision
- msoShapeFlowchartDelay
- msoShapeFlowchartDirectAccessStorage
- msoShapeFlowchartDisplay
- msoShapeFlowchartDocument
- msoShapeFlowchartExtract
- msoShapeFlowchartInternalStorage
- msoShapeFlowchartMagneticDisk
- msoShapeFlowchartManualInput
- msoShapeFlowchartManualOperation
- msoShapeFlowchartMerge
- msoShapeFlowchartMultidocument
- msoShapeFlowchartOffpageConnector
- msoShapeFlowchartOr
- msoShapeFlowchartPredefinedProcess
- msoShapeFlowchartPreparation
- msoShapeFlowchartProcess
- msoShapeFlowchartPunchedTape
- msoShapeFlowchartSequentialAccessStorage
- msoShapeFlowchartSort
- msoShapeFlowchartStoredData
expression.AutoShapeType

expression Required. An expression that returns one of the objects in the Applies To list. Read/write Long.

Note When you change the type of a shape, the shape retains its size, color, and other attributes.
Remarks

Use the **Type** property of the `ConnectorFormat` object to set or return the connector type.
Example

This example replaces all 16-point stars with 32-point stars in myDocument.

Set myDocument = ActivePresentation.Slides(1)
For Each s In myDocument.Shapes
    If s.AutoShapeType = msoShape16pointStar Then
        s.AutoShapeType = msoShape32pointStar
    End If
Next
AutoSize Property

Returns or sets a value that indicates whether the size of the specified shape is changed automatically to fit text within its boundaries. Read/write PpAutoSize.

PpAutoSize can be one of these PpAutoSize constants.

- ppAutoSizeMixed
- ppAutoSizeNone
- ppAutoSizeShapeToFitText

expression.AutoSize

expression Required. An expression that returns one of the objects in the Applies To list.
Example

This example adjusts the size of the title bounding box on slide one to fit the title text.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(1)
    If .TextFrame.TextRange.Characters.Count < 50 Then
        .TextFrame.AutoSize = ppAutoSizeShapeToFitText
    End If
End With
AutoUpdate Property

Returns or sets the way the link will be updated. Read/write PpUpdateOption.

PpUpdateOption can be one of these PpUpdateOption constants.

**ppUpdateOptionAutomatic** Link will be updated each time the presentation is opened or the source file changes.

**ppUpdateOptionManual** Link will be updated only when the user specifically asks to update the presentation.

**ppUpdateOptionMixed**

expression.AutoUpdate

(expression) Required. An expression that returns one of the objects in the Applies To list.
Example

This example loops through all the shapes on all the slides in the active presentation and sets all linked Microsoft Excel worksheets to be updated manually.

For Each sld In ActivePresentation.Slides
    For Each sh In sld.Shapes
        If sh.Type = msoLinkedOLEObject Then
            If sh.OLEFormat.ProgID = "Excel.Sheet" Then
            End If
        End If
    Next
Next
BackColor Property

- Returns or sets a ColorFormat object that represents the background color for the specified fill or patterned line. Read/write.
**Example**

This example adds a rectangle to myDocument and then sets the foreground color, background color, and gradient for the rectangle's fill.

```vba
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes.AddShape(msoShapeRectangle, _
   90, 90, 90, 50).Fill
   .ForeColor.RGB = RGB(128, 0, 0)
   .BackColor.RGB = RGB(170, 170, 170)
   .TwoColorGradient msoGradientHorizontal, 1
End With
```

This example adds a patterned line to myDocument.

```vba
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes.AddLine(10, 100, 250, 0).Line
   .Weight = 6
   .ForeColor.RGB = RGB(0, 0, 255)
   .BackColor.RGB = RGB(128, 0, 0)
   .Pattern = msoPatternDarkDownwardDiagonal
End With
```
Background Property

Returns a ShapeRange object that represents the slide background.

expression.Background

expression  Required. An expression that returns one of the objects in the Applies To list.
Remarks

If you use the **Background** property to set the background for an individual slide without changing the slide master, the **FollowMasterBackground** property for that slide must be set to **False**.
Example

This example sets the background of the slide master in the active presentation to a preset shade.

ActivePresentation.SlideMaster.Background.Fill.PresetGradient _
    Style:=msoGradientHorizontal, Variant:=1, _
    PresetGradientType:=msoGradientLateSunset

This example sets the background of slide one in the active presentation to a preset shade.

With ActivePresentation Slides(1)
    .FollowMasterBackground = False
    .Background.Fill.PresetGradient Style:=msoGradientHorizontal, _
        Variant:=1, PresetGradientType:=msoGradientLateSunset
End With
BaseLineAlignment Property

Returns or sets the base line alignment for the specified paragraph. Read/write **PpBaselineAlignment**.

PpBaselineAlignment can be one of these PpBaselineAlignment constants.

- `ppBaselineAlignBaseline`
- `ppBaselineAlignCenter`
- `ppBaselineAlignFarEast50`
- `ppBaselineAlignMixed`
- `ppBaselineAlignTop`

`expression.BaseLineAlignment`  

`expression`  Required. An expression that returns one of the objects in the Applies To list.
Example

This example displays the base line alignment for the paragraphs in shape two on slide one in the active presentation.

BaselineOffset Property

Returns or sets the baseline offset for the specified superscript or subscript characters. Can be a floating-point value from –1 through 1. A value of –1 represents an offset of –100 percent, and a value of 1 represents an offset of 100 percent. Read/write Single.
Remarks

Setting the **BaselineOffset** property to a negative value automatically sets the **Subscript** property to **True** and the **Superscript** property to **False**.

Setting the **BaselineOffset** property to a positive value automatically sets the **Subscript** property to **False** and the **Superscript** property to **True**.

Setting the **Subscript** property to **True** automatically sets the **BaselineOffset** property to 0.3 (30 percent).

Setting the **Superscript** property to **True** automatically sets the **BaselineOffset** property to \(-0.25\) (\(-25\) percent).
Example

This example sets the text for shape two on slide one and then makes the second character subscript with a 20-percent offset.

```vbnet
With Application.ActivePresentation.Slides(1) _
    .Shapes(2).TextFrame.TextRange
    .Text = "H2O"
    .Characters(2, 1).Font.BaselineOffset = -0.2
End With
```
**BeginArrowheadLength Property**

Returns or sets the length of the arrowhead at the beginning of the specified line. Read/write `MsoArrowheadLength`.

MsoArrowheadLength can be one of these MsoArrowheadLength constants:

- `msoArrowheadLengthMedium`
- `msoArrowheadLengthMixed`
- `msoArrowheadLong`
- `msoArrowheadShort`

`expression.BeginArrowheadLength`

`expression` Required. An expression that returns one of the objects in the Applies To list.
Example

This example adds a line to myDocument. There's a short, narrow oval on the line's starting point and a long, wide triangle on its end point.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes.AddLine(100, 100, 200, 300).Line
  .BeginArrowheadLength = msoArrowheadShort
  .BeginArrowheadStyle = msoArrowheadOval
  .BeginArrowheadWidth = msoArrowheadNarrow
  .EndArrowheadLength = msoArrowheadLong
  .EndArrowheadStyle = msoArrowheadTriangle
  .EndArrowheadWidth = msoArrowheadWide
End With
BeginArrowheadStyle Property

Returns or sets the style of the arrowhead at the beginning of the specified line. Read/write [MsoArrowheadStyle](#).

MsoArrowheadStyle can be one of these MsoArrowheadStyle constants.

- `msoArrowheadDiamond`
- `msoArrowheadNone`
- `msoArrowheadOpen`
- `msoArrowheadOval`
- `msoArrowheadStealth`
- `msoArrowheadStyleMixed`
- `msoArrowheadTriangle`

`expression.BeginArrowheadStyle`

`expression` Required. An expression that returns one of the objects in the Applies To list.
Example

This example adds a line to myDocument. There's a short, narrow oval on the line's starting point and a long, wide triangle on its end point.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes.AddLine(100, 100, 200, 300).Line
  .BeginArrowheadLength = msoArrowheadShort
  .BeginArrowheadStyle = msoArrowheadOval
  .BeginArrowheadWidth = msoArrowheadNarrow
  .EndArrowheadLength = msoArrowheadLong
  .EndArrowheadStyle = msoArrowheadTriangle
  .EndArrowheadWidth = msoArrowheadWide
End With
**BeginArrowheadWidth Property**

Returns or sets the width of the arrowhead at the beginning of the specified line. Read/write [MsoArrowheadWidth](#).

MsoArrowheadWidth can be one of these MsoArrowheadWidth constants.

- [msoArrowheadNarrow](#)
- [msoArrowheadWide](#)
- [msoArrowheadWidthMedium](#)
- [msoArrowheadWidthMixed](#)

expression.BEGINARROWHEADWIDTH

*expression* Required. An expression that returns one of the objects in the Applies To list.
Example

This example adds a line to myDocument. There's a short, narrow oval on the line's starting point and a long, wide triangle on its end point.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes.AddLine(100, 100, 200, 300).Line
    .BeginArrowheadLength = msoArrowheadShort
    .BeginArrowheadStyle = msoArrowheadOval
    .BeginArrowheadWidth = msoArrowheadNarrow
    .EndArrowheadLength = msoArrowheadLong
    .EndArrowheadStyle = msoArrowheadTriangle
    .EndArrowheadWidth = msoArrowheadWide
End With
BeginConnected Property

Determines whether the beginning of the specified connector is connected to a shape. Read/write `MsoTriState`.

MsoTriState can be one of these MsoTriState constants:

- `msoCTrue`
- `msoFalse`
- `msoTriStateMixed`
- `msoTriStateToggle`
- `msoTrue` The beginning of the specified connector is connected to a shape.
Example

If shape three on the first slide in the active presentation is a connector whose beginning is connected to a shape, this example stores the connection site number in the variable oldBeginConnSite, stores a reference to the connected shape in the object variable oldBeginConnShape, and then disconnects the beginning of the connector from the shape.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(3)
    If .Connector Then
        With .ConnectorFormat
            If .BeginConnected Then
                oldBeginConnSite = .BeginConnectionSite
                Set oldBeginConnShape = .BeginConnectedShape
                .BeginDisconnect
            End If
        End With
    End If
End With
BeginConnectedShape Property

Returns a Shape object that represents the shape that the beginning of the specified connector is attached to. Read-only.

Note If the beginning of the specified connector isn't attached to a shape, this property generates an error.
Example

This example assumes that the first slide in the active presentation already contains two shapes attached by a connector named "Conn1To2." The code adds a rectangle and a connector to the first slide. The beginning of the new connector will be attached to the same connection site as the beginning of the connector named "Conn1To2," and the end of the new connector will be attached to connection site one on the new rectangle.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes
    Set r3 = .AddShape(msoShapeRectangle, 450, 190, 200, 100)
    .AddConnector(msoConnectorCurve, 0, 0, 10, 10) _
        .Name = "Conn1To3"
    With .Item("Conn1To2").ConnectorFormat
        beginConnSite1 = .BeginConnectionSite
        Set beginConnShape1 = .BeginConnectedShape
    End With
    With .Item("Conn1To3").ConnectorFormat
        .BeginConnect beginConnShape1, beginConnSite1
        .EndConnect r3, 1
    End With
End With
BeginConnectionSite Property

Returns an integer that specifies the connection site that the beginning of a connector is connected to. Read-only **Long**.

**Note** If the beginning of the specified connector isn't attached to a shape, this property generates an error.
Example

This example assumes that the first slide in the active presentation already contains two shapes attached by a connector named "Conn1To2." The code adds a rectangle and a connector to the first slide. The beginning of the new connector will be attached to the same connection site as the beginning of the connector named "Conn1To2," and the end of the new connector will be attached to connection site one on the new rectangle.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes
    Set r3 = .AddShape(msoShapeRectangle, 450, 190, 200, 100)
    .AddConnector(msoConnectorCurve, _
        0, 0, 10, 10).Name = "Conn1To3"
With .Item("Conn1To2").ConnectorFormat
    beginConnSite1 = .BeginConnectionSite
    Set beginConnShape1 = .BeginConnectedShape
End With
With .Item("Conn1To3").ConnectorFormat
    .BeginConnect beginConnShape1, beginConnSite1
    .EndConnect r3, 1
End With
End With
Behaviors Property

Returns a specified slide animation behavior as an `AnimationBehaviors` collection.

`expression.Behaviors`

`expression`  Required. An expression that returns one of the objects in the Applies To list.
Remarks

To return a single `AnimationBehavior` object in the `AnimationBehaviors` collection, use the `Item` method or `Behaviors(index)`, where `index` is the index number of the `AnimationBehavior` object in the `AnimationBehaviors` collection.
Example

The following example returns a specific animation behavior type in the active presentation.

Sub ReturnBehaviorValue
    MsgBox ActiveWindow.Selection.SlideRange(1).TimeLine.MainSequence(1).Behaviors.Item(1).Type
End Sub
This keyword is not implemented. It is reserved for future use.
BlackAndWhite Property

Determines whether the document window display is black and white. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.

msoCTrue
msoFalse Default.

msoTriStateMixed
msoTriStateToggle

msoTrue The document window display is black and white.
Example

This example changes the display in window one to black and white.

Application.Windows(1).BlackAndWhite = msoTrue
BlackWhiteMode Property

- Returns or sets a value that indicates how the specified shape appears when the presentation is viewed in black-and-white mode. Read/write MsoBlackWhiteMode.

MsoBlackWhiteMode can be one of these MsoBlackWhiteMode constants.

msoBlackWhiteAutomatic
msoBlackWhiteBlack
msoBlackWhiteBlackTextAndLine
msoBlackWhiteDontShow
msoBlackWhiteGrayOutline
msoBlackWhiteGrayScale
msoBlackWhiteHighContrast
msoBlackWhiteInverseGrayScale
msoBlackWhiteLightGrayScale
msoBlackWhiteMixed
msoBlackWhiteWhite

expression.BlackWhiteMode

expression Required. An expression that returns one of the objects in the Applies To list.
Example

This example sets shape one on `myDocument` to appear in black-and-white mode. When you view the presentation in black-and-white mode, shape one will appear black, regardless of what color it is in color mode.

```vba
Set myDocument = ActivePresentation.Slides(1)
```
**Bold Property**

Determines whether the character format is bold. Read/write [MsoTriState](#). MsoTriState can be one of these MsoTriState constants.

- **msoCTrue**
- **msoFalse** The character format is not bold.
- **msoTriStateMixed** The specified text range contains both bold and nonbold characters.
- **msoTriStateToggle**
- **msoTrue** The character format is bold.
Example

This example sets characters one through five in the title on slide one to bold.

Set myT = Application.ActivePresentation.Slides(1).Shapes.Title
myT.TextFrame.TextRange.Characters(1, 5).Font.Bold = msoTrue
Border Property

Determines whether the text in the specified callout is surrounded by a border. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.

msoCTrue
msoFalse
msoTriStateMixed
msoTriStateToggle
msoTrue The text in the specified callout is surrounded by a border.
Example

This example adds to myDocument an oval and a callout that points to the oval. The callout text won't have a border, but it will have a vertical accent bar that separates the text from the callout line.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes
    .AddShape msoShapeOval, 180, 200, 280, 130
    With .AddCallout(msoCalloutTwo, 420, 170, 170, 40)
        .TextFrame.TextRange.Text = "My oval"
        With .Callout
            .Accent = msoTrue
            .Border = msoFalse
        End With
    End With
End With
Borders Property

Returns a Borders collection that represents the borders and diagonal lines for the specified Cell object or CellRange collection. Read-only.

For information about returning a single member of a collection, see Returning an Object from a Collection.
Example

This example sets the thickness of the left border for the first cell in the second row of the selected table to three points.

```
ActiveWindow.Selection.ShapeRange.Table.Rows(2) _.Cells(1).Borders.Item(ppBorderLeft).Weight = 3
```
BoundHeight Property

Returns the height (in points) of the text bounding box for the specified text frame. Read-only Single.
Example

This example adds a rounded rectangle to slide one in the active presentation. The rectangle has the same dimensions as the text bounding box for shape one.

With Application.ActivePresentation.Slides(1).Shapes
    Set tr = .Item(1).TextFrame.TextRange
    Set roundRect = .AddShape(msoShapeRoundedRectangle, _
        tr.BoundLeft, tr.BoundTop, tr.BoundWidth, tr.BoundHeight)
End With
With roundRect.Fill
    .ForeColor.RGB = RGB(255, 0, 128)
    .Transparency = 0.75
End With
BoundLeft Property

Returns the distance (in points) from the left edge of the text bounding box for the specified text frame to the left edge of the slide. Read-only **Single.**
Example

This example adds a rounded rectangle to slide one in the active presentation. The rectangle has the same dimensions as the text bounding box for shape one.

```vba
With Application.ActivePresentation.Slides(1).Shapes
    Set tr = .Item(1).TextFrame.TextRange
    Set roundRect = .AddShape(msoShapeRoundedRectangle, _
        tr.BoundLeft, tr.BoundTop, tr.BoundWidth, tr.BoundHeight)
End With
With roundRect.Fill
    .ForeColor.RGB = RGB(255, 0, 128)
    .Transparency = 0.75
End With
```
Show All
BoundTop Property

Returns the distance (in points) from the top of the specified text bounding box for the specified text frame to the top of the slide. Read-only Single.
Example

This example adds a rounded rectangle to slide one in the active presentation. The rectangle has the same dimensions as the text bounding box for shape one.

```vba
With Application.ActivePresentation.Slides(1).Shapes
    Set tr = .Item(1).TextFrame.TextRange
    Set roundRect = .AddShape(msoShapeRoundedRectangle, _
        tr.BoundLeft, tr.BoundTop, tr.BoundWidth, tr.BoundHeight)
End With
With roundRect.Fill
    .ForeColor.RGB = RGB(255, 0, 128)
    .Transparency = 0.75
End With
```
BoundWidth Property

Returns the width (in points) of the text bounding box for the specified text frame. Read-only Single.
Example

This example adds a rounded rectangle to slide one in the active presentation. The rectangle has the same dimensions as the text bounding box for shape one.

```vba
With Application.ActivePresentation.Slides(1).Shapes
    Set tr = .Item(1).TextFrame.TextRange
    Set roundRect = .AddShape(msoShapeRoundedRectangle, _
                                 tr.BoundLeft, tr.BoundTop, tr.BoundWidth, tr.BoundHeight)
End With
With roundRect.Fill
    .ForeColor.RGB = RGB(255, 0, 128)
    .Transparency = 0.75
End With
```
Brightness Property

Returns or sets the brightness of the specified picture or OLE object. The value for this property must be a number from 0.0 (dimmest) to 1.0 (brightest). Read/write Single.
Example

This example sets the brightness for shape one on myDocument. Shape one must be either a picture or an OLE object.

Set myDocument = ActivePresentation.Slides(1)
myDocument.Shapes(1).PictureFormat.Brightness = 0.3
Build Property

Returns the PowerPoint build number. Read-only **String**.
Example

This example displays the PowerPoint build number.

MsgBox Prompt:=Application.Build, Title:="PowerPoint Build"
BuildByLevelEffect Property

Returns an **MsoAnimateByLevel** constant that represents the level of the animation build effect. Read-only.

MsoAnimateByLevel can be one of these MsoAnimateByLevel constants:

- msoAnimateChartAllAtOnce
- msoAnimateChartByCategory
- msoAnimateChartByCategoryElements
- msoAnimateChartBySeries
- msoAnimateChartBySeriesElements
- msoAnimateDiagramAllAtOnce
- msoAnimateDiagramBreadthByLevel
- msoAnimateDiagramBreadthByNode
- msoAnimateDiagramClockwise
- msoAnimateDiagramClockwiseIn
- msoAnimateDiagramClockwiseOut
- msoAnimateDiagramCounterClockwise
- msoAnimateDiagramCounterClockwiseIn
- msoAnimateDiagramCounterClockwiseOut
- msoAnimateDiagramDepthByBranch
- msoAnimateDiagramDepthByNode
- msoAnimateDiagramDown
- msoAnimateDiagramInByRing
- msoAnimateDiagramOutByRing
- msoAnimateDiagramUp
- msoAnimateLevelMixed
- msoAnimateTextByAllLevels
- msoAnimateTextByFifthLevel
- msoAnimateTextByFirstLevel
expressionBUILDByLevelEffect

expression Required. An expression that returns one of the objects in the Applies To list.
Example

The following example returns a build-by-level effect.

Sub QueryBuildByLevelEffect()
    Dim effMain As Effect
    Set effMain = ActivePresentation.Slides(1).TimeLine.MainSequence(1)
    If effMain.EffectInformation.BuildByLevelEffect <> msoAnimateLevelNone Then
        ActivePresentation.Slides(1).TimeLine.MainSequence.ConvertToTextUnitEffect Effect:=effMain,
        UnitEffect:=msoAnimTextUnitEffectByWord
    End If
End Sub
BuiltInDocumentProperties Property

Returns a DocumentProperties collection that represents all the built-in document properties for the specified presentation. Read-only.

For information about returning a single member of a collection, see Returning an Object from a Collection.
Remarks

Use the `CustomDocumentProperties` property to return the collection of custom document properties.
Example

This example displays the names of all the built-in document properties for the active presentation.

For Each p In Application.ActivePresentation.
  .BuiltInDocumentProperties
    bidpList = bidpList & p.Name & Chr$(13)
Next
MsgBox bidpList

This example sets the "Category" built-in property for the active presentation if the author of the presentation is Jake Jarmel.

With Application.ActivePresentation.BuiltInDocumentProperties
  If .Item("author").Value = "Jake Jarmel" Then
    .Item("category").Value = "Creative Writing"
  End If
End With
Bullet Property

Returns a **BulletFormat** object that represents bullet formatting for the specified paragraph format. Read-only.
**Example**

This example sets the bullet size and bullet color for the paragraphs in shape two on slide one in the active presentation.

```vba
With Application.ActivePresentation.Slides(1).Shapes(2).TextFrame
        .Visible = True
        .RelativeSize = 1.25
        .Font.Color = RGB(255, 0, 255)
    End With
End With
```
By Property

- By property as it applies to the ColorEffect object.

Returns a ColorFormat object that represents a change to the color of the object by the specified number, expressed in RGB format.

expression.ById

expression  Required. An expression that returns a ColorEffect object.

- By property as it applies to the RotationEffect object.

Sets or returns a Single that represents the rotation of an object by the specified number of degrees; for example, a value of 180 means to rotate the object by 180 degrees. Read/write.

expression.ById

expression  Required. An expression that returns a RotationEffect object.
Remarks

The specified object will be rotated with the center of the object remaining in the same position on the screen.

If both the **By** and **To** properties are set for a rotation effect, then the value of the **By** property is ignored.

Floating point numbers (for example, 55.5) are valid, but negative numbers are not.
Remarks

Do not confuse this property with the **ByX** or **ByY** properties of the **ScaleEffect** and **MotionEffect** objects, which are only used for scaling or motion effects.
Example

- **As it applies to the ColorEffect object.**

This example adds a color effect and changes its color. This example assumes there is at least one shape on the first slide of the active presentation.

```vba
Sub AddAndChangeColorEffect()
    Dim effBlinds As Effect
    Dim tmlnShape As TimeLine
    Dim shpShape As Shape
    Dim animBehavior As AnimationBehavior
    Dim clrEffect As ColorEffect

    'Sets shape, timing, and effect
    Set shpShape = ActivePresentation.Slides(1).Shapes(1)
    Set tmlnShape = ActivePresentation.Slides(1).TimeLine
    Set effBlinds = tmlnShape.MainSequence.AddEffect _
        (Shape:=shpShape, effectId:=msoAnimEffectBlinds)

    'Adds animation behavior and color effect
    Set animBehavior = tmlnShape.MainSequence(1).Behaviors _
        .Add(Type:=msoAnimTypeColor)
    Set clrEffect = animBehavior.ColorEffect

    'Specifies color
    clrEffect.By.RGB = RGB(Red:=255, Green:=0, Blue:=0)
End Sub
```

- **As it applies to the RotationEffect object.**

This example adds a rotation effect and changes its rotation.

```vba
Sub AddAndChangeRotationEffect()
    Dim effBlinds As Effect
    Dim tmlnShape As TimeLine
    Dim shpShape As Shape
    Dim animBehavior As AnimationBehavior
    Dim rtnEffect As RotationEffect

    'Sets shape, timing, and effect
    Set shpShape = ActivePresentation.Slides(1).Shapes(1)
    Set tmlnShape = ActivePresentation.Slides(1).TimeLine
```

Set effBlinds = tmlnShape.MainSequence.AddEffect (Shape:=shpShape, effectId:=msoAnimEffectBlinds)

' Adds animation behavior and sets rotation effect
Set animBehavior = tmlnShape.MainSequence(1).Behaviors .Add(Type:=msoAnimTypeRotation)
Set rtnEffect = animBehavior.RotationEffect
rtnEffect.By = 270

End Sub
ByX Property

Sets or returns a **Single** that represents scaling or moving an object horizontally by a specified percentage of the screen width, depending on whether it used in conjunction with a **ScaleEffect** or **MotionEffect** object, respectively. For example, a value of 50 for a motion effect means to move the object half the screen width to the right. Read/write.

*expression*.**ByX**

*expression*  Required. An expression that returns one of the objects in the Applies To list.
Remarks

Negative numbers move the object horizontally to the left. Floating point numbers (for example, 55.5) are allowed.

To scale or move an object vertically, use the ByY property.

If both the ByX and ByY properties are set, then the object is scaled or moves both horizontally and vertically.

Do not confuse this property with the By property of the ColorEffect, RotationEffect, or PropertyEffect objects, which is used to set colors, rotations, or other properties of an animation behavior, respectively.
Example

The following example adds an animation path; then sets the horizontal and vertical movement of the shape.

Sub AddMotionPath()
    Dim effCustom As Effect
    Dim animBehavior As AnimationBehavior
    Dim shpRectangle As Shape

    'Adds rectangle and sets effect and animation
    Set shpRectangle = ActivePresentation.Slides(1).Shapes _
        .AddShape(Type:=msoShapeRectangle, Left:=300, _
            Top:=300, Width:=300, Height:=150)
    Set effCustom = ActivePresentation.Slides(1).TimeLine _
        .MainSequence.AddEffect(Shape:=shpRectangle, _
            effectId:=msoAnimEffectCustom)
    Set animBehavior = effCustom.Behaviors.Add(msoAnimTypeMotion)

    'Specifies animation motion
    With animBehavior.MotionEffect
        .ByX = 50
        .ByY = 50
    End With
End Sub
ByY Property

Sets or returns a **Single** that represents scaling or moving an object vertically by a specified percentage of the screen width, depending on whether it is used in conjunction with a **ScaleEffect** or **MotionEffect** object, respectively. Read/write.

`expression.ByY`

**expression** Required. An expression that returns one of the objects in the Applies To list.
Remarks

Negative numbers move the object horizontally to the left. Floating point numbers (for example, 55.5) are allowed.

To scale or move an object horizontally, use the ByX property.

If both the ByX and ByY properties are set, then the object is scaled or moves both horizontally and vertically.

Do not confuse this property with the By property of the ColorEffect, RotationEffect, or PropertyEffect objects, which is used to set colors, rotations, or other properties of an animation behavior, respectively.
Example

The following example adds an animation path; then sets the horizontal and vertical movement of the shape.

Sub AddMotionPath()
  Dim effCustom As Effect
  Dim animBehavior As AnimationBehavior
  Dim shpRectangle As Shape

  'Adds rectangle and sets effect and animation
  Set shpRectangle = ActivePresentation.Slides(1).Shapes .
    .AddShape(Type:=msoShapeRectangle, Left:=300, _
      Top:=300, Width:=300, Height:=150)
  Set effCustom = ActivePresentation.Slides(1).TimeLine _
    .MainSequence.AddEffect(Shape:=shpRectangle, _
      effectId:=msoAnimEffectCustom)
  Set animBehavior = effCustom.Behaviors.Add(msoAnimTypeMotion)

  'Specifies animation motion
  With animBehavior.MotionEffect
    .ByX = 50
    .ByY = 50
  End With
End Sub
Callout Property

Returns a CalloutFormat object that contains callout formatting properties for the specified shape. Applies to Shape or ShapeRange objects that represent line callouts. Read-only.
Example

This example adds to myDocument an oval and a callout that points to the oval. The callout text won't have a border, but it will have a vertical accent bar that separates the text from the callout line.

```vba
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes
    .AddShape msoShapeOval, 180, 200, 280, 130
    With .AddCallout(msoCalloutTwo, 420, 170, 170, 40)
        .TextFrame.TextRange.Text = "My oval"
        With .Callout
            .Accent = True
            .Border = False
        End With
    End With
End With
```

Caption Property

- Caption property as it applies to the Application object.

Returns the text that appears in the title bar of the application window. Read/write String.

expression.Caption

expression  Required. An expression that returns one of the above objects.

- Caption property as it applies to the DocumentWindow object.

Returns the text that appears in the title bar of the document window. Read-only String.

expression.Caption

expression  Required. An expression that returns one of the above objects.
Example

This example displays the caption for each open document window.

With Application.Windows
    For w = 1 To .Count
        MsgBox "Window " & w & " contains " & .Item(w).Caption
    Next
End With
Cells Property

- Returns a CellRange collection that represents the cells in a table column or row. Read-only.

For information about returning a single member of a collection, see Returning an Object from a Collection.
Example

This example creates a new presentation, adds a slide, inserts a 3x3 table on the slide, and assigns the column and row number to each cell in the table.

Dim i As Integer
Dim j As Integer
With Presentations.Add
  .Slides.Add(1, ppLayoutBlank).Shapes.AddTable(3, 3).Select
  Set myTable = .Slides(1).Shapes(1).Table
  For i = 1 To myTable.Columns.Count
    For j = 1 To myTable.Columns(i).Cells.Count
    Next j
  Next i
End With
Character Property

Returns or sets the Unicode character value that is used for bullets in the specified text. Read/write **Long**.
Example

This example sets the bullet character for shape two on slide one in the active presentation.

```vba
Set frame2 = ActivePresentation.Slides(1).Shapes(2).TextFrame
With frame2.TextRange.ParagraphFormat.Bullet
    .Character = 8226
    .Visible = True
End With
```
ChartUnitEffect Property

Returns or sets a value that indicates whether the graph range is animated by series, category, or element. Read/write `PpChartUnitEffect`.

`PpChartUnitEffect` can be one of these `PpChartUnitEffect` constants.

- `ppAnimateByCategory`
- `ppAnimateByCategoryElements`
- `ppAnimateBySeries`
- `ppAnimateBySeriesElements`
- `ppAnimateChartAllAtOnce`
- `ppAnimateChartMixed`

`expression.ChartUnitEffect`

`expression` Required. An expression that returns one of the objects in the Applies To list.
Remarks

If your graph doesn't become animated, make sure that the Animate property is set to True
Example

This example sets shape two on slide three in the active presentation to be animated by series. Shape two must be a graph for this to work.

```vba
With ActivePresentation.Slides(3).Shapes(2)
    With .AnimationSettings
        .ChartUnitEffect = ppAnimateBySeries
        .EntryEffect = ppEffectFlyFromLeft
        .Animate = True
    End With
End With
```
CheckIfOfficeIsHTMLEditor Property

Determines whether Microsoft PowerPoint checks to see whether an Office application is the default HTML editor when you start PowerPoint. Read/write **MsoTriState**.

MsoTriState can be one of these MsoTriState constants.

- **msoCTrue**
- **msoFalse** PowerPoint does not check to see whether an Office application is the default HTML editor when you start PowerPoint.
- **msoTriStateMixed**
- **msoTriStateToggle**
- **msoTrue** Default. PowerPoint checks to see whether an Office application is the default HTML editor when you start PowerPoint.
Remarks

This property is used only if the Web browser you are using supports HTML editing and HTML editors.

To use a different HTML editor, you must set this property to False and then register the editor as the default system HTML editor.
Example

This example causes Microsoft PowerPoint not to check whether an Office application is the default HTML editor.

Application.DefaultWebOptions.CheckIfOfficeIsHTMLEditor = msoFalse
Child Property

**MsoTrue** if the shape is a child shape or if all shapes in a shape range are child shapes of the same parent. Read-only **MsoTriState**.

MsoTriState can be one of these MsoTriState constants.

**msoCTrue** Does not apply to this property.

**msoFalse** The shape is not a child shape or, if a shape range, all child shapes do not belong to the same parent.

**msoTriStateMixed** Does not apply to this property.

**msoTriStateToggle** Does not apply to this property.

**msoTrue** The shape is a child shape or, if a shape range, all child shapes belong to the same parent.

*expression*.Child

*expression*  Required. An expression that returns one of the objects in the Applies To list.
Example

This example selects the first shape in the canvas, and if the selected shape is a child shape, fills the shape with the specified color. This example assumes that the first shape in the active presentation is a drawing canvas that contains multiple shapes.

Sub FillChildShape()

    'Select the first shape in the drawing canvas
    ActivePresentation.Slides(1).Shapes(1).CanvasItems(1).Select

    'Fill selected shape if it is a child shape
    With ActiveWindow.Selection
        If .ShapeRange.Child = msoTrue Then
            .ShapeRange.Fill.ForeColor.RGB = RGB(Red:=100, Green:=0,
        Else
            MsgBox "This shape is not a child shape."
        End If
    End With

End Sub
Children Property

- Returns a `DiagramNodeChildren` object that represents all of the children of the specified diagram node.

`expression.Children`

`expression` Required. An expression that returns one of the objects in the Applies To list.
Example

The following example creates a pyramid diagram and adds child nodes to it.

Sub CreatePyramidDiagram()
    Dim dgnNode As DiagramNode
    Dim shpDiagram As Shape
    Dim intNodes As Integer

    ' Adds pyramid diagram and first child node
    Set shpDiagram = ActivePresentation.Slides(1).Shapes.AddDiagram(Type:=msoDiagramPyramid, Left:=10, _
        Top:=15, Width:=400, Height:=475)

    ' Adds three additional child nodes to diagram
    For intNodes = 1 To 3
        dgnNode.AddNode
    Next intNodes
End Sub
ChildShapeRange Property

Returns a ShapeRange object that represents the child shapes of a selection.

expression.ChildShapeRange

expression  Required. An expression that returns one of the objects in the Applies To list.
Example

This example creates a new document with a drawing canvas, populates the drawing canvas with shapes, and selects the shapes added to the canvas. Then after checking that the shapes selected are child shapes, it fills the child shapes with a pattern.

Sub ChildShapes()
    Dim sldNew As Slide
    Dim shpCanvas As Shape

    'Create a new slide with a drawing canvas and shapes
    Set shpCanvas = sldNew.Shapes.AddCanvas(Left:=100, Top:=100, Width:=200, Height:=200)

    With shpCanvas.CanvasItems
        .AddShape msoShapeRectangle, Left:=0, Top:=0, _
        Width:=100, Height:=100
        .AddShape msoShapeOval, Left:=0, Top:=50, _
        Width:=100, Height:=100
        .AddShape msoShapeDiamond, Left:=0, Top:=100, _
        Width:=100, Height:=100
    End With

    'Select all shapes in the canvas
    shpCanvas.CanvasItems.SelectAll

    'Fill canvas child shapes with a pattern
    With ActiveWindow.Selection
        If .HasChildShapeRange = True Then
        Else
            MsgBox "This is not a range of child shapes."
        End If
    End With

End Sub
Collate Property

Determines whether a complete copy of the specified presentation is printed before the first page of the next copy is printed. Read/write `MsoTriState`.

MsoTriState can be one of these MsoTriState constants.

- **msoCTrue**
- **msoFalse**
- **msoTriStateMixed**
- **msoTriStateToggle**
- **msoTrue** Default. A complete copy of the specified presentation is printed before the first page of the next copy is printed.
**Remarks**

Specifying a value for the *Collate* argument of the *PrintOut* method sets the value of this property.
Example

This example prints three collated copies of the active presentation.

With ActivePresentation.PrintOptions
    .NumberOfCopies = 3
    .Collate = msoTrue
    .Parent.PrintOut
End With
Color Property

Returns a ColorFormat object that represents the color for the specified characters. Read-only.
Example

This example sets the color of characters one through five in the title on slide one.

myRed = RGB(255, 0, 0)
Set myT = Application.ActivePresentation.Slides(1).Shapes.Title
This keyword is not implemented. It is reserved for future use.
Color2 Property

Returns a ColorFormat object that represents the color on which to end a color-cycle animation.

expression.Color2

expression Required. An expression that returns one of the objects in the Applies To list.
Remarks

The **Color1** property returns the color from which to start.
Example

The following example adds a shape, adds a fill animation to that shape, then reports the starting and ending fill colors.

Sub SetStartEndColors()
    Dim effChangeFill As Effect
    Dim shpCube As Shape
    Dim a As AnimationBehavior

    'Adds cube and set fill effect
    Set shpCube = ActivePresentation.Slides(1).Shapes.AddShape(Type:=msoShapeCube, Left:=300, _
    Top:=300, Width:=100, Height:=100)
    Set effChangeFill = ActivePresentation.Slides(1).TimeLine.MainSequence.AddEffect(Shape:=shpCube, _
    effectId:=msoAnimEffectChangeFillColor)

    'Sets duration of effect and displays a message containing
    'the starting and ending colors for the fill effect
    effChangeFill.Timing.Duration = 3
End Sub
ColorEffect Property

Returns a **ColorEffect** object that represents the color properties for a specified animation behavior.

`expression.ColorEffect`  

`expression`  Required. An expression that returns one of the objects in the Applies To list.
Example

This example adds a shape to the first slide of the active presentation and sets a color effect behavior to change the fill color of the new shape.

Sub ChangeColorEffect()
    Dim sldFirst As Slide
    Dim shpHeart As Shape
    Dim effNew As Effect
    Dim bhvEffect As AnimationBehavior

    Set sldFirst = ActivePresentation.Slides(1)
    Set shpHeart = sldFirst.Shapes.AddShape(Type:=msoShapeHeart, _
        Left:=100, Top:=100, Width:=100, Height:=100)
    Set effNew = sldFirst.TimeLine.MainSequence.AddEffect _
        (Shape:=shpHeart, EffectID:=msoAnimEffectChangeFillColor, _
        Trigger:=msoAnimTriggerAfterPrevious)
    Set bhvEffect = effNew.Behaviors.Add(Type:=msoAnimTypeColor)

    With bhvEffect.ColorEffect
        .From.RGB = RGB(Red:=255, Green:=0, Blue:=0)
        .To.RGB = RGB(Red:=0, Green:=0, Blue:=255)
    End With
End Sub
ColorScheme Property

Returns or sets the ColorScheme object that represents the scheme colors for the specified slide, slide range, or slide master. Read/write.
**Example**

This example sets the title color to green for slides one and three in the active presentation.

```vba
Set mySlides = ActivePresentation.Slides.Range(Array(1, 3))
mySlides.ColorScheme.Colors(ppTitle).RGB = RGB(0, 255, 0)
```
ColorSchemes Property

Returns a ColorSchemes collection that represents the color schemes in the specified presentation. Read-only.
**Example**

This example sets the background color for color scheme three in the active presentation and then applies the color scheme to all slides in the presentation that are based on the slide master.

```vba
With ActivePresentation
    Set cs1 = .ColorSchemes(3)
    cs1.Colors(ppBackground).RGB = RGB(128, 128, 0)
    .SlideMaster.ColorScheme = cs1
End With
```
ColorType Property

Returns or sets the type of color transformation applied to the specified picture or OLE object. Read/write `MsoPictureColorType`.

`MsoPictureColorType` can be one of these `MsoPictureColorType` constants:

- `msoPictureAutomatic`
- `msoPictureBlackAndWhite`
- `msoPictureGrayscale`
- `msoPictureMixed`
- `msoPictureWatermark`

`expression.ColorType`

`expression` Required. An expression that returns one of the objects in the Applies To list.
Example

This example sets the color transformation to grayscale for shape one on myDocument. Shape one must be either a picture or an OLE object.

```vba
Set myDocument = ActivePresentation.Slides(1)
myDocument.Shapes(1).PictureFormat.ColorType = msoPictureGrayScale
```
Columns Property

Returns a `Columns` collection that represents all the columns in a table. Read-only.

For information about returning a single member of a collection, see [Returning an Object from a Collection](Returning an Object from a Collection).
Example

This example displays the shape number, the slide number, and the number of columns in the first table of the active presentation.

Dim ColCount As Integer
Dim sl As Integer
Dim sh As Integer

With ActivePresentation
    For sl = 1 To .Slides.Count
        For sh = 1 To .Slides(sl).Shapes.Count
            If .Slides(sl).Shapes(sh).HasTable Then
                MsgBox "Shape " & sh & " on slide " & sl & " contains the first table and has " & ColCount & " columns."
                Exit Sub
            End If
        Next
    Next
End With

This example tests the selected shape to see if it contains a table. If it does, the code sets the width of column one to 72 points (one inch).

With ActiveWindow.Selection.ShapeRange
    If .HasTable = True Then
        .Table.Columns(1).Width = 72
    End If
End With
COMAddIns Property

Returns a reference to the Component Object Model (COM) add-ins currently loaded in Microsoft PowerPoint. These are listed in the COM Add-Ins dialog box. You can add the COM Add-Ins command to your Tools menu by using the Customize dialog box. Read-only.

For information about returning a single member of a collection, see Returning an Object from a Collection.
Show All
CommandBars Property

- **CommandBars property as it applies to the Application object.**

Returns a **CommandBars** collection that represents all the command bars in PowerPoint. Read-only.

- **CommandBars property as it applies to the Presentation object.**

Returns a **CommandBars** collection that represents the merged command bar set from the host container application and PowerPoint. This property returns a valid object only when the container is a DocObject server, like Microsoft Binder, and PowerPoint is acting as an OLE server. Read-only.

For information about returning a single member of a collection, see [Returning an Object from a Collection](#).
Example

- As it applies to the **Application** object.

This example enlarges all command bar buttons and enables ToolTips.

```vba
With Application.CommandBars
  .LargeButtons = True
  .DisplayTooltips = True
End With
```

- As it applies to the **Presentation** object.

This example displays the **Formatting** command bar with the merged command bar set at the top of the application window.

```vba
With ActivePresentation.CommandBars("Formatting")
  .Visible = True
  .Position = msoBarTop
End With
```
Comments Property

- Returns a Comments object that represents a collection of comments.

expression.Comments

expression Required. An expression that returns one of the objects in the Applies To list.
Example

The following example adds a comment to a slide.

Sub AddNewComment()
    ActivePresentation.Slides(1).Comments.Add _
        Left:=0, Top:=0, Author:="John Doe", AuthorInitials:="jd", _
        Text:="Please check this spelling again before the next draft"
End Sub
ConnectionSiteCount Property

- Returns the number of connection sites on the specified shape. Read-only Long.
Example

This example adds two rectangles to myDocument and joins them with two connectors. The beginnings of both connectors attach to connection site one on the first rectangle; the ends of the connectors attach to the first and last connection sites of the second rectangle.

Set myDocument = ActivePresentation.Slides(1)
Set s = myDocument.Shapes
Set firstRect = s.AddShape(msoShapeRectangle, 100, 50, 200, 100)
Set secondRect = s.AddShape(msoShapeRectangle, 300, 300, 200, 100)
lastsite = secondRect.ConnectionSiteCount
With s.AddConnector(msoConnectorCurve, 0, 0, 100, 100) _
  .ConnectorFormat
    .BeginConnect ConnectedShape:=firstRect, ConnectionSite:=1
    .EndConnect ConnectedShape:=secondRect, ConnectionSite:=1
End With
With s.AddConnector(msoConnectorCurve, 0, 0, 100, 100) _
  .ConnectorFormat
    .BeginConnect ConnectedShape:=firstRect, ConnectionSite:=1
    .EndConnect ConnectedShape:=secondRect, _
      ConnectionSite:=lastsite
End With
Connector Property

Determines whether the specified shape is a connector. Read-only MsoTriState.

MsoTriState can be one of these MsoTriState constants.

msoCTrue
msoFalse
msoTriStateMixed
msoTriStateToggle
msoTrue  The specified shape is a connector.
Example

This example deletes all connectors on `myDocument`.

```vba
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes
    For i = .Count To 1 Step -1
        With .Item(i)
            If .Connector Then .Delete
        End With
    Next
End With
```
ConnectorFormat Property

Returns a ConnectorFormat object that contains connector formatting properties. Applies to Shape or ShapeRange objects that represent connectors. Read-only.
Example

This example adds two rectangles to myDocument, attaches them with a connector, automatically reroutes the connector along the shortest path, and then detaches the connector from the rectangles.

Set myDocument = ActivePresentation.Slides(1)
Set s = myDocument.Shapes
Set firstRect = s.AddShape(msoShapeRectangle, 100, 50, 200, 100)
Set secondRect = s.AddShape(msoShapeRectangle, 300, 300, 200, 100)
With s.AddConnector(msoConnectorCurve, 0, 0, 0, 0).ConnectorFormat
    .BeginConnect firstRect, 1
    .EndConnect secondRect, 1
    .Parent.RerouteConnections
    .BeginDisconnect
    .EndDisconnect
End With
Container Property

- Returns the object that contains the specified embedded presentation. Read-only Object.

Note  If the container doesn't support OLE Automation, or if the specified presentation isn't embedded in a Microsoft Binder file, this property fails.
Example

This example hides the second section of the Microsoft Binder file that contains the embedded active presentation. The **Container** property of the presentation returns a **Section** object, and the **Parent** property of the **Section** object returns a **Binder** object.

```vba
```
Contrast Property

Returns or sets the contrast for the specified picture or OLE object. The value for this property must be a number from 0.0 (the least contrast) to 1.0 (the greatest contrast). Read/write Single.
Example

This example sets the contrast for shape one on myDocument. Shape one must be either a picture or an OLE object.

```vba
Set myDocument = ActivePresentation.Slides(1)
myDocument.Shapes(1).PictureFormat.Contrast = 0.8
```
Count Property

Returns the number of objects in the specified collection.

Read-only **Integer** for the following objects: Adjustments, CanvasShapes, DiagramNodeChildren, DiagramNodes, GroupShapes, ShapeNodes, and Shapes.

Example

This example closes all windows except the active window.

With Application.Windows
    For i = 2 To .Count
        .Item(2).Close
    Next
End With
Creator Property

Returns a Long that represents the four-character creator code for the application in which the specified object was created. For example, if the object was created in PowerPoint, this property returns the hexadecimal number 50575054. Read-only.

expression.Creator

eexpression Required. An expression that returns one of the objects in the Applies To list.
Remarks

The **Creator** property is designed to be used in Microsoft Office applications for the Macintosh.
Example

This example displays a message about the creator of myObject.

Set myObject = Application.ActivePresentation.Slides(1).Shapes(1)
If myObject.Creator = &h50575054 Then
    MsgBox "This is a PowerPoint object"
Else
    MsgBox "This is not a PowerPoint object"
End If
CropBottom Property

Returns or sets the number of points that are cropped off the bottom of the specified picture or OLE object. Read/write Single.

Note  Cropping is calculated relative to the original size of the picture. For example, if you insert a picture that is originally 100 points high, rescale it so that it's 200 points high, and then set the CropBottom property to 50, 100 points (not 50) will be cropped off the bottom of your picture.
Example

This example crops 20 points off the bottom of shape three on myDocument. For the example to work, shape three must be either a picture or an OLE object.

```vba
Set myDocument = ActivePresentation.Slides(1)
```

This example crops the percentage specified by the user off the bottom of the selected shape, regardless of whether the shape has been scaled. For the example to work, the selected shape must be either a picture or an OLE object.

```vba
percentToCrop = InputBox("What percentage do you " & _
                   "want to crop off the bottom of this picture?")
Set shapeToCrop = ActiveWindow.Selection.ShapeRange(1)
With shapeToCrop.Duplicate
    .ScaleHeight 1, True
    origHeight = .Height
    .Delete
End With
cropPoints = origHeight * percentToCrop / 100
shapeToCrop.PictureFormat.CropBottom = cropPoints
```
**CropLeft Property**

Returns or sets the number of points that are cropped off the left side of the specified picture or OLE object. Read/write *Single*.

*Note*   Cropping is calculated relative to the original size of the picture. For example, if you insert a picture that is originally 100 points wide, rescale it so that it's 200 points wide, and then set the **CropLeft** property to 50, 100 points (not 50) will be cropped off the left side of your picture.
**Example**

This example crops 20 points off the left side of shape three on `myDocument`. For the example to work, shape three must be either a picture or an OLE object.

```vba
Set myDocument = ActivePresentation.Slides(1)
```

This example crops the percentage specified by the user off the left side of the selected shape, regardless of whether the shape has been scaled. For the example to work, the selected shape must be either a picture or an OLE object.

```vba
percentToCrop = InputBox("What percentage do you " & _
   "want to crop off the left of this picture?")
Set shapeToCrop = ActiveWindow.Selection.ShapeRange(1)
With shapeToCrop.Duplicate
   .ScaleWidth 1, True
   .Width = origWidth
   .Delete
End With
cropPoints = origWidth * percentToCrop / 100
shapeToCrop.PictureFormat.CropLeft = cropPoints
```
CropRight Property

Returns or sets the number of points that are cropped off the right side of the specified picture or OLE object. Read/write Single.

**Note** Cropping is calculated relative to the original size of the picture. For example, if you insert a picture that is originally 100 points wide, rescale it so that it's 200 points wide, and then set the **CropRight** property to 50, 100 points (not 50) will be cropped off the right side of your picture.
**Example**

This example crops 20 points off the right side of shape three on myDocument. For this example to work, shape three must be either a picture or an OLE object.

```vba
Set myDocument = ActivePresentation.Slides(1)
```

This example crops the percentage specified by the user off the right side of the selected shape, regardless of whether the shape has been scaled. For the example to work, the selected shape must be either a picture or an OLE object.

```vba
percentToCrop = InputBox("What percentage do you " & _
   "want to crop off the right of this picture?")
Set shapeToCrop = ActiveWindow.Selection.ShapeRange(1)
With shapeToCrop.Duplicate
   .ScaleWidth 1, True
   origWidth = .Width
   .Delete
End With
cropPoints = origWidth * percentToCrop / 100
shapeToCrop.PictureFormat.CropRight = cropPoints
```
CropTop Property

Returns or sets the number of points that are cropped off the top of the specified picture or OLE object. Read/write Single.

**Note**  Cropping is calculated relative to the original size of the picture. For example, if you insert a picture that is originally 100 points high, rescale it so that it's 200 points high, and then set the *CropTop* property to 50, 100 points (not 50) will be cropped off the top of your picture.
Example

This example crops 20 points off the top of shape three on myDocument. For the example to work, shape three must be either a picture or an OLE object.

```vba
Set myDocument = ActivePresentation.Slides(1)
```

This example crops the percentage specified by the user off the top of the selected shape, regardless of whether the shape has been scaled. For the example to work, the selected shape must be either a picture or an OLE object.

```vba
percentToCrop = InputBox("What percentage do you " & _
    "want to crop off the top of this picture?")
Set shapeToCrop = ActiveWindow.Selection.ShapeRange(1)
With shapeToCrop.Duplicate
    .ScaleHeight 1, True
    origHeight = .Height
    .Delete
End With
cropPoints = origHeight * percentToCrop / 100
shapeToCrop.PictureFormat.CropTop = cropPoints
```
CurrentShowPosition Property

Returns the position of the current slide within the slide show that is showing in the specified view. Read-only Long.
Remarks

If the specified view contains a custom show, the **CurrentShowPosition** property returns the position of the current slide within the custom show, not the position of the current slide within the entire presentation.
Example

This example sets a variable to the position of the current slide in the slide show running in slide show window one.

```
lastSlideSeen = SlideShowWindows(1).View.CurrentShowPosition
```
CustomDocumentProperties Property

Returns a DocumentProperties collection that represents all the custom document properties for the specified presentation. Read-only.

For information about returning a single member of a collection, see Returning an Object from a Collection.
Remarks

Use the `BuiltInDocumentProperties` property to return the collection of built-in document properties.
**Example**

This example adds a static custom property named "Complete" for the active presentation.

```vba
Application.ActivePresentation.CustomDocumentProperties._
    .Add Name:="Complete", LinkToContent:=False, _
    Type:=msoPropertyTypeBoolean, Value:=False
```

This example prints out the active presentation if the value of the "Complete" custom property is **True**.

```vba
With Application.ActivePresentation
    If .CustomDocumentProperties("complete") Then .PrintOut
End With
```
This keyword is not implemented. It is reserved for future use.
DashStyle Property

Returns or sets the dash style for the specified line. Read/write MsoLineDashStyle.

MsoLineDashStyle can be one of these MsoLineDashStyle constants.

msoLineDash
msoLineDashDot
msoLineDashDotDot
msoLineDashStyleMixed
msoLineLongDash
msoLineLongDashDot
msoLineRoundDot
msoLineSolid
msoLineSquareDot

expression.DashStyle

expression  Required. An expression that returns one of the objects in the Applies To list.
Example

This example adds a blue dashed line to myDocument.

Set myDocument = ActivePresentation.Slides(1)
    .DashStyle = msoLineDashDotDot
    .ForeColor.RGB = RGB(50, 0, 128)
End With
DateAndTime Property

Returns a **HeaderFooter** object that represents the date and time item that appears in the lower-left corner of a slide or in the upper-right corner of a notes page, handout, or outline. Read-only.
Example

This example sets the date and time format for the slide master in the active presentation. This setting will apply to all slides that are based on this master.

Set myPres = Application.ActivePresentation
With myPres.SlideMaster.HeadersFooters.DateAndTime
    .Format = ppDateTimeMdyy
    .UseFormat = True
End With
DateTime Property

Returns a Date representing the date and time a comment was created.

expression.Date Time

expression Required. An expression that returns a Comment object.
Remarks

Don't confuse this property with the DateAndTime property, which applies to the headers and footers of a slide.
Example
The following example provides information about all the comments for a given
slide.
Sub ListComments()
Dim cmtExisting As Comment
Dim strAuthorInfo As String
For Each cmtExisting In ActivePresentation.Slides(1).Comments
With cmtExisting
strAuthorInfo = strAuthorInfo & .Author & "'s comment #" & _
.AuthorIndex & " (" & .Text & ") was created on " & _
.DateTime & vbCrLf
End With
Next
If strAuthorInfo <> "" Then
MsgBox strAuthorInfo
Else
MsgBox "There are no comments on this slide."
End If
End Sub


Decelerate Property

Sets or returns a **Single** that represents the percent of the duration over which a timing deceleration should take place. For example, a value of 0.9 means that an deceleration should start at the default speed, and then start to slow down after the first ten percent of the animation. Read/write.

`expression.Decelerate`

`expression` Required. An expression that returns one of the objects in the Applies To list.
Example

This example adds a shape and adds an animation that starts at the default speed and slows down after 70% of the animation has finished.

Sub AddShapeSetTiming()
    Dim effDiamond As Effect
    Dim shpRectangle As Shape

    'Adds rectangle and sets animation effect
    Set shpRectangle = ActivePresentation.Slides(1).Shapes.
        .AddShape(Type:=msoShapeRectangle, Left:=100, _
        Top:=100, Width:=50, Height:=50)
    Set effDiamond = ActivePresentation.Slides(1).TimeLine.
        .MainSequence.AddEffect(Shape:=shpRectangle, _
        effectId:=msoAnimEffectPathDiamond)

    'Slows the effect after seventy percent of the animation has fin
    With effDiamond.Timing
        .Decelerate = 0.3
    End With
End Sub
DefaultLanguageID Property

Returns or sets the default language of a presentation. When you set the DefaultLanguageID property for a presentation, you set it for all subsequent new presentations as well. Read/write MsoLanguageID.

MsoLanguageID can be one of these MsoLanguageID constants.

msoLanguageIDAfrikaans
msoLanguageIDAlbanian
msoLanguageIDAmharic
msoLanguageIDArabic
msoLanguageIDArabicAlgeria
msoLanguageIDArabicBahrain
msoLanguageIDArabicEgypt
msoLanguageIDArabicIraq
msoLanguageIDArabicJordan
msoLanguageIDArabicKuwait
msoLanguageIDArabicLebanon
msoLanguageIDArabicLibya
msoLanguageIDArabicMorocco
msoLanguageIDArabicOman
msoLanguageIDArabicQatar
msoLanguageIDArabicSyria
msoLanguageIDArabicTunisia
msoLanguageIDArabicUAE
msoLanguageIDArabicYemen
msoLanguageIDArmenian
msoLanguageIDAzerbaijani
msoLanguageIDAssamese
msoLanguageIDAzeriCyrillic
msoLanguageIDAzeriLatin
expression.DefaultLanguageID

expression Required. An expression that returns one of the objects in the Applies To list.

Remarks

You can use the LanguageID property to set text ranges to different languages. Any text range not explicitly set to another language will be set to this default.
**Example**

This example sets the default language for the active presentation, and all subsequent new presentations, to German.

```plaintext
ActivePresentation.DefaultLanguageID = msoLanguageIDGerman
```
DefaultShape Property

Returns a Shape object that represents the default shape for the presentation. Read-only.
Example

This example adds a shape to slide one in the active presentation, sets the default fill color to red for shapes in the presentation, and then adds another shape. This second shape will automatically have the new default fill color applied to it.

With Application.ActivePresentation
    Set sld1Shapes = .Slides(1).Shapes
    sld1Shapes.AddShape msoShape16pointStar, 20, 20, 100, 100
      .DefaultShape.Fill.ForeColor.RGB = RGB(255, 0, 0)
    sld1Shapes.AddShape msoShape16pointStar, 150, 20, 100, 100
End With
DefaultSpacing Property

Returns or sets the default tab-stop spacing for the specified text, in points. Read/write Single.
**Example**

This example sets the default tab-stop spacing to 0.5 inch (36 points) for the text in shape two on slide one in the active presentation.

```vba
```
DefaultWebOptions Property

Returns the DefaultWebOptions object, which contains global application-level attributes used by Microsoft PowerPoint when you publish or save a complete or partial presentation as a Web page or open a Web page. Read-only.
Example

This example checks to see whether the default document encoding is Western. If it is, the string strDocEncoding is set accordingly.

Set objAppWebOptions = Application.DefaultWebOptions
With objAppWebOptions
    If .Encoding = msoEncodingWestern Then
        strDocEncoding = "Western"
    End If
End If
End With
Depth Property

Returns or sets the depth of the shape's extrusion. Can be a value from –600 through 9600 (positive values produce an extrusion whose front face is the original shape; negative values produce an extrusion whose back face is the original shape). Read/write Single.
Example

This example adds an oval to myDocument, and then specifies that the oval be extruded to a depth of 50 points and that the extrusion be purple.

```vba
Set myDocument = ActivePresentation.Slides(1)
Set myShape = myDocument.Shapes_.AddShape(msoShapeOval, 90, 90, 90, 40)
With myShape.ThreeD
    .Visible = True
    .Depth = 50
    'RGB value for purple
    .ExtrusionColor.RGB = RGB(255, 100, 255)
End With
```
Design Property

- Returns a **Design** object representing a design.

*expression*.**Design**

*expression*  Required. An expression that returns one of the above objects.
Example

The following example adds a title master.

Sub AddDesignMaster
    ActivePresentation.Slides(1).Design.AddTitleMaster
End Sub
Designs Property

Returns a `Designs` object, representing a collection of designs.

`expression. Designs`

`expression` Required. An expression that returns one of the objects in the Applies To list.
Example

The following example displays a message for each design in the active presentation.

Sub AddDesignMaster()
    Dim desName As Design

    With ActivePresentation
        For Each desName In Designs
            MsgBox "The design name is " & Designs.Item(desName.Index).Name
        Next
    End With
End Sub
Diagram Property

- Returns a `Diagram` object to which a diagram node belongs.

`expression.Diagram`

`expression` Required. An expression that returns one of the objects in the Applies To list.
Example

The following example adds a diagram to a slide.

Sub AddADiagram()

    Dim dgnNode As DiagramNode
    Dim shpDiagram As Shape
    Dim intNodes As Integer

    'Adds diagram and first child node
    Set shpDiagram = ActivePresentation.Slides(1).Shapes.AddDiagram
                   (Type:=msoDiagramCycle, Left:=10, Top:=15, _
                    Width:=400, Height:=475)

    'Adds three additional child nodes
    For intNodes = 1 To 3
        dgnNode.AddNode
    Next intNodes

    'Automatically formats the diagram
    dgnNode.Diagram.AutoFormat = msoTrue

End Sub
DiagramNode Property

- Returns a `DiagramNode` object that represents a node in a diagram.

`expression.DiagramNode`

`expression` Required. An expression that returns one of the objects in the Applies To list.
Example

This example adds a pyramid chart to the first slide in the active presentation.

Sub CreatePyramidDiagram()
    Dim dgnNode As DiagramNode
    Dim shpDiagram As Shape
    Dim intCount As Integer

    'Add pyramid diagram to current document
    Set shpDiagram = ActivePresentation.Slides(1).Shapes. AddDiagram(Type:=msoDiagramPyramid, Left:=10, _
        Top:=15, Width:=400, Height:=475)

    'Add first diagram node child

    'Add three more diagram child nodes
    For intCount = 1 To 3
        dgnNode. AddNode
    Next intCount
End Sub
Dim Property

Returns a ColorFormat object that represents the color to dim to after an animation is finished.

expression.Dim

expression Required. An expression that returns one of the objects in the Applies To list.
Example

This example displays the color to dim to after the animation.

Sub QueryDimColor()
    Dim effDim As Effect
    Set effDim = ActivePresentation.Slides(1).TimeLine.MainSequence(1)
    MsgBox effDim.EffectInformation.Dim
End Sub
DimColor Property

- Returns or sets a ColorFormat object that represents the color of the specified shape after it's been built. Read-only.
Remarks

If you don't get the effect you expect, check your other build settings. You won't see the effect of the DimColor property unless the TextLevelEffect property of the AnimationSettings object is set to something other than ppAnimateLevelNone, the AfterEffect property is set to ppAfterEffectDim, and the Animate property is set to True. In addition, if the specified shape is the only item or the last item to be built on the slide, the shape won't be dimmed. To change the build order of the shapes on a slide, use the AnimationOrder property.
Example

This example adds a slide that contains both a title and a three-item list to the active presentation, sets the title and list to be dimmed after being built, and sets the color that each of them will be dimmed to.

```vbnet
With ActivePresentation.Slides.Add(2, ppLayoutText).Shapes
    With .Item(1)
        .TextFrame.TextRange.Text = "Sample title"
        With .AnimationSettings
            .TextLevelEffect = ppAnimateByAllLevels
            .AfterEffect = ppAfterEffectDim
            DimColor.SchemeColor = ppShadow
            .Animate = True
        End With
    End With
End With
With .Item(2)
    .TextFrame.TextRange.Text = "Item one" _
& Chr(13) & "Item two"
    With .AnimationSettings
        .TextLevelEffect = ppAnimateByFirstLevel
        .AfterEffect = ppAfterEffectDim
        DimColor.RGB = RGB(100, 150, 130)
        .Animate = True
    End With
End With
End With
```
Direction Property

Returns an MsoAnimDirection that represents the direction used for an animation effect. This property can be used only if the effect uses a direction. Read/write.

MsoAnimDirection can be one of these MsoAnimDirection constants.

- msoAnimDirectionAcross
- msoAnimDirectionBottom
- msoAnimDirectionBottomLeft
- msoAnimDirectionBottomRight
- msoAnimDirectionCenter
- msoAnimDirectionClockwise
- msoAnimDirectionCounterclockwise
- msoAnimDirectionCycleClockwise
- msoAnimDirectionCycleCounterclockwise
- msoAnimDirectionDown
- msoAnimDirectionDownLeft
- msoAnimDirectionDownRight
- msoAnimDirectionFontAllCaps
- msoAnimDirectionFontBold
- msoAnimDirectionFontItalic
- msoAnimDirectionFontShadow
- msoAnimDirectionFontStrikethrough
- msoAnimDirectionFontUnderline
- msoAnimDirectionGradual
- msoAnimDirectionHorizontal
- msoAnimDirectionHorizontalIn
- msoAnimDirectionHorizontalOut
- msoAnimDirectionIn
expression.Direction

expression  Required. An expression that returns one of the objects in the Applies To list.
Example

The following example adds a shape, and animates the shape to fly in from the left.

Sub AddShapeSetAnimFly()
    Dim effFly As Effect
    Dim shpCube As Shape

    Set shpCube = ActivePresentation.Slides(1).Shapes .AddShape(Type:=msoShapeCube, Left:=100, _
        Top:=100, Width:=50, Height:=50)
    Set effFly = ActivePresentation.Slides(1).TimeLine.MainSequence .AddEffect(Shape:=shpCube, effectId:=msoAnimEffectFly)

    effFly.Timing.Duration = 3
    effFly.EffectParameters.Direction = msoAnimDirectionLeft
End Sub
DisplayAlerts Property

- Sets or returns a **PpAlertLevel** constant that represents whether Microsoft PowerPoint displays alerts while running a macro. Read/write.

**PpAlertLevel** can be one of these **PpAlertLevel** constants.

**ppAlertsAll** All message boxes and alerts are displayed; errors are returned to the macro.

**ppAlertsNone** Default. No alerts or message boxes are displayed. If a macro encounters a message box, the default value is chosen and the macro continues.

**expression**.DisplayAlerts

**expression**  Required. An expression that returns an **Application** object.
Remarks

The value of the `DisplayAlerts` property is not reset once a macro stops running; it is maintained throughout a session. It is not stored across sessions, so when PowerPoint begins, it reset to `ppAlertsNone`. 
Example

The following line of code instructs PowerPoint to display all message boxes and alerts, returning errors to the macro.

Sub SetAlert
    Application.DisplayAlerts = ppAlertsAll
End Sub
DisplayAutoCorrectOptions Property

MsoTrue for Microsoft PowerPoint to display the AutoCorrect Options button. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.
  msoCTrue
  msoFalse
  msoTriStateMixed
  msoTriStateToggle
  msoTrue

expression.DisplayAutoCorrectOptions

expression  Required. An expression that returns an AutoCorrect object.
Example

This example disables display of the **AutoCorrect Options** and **AutoLayout Options** buttons.

Sub HideAutoCorrectOpButton()
    With Application.AutoCorrect
        .DisplayAutoCorrectOptions = msoFalse
        .DisplayAutoLayoutOptions = msoFalse
    End With
End Sub
DisplayAutoLayoutOptions Property

MsoTrue for Microsoft PowerPoint to display the AutoLayout Options button. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.
  msoCTrue
  msoFalse
  msoTriStateMixed
  msoTriStateToggle
  msoTrue

expression.DisplayAutoLayoutOptions

expression Required. An expression that returns an AutoCorrect object.
Example

This example disables display of the AutoCorrect Options and AutoLayout Options buttons.

Sub HideAutoCorrectOpButton()
    With Application.AutoCorrect
        .DisplayAutoCorrectOptions = msoFalse
        .DisplayAutoLayoutOptions = msoFalse
    End With
End Sub
DisplayComments Property

Determines whether comments are displayed in the specified presentation. Read/write \texttt{MsoTriState}.

\texttt{MsoTriState} can be one of these \texttt{MsoTriState} constants.

- \texttt{msoCTrue}
- \texttt{msoFalse}
- \texttt{msoTriStateMixed}
- \texttt{msoTriStateToggle}
- \texttt{msoTrue} Comments are displayed in the specified presentation.
Example

This example hides comments in the active presentation.

ActivePresentation.DisplayComments = msoFalse
**DisplayGridLines Property**

MsoTrue to display gridlines in Microsoft PowerPoint. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.

- msoCTrue
- msoFalse
- msoTriStateMixed
- msoTriStateToggle
- msoTrue

expression.DisplayGridLines

expression  Required. An expression that returns an Application object.
Example

This example toggles the display of the gridlines in PowerPoint.

Sub ToggleGridLines()
    With Application
        If .DisplayGridLines = msoTrue Then
            .DisplayGridLines = msoFalse
        Else
            .DisplayGridLines = msoTrue
        End If
    End With
End Sub
DisplayMasterShapes Property

Determines whether the specified slide or range of slides displays the background objects on the slide master. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.
  msoCTrue
  msoFalse
  msoTriStateMixed
  msoTriStateToggle
  msoTrue The specified slide or range of slides displays the background objects on the slide master. These background objects can include text, drawings, OLE objects, and clip art you add to the slide master. Headers and footers aren't included.
Remarks

When you create a new slide, the default value for this property is `msoTrue`. If you copy a slide from another presentation, it retains the setting it had in the original presentation. That is, if the slide omitted slide master background objects in the original presentation, it will omit them in the new presentation as well.

Note that the look of the slide's background is determined by the color scheme and background as well as by the background objects. If setting the `DisplayMasterShapes` property alone doesn't give you the results you want, try setting the `FollowMasterBackground` and `ColorScheme` properties as well.
Example

This example copies slide one from presentation two, pastes it at the end of presentation one, and matches the slide's background, color scheme, and background objects to the rest of presentation one.

```
Presentations(2).Slides(1).Copy
With Presentations(1).Slides.Paste
    .FollowMasterBackground = True
    .ColorScheme = Presentations(1).SlideMaster.ColorScheme
    .DisplayMasterShapes = msoTrue
End With
```
Display Name Property

Returns a String that represents the name of an animation effect. Read-only.

expression.DisplayName

expression Required. An expression that returns one of the objects in the Applies To list.
Example

This example displays the name for the first animation sequence of the first slide's main animation sequence timeline.

Sub DisplayEffectName()
    Dim effMain As Effect
    Set effMain = ActivePresentation.Slides(1).TimeLine.MainSequence
    MsgBox effMain.DisplayName
End Sub
DisplayOnTitleSlide Property

Determines whether the footer, date and time, and slide number appear on the title slide. Read/write [MsoTriState](#). Applies to slide masters.

MsoTriState can be one of these MsoTriState constants.

- **msoCTrue**
- **msoFalse** The footer, date and time, and slide number appears on all slides except the title slide.
- **msoTriStateMixed**
- **msoTriStateToggle**
- **msoTrue** The footer, date and time, and slide number appear on the title slide.
Example

This example sets the footer, date and time, and slide number to not appear on the title slide.

Application.ActivePresentation.SlideMaster.HeadersFooters._DisplayOnTitleSlide = msoFalse
Show All
DisplayPasteOptions Property

MsoTrue for Microsoft PowerPoint to display the Paste Options button, which displays directly under newly pasted text. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.

msoCTrue
msoFalse
msoTriStateMixed
msoTriStateToggle
msoTrue

expression.DisplayPasteOptions

expression  Required. An expression that returns an Options object.
Example

This example enables the **Paste Options** button if the option has been disabled.

```vbnet
Sub ShowPasteOptionsButton()
    With Application.Options
        If .DisplayPasteOptions = False Then
            .DisplayPasteOptions = True
        End If
    End With
End Sub
```
DisplaySlideMiniature Property

Determines if and when the slide miniature window is displayed automatically. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.

**msoCTrue**
**msoFalse** The slide miniature window is not displayed automatically.

**msoTriStateMixed**
**msoTriStateToggle**
**msoTrue** The slide miniature window is displayed automatically when the document window is in black-and-white view, the slide pane is zoomed to greater than 150% of the fit percentage, or a master view is visible.
Remarks

This property is not available in slide show view and slide sorter view. The slide miniature window isn't a member of either the Windows collection or the SlideShowWindows collection.

The fit percentage is determined by a combination of the size of the slide pane and the size of the presentation window. To determine the fit percentage, set the ZoomToFit property to True and then return the value of the Zoom property.
Example

If document window one is in slide view, this example displays the slide miniature window.

With Windows(1).View
    If .Type = ppViewSlide Then .DisplaySlideMiniature = msoTrue
End With
Drop Property

For callouts with an explicitly set drop value, this property returns the vertical distance (in points) from the edge of the text bounding box to the place where the callout line attaches to the text box. This distance is measured from the top of the text box unless the AutoAttach property is set to True and the text box is to the left of the origin of the callout line (the place that the callout points to). In this case the drop distance is measured from the bottom of the text box. Read-only Single.
Remarks

Use the **CustomDrop** method to set the value of this property.

The value of this property accurately reflects the position of the callout line attachment to the text box only if the callout has an explicitly set drop value — that is, if the value of the **DropType** property is **msoCalloutDropCustom**.
Example

This example replaces the custom drop for shape one on myDocument with one of two preset drops, depending on whether the custom drop value is greater than or less than half the height of the callout text box. For the example to work, shape one must be a callout.

```vba
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(1).Callout
    If .DropType = msoCalloutDropCustom Then
        If .Drop < .Parent.Height / 2 Then
            .PresetDrop msoCalloutDropTop
        Else
            .PresetDrop msoCalloutDropBottom
        End If
    End If
End With
```
DropType Property

Returns a value that indicates where the callout line attaches to the callout text box. Read-only **MsoCalloutDropType**.

MsoCalloutDropType can be one of these MsoCalloutDropType constants.

- msoCalloutDropBottom
- msoCalloutDropCenter
- msoCalloutDropCustom
- msoCalloutDropMixed
- msoCalloutDropTop

`expression.DropType`

`expression` Required. An expression that returns one of the objects in the Applies To list.
Remarks

If the callout drop type is **msoCalloutDropCustom**, the values of the **Drop** and **AutoAttach** properties and the relative positions of the callout text box and callout line origin (the place that the callout points to) are used to determine where the callout line attaches to the text box.

This property is read-only. Use the **PresetDrop** method to set the value of this property.
Example

This example checks to determine whether shape three on myDocument is a callout with a custom drop. If it is, the code replaces the custom drop with one of two preset drops, depending on whether the custom drop value is greater than or less than half the height of the callout text box.

```vba
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(3)
    If .Type = msoCallout Then
        With .Callout
            If .DropType = msoCalloutDropCustom Then
                If .Drop < .Parent.Height / 2 Then
                    .PresetDrop msoCalloutDropTop
                Else
                    .PresetDrop msoCalloutDropBottom
                End If
            End If
        End With
    End If
End With
```
**Duration Property**

Returns or sets a **Single** that represents the length of an animation in seconds. Read/write.

`expression.Duration`

`expression`  Required. An expression that returns one of the objects in the Applies To list.
Example

The following example adds a shape and an animation to that shape, then sets its animation duration.

Sub AddShapeSetTiming()
    Dim effDiamond As Effect
    Dim shpRectangle As Shape

    'Adds shape and sets animation effect
    Set shpRectangle = ActivePresentation.Slides(1).Shapes _
        .AddShape(Type:=msoShapeRectangle, Left:=100, _
        Top:=100, Width:=50, Height:=50)
    Set effDiamond = ActivePresentation.Slides(1).TimeLine.MainSequence .AddEffect(Shape:=sh, effectId:=msoAnimEffectPathDiamond)

    'Sets duration of effect
    effDiamond.Timing.Duration = 5
End Sub
EditingType Property

If the specified node is a vertex, this property returns a value that indicates how changes made to the node affect the two segments connected to the node. If the node is a control point for a curved segment, this property returns the editing type of the adjacent vertex. Read-only [MsoEditingType](#).

MsoEditingType can be one of these MsoEditingType constants.

- [msoEditingAuto](#)
- [msoEditingCorner](#)
- [msoEditingSmooth](#)
- [msoEditingSymmetric](#)

$expression.Edi
tingType$

$expression$ Required. An expression that returns one of the objects in the Applies To list.
Remarks

This property is read-only. Use the SetEditingType method to set the value of this property.
Example

This example changes all corner nodes to smooth nodes in shape three on myDocument. Shape three must be a freeform drawing.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(3).Nodes
    For n = 1 to .Count
        If .Item(n).EditingType = msoEditingCorner Then
            .SetEditingType n, msoEditingSmooth
        End If
    Next
End With
EffectInformation Property

Returns an EffectInformation object representing information for a specified animation effect.

expression.EffectInformation

expression  Required. An expression that returns one of the objects in the Applies To list.
Example

This example adds a sound effect to the main animation sequence for a given shape.

Sub AddSoundEffect()
    Dim effMain As Effect
    Set effMain = ActivePresentation.Slides(1).TimeLine.MainSequence
    MsgBox effMain.EffectInformation.AfterEffect
End Sub
**EffectParameters Property**

Returns an `EffectParameters` object representing animation effect properties.

`expression`.EffectParameters

`expression`  Required. An expression that returns one of the objects in the Applies To list.
Example

This example adds an effect to the main animation sequence on the first slide. This effect changes the font for the first shape to Broadway.

Sub ChangeFontName()
    Dim shpText As Shape
    Dim effNew As Effect

    Set shpText = ActivePresentation.Slides(1).Shapes(1)
    Set effNew = ActivePresentation.Slides(1).TimeLine.MainSequence .AddEffect(Shape:=shpText, EffectId:=msoAnimEffectChangeFont

    effNew.EffectParameters.FontName = "Broadway"
End Sub
Show All
**EffectType Property**

Sets or returns an **MsoAnimEffect** constant that represents an animation effect type. Read/write.

MsoAnimEffect can be one of these MsoAnimEffect constants.

- `msoAnimEffectAppear`
- `msoAnimEffectArcUp`
- `msoAnimEffectAscend`
- `msoAnimEffectBlast`
- `msoAnimEffectBlinds`
- `msoAnimEffectBoldFlash`
- `msoAnimEffectBoldReveal`
- `msoAnimEffectBoomerang`
- `msoAnimEffectBounce`
- `msoAnimEffectBox`
- `msoAnimEffectBrushOnColor`
- `msoAnimEffectBrushOnUnderline`
- `msoAnimEffectCenterRevolve`
- `msoAnimEffectChangeFillColor`
- `msoAnimEffectChangeFont`
- `msoAnimEffectChangeFontColor`
- `msoAnimEffectChangeFontSize`
- `msoAnimEffectChangeFontStyle`
- `msoAnimEffectChangeLineColor`
- `msoAnimEffectCheckerboard`
- `msoAnimEffectCircle`
- `msoAnimEffectColorBlend`
- `msoAnimEffectColorReveal`
- `msoAnimEffectColorWave`
msoAnimEffectComplementaryColor
msoAnimEffectComplementaryColor2
msoAnimEffectContrastingColor
msoAnimEffectCrawl
msoAnimEffectCredits
msoAnimEffectCustom
msoAnimEffectDarken
msoAnimEffectDesaturate
msoAnimEffectDescend
msoAnimEffectDiamond
msoAnimEffectDissolve
msoAnimEffectEaseIn
msoAnimEffectExpand
msoAnimEffectFade
msoAnimEffectFadedAscend
msoAnimEffectFadedSwivel
msoAnimEffectFadedZoom
msoAnimEffectFlashBulb
msoAnimEffectFlashOnce
msoAnimEffectFlicker
msoAnimEffectFlip
msoAnimEffectFloat
msoAnimEffectFly
msoAnimEffectFold
msoAnimEffectGlide
msoAnimEffectGrowAndTurn
msoAnimEffectGrowShrink
msoAnimEffectGrowWithColor
msoAnimEffectLighten
msoAnimEffectMediaPause
msoAnimEffectMediaPlay
msoAnimEffectMediaStop
msoAnimEffectPath4PointStar
msoAnimEffectPath5PointStar
msoAnimEffectPath6PointStar
msoAnimEffectPath8PointStar
msoAnimEffectPathArcDown
msoAnimEffectPathArcLeft
msoAnimEffectPathArcRight
msoAnimEffectPathArcUp
msoAnimEffectPathBean
msoAnimEffectPathBounceLeft
msoAnimEffectPathBounceRight
msoAnimEffectPathBuzzsaw
msoAnimEffectPathCircle
msoAnimEffectPathCrescentMoon
msoAnimEffectPathCurvedSquare
msoAnimEffectPathCurvedX
msoAnimEffectPathCurvyLeft
msoAnimEffectPathCurvyRight
msoAnimEffectPathCurvyStar
msoAnimEffectPathDecayingWave
msoAnimEffectPathDiagonalDownRight
msoAnimEffectPathDiagonalUpRight
msoAnimEffectPathDiamond
msoAnimEffectPathDown
msoAnimEffectPathEqualTriangle
msoAnimEffectPathFigure8Four
msoAnimEffectPathFootball
msoAnimEffectPathFunnel
msoAnimEffectPathHeart
msoAnimEffectPathHeartbeat
msoAnimEffectPathHexagon
msoAnimEffectPathHorizontalFigure8
msoAnimEffectPathInvertedSquare
msoAnimEffectPathInvertedTriangle
msoAnimEffectPathLeft
msoAnimEffectPathLoopdeLoop
msoAnimEffectPathNeutron
msoAnimEffectPathOctagon
msoAnimEffectPathParallelogram
msoAnimEffectPathPeanut
msoAnimEffectPathPentagon
msoAnimEffectPathPlus
msoAnimEffectPathPointyStar
msoAnimEffectPathRightTriangle
msoAnimEffectPathSCurve1
msoAnimEffectPathSCurve2
msoAnimEffectPathSineWave
msoAnimEffectPathSpiralLeft
msoAnimEffectPathSpiralRight
msoAnimEffectPathSpring
msoAnimEffectPathSquare
msoAnimEffectPathStairsDown
msoAnimEffectPathSwoosh
msoAnimEffectPathTeardrop
msoAnimEffectPathTrapezoid
msoAnimEffectPathTurnDown
msoAnimEffectPathTurnRight
msoAnimEffectPathTurnUp
msoAnimEffectPathTurnUpRight
msoAnimEffectPathVerticalFigure8
msoAnimEffectPathWave
msoAnimEffectPathZigzag
msoAnimEffectPeek
msoAnimEffectPinwheel
msoAnimEffectPlus
msoAnimEffectRandomBars
msoAnimEffectRandomEffects
expression.EffectType

expression  Required. An expression that returns one of the objects in the Applies To list.
Example

This example changes an animation effect to a random bar animation.

Sub ChangeEffectType()
    Dim effRandom As Effect
    Set effRandom = ActivePresentation.Slides(1).TimeLine.MainSequence(1).EffectType = msoAnimEffectRandomBars
End Sub
EmailSubject Property

Returns or sets the text string of the hyperlink subject line. The subject line is appended to the Internet address (URL) of the hyperlink. Read/write String.
Remarks

This property is commonly used with e-mail hyperlinks. The value of this property takes precedence over any e-mail subject specified in the Address property of the same Hyperlink object.
Example

This example sets the e-mail subject line of the first hyperlink on slide one in the active presentation.

ActivePresentation.Slides(1).Hyperlinks(1).EmailSubject = "Quote Request"
Embeddable Property

Determines whether the specified font can be embedded in the presentation. Read-only **MsoTriState**.

MsoTriState can be one of these MsoTriState constants.

- **msoCTrue**
- **msoFalse**
- **msoTriStateMixed**
- **msoTriStateToggle**
- **msoTrue** The specified font can be embedded in the presentation.

*expression*.**Embeddable**

*expression* Required. An expression that returns one of the objects in the Applies To list.
Example

This example checks each font used in the active presentation to determine whether it's embeddable in the presentation.

```vba
For Each usedFont In Presentations(1).Fonts
    If usedFont.Embeddable Then
        MsgBox usedFont.Name & ": Embeddable"
    Else
        MsgBox usedFont.Name & ": Not embeddable"
    End If
Next usedFont
```
Embedded Property

Determines whether the specified font is embedded in the presentation. Read-only **MsoTriState**.

MsoTriState can be one of these MsoTriState constants.

- **msoCTrue**
- **msoFalse**
- **msoTriStateMixed**
- **msoTriStateToggle**
- **msoTrue** The specified font is embedded in the presentation.

```plaintext
expression.Embedded
```

*expression* Required. An expression that returns one of the objects in the Applies To list.
Example

This example checks each font used in the active presentation to determine whether it's embedded in the presentation.

For Each usedFont In Presentations(1).Fonts
    If usedFont.Embedded Then
        MsgBox usedFont.Name & ($('#text').text || ': Embedded')
    Else
        MsgBox usedFont.Name & ($('#text').text || ': Not embedded')
    End If
Next usedFont
Emboss Property

Determines whether the character format is embossed. Read/write **MsoTriState**.

MsoTriState can be one of these MsoTriState constants.

- **msoCTrue**
- **msoFalse** The character format is not embossed.
- **msoTriStateMixed** The specified text range contains both embossed and unembossed characters.
- **msoTriStateToggle**
- **msoTrue** The character format is embossed.

*expression*.Emboss

*expression*  Required. An expression that returns one of the objects in the Applies To list.
Example

This example sets the title text on slide one to embossed.

Show All
Encoding Property

Returns or sets the document encoding (code page or character set) to be used by the Web browser when you view the saved document. The default is the system code page. Read/write MsoEncoding.

Although MsoEncoding can be one of these MsoEncoding constants, you cannot not use any of the constants that have the suffix AutoDetect. Those constants are used by the ReloadAs method.

msoEncodingArabic
msoEncodingArabicASMO
msoEncodingArabicAutoDetect
msoEncodingArabicTransparentASMO
msoEncodingAutoDetect
msoEncodingBaltic
msoEncodingCentralEuropean
msoEncodingCyrillic
msoEncodingCyrillicAutoDetect
msoEncodingEBCDICArabic
msoEncodingEBCDICDenmarkNorway
msoEncodingEBCDICFinlandSweden
msoEncodingEBCDICFrance
msoEncodingEBCDICGermany
msoEncodingEBCDICGreek
msoEncodingEBCDICGreekModern
msoEncodingEBCDICHebrew
msoEncodingEBCDICIcelandic
msoEncodingEBCDICInternational
msoEncodingEBCDICItaly
msoEncodingEBCDICJapaneseKatakanaExtended
msoEncodingEBCDICJapaneseKatakanaExtendedAndJapanese
msoEncodingUTF8
msoEncodingVietnamese
msoEncodingWestern
msoEncodingMacArabic

expression.Encoding

expression Required. An expression that returns one of the objects in the Applies To list.
Example

This example checks to see whether the default document encoding is Western, and then it sets the string \texttt{strDocEncoding} accordingly.

\begin{verbatim}
If Application.DefaultWebOptions.\textbf{Encoding} = msoEncodingWestern Then
    strDocEncoding = "Western"
Else
    strDocEncoding = "Other"
End If
\end{verbatim}
End Property

Returns the number of the last slide in the specified print range. Read-only Long.
Example

This example displays a message that indicates the starting and ending slide numbers for print range one in the active presentation.

```
With ActivePresentation.PrintOptions.Ranges
    If .Count > 0 Then
        With .Item(1)
            MsgBox "Print range 1 starts on slide " & .Start & 
            " and ends on slide " & .End
        End With
    End If
End With
```
EndArrowheadLength Property

Returns or sets the length of the arrowhead at the end of the specified line. Read/write [MsoArrowheadLength].

MsoArrowheadLength can be one of these MsoArrowheadLength constants. 
- msoArrowheadLengthMedium
- msoArrowheadLengthMixed
- msoArrowheadLong
- msoArrowheadShort

expression.EndArrowheadLength

expression  Required. An expression that returns one of the objects in the Applies To list.
Example

This example adds a line to myDocument. There's a short, narrow oval on the line's starting point and a long, wide triangle on its end point.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes.AddLine(100, 100, 200, 300).Line
  .BeginArrowheadLength = msoArrowheadShort
  .BeginArrowheadStyle = msoArrowheadOval
  .BeginArrowheadWidth = msoArrowheadNarrow
  .EndArrowheadLength = msoArrowheadLong
  .EndArrowheadStyle = msoArrowheadTriangle
  .EndArrowheadWidth = msoArrowheadWide
End With
EndArrowheadStyle Property

Returns or sets the style of the arrowhead at the end of the specified line. Read/write MsoArrowheadStyle.

MsoArrowheadStyle can be one of these MsoArrowheadStyle constants. msoArrowheadDiamond msoArrowheadNone msoArrowheadOpen msoArrowheadOval msoArrowheadStealth msoArrowheadStyleMixed msoArrowheadTriangle

expression.EndArrowheadStyle

expression Required. An expression that returns one of the objects in the Applies To list.
Example

This example adds a line to myDocument. There's a short, narrow oval on the line's starting point and a long, wide triangle on its end point.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes.AddLine(100, 100, 200, 300).Line
    .BeginArrowheadLength = msoArrowheadShort
    .BeginArrowheadStyle = msoArrowheadOval
    .BeginArrowheadWidth = msoArrowheadNarrow
    .EndArrowheadLength = msoArrowheadLong
    .EndArrowheadStyle = msoArrowheadTriangle
    .EndArrowheadWidth = msoArrowheadWide
End With
EndArrowheadWidth Property

Returns or sets the width of the arrowhead at the end of the specified line. Read/write MsoArrowheadWidth.

MsoArrowheadWidth can be one of these MsoArrowheadWidth constants:
- msoArrowheadNarrow
- msoArrowheadWide
- msoArrowheadWidthMedium
- msoArrowheadWidthMixed

expression.EndArrowheadWidth

expression Required. An expression that returns one of the objects in the Applies To list.
Example

This example adds a line to myDocument. There's a short, narrow oval on the line's starting point and a long, wide triangle on its end point.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes.AddLine(100, 100, 200, 300).Line
    .BeginArrowheadLength = msoArrowheadShort
    .BeginArrowheadStyle = msoArrowheadOval
    .BeginArrowheadWidth = msoArrowheadNarrow
    .EndArrowheadLength = msoArrowheadLong
    .EndArrowheadStyle = msoArrowheadTriangle
    .EndArrowheadWidth = msoArrowheadWide
End With
EndConnected Property

Determines whether the end of the specified connector is connected to a shape. Read-only [MsoTriState].

MsoTriState can be one of these MsoTriState constants.
- msoCTrue
- msoFalse
- msoTriStateMixed
- msoTriStateToggle
- msoTrue The end of the specified connector is connected to a shape.

expression.EndConnected

expression Required. An expression that returns one of the objects in the Applies To list.
Example

If the end of the connector represented by shape three on the first slide in the active presentation is connected to a shape, this example stores the connection site number in the variable oldEndConnSite, stores a reference to the connected shape in the object variable oldEndConnShape, and then disconnects the end of the connector from the shape.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(3)
  If .Connector Then
    With .ConnectorFormat
      If .EndConnected Then
        oldEndConnSite = .EndConnectionSite
        Set oldEndConnShape = .EndConnectedShape
        .EndDisconnect
      End If
    End With
  End If
End With
EndConnectedShape Property

Returns a Shape object that represents the shape that the end of the specified connector is attached to. Read-only.

Note  If the end of the specified connector isn't attached to a shape, this property generates an error.
Example

This example assumes that the first slide in the active presentation already contains two shapes attached by a connector named "Conn1To2." The code adds a rectangle and a connector to the first slide. The end of the new connector will be attached to the same connection site as the end of the connector named "Conn1To2," and the beginning of the new connector will be attached to connection site one on the new rectangle.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes
    Set r3 = .AddShape(msoShapeRectangle, 100, 420, 200, 100)
    .AddConnector(msoConnectorCurve, 0, 0, 10, 10)
    .Name = "Conn1To3"
    With .Item("Conn1To2").ConnectorFormat
        endConnSite1 = .EndConnectionSite
        Set endConnShape1 = .EndConnectedShape
    End With
    With .Item("Conn1To3").ConnectorFormat
        .BeginConnect r3, 1
        .EndConnect endConnShape1, endConnSite1
    End With
End With
EndConnectionSite Property

Returns an integer that specifies the connection site that the end of a connector is connected to. Read-only Long.

Note  If the end of the specified connector isn't attached to a shape, this property generates an error.
**Example**

This example assumes that the first slide in the active presentation already contains two shapes attached by a connector named "Conn1To2." The code adds a rectangle and a connector to the first slide. The end of the new connector will be attached to the same connection site as the end of the connector named "Conn1To2," and the beginning of the new connector will be attached to connection site one on the new rectangle.

```
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes
    Set r3 = .AddShape(msoShapeRectangle, 100, 420, 200, 100)
        .AddConnector(msoConnectorCurve, 0, 0, 10, 10)
        .Name = "Conn1To3"
    With .Item("Conn1To2").ConnectorFormat
        endConnSite1 = .EndConnectionSite
        Set endConnShape1 = .EndConnectedShape
    End With
    With .Item("Conn1To3").ConnectorFormat
        .BeginConnect r3, 1
        .EndConnect endConnShape1, endConnSite1
    End With
End With
```

EndingSlide Property

Returns or sets the last slide to be displayed in the specified slide show. Read/write **Long**.
Example

This example runs a slide show of the active presentation, starting with slide two and ending with slide four.

With ActivePresentation.SlideShowSettings
    .RangeType = ppShowSlideRange
    .StartingSlide = 2
    .EndingSlide = 4
    .Run
End With
EntryEffect Property

For the **AnimationSettings** object, this property returns or sets the special effect applied to the animation for the specified shape. For the **SlideShowTransition** object, this property returns or sets the special effect applied to the specified slide transition. Read/write **PpEntryEffect**.

PpEntryEffect can be one of these PpEntryEffect constants.

- ppEffectAppear
- ppEffectBlindsHorizontal
- ppEffectBlindsVertical
- ppEffectBoxIn
- ppEffectBoxOut
- ppEffectCheckerboardAcross
- ppEffectCheckerboardDown
- ppEffectCoverDown
- ppEffectCoverLeft
- ppEffectCoverLeftDown
- ppEffectCoverLeftUp
- ppEffectCoverRight
- ppEffectCoverRightDown
- ppEffectCoverRightUp
- ppEffectCoverUp
- ppEffectCrawlFromDown
- ppEffectCrawlFromLeft
- ppEffectCrawlFromRight
- ppEffectCrawlFromUp
- ppEffectCut
- ppEffectCutThroughBlack
- ppEffectDissolve
ppEffectFade
ppEffectFlashOnceFast
ppEffectFlashOnceMedium
ppEffectFlashOnceSlow
ppEffectFlyFromBottom
ppEffectFlyFromBottomLeft
ppEffectFlyFromBottomRight
ppEffectFlyFromLeft
ppEffectFlyFromRight
ppEffectFlyFromTop
ppEffectFlyFromTopLeft
ppEffectFlyFromTopRight
ppEffectMixed
ppEffectNone
ppEffectPeekFromDown
ppEffectPeekFromLeft
ppEffectPeekFromRight
ppEffectPeekFromUp
ppEffectRandom
ppEffectRandomBarsHorizontal
ppEffectRandomBarsVertical
ppEffectSpiral
ppEffectSplitHorizontalIn
ppEffectSplitHorizontalOut
ppEffectSplitVerticalIn
ppEffectSplitVerticalOut
ppEffectStretchAcross
ppEffectStretchDown
ppEffectStretchLeft
ppEffectStretchRight
ppEffectStretchUp
ppEffectStripsDownLeft
ppEffectStripsDownRight
ppEffectStripsLeftDown
ppEffectStripsLeftUp
ppEffectStripsRightDown
ppEffectStripsRightUp
ppEffectStripsUpLeft
ppEffectStripsUpRight
ppEffectSwivel
ppEffectUncoverDown
ppEffectUncoverLeft
ppEffectUncoverLeftDown
ppEffectUncoverLeftUp
ppEffectUncoverRight
ppEffectUncoverRightDown
ppEffectUncoverRightUp
ppEffectUncoverUp
ppEffectWipeDown
ppEffectWipeLeft
ppEffectWipeRight
ppEffectWipeUp
ppEffectZoomBottom
ppEffectZoomCenter
ppEffectZoomIn
ppEffectZoomInSlightly
ppEffectZoomOut
ppEffectZoomOutSlightly

expression.EntryEffect

expression  Required. An expression that returns one of the objects in the Applies To list.
Remarks

If the `TextLevelEffect` property for the specified shape is set to `ppAnimateLevelNone` (the default value) or the `Animate` property is set to `False`, you won't see the special effect you've applied with the `EntryEffect` property.
Example

This example adds a title slide to the active presentation and sets the title to fly in from the right whenever it's animated during a slide show.

```vba
With ActivePresentation.Slides.Add(1, ppLayoutTitleOnly).Shapes(1)
    .TextFrame.TextRange.Text = "Sample title"
    With .AnimationSettings
        .TextLevelEffect = ppAnimateByAllLevels
        .EntryEffect = ppEffectFlyFromRight
        .Animate = True
    End With
End With
```
EnvelopeVisible Property

Determines whether the e-mail message header is visible in the document window. Read/write **MsoTriState**.

MsoTriState can be one of these MsoTriState constants.

- **msoCTrue**  
- **msoFalse** Default.
- **msoTriStateMixed**  
- **msoTriStateToggle**  
- **msoTrue** The e-mail message header is visible in the document window.

**expression.EnvelopeVisible**

**expression** Required. An expression that returns one of the objects in the Applies To list.
Example

This example displays the e-mail message header.

ActivePresentation.\texttt{EnvelopeVisible} = \texttt{msoTrue}
Exit Property

Returns or sets an **MsoTriState** that represents whether the animation effect is an exit effect. Read/write.

MsoTriState can be one of these MsoTriState constants.

- **msoCTrue**
- **msoFalse** The effect is not an exit effect.
- **msoTriStateMixed**
- **msoTriStateToggle**
- **msoTrue** The effect is an exit effect.

`expression.Exit`

`expression` Required. An expression that returns one of the objects in the Applies To list.
Example

This example displays whether the specified animation is an exit animation effect.

Sub EffectExit()
    Dim effMain As Effect
    Set effMain = ActivePresentation.Slides(1).TimeLine.MainSequence
    If effMain.Exit = msoTrue Then
        MsgBox "This is an exit animation effect."
    Else
        MsgBox "This is not an exit animation effect."
    End If
End Sub
ExtraColors Property

Returns an ExtraColors object that represents the extra colors available in the specified presentation. Read-only.
Example

The following example adds a rectangle to slide one in the active presentation and sets its fill foreground color to the first extra color. If there hasn't been at least one extra color defined for the presentation, this example will fail.

With ActivePresentation
    Set rect = .Slides(1).Shapes _
        .AddShape(msoShapeRectangle, 50, 50, 100, 200) _
    rect.Fill.ForeColor.RGB = .ExtraColors(1)
End With
ExtrusionColor Property

Returns a ColorFormat object that represents the color of the shape's extrusion. Read-only.
Example

This example adds an oval to myDocument, and then specifies that the oval be extruded to a depth of 50 points and that the extrusion be purple.

Set myDocument = ActivePresentation.Slides(1)
Set myShape = myDocument.Shapes _
    .AddShape(msoShapeOval, 90, 90, 90, 40)
With myShape.ThreeD
    .Visible = True
    .Depth = 50
    'RGB value for purple
    .ExtrusionColor.RGB = RGB(255, 100, 255)
End With
ExtrusionColorType Property

Returns or sets a value that indicates whether the extrusion color is based on the extruded shape's fill (the front face of the extrusion) and automatically changes when the shape's fill changes, or whether the extrusion color is independent of the shape's fill. Read/write MsoExtrusionColorType.

MsoExtrusionColorType can be one of these MsoExtrusionColorType constants.
- msoExtrusionColorAutomatic Extrusion color is based on shape fill.
- msoExtrusionColorCustom Extrusion color is independent of shape fill.
- msoExtrusionColorTypeMixed

expression.ExtrusionColorType

expression Required. An expression that returns one of the objects in the Applies To list.
Example

If shape one on myDocument has an automatic extrusion color, this example gives the extrusion a custom yellow color.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(1).ThreeD
    If .ExtrusionColorType = msoExtrusionColorAutomatic Then
        .ExtrusionColor.RGB = RGB(240, 235, 16)
    End If
End With
FarEastLineBreakControl Property

Returns or sets the line break control option if you have an Asian language setting specified True if the line break control option is selected. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.

- msoCTrue
- msoFalse
- msoTriStateMixed
- msoTriStateToggle
- msoTrue
Example

This example selects the line break option for the text in shape one on the first slide of the active presentation.

FarEastLineBreakLanguage Property

Returns or sets the language used to determine which line break level is used when the line break control option is turned on. Read/write MsoFarEastLineBreakLanguageID.

MsoFarEastLineBreakLanguageID can be one of these MsoFarEastLineBreakLanguageID constants.

MsoFarEastLineBreakLanguageJapanese
MsoFarEastLineBreakLanguageKorean
MsoFarEastLineBreakLanguageSimplifiedChinese
MsoFarEastLineBreakLanguageTraditionalChinese

expression.FarEastLineBreakLanguage

expression Required. An expression that returns one of the objects in the Applies To list.
Example

The following example sets the line break language to Japanese.

ActivePresentation.FarEastLineBreakLanguage = _
    MsoFarEastLineBreakLanguageJapanese
FarEastLineBreakLevel Property

Returns or sets the line break based upon Asian character level. Read/write Long. Read/write PpFarEastLineBreakLevel.

PpFarEastLineBreakLevel can be one of these PpFarEastLineBreakLevel constants.
- ppFarEastLineBreakLevelCustom
- ppFarEastLineBreakLevelNormal
- ppFarEastLineBreakLevelStrict

expression.FarEastLineBreakLevel

expression  Required. An expression that returns one of the objects in the Applies To list.
Example

This example sets line break control to use level one kinsoku characters.

ActivePresentation.FarEastLineBreakLevel = _
    ppFarEastLineBreakLevelNormal
FeatureInstall Property

Returns or sets how Microsoft PowerPoint handles calls to methods and properties that require features not yet installed. Read/write MsoFeatureInstall.

MsoFeatureInstall can be one of these MsoFeatureInstall constants.

- **msoFeatureInstallNone** Default. A trappable run-time automation error is generated when uninstalled features are called.
- **msoFeatureInstallOnDemand** A dialog box is displayed prompting the user to install new features.
- **msoFeatureInstallOnDemandWithUI** A progress meter is displayed during installation. The user isn't prompted to install new features.

expression.FeatureInstall

expression Required. An expression that returns one of the objects in the Applies To list.
Remarks

You can use the msoFeatureInstallOnDemandWithUI constant to prevent users from believing that the application isn't responding while a feature is being installed. Use the msoFeatureInstallNone constant with error trapping routines to exclude end-user feature installation.

**Note**  If you refer to an uninstalled presentation design template in a string, a run-time error is generated. The template is not installed automatically regardless of your FeatureInstall property setting. To use the ApplyTemplate method for a template that is not currently installed, you first must install the additional design templates. To do so, install the Additional Design Templates for PowerPoint by running the Microsoft Office installation program (available through the Add/Remove Programs icon in Windows Control Panel).
Example

This example checks the value of the FeatureInstall property. If the property is set to msoFeatureInstallNone, the code displays a message box that asks the user whether they want to change the property setting. If the user responds "Yes", the property is set to msoFeatureInstallOnDemand.

With Application
    If .FeatureInstall = msoFeatureInstallNone Then
        Reply = MsgBox("Uninstalled features for this " _
                        & "application " & vbCrLf _
                        & "may cause a run-time error when called." & vbCrLf
                        & vbCrLf _
                        & "Would you like to change this setting" & vbCrLf _
                        & "to automatically install missing features when ca _
                        , 52, "Feature Install Setting")
        If Reply = 6 Then
            .FeatureInstall = msoFeatureInstallOnDemand
        End If
    End If
End With
FileDialog Property

Returns a `FileDialog` object that represents a single instance of a file dialog box.

`expression.FileDialog(Type)`

- `expression`  Required. An expression that returns an `Application` object.
- `Type` Required `MsoFileDialogType`. The type of dialog to return.

`MsoFileDialogType` can be one of these `MsoFileDialogType` constants.

- `msoFileDialogFilePicker`
- `msoFileDialogFolderPicker`
- `msoFileDialogOpen`
- `msoFileDialogSaveAs`
Example

This example displays the **Save As** dialog box.

```vba
Sub ShowSaveAsDialog()
    Dim dlgSaveAs As FileDialog
    Set dlgSaveAs = Application.FileDialog(msoFileDialogSaveAs)
    dlgSaveAs.Show
End Sub
```

This example displays the **Open** dialog box and allows a user to select multiple files to open.

```vba
Sub ShowFileDialog()
    Dim dlgOpen As FileDialog
    Set dlgOpen = Application.FileDialog(msoFileDialogOpen)
    With dlgOpen
        .AllowMultiSelect = True
        .Show
    End With
End Sub
```
FileName Property

Returns or sets the path and file name of the Web presentation created when all or part of the active presentation is published. Read/write String.
Remarks

The **FileName** property generates an error if a folder in the specified path does not exist.
Example

This example publishes slides three through five of the active presentation to HTML. It names the published presentation Mallard.htm and saves it in the Test folder.

With ActivePresentation.PublishObjects(1)
    .FileName = "C:\Test\Mallard.htm"
    .SourceType = ppPublishSlideRange
    .RangeStart = 3
    .RangeEnd = 5
    .Publish
End With
FileSearch Property

Returns a **FileSearch** object that can be used to search for files using either an absolute or relative path. Read-only.
Example

This example displays the names of all files in the My Documents folder that begin with "New."

With Application.FileSearch
    .FileName = "New*.*"
    .LookIn = "C:\My Documents"
    .Execute
    For I = 1 To .FoundFiles.Count
        MsgBox .FoundFiles(I)
    Next
End With
Fill Property

Returns a FillFormat object that contains fill formatting properties for the specified shape. Read-only.
Example

This example adds a rectangle to myDocument and then sets the foreground color, background color, and gradient for the rectangle's fill.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes _
  .AddShape(msoShapeRectangle, 90, 90, 90, 50).Fill
  .ForeColor.RGB = RGB(128, 0, 0)
  .BackColor.RGB = RGB(170, 170, 170)
  .TwoColorGradient msoGradientHorizontal, 1
End With
FirstChild Property

- Returns a **DiagramNode** object representing the first diagram node in a
collection of diagram nodes.

`expression.FirstChild`

`expression`  Required. An expression that returns one of the objects in the
Applies To list.
Example

The following example creates a new diagram and identifies the first child diagram node.

Sub FirstChildNodeHello()
    Dim dgnNode As DiagramNode
    Dim dgnFirst As DiagramNode
    Dim shpDiagram As Shape
    Dim intNodes As Integer

    Set shpDiagram = ActivePresentation.Slides(1).Shapes.AddDiagram
        (Type:=msoDiagramOrgChart, Left:=10, Top:=15, _
        Width:=400, Height:=475)

    For intNodes = 1 To 3
        dgnNode.Children.AddNode
    Next intNodes

    Set dgnFirst = dgnNode.Children.FirstChild
    dgnFirst.Shape.TextFrame.TextRange.Text = "Here I am!"

End Sub
FirstMargin Property

Returns or sets the first-line indent for the specified outline level, in points. Read/write Single.
Remarks

If a paragraph begins with a bullet, the bullet position is determined by the **FirstMargin** property, and the position of the first text character in the paragraph is determined by the **LeftMargin** property.

**Note**  The **RulerLevels** collection contains five **RulerLevel** objects, each of which corresponds to one of the possible outline levels. The **FirstMargin** property value for the **RulerLevel** object that corresponds to the first outline level has a valid range of (-9.0 to 4095.875). The valid range for the **FirstMargin** property values for the **RulerLevel** objects that correspond to the second through the fifth outline levels are determined as follows:

- The maximum value is always 4095.875.
- The minimum value is the maximum assigned value between the **FirstMargin** property and **LeftMargin** property of the previous level plus 9.

You can use the following equations to determine the minimum value for the **FirstMargin** property. **Index**, the index number of the **RulerLevel** object, indicates the object’s corresponding outline level. To determine the minimum **FirstMargin** property values for the **RulerLevel** objects that correspond to the second through the fifth outline levels, substitute 2, 3, 4, or 5 for the **index** placeholder.

Minimum(RulerLevel(index).**FirstMargin**) = Maximum(RulerLevel(index -1).**FirstMargin**, RulerLevel(index -1).**LeftMargin**) + 9

Minimum (RulerLevel(index).**LeftMargin**) = Maximum(RulerLevel(index -1).**FirstMargin**, RulerLevel(index -1).**LeftMargin**) + 9
Example

This example sets the first-line indent and hanging indent for outline level one in body text on the slide master for the active presentation.

```vba
With Application.ActivePresentation
    .SlideMaster.TextStyles(ppBodyStyle)
    With .Ruler.Levels(1)
        .FirstMargin = 9
        .LeftMargin = 54
    End With
End With
```
FirstSlideNumber Property

Returns or sets the slide number for the first slide in the presentation. Read/write Long.
Remarks

The slide number is the actual number that will appear in the lower-right corner of the slide when you display slide numbers. This number is determined by the number (order) of the slide within the presentation (the SlideIndex property value) and the starting slide number for the presentation (the FirstSlideNumber property value). The slide number will always be equal to the starting slide number + the slide index number – 1. The SlideNumber property returns the slide number.
Example

This example shows how changing the first slide number in the active presentation affects the slide number of a specific slide.

With Application.ActivePresentation
  .PageSetup.FirstSlideNumber = 1  'starts slide numbering at 1
  MsgBox .Slides(2).SlideNumber  'returns 2
  .PageSetup.FirstSlideNumber = 10 'starts slide numbering at 10
  MsgBox .Slides(2).SlideNumber  'returns 11
End With
FitToPage Property

Determines whether the slides will be scaled to fill the page they're printed on. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.

- msoCTrue
- msoFalse Default. The slides will have the dimensions specified in the Page Setup dialog box, whether or not those dimensions match the page they're printed on.
- msoTriStateMixed
- msoTriStateToggle
- msoTrue The specified slides will be scaled to fill the page they're printed on, regardless of the values in the Height and Width boxes in the Page Setup dialog box (File menu)
Example

This example prints the active presentation and scales each slide to fit the printed page.

With ActivePresentation
    .PrintOptions.FitToPage = msoTrue
    .PrintOut
End With
FolderSuffix Property

Returns the folder suffix that Microsoft PowerPoint uses when you save or publish a complete or partial presentation as a Web page, use long file names, and choose to save supporting files in a separate folder (that is, if the UseLongFileNames and OrganizeInFolder properties are set to True). Read-only String.
Remarks

Newly created presentations use the suffix returned by the `FolderSuffix` property of the `DefaultWebOptions` object. The value of the `FolderSuffix` property of the `WebOptions` object may differ from that of the `DefaultWebOptions` object if the presentation was previously edited in a different language version of Microsoft PowerPoint. You can use the `UseDefaultFolderSuffix` method to change the suffix to that of the language you are currently using in Microsoft Office.

By default, the name of the supporting folder is the name of the Web page plus an underscore (_), a period (.), or a hyphen (-) and the word "files" (appearing in the language of the version of PowerPoint in which the file was saved as a Web page). For example, suppose that you use the Dutch language version of PowerPoint to save a file called "Page1" as a Web page. The default name of the supporting folder would be `Page1_bestanden`.

The following table lists each language version of Office, and gives its corresponding folder suffix. For the languages that are not listed in the table, the suffix ".files" is used.

<table>
<thead>
<tr>
<th>Language</th>
<th>Folder suffix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arabic</td>
<td>.files</td>
</tr>
<tr>
<td>Basque</td>
<td>_fitxategiak</td>
</tr>
<tr>
<td>Brazilian</td>
<td>_arquivos</td>
</tr>
<tr>
<td>Bulgarian</td>
<td>.files</td>
</tr>
<tr>
<td>Catalan</td>
<td>_fitxers</td>
</tr>
<tr>
<td>Chinese - Simplified</td>
<td>.files</td>
</tr>
<tr>
<td>Chinese - Traditional</td>
<td>.files</td>
</tr>
<tr>
<td>Croatian</td>
<td>_datoteke</td>
</tr>
<tr>
<td>Czech</td>
<td>_soubory</td>
</tr>
<tr>
<td>Danish</td>
<td>-filer</td>
</tr>
<tr>
<td>Dutch</td>
<td>_bestanden</td>
</tr>
</tbody>
</table>
English _files
Estonian _failid
Finnish _tiedostot
French _fichiers
German -Dateien
Greek .files
Hebrew .files
Hungarian _elemei
Italian -file
Japanese .files
Korean .files
Latvian _fails
Lithuanian _bylos
Norwegian -filer
Polish _pliki
Portuguese _ficheiros
Romanian .files
Russian .files
Serbian (Cyrillic) .files
Serbian (Latin) _fajlovi
Slovakian .files
Slovenian _datoteke
Spanish _archivos
Swedish -filer
Thai .files
Turkish _dosyalar
Ukranian .files
Vietnamese .files
Example

This example returns the folder suffix used by presentation one. The suffix is returned in the string variable strFolderSuffix.

strFolderSuffix = Presentations(1).WebOptions.FolderSuffix
FollowColors Property

Returns or sets the extent to which the colors in the specified object follow the slide's color scheme. The specified object must be a chart created in either Microsoft Graph or Microsoft Organization Chart. Read/write PpFollowColors.

PpFollowColors can be one of these PpFollowColors constants.

- **ppFollowColorsNone** The chart colors don't follow the slide's color scheme.
- **ppFollowColorsMixed**
- **ppFollowColorsScheme** All the colors in the chart follow the slide's color scheme.
- **ppFollowColorsTextAndBackground** Only the text and background follow the slide's color scheme.

`expression.FollowColors`

`expression` Required. An expression that returns one of the objects in the Applies To list.
This example specifies that the text and background of shape two on slide one in the active presentation follow the slide's color scheme. Shape two must be a chart created in either Microsoft Graph or Microsoft Organization Chart.

ActivePresentation.Slides(1).Shapes(2).OLEFormat.FollowColors = _ppFollowColorsTextAndBackground
FollowMasterBackground Property

Determines whether the slide or range of slides follows the slide master background. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.
- **msoCTrue**
- **msoFalse** The specified slide or range of slides has a custom background.
- **msoTriStateMixed**
- **msoTriStateToggle**
- **msoTrue** The specified slide or range of slides follows the slide master background.
Remarks

When you create a new slide, the default value for this property is **True**. If you copy a slide from another presentation, it retains the setting it had in the original presentation. That is, if the slide followed the slide master background in the original presentation, it will automatically follow the slide master background in the new presentation; or, if the slide had a custom background, it will retain that custom background.

Note that the look of the slide's background is determined by the color scheme and background objects as well as by the background itself. If setting the `FollowMasterBackground` property alone doesn't give you the results you want, try setting the `ColorScheme` and `DisplayMasterShapes` properties as well.
Example

This example copies slide one from presentation two, pastes the slide at the end of presentation one, and matches the slide's background, color scheme, and background objects to the rest of presentation one.

```
Presentations(2).Slides(1).Copy
With Presentations(1).Slides.Paste
    .FollowMasterBackground = msoTrue
    .ColorScheme = Presentations(1).SlideMaster.ColorScheme
    .DisplayMasterShapes = True
End With
```
Font Property

Returns a Font object that represents character formatting. Read-only.
Example

This example sets the formatting for the text in shape one on slide one in the active presentation.

```vba
With ActivePresentation.Slides(1).Shapes(1)
   With .TextFrame.TextRange.Font
      .Size = 48
      .Name = "Palatino"
      .Bold = True
      .Color.RGB = RGB(255, 127, 255)
   End With
End With
```

This example sets the color and font name for bullets in shape two on slide one.

```vba
With ActivePresentation.Slides(1).Shapes(2)
      .Visible = True
      With .Font
         .Name = "Palatino"
         .Color.RGB = RGB(0, 0, 255)
      End With
   End With
End With
```
FontBold Property

Determines whether the font in the specified WordArt is bold. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.

msoCTrue
msoFalse
msoTriStateMixed
msoTriStateToggle
msoTrue The font in the specified WordArt is bold.
Example

This example sets the font to bold for shape three on myDocument if the shape is WordArt.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(3)
    If .Type = msoTextEffect Then
        .TextEffect.FontBold = msoTrue
    End If
End With
FontItalic Property

Determines whether the font in the specified WordArt is italic. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.

msoCTrue
msoFalse
msoTriStateMixed
msoTriStateToggle
msoTrue The font in the specified WordArt is italic.
Example

This example sets the font to italic for the shape named "WordArt 4" on myDocument.

Set myDocument = ActivePresentation.Slides(1)
FontName Property

Returns or sets the name of the font in the specified WordArt. Read/write String.
Example

This example sets the font name to "Courier New" for shape three on myDocument if the shape is WordArt.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(3)
  If .Type = msoTextEffect Then
    .TextEffect.FontName = "Courier New"
  End If
End With
Fonts Property

- Fonts property as it applies to the Presentation object.

Returns a Fonts collection that represents all fonts used in the specified presentation. Read-only.

expression.Fonts

expression Required. An expression that returns one of the above objects.

- Fonts property as it applies to the DefaultWebOptions object.

Returns a WebPageFonts collection representing the set of available fonts for saving a presentation as a Web page. Read-only.

expression.Fonts

expression Required. An expression that returns one of the above objects.
Example

- **As it applies to the Presentation object.**

This example replaces the Times New Roman font with the Courier font in the active presentation.


- **As it applies to the DefaultWebOptions object.**

This example sets the fixed-width font default Web option, specified by the character set constant `msoCharacterSetEnglishWesternEuropeanOtherLatinScript`, to be Courier New 10 points.

With Application.DefaultWebOptions Fonts(msoCharacterSetEnglishWesternEuropeanOtherLatinScript)
  .FixedWidthFont = "Courier New"
  .FixedWidthFontSize = 10
End With
FontSize Property

Returns or sets the font size for the specified WordArt, in points. Read/write Single.
Example

This example sets the font size to 16 points for the shape named "WordArt 4" in myDocument.

Set myDocument = ActivePresentation.Slides(1)
myDocument.Shapes("WordArt 4").TextEffect.FontSize = 16
Footer Property

Returns a HeaderFooter object that represents the footer that appears at the bottom of a slide or in the lower-left corner of a notes page, handout, or outline. Read-only.
Example

This example sets the text for the footer on the slide master in the active presentation and sets the footer, date and time, and slide number to appear on the title slide.

```vba
With Application.ActivePresentation.SlideMaster.HeadersFooters
    .Footer.Text = "Introduction"
    .DisplayOnTitleSlide = True
End With
```
ForeColor Property

Returns or sets a **ColorFormat** object that represents the foreground color for the fill, line, or shadow. Read/write.
**Example**

This example adds a rectangle to myDocument and then sets the foreground color, background color, and gradient for the rectangle's fill.

```vba
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes _
    .AddShape(msoShapeRectangle, 90, 90, 90, 50).Fill
        .ForeColor.RGB = RGB(128, 0, 0)
        .BackColor.RGB = RGB(170, 170, 170)
        .TwoColorGradient msoGradientHorizontal, 1
    End With

This example adds a patterned line to myDocument.

```vba
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes.AddLine(10, 100, 250, 0).Line
    .Weight = 6
    .ForeColor.RGB = RGB(0, 0, 255)
    .BackColor.RGB = RGB(128, 0, 0)
    .Pattern = msoPatternDarkDownwardDiagonal
End With
```
Format Property

Returns or sets the format for the automatically updated date and time. Applies only to HeaderFooter objects that represent a date and time (returned from the HeadersFooters collection by the DateAndTime property). Read/write PpDateTimeFormat.

PpDateTimeFormat can be one of these PpDateTimeFormat constants.

- `ppDateTimedddMMMdyyy`
- `ppDateTimeMMMdyyy`
- `ppDateTimeMMMyy`
- `ppDateTimeFormatMixed`
- `ppDateTimeHmm`
- `ppDateTimeHmmAMPM`
- `ppDateTimeHmmss`
- `ppDateTimeHmmssAMPM`
- `ppDateTimeMdyy`
- `ppDateTimeMMMdyyyy`
- `ppDateTimeMMMMdyyyy`
- `ppDateTimeMMMMyy`

*expression*.Format

*expression* Required. An expression that returns one of the objects in the Applies To list.
Remarks

Make sure that the date and time are set to be updated automatically (not displayed as fixed text) by setting the `UseFormat` property to `True`. 
Example

This example sets the date and time for the slide master of the active presentation to be updated automatically and then it sets the date and time format to show hours, minutes, and seconds.

Set myPres = Application.ActivePresentation
With myPres.SlideMaster.HeadersFooters.DateAndTime
  .UseFormat = True
  .Format = ppDateTimeHmmss
End With
Formula Property

- Returns or sets a String that represents a formula to use for calculating an animation. Read/write.

expression.Formula

expression Required. An expression that returns one of the objects in the Applies To list.
Example

The following example adds a shape, and adds a three-second fill animation to that shape.

Sub AddShapeSetAnimFill()
    Dim effBlinds As Effect
    Dim shpRectangle As Shape
    Dim animBlinds As AnimationBehavior

    ' Adds rectangle and sets animation effect
    Set shpRectangle = ActivePresentation.Slides(1).Shapes _
        .AddShape(Type:=msoShapeRectangle, Left:=100, _
        Top:=100, Width:=50, Height:=50)
    Set effBlinds = ActivePresentation.Slides(1).TimeLine.MainSequence _
        .AddEffect(Shape:=shpRectangle, effectId:=msoAnimEffectBlinds)

    ' Sets the duration of the animation
    effBlinds.Timing.Duration = 3

    ' Adds a behavior to the animation
    Set animBlinds = effBlinds.Behaviors.Add(msoAnimTypeProperty)

    ' Sets the animation color effect and the formula to use
    With animBlinds.PropertyEffect
        .Property = msoAnimColor
        .Formula = RGB(Red:=255, Green:=255, Blue:=255)
    End With
End Sub
FrameColors Property

Returns or sets the text color for the outline pane and the background color for the outline and slide panes for Web presentations. Read/write \texttt{PpFrameColors}.

PpFrameColors can be one of these PpFrameColors constants.

\texttt{ppFrameColorsBlackTextOnWhite}
\texttt{ppFrameColorsBrowserColors}
\texttt{ppFrameColorsPresentationSchemeAccentColor}
\texttt{ppFrameColorsPresentationSchemeTextColor}
\texttt{ppFrameColorsWhiteTextOnBlack}

\textit{expression}.\texttt{FrameColors}

\textit{expression}  Required. An expression that returns one of the objects in the Applies To list.
Example

This example specifies that when saving or publishing the active presentation as a Web page, the text color for the outline pane is white and the background color for the outline and slide panes is black, and Portable Network Graphics (PNG) are allowed as an image format.

With ActivePresentation.WebOptions
  .FrameColors = ppFrameColorsWhiteTextOnBlack
  .AllowPNG = True
End With
FrameSlides Property

Determines whether a thin frame is placed around the border of the printed slides. Read/write MsoTriState. Applies to printed slides, handouts, and notes pages.

MsoTriState can be one of these MsoTriState constants.

msoCTrue
msoFalse Default.
msoTriStateMixed
msoTriStateToggle
msoTrue A thin frame is placed around the border of the printed slides.
Example

This example prints the active presentation with a frame around each slide.

With ActivePresentation
    .PrintOptions.FrameSlides = msoTrue
    .PrintOut
End With
Show All
From Property

- From property as it applies to the **ColorEffect** object.

Sets or returns a **ColorFormat** object that represents the starting RGB color value of an animation behavior.

```expression.From```

**expression**  Required. An expression that returns a **ColorEffect** object.
Remarks

Use this property in conjunction with the **To** property to transition from one color to another.

- **From** property as it applies to the **RotationEffect** object.

Sets or returns a **Single** that represents the starting angle in degrees, specified relative to the screen (for example, 90 degrees is completely horizontal). Read/write.

\[\textit{expression}.\textit{From}\]

\textit{expression} Required. An expression that returns a **RotationEffect** object.
Remarks

Use this property in conjunction with the **To** property to transition from one rotation angle to another.

The default value is **Empty** in which case the current position of the object is used.

- **From**

  Sets or returns a **Variant** that represents the starting value of an object’s property. Read/write.

  _expression_.**From**

  _expression_ Required. An expression that returns a **PropertyEffect** object.
Remarks

The **From** property is similar to the **Points** property, but using the **From** property is easier for simple tasks.

The default value is **Empty**, in which case the current position of the object is used.
Remarks

Do not confuse this property with the \texttt{FromX} or \texttt{FromY} properties of the \texttt{ScaleEffect} and \texttt{MotionEffect} objects, which are only used for scaling or motion effects.
Example

As it applies to the **ColorEffect** object.

The following example adds a color effect and immediately changes its color.

```vbscript
Sub AddAndchangeColorEffect()
    Dim effBlinds As Effect
    Dim tlnTiming As TimeLine
    Dim shpRectangle As Shape
    Dim animColorEffect As AnimationBehavior
    Dim clrEffect As ColorEffect

    'Adds rectangle and sets effect and animation
    Set shpRectangle = ActivePresentation.Slides(1).Shapes._
        .AddShape(Type:=msoShapeRectangle, Left:=100, _
            Top:=100, Width:=50, Height:=50)
    Set effBlinds = t.MainSequence.AddEffect(Shape:=shpRectangle, _
        effectId:=msoAnimEffectBlinds)
    Set animColorEffect = tlnTimming.MainSequence(1).Behaviors _
        .Add(Type:=msoAnimTypeColor)
    Set clrEffect = animColorEffect.ColorEffect

    'Sets the animation effect starting and ending colors
    clrEffect.From.RGB = RGB(Red:=255, Green:=255, Blue:=0)
    clrEffect.To.RGB = RGB(Red:=0, Green:=255, Blue:=255)
End Sub
```

As it applies to the **RotationEffect** object.

The following example adds a rotation effect and immediately changes its rotation angle.

```vbscript
Sub AddAndchangeRotationEffect()
    Dim effBlinds As Effect
    Dim tlnTiming As TimeLine
    Dim shpRectangle As Shape
    Dim animRotation As AnimationBehavior
    Dim rtnEffect As RotationEffect

    'Adds rectangle and sets effect and animation
    Set shpRectangle = ActivePresentation.Slides(1).Shapes._
        .AddShape(Type:=msoShapeRectangle, Left:=100, _
            Top:=100, Width:=50, Height:=50)
    Set effBlinds = t.MainSequence.AddEffect(Shape:=shpRectangle, _
        effectId:=msoAnimEffectBlinds)
    Set animRotation = tlnTimming.MainSequence(1).Behaviors _
        .Add(Type:=msoAnimTypeColor)
    Set rtnEffect = animRotation.ColorEffect
```

```vbscript
    'Sets the animation effect starting and ending colors
    r
```
Set tlnTiming = ActivePresentation.Slides(1).TimeLine
Set effBlinds = tlnTiming.MainSequence.AddEffect(Shape:=shpRectangle, effectId:=msoAnimEffectBlinds)
Set animRotation = tlnTiming.MainSequence(1).Behaviors.Add(Type:=msoAnimTypeRotation)
Set rtnEffect = animRotation.RotationEffect

' Sets the rotation effect starting and ending positions
rtnEffect.From = 90
rtnEffect.To = 270
End Sub
FromX Property

Sets or returns a Single that represents the starting width or horizontal position of a ScaleEffect or MotionEffect object, respectively, specified as a percent of the screen width. Read/write.

expression.FromX

expression  Required. An expression that returns one of the objects in the Applies To list.
Remarks

The default value of this property is **Empty**, in which case the current position of the object is used.

Use this property in conjunction with the **ToX** property to resize or jump from one position to another.

Do not confuse this property with the **From** property of the **ColorEffect**, **RotationEffect**, or **PropertyEffect** objects, which is used to set or change colors, rotations, or other properties of an animation behavior, respectively.
Example

The following example adds a motion path and sets the starting and ending horizontal and vertical positions.

Sub AddMotionPath()
    Dim effCustom As Effect
    Dim animMotion As AnimationBehavior
    Dim shpRectangle As Shape

    'Adds shape and sets effect and animation properties
    Set shpRectangle = ActivePresentation.Slides(1).Shapes.AddShape(Type:=msoShapeRectangle, Left:=100, _
        Top:=100, Width:=50, Height:=50)
    Set effCustom = ActivePresentation.Slides(1).TimeLine.MainSequence.AddEffect(Shape:=shpRectangle,
        effectId:=msoAnimEffectCustom)
    Set animMotion = effCustom.Behaviors.Add(msoAnimTypeMotion)

    'Sets starting and ending horizontal and vertical positions
    With animMotion.MotionEffect
        .FromX = 0
        .FromY = 0
        .ToX = 50
        .ToY = 50
    End With

End Sub
Returns or sets a **Single** that represents the starting height or vertical position of a **ScaleEffect** or **MotionEffect** object, respectively, specified as a percentage of the screen width. Read/write.

*expression*.**FromY**

*expression* Required. An expression that returns one of the objects in the Applies To list.
Remarks

The default value of this property is **Empty**, in which case the current position of the object is used.

Use this property in conjunction with the **ToY** property to resize or jump from one position to another.

Do not confuse this property with the **From** property of the **ColorEffect**, **RotationEffect**, or **PropertyEffect** objects, which is used to set or change colors, rotations, or other properties of an animation behavior, respectively.
Example

The following example adds an animation path and sets the starting and ending horizontal and vertical positions.

Sub AddMotionPath()
    Dim effCustom As Effect
    Dim animMotion As AnimationBehavior
    Dim shpRectangle As Shape

    'Adds shape and sets effect and animation properties
    Set shpRectangle = ActivePresentation.Slides(1).Shapes _
        .AddShape(Type:=msoShapeRectangle, Left:=100, _
        Top:=100, Width:=50, Height:=50)
    Set effCustom = ActivePresentation.Slides(1).TimeLine.MainSequence
        .AddEffect(Shape:=shpRectangle, effectId:=msoAnimEffectCustom)
    Set animMotion = effCustom.Behaviors.Add(msoAnimTypeMotion)

    'Sets starting and ending horizontal and vertical positions
    With animMotion.MotionEffect
        .FromX = 0
        .FromY = 0
        .ToX = 50
        .ToY = 50
    End With

End Sub
**FullName Property**

Returns the name of the specified add-in or saved presentation, including the path, the current file system separator, and the file name extension. Read-only String.
Remarks

This property is equivalent to the **Path** property, followed by the current file system separator, followed by the **Name** property.
Example

This example displays the path and file name of every available add-in.

For Each a In Application.AddIns
    MsgBox a.Full Name
Next a

This example displays the path and file name of the active presentation (assuming that the presentation has been saved).

MsgBox Application.ActivePresentation.FullName
Gap Property

Returns or sets the horizontal distance (in points) between the end of the callout line and the text bounding box. Read/write Single.
Example

This example sets the distance between the callout line and the text bounding box to 3 points for shape one on myDocument. For the example to work, shape one must be a callout.

```vba
Set myDocument = ActivePresentation.Slides(1)
```
GradientColorType Property

Returns the gradient color type for the specified fill. This property is read-only. Use the OneColorGradient, PresetGradient, or TwoColorGradient method to set the gradient type for the fill. Read-only MsoGradientColorType.

MsoGradientColorType can be one of these MsoGradientColorType constants.

msoGradientColorMixed
msoGradientOneColor
msoGradientPresetColors
msoGradientTwoColors

expression.GradientColorType

expression Required. An expression that returns one of the objects in the Applies To list.
Example

This example changes the fill for all shapes in myDocument that have a two-color gradient fill to a preset gradient fill.

Set myDocument = ActivePresentation.Slides(1)
For Each s In myDocument.Shapes
    With s.Fill
        If .GradientColorType = msoGradientTwoColors Then
            .PresetGradient msoGradientHorizontal, 1, msoGradientBrass
        End If
    End With
End For
GradientDegree Property

Returns a value that indicates how dark or light a one-color gradient fill is. A value of 0 (zero) means that black is mixed in with the shape's foreground color to form the gradient; a value of 1 means that white is mixed in; and values between 0 and 1 mean that a darker or lighter shade of the foreground color is mixed in. Read-only Single.

This property is read-only. Use the OneColorGradient method to set the gradient degree for the fill.
Example

This example adds a rectangle to myDocument and sets the degree of its fill gradient to match that of the shape named "Rectangle 2." If Rectangle 2 doesn't have a one-color gradient fill, this example fails.

```vba
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes
    gradDegree1 = .Item("Rectangle 2").Fill.GradientDegree
    With .AddShape(msoShapeRectangle, 0, 0, 40, 80).Fill
        .ForeColor.RGB = RGB(128, 0, 0)
        .OneColorGradient msoGradientHorizontal, 1, gradDegree1
    End With
End With
```
GradientStyle Property

Returns the gradient style for the specified fill. Use the OneColorGradient, PresetGradient, or TwoColorGradient method to set the gradient style for the fill. Attempting to return this property for a fill that doesn't have a gradient generates an error. Use the Type property to determine whether the fill has a gradient. Read-only MsoGradientStyle.

MsoGradientStyle can be one of these MsoGradientStyle constants.

msoGradientDiagonalDown
msoGradientDiagonalUp
msoGradientFromCenter
msoGradientFromCorner
msoGradientFromTitle
msoGradientHorizontal
msoGradientMixed
msoGradientVertical

expression.GradientStyle

expression  Required. An expression that returns one of the objects in the Applies To list.
Example

This example adds a rectangle to myDocument and sets its fill gradient style to match that of the shape named "rect1." For the example to work, rect1 must have a gradient fill.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes
    gradStyle1 = .Item("rect1").Fill.GradientStyle
    With .AddShape(msoShapeRectangle, 0, 0, 40, 80).Fill
        .ForeColor.RGB = RGB(128, 0, 0)
        .OneColorGradient gradStyle1, 1, 1
    End With
End With
GradientVariant Property

Returns the gradient variant for the specified fill as an integer value from 1 to 4 for most gradient fills. If the gradient style is `msoGradientFromTitle` or `msoGradientFromCenter`, this property returns either 1 or 2. The values for this property correspond to the gradient variants (numbered from left to right and from top to bottom) on the **Gradient** tab in the **Fill Effects** dialog box. Read-only **Long**.

This property is read-only. Use the **OneColorGradient**, **PresetGradient**, or **TwoColorGradient** method to set the gradient variant for the fill.
Example

This example adds a rectangle to myDocument and sets its fill gradient variant to match that of the shape named "rect1." For the example to work, rect1 must have a gradient fill.

```vba
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes
    gradVar1 = .Item("rect1").Fill.GradientVariant
    With .AddShape(msoShapeRectangle, 0, 0, 40, 80).Fill
        .ForeColor.RGB = RGB(128, 0, 0)
        .OneColorGradient msoGradientHorizontal, gradVar1, 1
    End With
End With
```
GridDistance Property

Sets or returns a **Single** that represents the distance between grid lines. Read/write.

`expression.GridDistance`

`expression`  Required. An expression that returns an **Presentation** object.
Example

This example displays the gridlines, and then specifies the distance between grid lines and enables the snap to grid setting.

Sub SetGridLines()
    Application.DisplayGridLines = msoTrue
    With ActivePresentation
        .GridDistance = 18
        .SnapToGrid = msoTrue
    End With
End Sub
GroupItems Property

Returns a GroupShapes object that represents the individual shapes in the specified group. Use the Item method of the GroupShapes object to return a single shape from the group. Applies to Shape or ShapeRange objects that represent grouped shapes. Read-only.
Example

This example adds three triangles to myDocument, groups them, sets a color for the entire group, and then changes the color for the second triangle only.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes
    .AddShape(msoShapeIsoscelesTriangle, 10, _,
        10, 100, 100).Name = "shpOne"
    .AddShape(msoShapeIsoscelesTriangle, 150, _,
        10, 100, 100).Name = "shpTwo"
    .AddShape(msoShapeIsoscelesTriangle, 300, _,
        10, 100, 100).Name = "shpThree"
With .Range(Array("shpOne", "shpTwo", "shpThree")).Group
    .Fill.PresetTextured msoTextureBlueTissuePaper
    .GroupItems(2).Fill.PresetTextured msoTextureGreenMarble
End With
End With
HandoutMaster Property

Returns a **Master** object that represents the handout master. Read-only.
Example

This example sets the background pattern on the handout master in the active presentation.

HandoutOrder Property

Returns or sets the page layout order in which slides appear on printed handouts that show multiple slides on one page. Read/write `PpPrintHandoutOrder`.

PpPrintHandoutOrder can be one of these PpPrintHandoutOrder constants.

- **ppPrintHandoutHorizontalFirst** Slides are ordered horizontally, with the first slide in the upper-left corner and the second slide to the right of it. If your language setting specifies a right-to-left language, the first slide is in the upper-right corner with the second slide to the left of it.

- **ppPrintHandoutVerticalFirst** Slides are ordered vertically, with the first slide in the upper-left corner and the second slide below it. If your language setting specifies a right-to-left language, the first slide is in the upper-right corner with the second slide below it.

(expression).HandoutOrder

*expression*  Required. An expression that returns one of the objects in the Applies To list.
Example

This example sets handouts of the active presentation to contain six slides per page, orders the slides horizontally on the handouts, and prints them.

With ActivePresentation
    .PrintOptions.OutputType = ppPrintOutputSixSlideHandouts
    .PrintOptions.**HandoutOrder** = ppPrintHandoutHorizontalFirst
    .PrintOut
End With
HangingPunctuation Property

Returns or sets the hanging punctuation option if you have an Asian language setting specified. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.

msoCTrue
msoFalse
msoTriStateMixed
msoTriStateToggle
msoTrue The hanging punctuation option is selected.
Example

This example selects hanging punctuation for the first paragraph of the active presentation.

ActivePresentation.Paragraphs(1).HangingPunctuation = msoTrue
HasChildShapeRange Property

True if the selection contains child shapes. Read-only Boolean.

expression.HasChildShapeRange

expression Required. An expression that returns one of the objects in the Applies To list.
Example

This example creates a new slide with a drawing canvas, populates the drawing canvas with shapes, and selects the shapes added to the canvas. Then after checking that the shapes selected are child shapes, it fills the child shapes with a pattern.

Sub ChildShapes()
    Dim sldNew As Slide
    Dim shpCanvas As Shape

    'Create a new slide with a drawing canvas and shapes
    Set shpCanvas = sldNew.Shapes.AddCanvas(Left:=100, Top:=100, Width:=200, Height:=200)

    With shpCanvas.CanvasItems
        .AddShape msoShapeRectangle, Left:=0, Top:=0, _
                Width:=100, Height:=100
        .AddShape msoShapeOval, Left:=0, Top:=50, _
                Width:=100, Height:=100
        .AddShape msoShapeDiamond, Left:=0, Top:=100, _
                Width:=100, Height:=100
    End With

    'Select all shapes in the canvas
    shpCanvas.CanvasItems.SelectAll

    'Fill canvas child shapes with a pattern
    With ActiveWindow.Selection
        If .HasChildShapeRange = True Then
        Else
            MsgBox "This is not a range of child shapes."
        End If
    End With

End Sub
HasDiagram Property

MsoTrue if a shape is a diagram. Read-only MsoTriState.

MsoTriState can be one of these MsoTriState constants.
MsoCTrue Doesn't apply to this property.
MsoFalse Shape is not a diagram.
MsoTriStateMixed Doesn't apply to this property.
MsoTriStateToggle Doesn't apply to this property.
MsoTrue Shape is a diagram.

expression.HasDiagram

expression  Required. An expression that returns one of the objects in the Applies To list.
Example

This example searches the current document for diagrams with nodes and if it finds both, creates a black balloon with bold white text.

Sub HasDiagramProperties()
    Dim shpDiagram As Shape
    Dim shpNode As DiagramNode
    Dim shpBalloon As Shape
    Dim sldFirst As Slide

    Set sldFirst = ActivePresentation.Slides(1)

    'Looks through the current document and when it finds a diagram
    'with one or more diagram nodes, creates a balloon with text
    For Each shpDiagram In sldFirst.Shapes
        If shpDiagram.HasDiagram = msoTrue And _
            shpDiagram.HasDiagramNode = msoTrue Then
            Set shpBalloon = sldFirst.Shapes.AddShape( _
                Type:=msoShapeBalloon, Left:=350, _
                Top:=75, Width:=150, Height:=150)
            With shpBalloon
                .With .TextFrame
                    .WordWrap = msoTrue
                    With .TextRange
                        .Text = "This is a diagram with nodes."
                        .Font.Color.RGB = RGB(Red:=255, _
                            Green:=255, Blue:=255)
                        .Font.Bold = True
                        .Font.Name = "Tahoma"
                        .Font.Size = 15
                    End With
                End With
                .Line.BackColor.RGB = RGB(Red:=0, Green:=25, Blue:=25)
                .Fill.ForeColor.RGB = RGB(Red:=0, Green:=25, Blue:=25)
            End With
        End If
    Next shpDiagram
End Sub
Show All
HasDiagramNode Property

_MsoTrue_ if a shape is a diagram node. Read-only _MsoTriState_.

_MsoTriState_ can be one of these _MsoTriState_ constants.

_msoCTrue_ Doesn't apply to this property.

_msoFalse_ Shape is not a diagram node.

_msoTriStateMixed_ Doesn't apply to this property.

_msoTriStateToggle_ Doesn't apply to this property.

_msoTrue_ Shape is a diagram node.

_expression_.HasDiagramNode

_expression_  Required. An expression that returns one of the objects in the Applies To list.
Example

This example searches the current document for diagrams with nodes, and if it finds both, creates a black balloon with bold white text.

Sub HasDiagramProperties()
    Dim shpDiagram As Shape
    Dim shpNode As DiagramNode
    Dim shpBalloon As Shape
    Dim sldFirst As Slide

    Set sldFirst = ActivePresentation.Slides(1)

    'Looks through the current document and when it finds a diagram
    'with one or more diagram nodes, creates a balloon with text
    For Each shpDiagram In sldFirst.Shapes
        If shpDiagram.HasDiagram = msoTrue And _
            shpDiagram.HasDiagramNode = msoTrue Then
            Set shpBalloon = sldFirst.Shapes.AddShape( _
                Type:=msoShapeBalloon, Left:=350, _
                Top:=75, Width:=150, Height:=150)
            With shpBalloon
                With .TextFrame
                    .WordWrap = msoTrue
                    With .TextRange
                        .Text = "This is a diagram with nodes."
                        .Font.Color.RGB = RGB(Red:=255, _
                            Green:=255, Blue:=255)
                        .Font.Bold = True
                        .Font.Name = "Tahoma"
                        .Font.Size = 15
                    End With
                End With
                .Line.BackColor.RGB = RGB( _
                    Red:=0, Green:=25, Blue:=25)
                .Fill.ForeColor.RGB = RGB( _
                    Red:=0, Green:=25, Blue:=25)
            End With
        End If
    Next shpDiagram
End Sub
HasRevisionInfo Property

Returns a PpRevisionInfo constant that represents whether a presentation is a merged author document, a reviewer document with base lines, or a regular Microsoft PowerPoint document. Read-only.

PpRevisionInfo can be one of these PpRevisionInfo constants.
ppRevisionInfoBaseline The presentation has a baseline.
ppRevisionInfoMerged The presentation is a merged author presentation.
ppRevisionInfoNone The presentation has no reviewer information.

expression.HasRevisionInfo

expression Required. An expression that returns one of the objects in the Applies To list.
Remarks

Comments are not considered reviewer information.
Example

The following example adds and removes baselines, reporting status to the user along the way.

Sub AddABaseline()
    ActivePresentation.AddBaseline
    Call ReportRevisionInfo(ActivePresentation)
    ActivePresentation.RemoveBaseline
    Call ReportRevisionInfo(ActivePresentation)
End Sub

Sub ReportRevisionInfo(pre As Presentation)
    Select Case pre.HasRevisionInfo
        Case ppRevisionInfoBaseline
            MsgBox "The presentation has a base line."
        Case ppRevisionInfoMerged
            MsgBox "The presentation is a merged author presentation"
        Case ppRevisionInfoNone
            MsgBox "The presentation has no reviewer information."
        Case Else
            MsgBox "Couldn't determine revision information."
    End Select
End Sub
HasTable Property

- Returns whether the specified shape is a table. Read-only **MsoTriState**.

MsoTriState can be one of these MsoTriState constants.

- **msoCTrue**
- **msoFalse**
- **msoTriStateMixed**
- **msoTriStateToggle**
- **msoTrue** The specified shape is a table.
Example

This example checks the currently selected shape to see if it is a table. If it is, the code sets the width of column one to one inch (72 points).

```
With ActiveWindow.Selection.ShapeRange
    If .HasTable = msoTrue Then
        .Table.Columns(1).Width = 72
    End If
End With
```
HasText Property

Returns whether the specified shape has text associated with it. Read-only MsoTriState.

MsoTriState can be one of these MsoTriState constants:
- msoCTrue
- msoFalse
- msoTriStateMixed
- msoTriStateToggle
- msoTrue The specified shape has text associated with it.
Example

If shape two on myDocument contains text, this example resizes the shape to fit the text.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(2).TextFrame
    If .HasText Then .AutoSize = ppAutoSizeShapeToFitText
End With
HasTextFrame Property

Returns whether the specified shape has a text frame. Read-only MsoTriState.

MsoTriState can be one of these MsoTriState constants.

msoCTrue
msoFalse
msoTriStateMixed
msoTriStateToggle
msoTrue The specified shape has a text frame and can therefore contain text.
Example

This example extracts text from all shapes on the first slide that contain text frames, and then it stores the names of these shapes and the text they contain in an array.

Dim shpTextArray() As Variant
Dim numShapes, numAutoShapes, i As Long

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes
    numShapes = .Count
    If numShapes > 1 Then
        numTextShapes = 0
        ReDim shpTextArray(1 To 2, 1 To numShapes)
        For i = 1 To numShapes
            If .Item(i).HasTextFrame Then
                numTextShapes = numTextShapes + 1
                shpTextArray(numTextShapes, 1) = .Item(i).Name
                shpTextArray(numTextShapes, 2) = .Item(i) _
                    .TextFrame.TextRange.Text
            End If
        Next
        ReDim Preserve shpTextArray(1 To 2, 1 To numTextShapes)
    End If
End With
HasTitle Property

Returns whether the collection of objects on the specified slide contains a title placeholder. Read-only \textbf{MsoTriState}.

MsoTriState can be one of these MsoTriState constants.
\begin{itemize}
  \item \texttt{msoCTrue}
  \item \texttt{msoFalse}
  \item \texttt{msoTriStateMixed}
  \item \texttt{msoTriStateToggle}
  \item \texttt{msoTrue} The collection of objects on the specified slide contains a title placeholder.
Example

This example restores the title placeholder to slide one in the active presentation if this placeholder has been deleted. The text of the restored title is "Restored title."

```vba
With ActivePresentation.Slides(1)
    If .Layout <> ppLayoutBlank Then
        With .Shapes
            If Not .HasTitle Then
                .AddTitle.TextFrame.TextRange.Text = "Restored title"
            End If
        End With
    End If
End With
```
Show All
HasTitleMaster Property

MsoTrue if the specified presentation has a title master. Read-only MsoTriState.

MsoTriState can be one of these MsoTriState constants.

msoCTrue
msoFalse
msoTriStateMixed
msoTriStateToggle
msoTrue The specified presentation has a title master.

expression.HasTitleMaster

expression  Required. An expression that returns one of the objects in the Applies To list.
**Example**

This example adds a title master to the active presentation if it doesn't already have one.

```vbnet
With Application.ActivePresentation
    If Not .HasTitleMaster Then .AddTitleMaster
End With
```
Header Property

Returns a HeaderFooter object that represents the header that appears at the top of a slide or in the upper-left corner of a notes page, handout, or outline. Read-only.
Example

This example sets the header text for the handout master for the active presentation. This text will appear in the upper-left corner of the page when you print your presentation as an outline or a handout.

Set myHandHF = Application.ActivePresentation.HandoutMaster .HeadersFooters
myHandHF.Header.Text = "Third Quarter Report"
HeadersFooters Property

Returns a HeadersFooters collection that represents the header, footer, date and time, and slide number associated with the slide, slide master, or range of slides. Read-only.

For information about returning a single member of a collection, see Returning an Object from a Collection.
Example

This example sets the footer text and the date and time format for the notes master in the active presentation and sets the date and time to be updated automatically.

```vba
With ActivePresentation.NotesMaster.HeadersFooters
  .Footer.Text = "Regional Sales"
  With .DateAndTime
    .UseFormat = True
    .Format = ppDateTimeHmmss
  End With
End With
```
Height Property

Returns or sets the height of the specified object, in points. Read-only Single for the Master object, read/write Single for all other objects.
Remarks

The **Height** property of a **Shape** object returns or sets the height of the forward-facing surface of the specified shape. This measurement doesn't include shadows or 3-D effects.
Example

This example sets the height of document window two to half the height of the application window.

\[
\text{Windows(2).Height} = \frac{\text{Application.Height}}{2}
\]

This example sets the height for row two in the specified table to 100 points (72 points per inch).

\[
\text{ActivePresentation.Slides(2).Shapes(5).Table.Rows(2).Height} = 100
\]
Hidden Property

Determines whether the specified slide is hidden during a slide show. Read/write \texttt{MsoTriState}.

\texttt{MsoTriState} can be one of these \texttt{MsoTriState} constants.

\texttt{msoCTrue}
\texttt{msoFalse}
\texttt{msoTriStateMixed}
\texttt{msoTriStateToggle}
\texttt{msoTrue} The specified slide is hidden during a slide show.
Example

This example makes slide two in the active presentation a hidden slide.

ActivePresentation.Slides(2).SlideShowTransition.Hidden = msoTrue
**HideWhileNotPlaying Property**

Determines whether the specified media clip is hidden during a slide show except when it's playing. Read/write [MsoTriState](#).

MsoTriState can be one of these MsoTriState constants.

- **msoCTrue**
- **msoFalse**
- **msoTriStateMixed**
- **msoTriStateToggle**
- **msoTrue** The specified media clip is hidden during a slide show except when it's playing.
Example

This example inserts a movie named "Clock.avi" onto slide one in the active presentation, sets it to play automatically after the slide transition, and specifies that the movie object be hidden during a slide show except when it's playing.

```vba
With ActivePresentation.Slides(1).Shapes _
    .AddOLEObject(Left:=10, Top:=10, _
        Width:=250, Height:=250, _
        FileName:="c:\winnt\clock.avi")
With .AnimationSettings.PlaySettings
    .PlayOnEntry = True
    .HideWhileNotPlaying = msoTrue
End With
```

End With
HorizontalAnchor Property

Returns or sets the horizontal alignment of text in a text frame. Read/write \texttt{MsoHorizontalAnchor}.

MsoHorizontalAnchor can be one of these MsoHorizontalAnchor constants. \texttt{msoAnchorNone} \texttt{msoHorizontalAnchorMixed} \texttt{msoAnchorCenter}

\textit{expression}.\texttt{HorizontalAnchor}

\textit{expression} Required. An expression that returns one of the objects in the Applies To list.
Example

This example sets the alignment of the text in shape one on myDocument to top centered.

```
Set myDocument = ActivePresentation.SlideMaster
With myDocument.Shapes(1)
    .TextFrame.HorizontalAnchor = msoAnchorCenter
    .TextFrame.VerticalAnchor = msoAnchorTop
End With
```
HorizontalFlip Property

- Returns whether the specified shape is flipped around the horizontal axis. Read-only **MsoTriState**.

MsoTriState can be one of these MsoTriState constants:
- **msoCTrue**
- **msoFalse**
- **msoTriStateMixed**
- **msoTriStateToggle**
- **msoTrue** The specified shape is flipped around the horizontal axis.
Example

This example restores each shape on myDocument to its original state, if it's been flipped horizontally or vertically.

Set myDocument = ActivePresentation.Slides(1)
For Each s In myDocument.Shapes
    If s.HorizontalFlip Then s.Flip msoFlipHorizontal
    If s.VerticalFlip Then s.Flip msoFlipVertical
Next
HTMLProject Property

Returns the HTMLProject object, which is a Web presentation (HTML format) accessed through the Microsoft Script Editor. Read-only.
Remarks

The **HTMLProject** object can be interpreted as the top-level project branch in the Project Explorer window of the Script Editor, for a loaded presentation. It contains the **HTMLProjectItems** collection. Members of the **HTMLProjectItems** collection represent a slide, master, or the handout for the Web presentation.
Example

This example checks the name of each member in the HTMLProjectItems collection for the loaded HTMLProject. If the name is Slide2, it then opens the generated HTML for that slide in the Microsoft Script Editor.

Dim i As Integer
With ActivePresentation.HTMLProject
   For i = 1 To .HTMLProjectItems.Count
      If .HTMLProjectItems(i).Name = "Slide2" Then
         .HTMLProjectItems(i).Open
      End If
   Next
End With
HTMLVersion Property

Returns or sets the version of HTML for a published presentation. Read/write PpHTMLVersion.

PpHTMLVersion can be one of these PpHTMLVersion constants:

- ppHTMLAutodetect
- ppHTMLDual
- ppHTMLv3
- ppHTMLv4 Default.

expression.HTMLVersion

expression Required. An expression that returns one of the objects in the Applies To list.
Example

This example publishes slides three through five of the active presentation in HTML version 3.0. It names the published presentation Mallard.htm.

With ActivePresentation.PublishObjects(1)
  .FileName = "C:\Test\Mallard.htm"
  .SourceType = ppPublishSlideRange
  .RangeStart = 3
  .RangeEnd = 5
  .HTMLVersion = ppHTMLv3
  .Publish
End With
Hyperlink Property

Returns a Hyperlink object that represents the hyperlink for the specified shape. For the hyperlink to be active during a slide show, the Action property must be set to ppActionHyperlink. Read-only.
Example

This example sets shape one on slide one in the active presentation to jump to the Microsoft Web site when the shape is clicked during a slide show.

With ActivePresentation.Slides(1).Shapes(1) _
  .ActionSettings(ppMouseClick)
  .Action = ppActionHyperlink
End With
Hyperlinks Property

Returns a Hyperlinks collection that represents all the hyperlinks on the specified slide. Read-only.

For information about returning a single member of a collection, see Returning an Object from a Collection.
Example

This example allows the user to update an outdated internet address for all hyperlinks in the active presentation.

oldAddr = InputBox("Old internet address")
newAddr = InputBox("New internet address")
For Each s In ActivePresentation.Slides
    For Each h In s.Hyperlinks
        If LCase(h.Address) = oldAddr Then h.Address = newAddr
    Next
Next
Id Property

Returns a Long that identifies the shape or range of shapes. Read-only.

expression.Id

expression Required. An expression that returns one of the objects in the Applies To list.
Example

This example adds a new shape to the active presentation, then fills the shape according to the value of the **ID** property.

```
Sub ShapeID()
    With ActivePresentation.Slides(1).Shapes.AddShape _
        (Type:=msoShape5pointStar, Left:=100, _
         Top:=100, Width:=100, Height:=100)
        Select Case .Id
            Case 0 To 500
                .Fill.ForeColor.RGB = RGB(Red:=255, Green:=0, Blue:=
            Case 500 To 1000
                .Fill.ForeColor.RGB = RGB(Red:=255, Green:=255, Blue=
            Case 1000 To 1500
                .Fill.ForeColor.RGB = RGB(Red:=255, Green:=0, Blue:=
            Case 1500 To 2000
                .Fill.ForeColor.RGB = RGB(Red:=0, Green:=255, Blue=
            Case 2000 To 2500
                .Fill.ForeColor.RGB = RGB(Red:=0, Green:=255, Blue:=
            Case Else
                .Fill.ForeColor.RGB = RGB(Red:=0, Green:=0, Blue:=25
        End Select
    End With
End Sub
```
IncludeNavigation Property

Determines whether the navigation bar for Web presentations is visible. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.

msoCTrue
msoFalse The navigation bar for Web presentations is not visible, which enlarges the slide.
msoTriStateMixed
msoTriStateToggle
msoTriStateToggle
msoTrue Default. The navigation bar for Web presentations is visible at the bottom of the page.
Example

This example specifies that the navigation bar is not to be included in the specified Web presentation. It then previews the presentation in the active Web browser.

With Presentations(2)
    .WebOptions.IncludeNavigation = msoFalse
    .WebPagePreview
End With
IndentLevel Property

Returns or sets the indent level for the specified text as an integer from 1 to 5, where 1 indicates a first-level paragraph with no indentation. Read/write Long.
Example

This example indents the second paragraph in shape two on slide two in the active presentation.

Index Property

Returns a Long that represents the index number for an animation effect or design. Read-only.

expression.Index

expression Required. An expression that returns one of the objects in the Applies To list.
Example

The following example displays the name and index number for all effects in the main animation sequence of the first slide.

Sub EffectInfo()
    Dim effIndex As Effect
    Dim seqMain As Sequence
    Set seqMain = ActivePresentation.Slides(1).Timeline.MainSequence
    For Each effIndex In seqMain
        With effIndex
            MsgBox "Effect Name: " & .DisplayName & vbCrLf & _
                    "Effect Index: " & .Index
        End With
    Next
End Sub
This keyword is not implemented. It is reserved for future use.
InsetPen Property

\textbf{MsoTrue} to draw lines on the inside of a specified shape. Read/write \textbf{MsoTriState}.

\textbf{MsoTriState} can be one of these \textbf{MsoTriState} constants.

\textbf{msoCTrue} Doesn't apply to this property.

\textbf{msoFalse} Default. An inset pen is not enabled.

\textbf{msoTriStateMixed} Doesn't apply to this property.

\textbf{msoTriStateToggle} Doesn't apply to this property.

\textbf{msoTrue} An inset pen is enabled.

\textit{expression}.InsetPen

\textit{expression} Required. An expression that returns one of the objects in the Applies To list.
Remarks

An error occurs if this property attempts to set inset pen drawing on any Microsoft Office AutoShape which does not support inset pen drawing.
Example

The following line of code enables an inset pen for a shape. This example assumes that the first slide of the active presentation contains a shape and the shape supports inset pen drawing.

Sub DrawLinesInsideShape
    ActivePresentation.Slides(1).Shapes(1).Line.InsetPen = msoTrue
End Sub
InteractiveSequences Property

- Returns a `Sequences` object that represents animations that are triggered by clicking on a specified shape.

`expression.InteractiveSequences`

`expression` Required. An expression that returns a `TimeLine` object.
Remarks

The default value of the `InteractiveSequences` property is an empty `Sequences` collection.
Example

The following example adds an interactive sequence to the first slide and sets the text effect properties for the new animation sequence.

```vba
Sub NewInteractiveSequence()
    Dim seqInteractive As Sequence
    Dim shpText As Shape
    Dim effText As Effect

    Set seqInteractive = ActivePresentation.Slides(1).Timeline.InteractiveSequences.Add(1)
    Set shpText = ActivePresentation.Slides(1).Shapes(1)
    Set effText = ActivePresentation.Slides(1).Timeline.MainSequence.AddEffect(Shape:=shpText, EffectId:=msoAnimEffectChangeFont, Trigger:=msoAnimTriggerOnPageClick)

    effText.EffectParameters.FontName = "Broadway"

    seqInteractive.ConvertToTextUnitEffect Effect:=effText, UnitEffect:=msoAnimTextUnitEffectByWord

End Sub
```
IsFullScreen Property

Returns whether the specified slide show window occupies the full screen. Read-only MsoTriState.

MsoTriState can be one of these MsoTriState constants.

msoCTrue
msoFalse
msoTriStateMixed
msoTriStateToggle
msoTrue The specified slide show window occupies the full screen.
Example

This example reduces the height of a full-screen slide show window just enough so that you can see the taskbar.

```vba
With Application.SlideShowWindows(1)
    If .FullScreen Then
        .Height = .Height - 20
    End If
End With
```
IsNamedShow Property

Determines whether a custom (named) slide show is displayed in the specified slide show view. Read-only MsoTriState.

MsoTriState can be one of these MsoTriState constants.

msoCTrue
msoFalse
msoTriStateMixed
msoTriStateToggle
msoTrue A custom (named) slide show is displayed in the specified slide show view.
Example

If the slide show running in slide show window one is a custom slide show, this example displays its name.

With SlideShowWindows(1).View
    If .IsNamedShow Then
        MsgBox "Now showing in slide show window 1: " _
        & .SlideShowName
    End If
End With
Italic Property

Determines whether the character format is italic. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.

msoCTrue

msoFalse The character format is not italic.

msoTriStateMixed The specified text range contains both italic and nonitalic characters.

msoTriStateToggle

msoTrue The character format is italic.
Example

This example sets the title text on slide one and makes the title blue and italic.

With Application.ActivePresentation.Slides(1) _
    .Shapes.Title.TextFrame.TextRange
    .Text = "Volcano Coffee"
With .Font
    .Italic = msoTrue
    .Name = "palatino"
    .Color.RGB = RGB(0, 0, 255)
End With
End With
Item Property

Returns or sets the adjustment value specified by the Index argument. For linear adjustments, an adjustment value of 0.0 generally corresponds to the left or top edge of the shape, and a value of 1.0 generally corresponds to the right or bottom edge of the shape. However, adjustments can pass beyond shape boundaries for some shapes. For radial adjustments, an adjustment value of 1.0 corresponds to the width of the shape. For angular adjustments, the adjustment value is specified in degrees. The Item property applies only to shapes that have adjustments. Read/write Single.

expression.Item(Index)

expression  Required. An expression that returns an Adjustments object.

Index  Required Long. The index number of the adjustment.
Remarks

AutoShapes, connectors, and WordArt objects can have up to eight adjustments.
Example

This example adds two crosses to myDocument and then sets the value for adjustment one (the only one on this type of AutoShape) on each cross.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes
  .AddShape(msoShapeCross, 10, 10, 100, 100) _
    .Adjustments.Item(1) = 0.4
  .AddShape(msoShapeCross, 150, 10, 100, 100) _
    .Adjustments.Item(1) = 0.2
End With

This example has the same result as the previous example even though it doesn't explicitly use the Item property.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes
  .AddShape(msoShapeCross, 10, 10, 100, 100) _
    .Adjustments(1) = 0.4
  .AddShape(msoShapeCross, 150, 10, 100, 100) _
    .Adjustments(1) = 0.2
End With
KernedPairs Property

Determines whether the character pairs in the specified WordArt are kered. Read/write \texttt{MsoTriState}.

\texttt{MsoTriState} can be one of these \texttt{MsoTriState} constants.
\texttt{msoCTrue}
\texttt{msoFalse}
\texttt{msoTriStateMixed}
\texttt{msoTriStateToggle}
\texttt{msoTrue} Character pairs in the specified WordArt are kered.
**Example**

This example turns on character pair kerning for shape three on `myDocument` if the shape is WordArt.

```vba
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(3)
    If .Type = msoTextEffect Then
        .TextEffect.KernedPairs = msoTrue
    End If
End With
```
LanguageID Property

Returns or sets the language for the specified text range. Used for tagging portions of text written in a different language than the DefaultLanguageID property specifies. This allows Microsoft PowerPoint to check spelling and grammar according to the language for each text range. This property is not related to the application interface language. Read/write MsoLanguageID.

MsoLanguageID can be one of these MsoLanguageID constants.

- msoLanguageIDAfrikaans
- msoLanguageIDAlbanian
- msoLanguageIDAmharic
- msoLanguageIDArabic
- msoLanguageIDArabicAlgeria
- msoLanguageIDArabicBahrain
- msoLanguageIDArabicEgypt
- msoLanguageIDArabicIraq
- msoLanguageIDArabicJordan
- msoLanguageIDArabicKuwait
- msoLanguageIDArabicLebanon
- msoLanguageIDArabicLibya
- msoLanguageIDArabicMorocco
- msoLanguageIDArabicOman
- msoLanguageIDArabicQatar
- msoLanguageIDArabicSyria
- msoLanguageIDArabicTunisia
- msoLanguageIDArabicUAE
- msoLanguageIDArabicYemen
- msoLanguageIDArmenian
- msoLanguageIDAssamese
- msoLanguageIDAzeriCyrillic
expression.LanguageID

description Required. An expression that returns one of the objects in the Applies To list.
Example

This example sets the language for the specified text in shape one to US English.

ActivePresentation.Slides(1).Shapes(1).TextFrame.TextRange _
   .LanguageID = msoLanguageIDEnglishUS
LanguageSettings Property

Returns a **LanguageSettings** object which contains information about the language settings in Microsoft PowerPoint. Read-only.
LastChild Property

Returns a `DiagramNode` object representing the last diagram node in a collection of diagram nodes.

`expression.LastChild`

`expression` Required. An expression that returns one of the objects in the Applies To list.
Example

The following example creates a new diagram and identifies the last child diagram node.

Sub LastChildNodeHello()
    Dim shpDiagram As Shape
    Dim dgnNode As DiagramNode
    Dim dgnLast As DiagramNode
    Dim intNodes As Integer

    'Add org chart to first slide and first child node
    Set shpDiagram = ActivePresentation.Slides(1).Shapes.AddDiagram
        (Type:=msoDiagramOrgChart, Left:=10, Top:=15, _
         Width:=400, Height:=475)

    'Add three additional nodes
    For intNodes = 1 To 3
        dgnNode.Children.AddNode
    Next intNodes

    'Enter text into last child node
    Set dgnLast = dgnNode.Children.LastChild
    dgnLast.Shape.TextFrame.TextRange.Text = "Here I am!"
End Sub
LastSlideViewed Property

Returns a Slide object that represents the slide viewed immediately before the current slide in the specified slide show view.
Example

This example takes you to the slide viewed immediately before the current slide in slide show window one.

With SlideShowWindows(1).View
  .GotoSlide (.LastSlideViewed.SlideIndex)
End With
Show All
Layout Property

- Layout property as it applies to the **DiagramNode** object.

Returns or sets an **MsoOrgChartLayoutType** constant that represents the layout type for the diagram nodes in an organization chart. Read/write.

MsoOrgChartLayoutType can be one of these MsoOrgChartLayoutType constants.

- **msoOrgChartLayoutAssistant**
- **msoOrgChartLayoutBothHanging**
- **msoOrgChartLayoutLeftHanging**
- **msoOrgChartLayoutMixed**
- **msoOrgChartLayoutRightHanging**
- **msoOrgChartLayoutStandard**

**expression**.Layout

**expression** Required. An expression that returns a **DiagramNode** object.
Remarks

This property generates an error unless the diagram's **Type** property is **msoDiagramTypeOrgChart**.

- **Layout** property as it applies to the **Slide** and **SlideRange** objects.

Returns or sets a **PpSlideLayout** constant that represents the slide layout. Read/write.

PpSlideLayout can be one of these PpSlideLayout constants.
- **ppLayoutBlank**
- **ppLayoutChart**
- **ppLayoutChartAndText**
- **ppLayoutClipartAndText**
- **ppLayoutClipArtAndVerticalText**
- **ppLayoutFourObjects**
- **ppLayoutLargeObject**
- **ppLayoutMediaClipAndText**
- **ppLayoutMixed**
- **ppLayoutObject**
- **ppLayoutObjectAndText**
- **ppLayoutObjectOverText**
- **ppLayoutOrgchart**
- **ppLayoutTable**
- **ppLayoutText**
- **ppLayoutTextAndChart**
- **ppLayoutTextAndClipart**
- **ppLayoutTextAndMediaClip**
- **ppLayoutTextAndObject**
- **ppLayoutTextAndTwoObjects**
- **ppLayoutTextOverObject**
- **ppLayoutManager**
ppLayoutTitleOnly
ppLayoutTwoColumnText
ppLayoutTwoObjectsAndText
ppLayoutTwoObjectsOverText
ppLayoutVerticalText
ppLayoutVerticalTitleAndText
ppLayoutVerticalTitleAndTextOverChart

expression.Layout

expression  Required. An expression that returns one of the above objects.
Example

- As it applies to the **DiagramNode** object.

The following example changes the layout of a newly-created diagram.

```vba
Sub ChangeDiagramLayout()
    Dim dgnNode As DiagramNode
    Dim shpDiagram As Shape
    Dim intNodes As Integer

    Set shpDiagram = ActivePresentation.Slides(1).Shapes.AddDiagram
                     (Type:=msoDiagramOrgChart, Left:=10, Top:=15, _
                      Width:=400, Height:=475)

    For intNodes = 1 To 3
        dgnNode.Children.AddNode
    Next intNodes

    dgnNode.Layout = msoOrgChartLayoutRightHanging

End Sub
```

- As it applies to the **Slide** object.

This example changes the layout of slide one in the active presentation to include a title and subtitle if it initially has only a title.

```vba
With ActivePresentation.Slides(1)
    If .Layout = ppLayoutTitleOnly Then
        .Layout = ppLayoutTitle
    End If
End With
```
LayoutDirection Property

Returns or sets the layout direction for the user interface. Can be one of the following The default value depends on the language support you have selected or installed. Read/write PpDirection.

PpDirection can be one of these PpDirection constants.

- ppDirectionLeftToRight
- ppDirectionMixed
- ppDirectionRightToLeft

expression.LayoutDirection

expression  Required. An expression that returns one of the objects in the Applies To list.
Example

This example sets the layout direction to right-to-left.

Application.ActivePresentation.\texttt{LayoutDirection} = \_ \_ppDirectionRightToLeft
Left Property

- 

- **Left property as it applies to the** Application, DocumentWindow, Shape, ShapeRange, and SlideShowWindow objects.

**Application**, **DocumentWindow** and **SlideShowWindow** objects: Returns or sets a **Single** that represents the distance in points from the left edge of the document, application, and slide show windows to the left edge of the application window's client area. Setting this property to a very large positive or negative value may position the window completely off the desktop. Read/write.

**Shape** object: Returns or sets a **Single** that represents the distance in points from the left edge of the shape's bounding box to the left edge of the slide. Read/write.

**ShapeRange** object: Returns or sets a **Single** that represents the distance in points from the left edge of the leftmost shape in the shape range to the left edge of the slide. Read/write.

*expression*.Left

*expression*  Required. An expression that returns one of the above objects.

- **Left property as it applies to the** Comment object.

Returns a **Single** that represents the distance in points from the left edge of the comment to the left edge of the slide. Read-only.

*expression*.Left

*expression*  Required. An expression that returns a **Comment** object.
Example

As it applies to the **DocumentWindows** object.

This example arranges windows one and two horizontally; in other words, each window occupies half the available vertical space and all the available horizontal space in the application window's client area. For this example to work, there must be only two document windows open.

```vba
Windows(Arrange ppArrangeTiled
    sngHeight = Windows(1).Height  ' available height
    sngWidth = Windows(1).Width + Windows(2).Width  ' available width
    With Windows(1)
        .Width = sngWidth
        .Height = sngHeight / 2
        .Left = 0
    End With
    With Windows(2)
        .Width = sngWidth
        .Height = sngHeight / 2
        .Top = sngHeight / 2
        .Left = 0
    End With
```
LeftMargin Property

Returns or sets the left indent for the specified outline level, in points. Read/write Single.
Remarks

If a paragraph begins with a bullet, the bullet position is determined by the **FirstMargin** property, and the position of the first text character in the paragraph is determined by the **LeftMargin** property.

**Note** The **RulerLevels** collection contains five **RulerLevel** objects, each of which corresponds to one of the possible outline levels. The **LeftMargin** property value for the **RulerLevel** object that corresponds to the first outline level has a valid range of (-9.0 to 4095.875). The valid range for the **LeftMargin** property values for the **RulerLevel** objects that correspond to the second through the fifth outline levels are determined as follows:

- The maximum value is always 4095.875.
- The minimum value is the maximum assigned value between the **FirstMargin** property and **LeftMargin** property of the previous level plus 9.

You can use the following equations to determine the minimum value for the **LeftMargin** property. **Index**, the index number of the **RulerLevel** object, indicates the object’s corresponding outline level. To determine the minimum **LeftMargin** property values for the **RulerLevel** objects that correspond to the second through the fifth outline levels, substitute 2, 3, 4, or 5 for the **index** placeholder.

\[
\text{Minimum(RulerLevel(index).FirstMargin)} = \text{Maximum(RulerLevel(index -1).FirstMargin, RulerLevel(index -1).LeftMargin)} + 9
\]

\[
\text{Minimum( RulerLevel(index).LeftMargin)} = \text{Maximum(RulerLevel(index -1).FirstMargin, RulerLevel(index -1).LeftMargin)} + 9
\]
Example

This example sets the first-line indent and hanging indent for outline level one in body text on the slide master for the active presentation.

```vba
With Application.ActivePresentation _
    .SlideMaster.TextStyles(ppBodyStyle)
    With .Ruler.Levels(1)
        .FirstMargin = 9
        .LeftMargin = 54
    End With
End With
```
Show All
Length Property

- Length property as it applies to the CalloutFormat object.

When the AutoLength property of the specified callout is set to False, the Length property returns the length (in points) of the first segment of the callout line (the segment attached to the text callout box). Applies only to callouts whose lines consist of more than one segment (types msoCalloutThree and msoCalloutFour). Read-only Float. Use the CustomLength method to set the value of this property for the CalloutFormat object.

expression.Length

expression Required. An expression that returns one of the above objects.

- Length property as it applies to the TextRange object.

Returns the length of the specified text range, in characters. Read-only Long.

expression.Length

expression Required. An expression that returns one of the above objects.
Example

As it applies to the **CalloutFormat** object.

If the first line segment in the callout named "co1" has a fixed length, this example specifies that the length of the first line segment in the callout named "co2" will also be fixed at that length. For the example to work, both callouts must have multiple-segment lines.

```vba
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes
  With .Item("co1").Callout
    If Not .AutoLength Then len1 = .Length
    End With
  End With
  If len1 Then .Item("co2").Callout.CustomLength len1
End With
```

As it applies to the **TextRange** object.

This example sets the title font size to 48 points if the title of slide two contains more than five characters, or it sets the font size to 72 points if the title has five or fewer characters.

```vba
Set myDocument = ActivePresentation.Slides(2)
  If .Length > 5 Then
    .Font.Size = 48
  Else
    .Font.Size = 72
  End If
End With
```
Levels Property

- Levels property as it applies to the Ruler object.

Returns a RulerLevels object that represents outline indent formatting. Read-only.

expression.Levels

expression  Required. An expression that returns one of the above objects.

- Levels property as it applies to the TextStyle object.

Returns a TextStyleLevels object that represents outline text formatting. Read-only.

expression.Levels

expression  Required. An expression that returns one of the above objects.
Example

This example sets the first-line indent and hanging indent for outline level one in body text on the slide master for the active presentation, and then it sets the font name and font size for text at that level.

```vba
With Application.ActivePresentation _
    .SlideMaster.TextStyles(ppBodyStyle)
    With .Ruler.Lev els(1) ' sets indents for level 1
        .FirstMargin = 9
        .LeftMargin = 54
    End With
    With .Le v els(1).Font ' sets text formatting for level 1
        .Name = "arial"
        .Size = 36
    End With
End With
```
Line Property

Returns a LineFormat object that contains line formatting properties for the specified shape. (For a line, the LineFormat object represents the line itself; for a shape with a border, the LineFormat object represents the border.) Read-only.
Example

This example adds a blue dashed line to myDocument.

```
Set myDocument = ActivePresentation.Slides(1)
    .DashStyle = msoLineDashDotDot
    .ForeColor.RGB = RGB(50, 0, 128)
End With
```

This example adds a cross to the first slide and then sets its border to be 8 points thick and red.

```
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes.AddShape(msoShapeCross, 10, 10, 50, 70).Line
    .Weight = 8
    .ForeColor.RGB = RGB(255, 0, 0)
End With
```
LineRuleAfter Property

Determines whether line spacing after the last line in each paragraph is set to a specific number of points or lines. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.

msoCTrue
msoFalse Line spacing after the last line in each paragraph is set to a specific number of points.
msoTriStateMixed
msoTriStateToggle
msoTrue Line spacing after the last line in each paragraph is set to a specific number of lines.
Example

This example displays a message box that shows the setting for space after paragraphs for the text in shape two on slide one in the active presentation.

```vba
With Application.ActivePresentation.Slides(1).Shapes(2).TextFrame
    With .TextRange.ParagraphFormat
        sa = .SpaceAfter
        If .LineRuleAfter Then
            saUnits = " lines"
        Else
            saUnits = " points"
        End If
    End With
End With
MsgBox "Current spacing after paragraphs: " & sa & saUnits
```
LineRuleBefore Property

Determines whether line spacing before the first line in each paragraph is set to a specific number of points or lines. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.

msoCTrue

msoFalse Line spacing before the first line in each paragraph is set to a specific number of points.

msoTriStateMixed

msoTriStateToggle

msoTrue Line spacing before the first line in each paragraph is set to a specific number of lines.
Example

This example displays a message box that shows the setting for space before paragraphs for text in shape two on slide one in the active presentation.

With Application.ActivePresentation.Slides(1).Shapes(2).TextFrame
    With .TextRange.ParagraphFormat
        sb = .SpaceBefore
        If .LineRuleBefore Then
            sbUnits = " lines"
        Else
            sbUnits = " points"
        End If
    End With
End With
MsgBox "Current spacing before paragraphs: " & sb & sbUnits
LineRuleWithin Property

Determines whether line spacing between base lines is set to a specific number of points or lines. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.

- msoCTrue
- msoFalse Line spacing between base lines is set to a specific number of points.
- msoTriStateMixed
- msoTriStateToggle
- msoTrue Line spacing between base lines is set to a specific number of lines.
Example

This example displays a message box that shows the setting for line spacing for text in shape two on slide one in the active presentation.

```vba
With Application.ActivePresentation.Slides(1).Shapes(2).TextFrame
    With .TextRange.ParagraphFormat
        ls = .SpaceWithin
        If .LineRuleWithin Then
            lsUnits = " lines"
        Else
            lsUnits = " points"
        End If
    End With
End With
MsgBox "Current line spacing: " & ls & lsUnits
```
LinkFormat Property

Returns a LinkFormat object that contains the properties that are unique to linked OLE objects. Read-only.
**Example**

This example updates the links between any OLE objects on slide one in the active presentation and their source files.

```vba
For Each sh In ActivePresentation.Slides(1).Shapes
    If sh.Type = msoLinkedOLEObject Then
        With sh.LinkFormat
            .Update
        End With
    End If
Next
```
Loaded Property

Determines whether the specified add-in is loaded. Read/write `MsoTriState`.

`MsoTriState` can be one of these `MsoTriState` constants.

- `msoCTrue`
- `msoFalse`
- `msoTriStateMixed`
- `msoTriStateToggle`
- `msoTrue` The specified add-in is loaded. In the `Add-Ins` dialog box (Tools menu), the check boxes next to loaded add-ins are selected.
Example

This example adds MyTools.ppa to the list in the **Add-Ins** dialog box (**Tools** menu) and then loads it.

Addins.Add("c:\my documents\mytools.ppa").**Loaded** = msoTrue

This example unloads the add-in named "MyTools."

Application.Addins("mytools").**Loaded** = msoFalse
LockAspectRatio Property

Determines whether the specified shape retains its original proportions when you resize it. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.

- msoCTrue
- msoFalse You can change the height and width of the shape independently of one another when you resize it.
- msoTriStateMixed
- msoTriStateToggle
- msoTrue The specified shape retains its original proportions when you resize it.
Example

This example adds a cube to myDocument. The cube can be moved and resized, but not reproportioned.

Set myDocument = ActivePresentation.Slides(1)
myDocument.Shapes.AddShape(msoShapeCube, 50, 50, 100, 200) 
.LockAspectRatio = msoTrue
LoopSoundUntilNext Property

Read/write **MsoTriState**. Specifies whether the sound that's been set for the specified slide transition loops until the next sound starts.

MsoTriState can be one of these MsoTriState constants.

- **msoCTrue**
- **msoFalse**
- **msoTriStateMixed**
- **msoTriStateToggle**
- **msoTrue** The sound that's been set for the specified slide transition loops until the next sound starts.
Example

This example specifies that the file Dudududu.wav will start to play at the transition to slide two in the active presentation and will continue to play until the next sound starts.

With ActivePresentation.Slides(2).SlideShowTransition
    .SoundEffect.ImportFromFile "c:\sndsys\dudududu.wav"
    .LoopSoundUntilNext = msoTrue
End With
LoopUntilStopped Property

- As it applies to the PlaySettings object.

Determines whether the specified movie or sound loops continuously until either the next movie or sound starts, the user clicks the slide, or a slide transition occurs. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.
  msoCTrue
  msoFalse
  msoTriStateMixed
  msoTriStateToggle
  msoTrue The specified movie or sound loops continuously until either the next movie or sound starts, the user clicks the slide, or a slide transition occurs.

expression.LoopUntilStopped

expression Required. An expression that returns one of the objects in the Applies To list.

- As it applies to the SlideShowSettings object.

Determines whether specified slide show loops continuously until the user presses ESC. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.
  msoCTrue
  msoFalse
  msoTriStateMixed
  msoTriStateToggle
  msoTrue The specified slide show loops continuously until the user presses ESC.
expression.\text{LoopUntilStopped}

expression Required. An expression that returns one of the objects in the Applies To list.
Example

- **As it applies to the PlaySettings object.**

  This example specifies that shape three on slide one in the active presentation will start to play in the animation order and will continue to play until the next media clip starts. Shape three must be a sound or movie object.

  ```vba
  ActivePresentation.Slides(1).Shapes(3).AnimationSettings.PlaySettings.LoopUntilStopped = msoTrue
  ```

- **As it applies to the SlideShowSettings object.**

  This example starts a slide show of the active presentation that will automatically advance the slides (using the stored timings) and will loop continuously through the presentation until the user presses ESC.

  ```vba
  With ActivePresentation.SlideShowSettings
    .AdvanceMode = ppSlideShowUseSlideTimings
    .LoopUntilStopped = msoTrue
    .Run
  End With
  ```
This keyword is not implemented. It is reserved for future use.
MainSequence Property

- Returns a Sequence object that represents the collection of Effect objects in the main animation sequence of a slide.

expression.MainSequence

expression  Required. An expression that returns one of the objects in the Applies To list.
Remarks

The default value of the `MainSequence` property is an empty `Sequence` collection. Any attempt to return a value from this property without adding one or more `Effect` objects to the main animation sequence will result in a run-time error.
Example

The following example adds a boomerang animation to a new shape on a new slide added to the active presentation.

Sub NewSequence()
    Dim sldNew As Slide
    Dim shpnew As Shape

    Set sldNew = ActivePresentation.Slides.Add(Index:=1, Layout:=ppL
    Set shpnew = sldNew.Shapes.AddShape(Type:=msoShape5pointStar, _
        Left:=25, Top:=25, Width:=100, Height:=100)

    With sldNew.TimeLine.MainSequence.AddEffect(Shape:=shpnew, _
        EffectId:=msoAnimEffectBoomerang)
        .Timing.Speed = 0.5
        .Timing.Accelerate = 0.2
    End With
End Sub
MarginBottom Property

Returns or sets the distance (in points) between the bottom of the text frame and the bottom of the inscribed rectangle of the shape that contains the text. Read/write Single.
Example

This example adds a rectangle to myDocument, adds text to the rectangle, and then sets the margins for the text frame.

```vba
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes.AddShape(msoShapeRectangle, _
    0, 0, 250, 140).TextFrame
    .TextRange.Text = "Here is some test text"
    .MarginBottom = 0
    .MarginLeft = 10
    .MarginRight = 0
    .MarginTop = 20
End With
```
MarginLeft Property

Returns or sets the distance (in points) between the left edge of the text frame and the left edge of the inscribed rectangle of the shape that contains the text. Read/write Single.
Example

This example adds a rectangle to myDocument, adds text to the rectangle, and then sets the margins for the text frame.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes.AddShape(msoShapeRectangle, _
    0, 0, 250, 140).TextFrame
    .TextRange.Text = "Here is some test text"
    .MarginBottom = 0
    .MarginLeft = 10
    .MarginRight = 0
    .MarginTop = 20
End With
MarginRight Property

Returns or sets the distance (in points) between the right edge of the text frame and the right edge of the inscribed rectangle of the shape that contains the text. Read/write Single.
**Example**

This example adds a rectangle to `myDocument`, adds text to the rectangle, and then sets the margins for the text frame.

```vba
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes.AddShape(msoShapeRectangle, _
    0, 0, 250, 140).TextFrame
    .TextRange.Text = "Here is some test text"
    .MarginBottom = 0
    .MarginLeft = 10
    .)**MarginRight** = 5
    .MarginTop = 20
End With
```
MarginTop Property

- Returns or sets the distance (in points) between the top of the text frame and the top of the inscribed rectangle of the shape that contains the text. Read/write Single.
Example

This example adds a rectangle to myDocument, adds text to the rectangle, and then sets the margins for the text frame.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes.AddShape(msoShapeRectangle, _
    0, 0, 250, 140).TextFrame
    .TextRange.Text = "Here is some test text"
    .MarginBottom = 0
    .MarginLeft = 10
    .MarginRight = 0
    .MarginTop = 20
End With
**Master Property**

Returns a [Master](#) object that represents the slide master. Read-only.
**Example**

This example sets the background fill for the slide master for slide one in the active presentation.

```vbnet
ActivePresentation.Slides(1).Master.Background.Fill _
    .PresetGradient msoGradientDiagonalUp, 1, msoGradientDaybreak
```
**MediaType Property**

Returns the OLE media type. Read-only [PpMediaType](#).

PpMediaType can be one of these PpMediaType constants.

- `ppMediaTypeMixed`
- `ppMediaTypeMovie`
- `ppMediaTypeOther`
- `ppMediaTypeSound`

`expression.MediaType`

`expression` Required. An expression that returns one of the objects in the Applies To list.
Example

This example sets all native sound objects on slide one in the active presentation to loop until manually stopped during a slide show.

For Each so In ActivePresentation.Slides(1).Shapes
    If so.Type = msoMedia Then
        If so.MediaType = ppMediaTypeSound Then
            so.AnimationSettings.PlaySettings._
                .LoopUntilStopped = True
        End If
    End If
Next
MotionEffect Property

Returns a MotionEffect object that represents the properties of a motion animation.

expression.MotionEffect

expression  Required. An expression that returns one of the objects in the Applies To list.
Example

This example adds a new motion behavior to the first slide's main sequence that moves the specified animation sequence from one side of the page to the shape's original position.

Sub NewMotion()
    With ActivePresentation.Slides(1).TimeLine.MainSequence(1) _.Behaviors.Add(msoAnimTypeMotion).MotionEffect
        .FromX = 100
        .FromY = 100
        .ToX = 0
        .ToY = 0
    End With
End Sub
Show All
Name Property

- Name property as it applies to the **ColorFormat**, **Design**, **Font**, **Master**, **Shape**, **ShapeRange**, **Slide**, **SlideRange**, and **SoundEffect** objects.

**ColorFormat**, **Design**, **Font**, and **Master** objects: Returns or sets the name of the specified object. Read/write **String**.

**Shape** or **ShapeRange** objects: When a shape is created, Microsoft PowerPoint automatically assigns it a name in the form *ShapeType Number*, where *ShapeType* identifies the type of shape or AutoShape, and *Number* is an integer that's unique within the collection of shapes on the slide. For example, the automatically generated names of the shapes on a slide could be Placeholder 1, Oval 2, and Rectangle 3. To avoid conflict with automatically assigned names, don't use the form *ShapeType Number* for user-defined names, where *ShapeType* is a value that is used for automatically generated names, and *Number* is any positive integer. A shape range must contain exactly one shape. Read/write **String**.

**Slide** or **SlideRange** objects: When a slide is inserted into a presentation, PowerPoint automatically assigns it a name in the form *Slide n*, where *n* is an integer that represents the order in which the slide was created in the presentation. For example, the first slide inserted into a presentation is automatically named Slide1. If you copy a slide from one presentation to another, the slide loses the name it had in the first presentation and is automatically assigned a new name in the second presentation. A slide range must contain exactly one slide. Read/write **String**.

**SoundEffect** object: The set of valid names for a presentation appears in the **Sound** box in the **Slide Transition** task pane (**Slide Show** menu). Read/write **String**.

*expression*.Name

*expression*  Required. An expression that returns one of the above objects.
Name property as it applies to the **AddIn**, **Application**, **NamedSlideShow**, and **Presentation** objects.

**AddIn** object: The name (title) of the add-in for file types that are registered. Read-only **String**.

**Application** object: Returns the string "Microsoft PowerPoint." Read-only **String**.

**NamedSlideShow** object: You cannot use this property to set the name for a custom slide show. Use the **Add** method to redefine a custom slide show under a new name. Read-only **String**.

**Presentation** object: The name of the presentation includes the file name extension (for file types that are registered) but doesn't include its path. You cannot use this property to set the name. Use the **SaveAs** method to save the presentation under a different name if you need to change the name. Read-only **String**.

**expression.Name**

**expression** Required. An expression that returns one of the above objects.
Remarks

You can use the object's name in conjunction with the **Item** method to return a reference to the object if the **Item** method for the collection that contains the object takes a **Variant** argument. For example, if the value of the **Name** property for a shape is Rectangle 2, then `.Shapes("Rectangle 2")` will return a reference to that shape.
Example

- As it applies to the **Shape** object.

This example sets the name of object two on slide one in the active presentation to "big triangle."

```vba
ActivePresentation.Slides(1).Shapes(2).Name = "big triangle"
```

This example sets the fill color for the shape named "big triangle" on slide one in the active presentation.

```vba
ActivePresentation.Slides(1).Shapes("big triangle").Fill.ForeColor.RGB = RGB(0, 0, 255)
```
NameAscii Property

- Returns or sets the font used for ASCII characters (characters with character set numbers within the range of 0 to 127). Read/write String.
Remarks

The default value of this property is Times New Roman. Use the Replace method to change the font that’s applied to all text and that appears in the Font box on the Formatting toolbar.
Example

This example sets the font used for ASCII characters in the title of the first slide to Century.

NameComplexScript Property

Returns or sets the complex script font name. Used for mixed language text. Read/write String.
Remarks

When you have a right-to-left language setting specified, this property is equivalent to the **Complex scripts font** list in the **Font** dialog box (**Format** menu). When you have an Asian language setting specified, this property is equivalent to the **Asian text font** list in the **Font** dialog box (**Format** menu).
Example

This example sets the complex script font to Times New Roman.

ActivePresentation.Slides(1).Shapes.Title.TextFrame._
.TextRange.Font.NameComplexScript = "Times New Roman"
NamedSlideShows Property

Returns a NamedSlideShows collection that represents all the named slide shows (custom slide shows) in the specified presentation. Each named slide show, or custom slide show, is a user-selected subset of the specified presentation. Read-only.
Remarks

Use the Add method of the NamedSlideShows object to create a named slide show.
Example

This example adds to the active presentation a named slide show "Quick Show" that contains slides 2, 7, and 9. The example then runs this slide show.

Dim qSlides(1 To 3) As Long
With ActivePresentation
    With .Slides
        qSlides(1) = .Item(2).SlideID
        qSlides(2) = .Item(7).SlideID
        qSlides(3) = .Item(9).SlideID
    End With
    With .SlideShowSettings
        .RangeType = ppShowNamedSlideShow
        .NamedSlideShows.Add "Quick Show", qSlides
        .SlideShowName = "Quick Show"
        .Run
    End With
End With
NameFarEast Property

Returns or sets the Asian font name. Read/write String.
Remarks

Use the Replace method to change the font that’s applied to all text and that appears in the Font box on the Formatting toolbar.
Example

This example displays the name of the Asian font applied to the selection.

NameOther Property

- Returns or sets the font used for characters whose character set numbers are greater than 127. Read/write String.

Remarks

In the U.S. English version of Microsoft PowerPoint, this property is read-only and the default value is Times New Roman. Use the Replace method to change a font in a presentation. The NameOther property setting is the same as the NameASCII property setting except when the NameASCII property is set to "Use FE Font."
Example

This example sets the font used for characters whose character set numbers are greater than 127, for the first member of the Fonts collection.

ActivePresentation.Fonts(1).NameOther = "Tahoma"
NewPresentation Property

Returns a NewFile object that represents a presentation listed on the New Presentation task pane. Read-only.

expression.NewPresentation

expression  Required. An expression that returns one of the objects in the Applies To list.
Example

This example lists a presentation on the New Presentation task pane at the bottom of the last section in the pane.

Sub CreateNewPresentationListItem()
    Application.NewPresentation.Add FileName:="C:\Presentation.ppt"
    Application.CommandBars("Task Pane").Visible = True
End Sub
**Nodes Property**

- **Nodes property as it applies to the Diagram object.**

Returns a **DiagramNodes** object that contains a flat list of all of the nodes in the specified diagram.

`expression.Nodes`

`expression` Required. An expression that returns a **Diagram** object.

- **Nodes property as it applies to the Shape and ShapeRange objects.**

Returns a **ShapeNodes** collection that represents the geometric description of the specified shape. Applies to **Shape** or **ShapeRange** objects that represent freeform drawings.

`expression.Nodes`

`expression` Required. An expression that returns one of the above objects.
Example

As it applies to the Diagram object.

The following example returns the number of nodes in a newly-created diagram.

Sub ConvertPyramidDiagram()

    Dim dgnNode As DiagramNode
    Dim shpDiagram As Shape
    Dim intNodes As Integer

    'Create pyramid diagram and add first node
    Set shpDiagram = ActivePresentation.Slides(1).Shapes.FromArgb
        .AddDiagram(Type:=msoDiagramPyramid, Left:=10, _
        Top:=15, Width:=400, Height:=475)

    'Add three child nodes to the first node
    For intNodes = 1 To 3
        dgnNode.AddNode
    Next intNodes

    'Automatically layout diagram and convert to radial diagram
    With dgnNode.Diagram
        .AutoLayout = msoTrue
        .Convert Type:=msoDiagramRadial
    End With

    'Display the number of nodes in the diagram
    MsgBox dgnNode.Diagram.Nodes.Count

End Sub

As it applies to the Shape object.

This example adds a smooth node with a curved segment after node four in shape three on myDocument. Shape three must be a freeform drawing with at least four nodes.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(3).Nodes
    .Insert Index:=4, SegmentType:=msoSegmentCurve, _
EditingType:=msoEditingSmooth, X1:=210, Y1:=100
End With
NoLineBreakAfter Property

Returns or sets the characters that cannot end a line. Read/write String.
Example

This example sets "$", "(" , "[" , "\" , and "{" as characters that cannot end a line.

With ActivePresentation
    .FarEastLineBreakLevel = ppFarEastLineBreakLevelCustom
    .NoLineBreakAfter = "$(\[{"
End With
NoLineBreakBefore Property

Returns or sets the characters that cannot begin a line. Read/write String.
Example

This example sets "!", ")", and "]" as characters that cannot begin a line.

With ActivePresentation
    .FarEastLineBreakLevel = ppFarEastLineBreakLevelCustom
    .NoLineBreakBefore = "!)"
End With
NormalizedHeight Property

Determines whether the characters (both uppercase and lowercase) in the specified WordArt are the same height. Read/write `MsoTriState`.

MsoTriState can be one of these MsoTriState constants.

- `msoCTrue`  
- `msoFalse`  
- `msoTriStateMixed`  
- `msoTriStateToggle`  
- `msoTrue`  

All characters (both uppercase and lowercase) in the specified WordArt are the same height.
Example

This example adds WordArt that contains the text "Test Effect" to myDocument and gives the new WordArt the name "texteff1." The code then makes all characters in the shape named "texteff1" the same height.

Set myDocument = ActivePresentation.Slides(1)  
myDocument.Shapes.AddTextEffect(PresetTextEffect:=msoTextEffect1,  
    Text:="Test Effect", FontName:="Courier New",  
    FontSize:=44, FontBold:=True,  
    FontItalic:=False, Left:=10, Top:=10)  
myDocument.Shapes("texteff1").TextEffect.NormalizedHeight = msoTrue
NotesMaster Property

Returns a Master object that represents the notes master. Read-only.
Example

This example sets the header and footer text for the notes master for the active presentation.

With Application.ActivePresentation.NotesMaster.HeadersFooters
  .Header.Text = "Employee Guidelines"
  .Footer.Text = "Volcano Coffee"
End With
NotesOrientation Property

Returns or sets the on-screen and printed orientation of notes pages, handouts, and outlines for the specified presentation. Read/write MsoOrientation.

MsoOrientation can be one of these MsoOrientation constants.

msoOrientationHorizontal
msoOrientationMixed
msoOrientationVertical

expression. NotesOrientation

expression Required. An expression that returns one of the objects in the Applies To list.
Example

This example sets the orientation of all notes pages, handouts, and outlines in the active presentation to horizontal (landscape).

Application.ActivePresentation.PageSetup.\texttt{NotesOrientation} = _msoOrientationHorizontal
NotesPage Property

Returns a SlideRange object that represents the notes pages for the specified slide or range of slides. Read-only.

Note The following properties and methods will fail if applied to a SlideRange object that represents a notes page: Copy method, Cut method, Delete method, Duplicate method, HeadersFooters property, Hyperlinks property, Layout property, PrintSteps property, SlideShowTransition property.
Remarks

The `NotesPage` property returns the notes page for either a single slide or a range of slides and allows you to make changes only to those notes pages. If you want to make changes that affect all notes pages, use the `NotesMaster` property to return the `Slide` object that represents the notes master.
Example

This example sets the background fill for the notes page for slide one in the active presentation.

```
With ActivePresentation.Slides(1).NotesPage
  .FollowMasterBackground = False
  .Background.Fill.PresetGradient _
    msoGradientHorizontal, 1, msoGradientLateSunset
End With
```
Number Property

Returns the bullet number of a paragraph when the `Type` property of the `BulletFormat` object is set to `ppBulletNumbered`. Read-only `Long`. 
Remarks

If this property is queried for multiple paragraphs with different numbers, then the value **ppBulletMixed** is returned. If this property is queried for a paragraph with a type other than **ppBulletNumbered**, then a run-time error occurs.
Example

This example returns the bullet number of paragraph one in the selected text range to a variable named myParnum.

With ActiveWindow.Selection
    If .Type = ppSelectionTextRange Then
            If .Type = ppBulletNumbered Then
                myParnum = .Number
            End If
        End With
    End If
End With
**NumberOfCopies Property**

Returns or sets the number of copies of a presentation to be printed. The default value is 1. Read/write **Long**.
Remarks

Specifying a value for the *Copies* argument of the *PrintOut* method sets the value of this property.
Example

This example prints three collated copies of the active presentation.

With ActivePresentation.PrintOptions
    .NumberOfCopies = 3
    .Collate = True
    .Parent.PrintOut
End With
Object Property

Returns the object that represents the specified OLE object's top-level interface. This property allows you to access the properties and methods of the application in which an OLE object was created. Read-only.
Remarks

Use the **TypeName** function to determine the type of object this property returns for a specific OLE object.
Example

This example displays the type of object contained in shape one on slide one in the active presentation. Shape one must contain an OLE object.

MsgBox TypeName(ActivePresentation.Slides(1)_.Shapes(1).OLEFormat.Object)

This example displays the name of the application in which each embedded OLE object on slide one in the active presentation was created.

For Each s In ActivePresentation.Slides(1).Shapes
    If s.Type = msoEmbeddedOLEObject Then
        MsgBox s.OLEFormat.Object.Application.Name
    End If
Next

This example adds text to cell A1 on worksheet one in the Microsoft Excel workbook contained in shape three on slide one in the active presentation.

End With
ObjectVerbs Property

Returns a ObjectVerbs collection that contains all the OLE verbs for the specified OLE object. Read-only.
Example

This example displays all the available verbs for the OLE object contained in shape one on slide two in the active presentation. For this example to work, shape one must be a shape that represents an OLE object.

```vba
With ActivePresentation.Slides(2).Shapes(1).OLEFormat
    For Each v In .ObjectVerbs
        MsgBox v
    Next
End With
```

This example specifies that the OLE object represented by shape one on slide two in the active presentation will open when it's clicked during a slide show if "Open" is one of the OLE verbs for that object. For this example to work, shape one must be a shape that represents an OLE object.

```vba
With ActivePresentation.Slides(2).Shapes(1)
    For Each sVerb In .OLEFormat. ObjectVerbs
        If sVerb = "Open" Then
            With .ActionSettings(ppMouseClick)
                .Action = ppActionOLEVerb
                .ActionVerb = sVerb
            End With
            Exit For
        End If
    Next
End With
```
Obscured Property

Determines whether the shadow of the specified shape appears filled in and is obscured by the shape. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants:
- msoCTrue
- msoFalse The shadow has no fill and the outline of the shadow is visible through the shape if the shape has no fill.
- msoTriStateMixed
- msoTriStateToggle
- msoTrue The shadow of the specified shape appears filled in and is obscured by the shape, even if the shape has no fill.
Example

This example sets the horizontal and vertical offsets of the shadow for shape three on myDocument. The shadow is offset 5 points to the right of the shape and 3 points above it. If the shape doesn't already have a shadow, this example adds one to it. The shadow will be filled in and obscured by the shape, even if the shape has no fill.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(3).Shadow
  .Visible = True
  .OffsetX = 5
  .OffsetY = -3
  .Obscured = msoTrue
End With
OffsetX Property

Returns or sets the horizontal offset of the shadow from the specified shape, in points. A positive value offsets the shadow to the right of the shape; a negative value offsets it to the left. Read/write Single.
Remarks

If you want to nudge a shadow horizontally or vertically from its current position without having to specify an absolute position, use the `IncrementOffsetX` method or the `IncrementOffsetY` method.
Example

This example sets the horizontal and vertical offsets of the shadow for shape three on myDocument. The shadow is offset 5 points to the right of the shape and 3 points above it. If the shape doesn't already have a shadow, this example adds one to it.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(3).Shadow
  .Visible = True
  .OffsetX = 5
  .OffsetY = -3
End With
OffsetY Property

Returns or sets the vertical offset of the shadow from the specified shape, in points. A positive value offsets the shadow to the right of the shape; a negative value offsets it to the left. Read/write Single.
Remarks

If you want to nudge a shadow horizontally or vertically from its current position without having to specify an absolute position, use the `IncrementOffsetX` method or the `IncrementOffsetY` method.
**Example**

This example sets the horizontal and vertical offsets of the shadow for shape three on myDocument. The shadow is offset 5 points to the right of the shape and 3 points above it. If the shape doesn't already have a shadow, this example adds one to it.

```
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(3).Shadow
  .Visible = True
  .OffsetX = 5
  .OffsetY = -3
End With
```
OLEFormat Property

Returns an OLEFormat object that contains OLE formatting properties for the specified shape. Applies to Shape or ShapeRange objects that represent OLE objects. Read-only
Example

This example loops through all the objects on all the slides in the active presentation and sets all linked Microsoft Word documents to be updated manually.

For Each sld In ActivePresentation.Slides
    For Each sh In sld.Shapes
        If sh.Type = msoLinkedOLEObject Then
            If sh.OLEFormat.ProgID = "Word.Document" Then
            End If
        End If
    Next
Next
OperatingSystem Property

Returns the name of the operating system. Read-only String.
Example

This example tests the **OperatingSystem** property to see whether PowerPoint is running with a 32-bit version of Microsoft Windows.

```vbnet
os = Application.OperatingSystem
If InStr(os, "Windows (32-bit)") <> 0 Then
    MsgBox "Running a 32-bit version of Microsoft Windows"
End If
```
Options Property

- Returns an `Options` object that represents application options in Microsoft PowerPoint.

`expression.Options`

`expression` Required. An expression that returns an `Application` object.
Example

Use the **Options** property to return the **Options** object. The following example sets three application options for PowerPoint.

```vbnet
Sub TogglePasteOptionsButton()
    With Application.**Options**
        If .DisplayPasteOptions = False Then
            .DisplayPasteOptions = True
        End If
    End With
End Sub
```
OrganizeInFolder Property

Determines whether all supporting files, such as background textures and graphics, are organized in a separate folder when you save or publish the specified presentation as a Web page. Read/write **MsoTriState**.

MsoTriState can be one of these MsoTriState constants.

- **msoCTrue**
- **msoFalse** Supporting files are saved in the same folder as the Web page.
- **msoTriStateMixed**
- **msoTriStateToggle**
- **msoTrue** Default. All supporting files, such as background textures and graphics, are organized in a separate folder when you save or publish the specified presentation as a Web page.
Remarks

The new folder is created within the folder where you have saved the Web page, and is named after the presentation. If the UseLongFileNames property is set to True, a suffix is added to the folder name.

If you save a presentation that was previously saved with the OrganizeInFolder property set to a different value, Microsoft PowerPoint automatically moves the supporting files into or out of the folder as appropriate.

If you don't use long file names (that is, if the UseLongFileNames property is set to False), PowerPoint automatically saves any supporting files in a separate folder. The files cannot be saved in the same folder as the Web page.
Example

This example specifies that all supporting files are saved in the same folder when presentation two is saved or published as a Web page.

Presentations(2).WebOptions.OrganizeInFolder = msoFalse
Orientation Property

Returns or sets text orientation. Read/write MsoTextOrientation. Some of these constants may not be available to you, depending on the language support (U.S. English, for example) that you’ve selected or installed.

MsoTextOrientation can be one of these MsoTextOrientation constants.

- msoTextOrientationDownward
- msoTextOrientationHorizontal
- msoTextOrientationHorizontalRotatedFarEast
- msoTextOrientationMixed
- msoTextOrientationUpward
- msoTextOrientationVertical
- msoTextOrientationVerticalFarEast

expression.Orientation

expression  Required. An expression that returns one of the objects in the Applies To list.
Example

This example orients the text horizontally within shape three on myDocument.

```
Set myDocument = ActivePresentationSlides(1)
    .Orientation = msoTextOrientationHorizontal
```
**OutputType Property**

Returns or sets a value that indicates which component (slides, handouts, notes pages, or an outline) of the presentation is to be printed. Read/write `PpPrintOutputType`.

`PpPrintOutputType` can be one of these `PpPrintOutputType` constants:
- `ppPrintOutputBuildSlides`
- `ppPrintOutputFourSlideHandouts`
- `ppPrintOutputNineSlideHandouts`
- `ppPrintOutputNotesPages`
- `ppPrintOutputOneSlideHandouts`
- `ppPrintOutputOutline`
- `ppPrintOutputSixSlideHandouts`
- `ppPrintOutputSlides`
- `ppPrintOutputThreeSlideHandouts`
- `ppPrintOutputTwoSlideHandouts`

`expression.OutputType`

`expression` Required. An expression that returns one of the objects in the Applies To list.
Example

This example prints handouts of the active presentation with six slides to a page.

With ActivePresentation
    .PrintOptions.OutputType = ppPrintOutputSixSlideHandouts
    .PrintOut
End With
This keyword is not implemented. It is reserved for future use.
PageSetup Property

Returns a PageSetup object whose properties control slide setup attributes for the specified presentation. Read-only.
Example

The following example sets the slide size and slide orientation for the presentation named "Pres1."

With Presentations("pres1").PageSetup
  .SlideSize = ppSlideSize35MM
  .SlideOrientation = msoOrientationHorizontal
End With
Show All
Panes Property

Returns a **Panes** collection that represents the **panes** in the document window. Read-only.
Example

This example tests for the number of panes in the active window. If the value is one, indicating any view other than normal view, normal view is activated.

If ActiveWindow.Panes.Count = 1 Then
    ActiveWindow.ViewType = ppViewNormal
End If
Paragraph Property

Returns or sets a **Long** that represents the paragraph in a text range to which to apply animation effects. Read/write.

*expression*.**Paragraph**

*expression*  Required. An expression that returns one of the objects in the Applies To list.
Example

This example adds a shape with text and animates the second and fourth paragraphs in the shape.

Sub AnimateParagraphTwo()
    Dim shpStar As Shape
    Dim effOne As Effect
    Dim effTwo As Effect
    Dim intCount As Integer

    With ActivePresentation.Slides(1)
        Set shpStar = .Shapes.AddShape(Type:=msoShape5pointStar, _
            Left:=150, Top:=72, Width:=400, Height:=400)
        Set effOne = .TimeLine.MainSequence _
            .AddEffect(Shape:=shpStar, _
                EffectId:=msoAnimEffectStretchy, _
                Trigger:=msoAnimTriggerAfterPrevious)
        Set effTwo = .TimeLine.MainSequence _
            .AddEffect(Shape:=shpStar, _
                EffectId:=msoAnimEffectSpinner, _
                Trigger:=msoAnimTriggerAfterPrevious)
    End With

    For intCount = 1 To 5
        shpStar.TextFrame.TextRange _
            .InsertAfter "This is a test." & vbCrLf
        Next intCount

    effOne.Paragraph = 2
    effTwo.Paragraph = 4

End Sub
ParagraphFormat Property

Returns a ParagraphFormat object that represents paragraph formatting for the specified text. Read-only.
Example

This example sets the line spacing before, within, and after each paragraph in shape two on slide one in the active presentation.

With Application.ActivePresentation.Slides(2).Shapes(2)
    With .TextFrame.TextRange.ParagraphFormat
        .LineRuleWithin = msoTrue
        .SpaceWithin = 1.4
        .LineRuleBefore = msoTrue
        .SpaceBefore = 0.25
        .LineRuleAfter = msoTrue
        .SpaceAfter = 0.75
    End With
End With
Parent Property

Returns the parent object for the specified object.

*expression*.Parent

*expression* Required. An expression that returns one of the objects in the Applies To list.
Example

This example adds an oval containing text to slide one in the active presentation and rotates the oval and the text 45 degrees. The parent object for the text frame is the Shape object that contains the text.

```vba
Set myShapes = ActivePresentation.Slides(1).Shapes
With myShapes.AddShape(Type:=msoShapeOval, Left:=50, _
    Top:=50, Width:=300, Height:=150).TextFrame
    .TextRange.Text = "Test text"
    .Parent.Rotation = 45
End With
```
ParentGroup Property

Returns a Shape object that represents the common parent shape of a child shape or a range of child shapes.

expression. ParentGroup

class

expression Required. An expression that returns one of the objects in the Applies To list.
Example

This example creates two shapes on the first slide in the active presentation and groups those shapes; then using one shape in the group, accesses the parent group and fills all shapes in the parent group with the same fill color. This example assumes that the first slide of the active presentation does not currently contain any shapes. If it does, you will receive an error.

Sub ParentGroup()
    Dim sldNewSlide As Slide
    Dim shpParentGroup As Shape

    'Add two shapes to active document and group
    Set sldNewSlide = ActivePresentation.Slides(1).Add(Index:=1, Layout:=ppLayoutBlank)

    With sldNewSlide.Shapes
        .AddShape Type:=msoShapeBalloon, Left:=72, _
            Top:=72, Width:=100, Height:=100
        .AddShape Type:=msoShapeOval, Left:=110, _
            Top:=120, Width:=100, Height:=100
        .Range(Array(1, 2)).Group
    End With

    Set shpParentGroup = ActivePresentation.Slides(1).Shapes(1)_.GroupItems(1).ParentGroup
    shpParentGroup.Fill.ForeColor.RGB = RGB (Red:=151, Green:=51, Blue:=250)
End Sub
Password Property

Returns or sets a String that represents a password that must be supplied to open the specified presentation. Read/write.

expression.Password

expression  Required. An expression that returns one of the objects in the Applies To list.
Example

This example opens Earnings.ppt, sets a password for it, and then closes the presentation.

Sub SetPassword()
    With Presentations.Open(FileName:="C:\My Documents\Earnings.ppt"
        .Password = "why"
        .Save
        .Close
    End With
End Sub
PasswordEncryptionAlgorithm

Property

Returns a **String** indicating the algorithm Microsoft PowerPoint uses for encrypting documents with passwords. Read-only.

`expression.PasswordEncryptionAlgorithm`

*expression*  Required. An expression that returns one of the objects in the Applies To list.
Remarks

Use the `SetPasswordEncryptionOptions` method to specify the algorithm PowerPoint uses for encrypting documents with passwords.
Example

This example sets the password encryption options if the password encryption algorithm in use is not RC4.

Sub PasswordSettings()
    With ActivePresentation
        If .PasswordEncryptionAlgorithm <> "RC4" Then
            .SetPasswordEncryptionOptions _
                PasswordEncryptionProvider:="Microsoft RSA SChannel
                PasswordEncryptionAlgorithm:="RC4",
                PasswordEncryptionKeyLength:=56,
                PasswordEncryptionFileProperties:=True
        End If
    End With
End Sub
PasswordEncryptionFileProperties Property

Returns **MsoTrue** if Microsoft PowerPoint encrypts file properties for password-protected documents. Read-only **MsoTriState**.

MsoTriState can be one of these MsoTriState constants.
- **msoCTrue**
- **msoFalse**
- **msoTriStateMixed**
- **msoTriStateToggle**
- **msoTrue**

**expression**.PasswordEncryptionFileProperties

**expression**  Required. An expression that returns one of the objects in the Applies To list.
Remarks

Use the SetPasswordEncryptionOptions method to specify the algorithm PowerPoint uses for encrypting documents with passwords.
Example

This example sets the password encryption options if the file properties are not encrypted for password-protected documents.

Sub PasswordSettings()
    With ActivePresentation
        If .PasswordEncryptionFileProperties = msoFalse Then
            .SetPasswordEncryptionOptions _
                PasswordEncryptionProvider:="Microsoft RSA SChannel"
                PasswordEncryptionAlgorithm:="RC4", _
                PasswordEncryptionKeyLength:=56, _
                PasswordEncryptionFileProperties:=True
        End If
    End With
End Sub
PasswordEncryptionKeyLength Property

Returns a Long indicating the key length of the algorithm Microsoft PowerPoint uses when encrypting documents with passwords. Read-only.

expression.PasswordEncryptionKeyLength

expression Required. An expression that returns one of the objects in the Applies To list.
Remarks

Use the SetPasswordEncryptionOptions method to specify the algorithm PowerPoint uses for encrypting documents with passwords.
Example

This example sets the password encryption options if the password encryption key length is less than 40.

Sub PasswordSettings()
    With ActivePresentation
        If .PasswordEncryptionKeyLength < 40 Then
            .SetPasswordEncryptionOptions _
                PasswordEncryptionProvider:="Microsoft RSA SChannel"
                PasswordEncryptionAlgorithm:="RC4", _
                PasswordEncryptionKeyLength:=56, _
                PasswordEncryptionFileProperties:=True
        End If
    End With
End Sub
PasswordEncryptionProvider Property

Returns a String specifying the name of the algorithm encryption provider that Microsoft PowerPoint uses when encrypting documents with passwords. Read-only.

expression.PasswordEncryptionProvider

expression  Required. An expression that returns one of the objects in the Applies To list.
Remarks

Use the `SetPasswordEncryptionOptions` method to specify the algorithm PowerPoint uses for encrypting documents with passwords.
Example

This example sets the password encryption options if the password encryption algorithm in use is not the Microsoft RSA SChannel Cryptographic Provider.

Sub PasswordSettings()
    With ActivePresentation
        If .PasswordEncryptionProvider <> "Microsoft RSA SChannel Cr
            .SetPasswordEncryptionOptions _
                PasswordEncryptionProvider:="Microsoft RSA SChannel
                PasswordEncryptionAlgorithm:="RC4", _
                PasswordEncryptionKeyLength:=56, _
                PasswordEncryptionFileProperties:=True
        End If
    End With
End Sub
Path Property

- Returns a String that represents the path to the specified AddIn, Application, or Presentation object or the path followed by a MotionEffect object. Read-only.

expression.Path

expression  Required. An expression that returns one of the objects in the Applies To list.
Remarks

If you use this property to return a path for a presentation that has not been saved, it returns an empty string. Using this property to return the path for an add-in that has not been loaded causes an error.

The path doesn't include the final backslash (\) or the name of the specified object. Use the Name property of the Presentation object to return the file name without the path, and use the FullName property to return the file name and the path together.

The String returned for a MotionEffect object is a specific path that the motion effect follows between From and To using the same syntax as the VML path description.
Example

This example saves the active presentation in the same folder as PowerPoint.

```vbnet
With Application
    fName = .Path & "\test presentation"
    ActivePresentation.SaveAs fName
End With
```
Pattern Property

- Pattern property as it applies to the LineFormat object.

Sets or returns a value that represents the pattern applied to the specified line. Read/write MsoPatternType.

MsoPatternType can be one of these MsoPatternType constants.

- msoPattern10Percent
- msoPattern20Percent
- msoPattern25Percent
- msoPattern30Percent
- msoPattern40Percent
- msoPattern50Percent
- msoPattern5Percent
- msoPattern60Percent
- msoPattern70Percent
- msoPattern75Percent
- msoPattern80Percent
- msoPattern90Percent
- msoPatternDarkDownwardDiagonal
- msoPatternDarkHorizontal
- msoPatternDarkUpwardDiagonal
- msoPatternDashedDownwardDiagonal
- msoPatternDashedHorizontal
- msoPatternDashedUpwardDiagonal
- msoPatternDashedVertical
- msoPatternDiagonalBrick
- msoPatternDivot
- msoPatternDottedDiamond
- msoPatternDottedGrid
expression.Pattern

expression  Required. An expression that returns one of the above objects.

- Pattern property as it applies to the FillFormat object.
Sets or returns a value that represents the pattern applied to the specified fill. Use the **BackColor** and **ForeColor** properties to set the colors used in the pattern. Read-only **MsoPatternType**.

MsoPatternType can be one of these MsoPatternType constants.

- msoPattern10Percent
- msoPattern20Percent
- msoPattern25Percent
- msoPattern30Percent
- msoPattern40Percent
- msoPattern50Percent
- msoPattern5Percent
- msoPattern60Percent
- msoPattern70Percent
- msoPattern75Percent
- msoPattern80Percent
- msoPattern90Percent
- msoPatternDarkDownwardDiagonal
- msoPatternDarkHorizontal
- msoPatternDarkUpwardDiagonal
- msoPatternDashedDownwardDiagonal
- msoPatternDashedHorizontal
- msoPatternDashedUpwardDiagonal
- msoPatternDashedVertical
- msoPatternDiagonalBrick
- msoPatternDivot
- msoPatternDottedDiamond
- msoPatternDottedGrid
- msoPatternHorizontalBrick
- msoPatternLargeCheckerBoard
- msoPatternLargeConfetti
- msoPatternLargeGrid
- msoPatternLightDownwardDiagonal
- msoPatternLightHorizontal
msPatternLightUpwardDiagonal
msPatternLightVertical
msPatternMixed
msPatternNarrowHorizontal
msPatternNarrowVertical
msPatternOutlinedDiamond
msPatternPlaid
msPatternShingle
msPatternSmallCheckerBoard
msPatternSmallConfetti
msPatternSmallGrid
msPatternSolidDiamond
msPatternSphere
msPatternTrellis
msPatternWave
msPatternWeave
msPatternWideDownwardDiagonal
msPatternWideUpwardDiagonal
msPatternZigZag
msPatternDarkVertical

expression.Pattern

expression  Required. An expression that returns one of the above objects.
Example

- **As it applies to the LineFormat object.**

This example adds a patterned line to *myDocument*.

```vbnet
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes.AddLine(10, 100, 250, 0).Line
    .Weight = 6
    .ForeColor.RGB = RGB(0, 0, 255)
    .BackColor.RGB = RGB(128, 0, 0)
    .Pattern = msoPatternDarkDownwardDiagonal
End With
```

- **As it applies to the FillFormat object.**

This example adds a rectangle to *myDocument* and sets its fill pattern to match that of the shape named "rect1." The new rectangle has the same pattern as rect1, but not necessarily the same colors. The colors used in the pattern are set with the **BackColor** and **ForeColor** properties.

```vbnet
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes
    pattern1 = .Item("rect1").Fill.Pattern
    With .AddShape(msoShapeRectangle, 100, 100, 120, 80).Fill
        .ForeColor.RGB = RGB(128, 0, 0)
        .BackColor.RGB = RGB(0, 0, 255)
        .Patterned pattern1
    End With
End With
```

```vbnet
End With
```
PauseAnimation Property

Determines whether the slide show pauses until the specified media clip is finished playing. Read/write **MsoTriState**.

MsoTriState can be one of these MsoTriState constants.

- **msoCTrue**
- **msoFalse** The slide show continues while the media clip plays in the background.
- **msoTriStateMixed**
- **msoTriStateToggle**
- **msoTrue** The slide show pauses until the specified media clip is finished playing.
Remarks

For the PauseAnimation property setting to take effect, the PlayOnEntry property of the specified shape must be set to msoTrue.
Example

This example specifies that shape three on slide one in the active presentation will be played automatically when it's animated and that the slide show won't continue while the movie is playing in the background. Shape three must be a sound or movie object.

Set OLEobj = ActivePresentation.Slides(1).Shapes(3)
With OLEobj.AnimationSettings.PlaySettings
  .PlayOnEntry = msoTrue
  .PauseAnimation = msoTrue
End With
Perspective Property

Determines whether the extrusion appears in perspective. Read/write \textit{MsoTriState}. \textit{MsoTriState} can be one of these \textit{MsoTriState} constants.

\textit{msoCTrue}  
\textit{msoFalse} The extrusion is a parallel, or orthographic, projection—that is, if the walls don't narrow toward a vanishing point.

\textit{msoTriStateMixed}  
\textit{msoTriStateToggle}  
\textit{msoTrue} The extrusion appears in perspective—that is, if the walls of the extrusion narrow toward a vanishing point.
Example

This example sets the extrusion depth for shape one on myDocument to 100 points and specifies that the extrusion be parallel, or orthographic.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(1).ThreeD
  .Visible = True
  .Depth = 100
  .Perspective = msoFalse
End With
PictureFormat Property

Returns a PictureFormat object that contains picture formatting properties for the specified shape. Applies to Shape or ShapeRange objects that represent pictures or OLE objects. Read-only.
Example

This example sets the brightness and contrast for shape one on myDocument. Shape one must be a picture or an OLE object.

```vba
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(1).PictureFormat
  .Brightness = 0.3
  .Contrast = .75
End With
```
Returns a PlaceholderFormat object that contains the properties that are unique to placeholders. Read-only.
Example

This example adds text to placeholder one on slide one in the active presentation if that placeholder is a horizontal title placeholder.

With ActivePresentation.Slides(1).Shapes.Placeholders
    If .Count > 0 Then
        With .Item(1)
            Select Case .PlaceholderFormat.Type
                Case ppPlaceholderTitle
                    .TextFrame.TextRange = "Title Text"
                Case ppPlaceholderCenterTitle
                    .TextFrame.TextRange = "Centered Title Text"
                Case Else
                    MsgBox "There's no horizontal" & _
                        "title on this slide"
            End Select
        End With
    End If
End With
Placeholders Property

Returns a **Placeholders** collection that represents the collection of all the placeholders on a slide. Each placeholder in the collection can contain text, a chart, a table, an organizational chart, or another object. Read-only.
Example

This example adds a slide to the active presentation and then adds text to both the title (which is the first placeholder on the slide) and the subtitle.

```vba
Set myDocument = ActivePresentation.Slides(1)
With ActivePresentation.Slides(_
    .Add(1, ppLayoutTitle).Shapes.Placeholders._
    .Item(1).TextFrame.TextRange.Text = "This is the title text"_
    .Item(2).TextFrame.TextRange.Text = "This is subtitle text"
End With
```
PlayOnEntry Property

Determines whether the specified movie or sound is played automatically when it's animated. Read/write [MsoTriState](#).

MsoTriState can be one of these MsoTriState constants:

- **msoCTrue**
- **msoFalse**
- **msoTriStateMixed**
- **msoTriStateToggle**
- **msoTrue** The specified movie or sound is played automatically when it's animated.
Remarks

Setting this property to `msoTrue` sets the `Animate` property of the `AnimationSettings` object to `msoTrue`. Setting the `Animate` property to `msoFalse` automatically sets the `PlayOnEntry` property to `msoFalse`.

Use the `ActionVerb` property to set the verb that will be invoked when the media clip is animated.
Example

This example specifies that shape three on slide one in the active presentation will be played automatically when it's animated. Shape three must be a sound or movie object.

Set OLEobj = ActivePresentation.Slides(1).Shapes(3)
OLEobj.AnimationSettings.PlaySettings.PlayOnEntry = msoTrue
PlaySettings Property

Returns a PlaySettings object that contains information about how the specified media clip plays during a slide show.

*expression*.PlaySettings

*expression*  Required. An expression that returns one of the objects in the Applies To list.
**Example**

This example inserts a movie named Clock.avi onto slide one in the active presentation, sets it to play automatically after the slide transition, and specifies that the movie object be hidden during a slide show except when it's playing.

```vbnet
With ActivePresentation.Slides(1).Shapes.AddOLEObject(Left:=10, _
    Top:=10, Width:=250, Height:=250, _
    FileName:="c:\winnt\Clock.avi")
    With .AnimationSettings.PlaySettings
        .PlayOnEntry = True
        .HideWhileNotPlaying = True
    End With
End With
```
 POINTERCOLOR PROPERTY

- **PointerColor Property as it applies to the SlideShowSettings object.**

Returns the pointer color for the specified presentation as a `ColorFormat` object. This color is saved with the presentation and is the default pen color each time you show the presentation. Read-only.

- **PointerColor Property as it applies to the SlideShowView object.**

Returns a `ColorFormat` object that represents the pointer color for the specified presentation during one slide show. As soon as the slide show is finished, the color reverts to the default color for the presentation. Read-only.
Remarks

To change the pointer to a pen, set the `PointerType` property to `ppSlideShowPointerPen`. 
Example

As it applies to the SlideShowSettings object.

This example sets the default pen color for the active presentation to blue, starts a slide show, changes the pointer to a pen, and then sets the pen color to red for this slide show only.

With ActivePresentation.SlideShowSettings
  .PointerColor.RGB = RGB(0, 0, 255) 'blue
With .Run.View
  .PointerColor.RGB = RGB(255, 0, 0) 'red
  .PointerType = ppSlideShowPointerPen
End With
End With
PointerType Property

Returns or sets the type of pointer used in the slide show. Read/write **PpSlideShowPointerType**.

PpSlideShowPointerType can be one of these PpSlideShowPointerType constants.

- **ppSlideShowPointerAlwaysHidden**
- **ppSlideShowPointerArrow**
- **ppSlideShowPointerAutoArrow**
- **ppSlideShowPointerNone**
- **ppSlideShowPointerPen**

*expression*. **PointerType**

*expression*  Required. An expression that returns one of the objects in the Applies To list.
Example

This example runs a slide show of the active presentation, changes the pointer to a pen, and sets the pen color for this slide show to red.

Set currView = ActivePresentation.SlideShowSettings.Run.View
With currView
  .PointerColor.RGB = RGB(255, 0, 0)
  .PointerType = ppSlideShowPointerPen
End With
Show All
Points Property

- Points property as it applies to the PropertyEffect object.

Returns an AnimationPoints object that represents a point in an animation. Use the From and To properties to set the value of this property.

expression.Points

expression  Required. An expression that returns a PropertyEffect object.

- Points property as it applies to the ShapeNode object.

Returns a Variant that represents the position of the specified node as a coordinate pair. Each coordinate is expressed in points. Use the SetPosition method to set the value of this property. Read-only.

expression.Points

expression  Required. An expression that returns a ShapeNode object.
Example

As it applies to the **ShapeNode** object.

This example moves node two in shape three in the active presentation to the right 200 points and down 300 points. Shape three must be a freeform drawing.

```
With ActivePresentation.Slides(1).Shapes(3).Nodes
    pointsArray = .Item(2).Points
    currXvalue = pointsArray(1, 1)
    currYvalue = pointsArray(1, 2)
    .SetPosition Index:=2, X1:=currXvalue + 200, Y1:=currYvalue + 30
End With
```
Position Property

Returns or sets the position of the specified tab stop, in points. Read/write Single.
Example

This example deletes all tab stops greater than 1 inch (72 points) for the text in shape two on slide one in the active presentation.

With Application.ActivePresentation.Slides(1).Shapes(2).TextFrame_.Ruler.TabStops
    For i = .Count To 1 Step -1
        With .Item(i)
            If .Position > 72 Then .Clear
        End With
    Next
End With
Presentation Property

Returns a Presentation object that represents the presentation in which the specified document window or slide show window was created. Read-only.
Remarks

If the slide that's currently displayed in document window one is from an embedded presentation, `Windows(1).View.Slide.Parent` returns the embedded presentation, and `Windows(1).Presentation` returns the presentation in which document window one was created.

If the slide that's currently displayed in slide show window one is from an embedded presentation, `SlideShowWindows(1).View.Slide.Parent` returns the embedded presentation, and `SlideShowWindows(1).Presentation` returns the presentation in which the slide show was started.
Example

This example continues the slide numbering for the presentation in window one into the slide numbering for the presentation in window two.

```plaintext
Windows(2).Presentation.PageSetup._
  .FirstSlideNumber = firstPresSlides + 1
```
PresentationElapsedTime Property

Returns the number of seconds that have elapsed since the beginning of the specified slide show. Read-only Long.
Example

This example goes to slide seven in slide show window one if more than five minutes have elapsed since the beginning of the slide show.

With SlideShowWindows(1).View
    If .PresentationElapsedTime > 300 Then
        .GotoSlide 7
    End If
End With
Presentations Property

Returns a `Presentations` collection that represents all open presentations. Read-only.

For information about returning a single member of a collection, see Returning an Object from a Collection.
Example

This example opens the presentation named "Long Version.ppt."

Application.Presentations.Open _
    FileName:="c:\My Documents\Long version.ppt"

This example saves presentation one as "Year-End Report.ppt."

Application.Presentations(1).SaveAs "Year-End Report"

This example closes the Year-end report presentation.

Application.Presentations("Year-End Report.ppt").Close
Preserved Property

Sets or returns an **MsoTriState** constant that represents whether a design master is preserved from changes. Read/write.

MsoTriState can be one of these MsoTriState constants.
- **msoCTrue** Doesn't apply to this property.
- **msoFalse** The design master is not preserved and can be edited.
- **msoTriStateMixed** Doesn't apply to this property.
- **msoTriStateToggle** Doesn't apply to this property.
- **msoTrue** The design master is preserved and cannot be edited.

`expression.Preserved`

`expression` Required. An expression that returns one of the objects in the Applies To list.
Example

The following line of code locks and preserves the first design master.

Sub PreserveMaster
    ActivePresentation.Designs(1).Preserved = msoTrue
End Sub
**PresetExtrusionDirection Property**

Returns the direction that the extrusion's sweep path takes away from the extruded shape (the front face of the extrusion). Read-only

MsoPresetExtrusionDirection.

MsoPresetExtrusionDirection can be one of these MsoPresetExtrusionDirection constants.

- msoExtrusionBottom
- msoExtrusionBottomLeft
- msoExtrusionBottomRight
- msoExtrusionLeft
- msoExtrusionNone
- msoExtrusionRight
- msoExtrusionTop
- msoExtrusionTopLeft
- msoExtrusionTopRight
- msoPresetExtrusionDirectionMixed

**expression.PresetExtrusionDirection**

**expression** Required. An expression that returns one of the objects in the Applies To list.
Remarks

This property is read-only. To set the value of this property, use the SetExtrusionDirection method.
**Example**

This example changes each extrusion on `myDocument` that extends toward the upper-left corner of the extrusion’s front face to an extrusion that extends toward the lower-right corner of the front face.

```vba
Set myDocument = ActivePresentation.Slides(1)
For Each s In myDocument.Shapes
    With s.ThreeD
        If .PresetExtrusionDirection = msoExtrusionTopLeft Then
            .SetExtrusionDirection msoExtrusionBottomRight
        End If
    End With
Next
```
PresetGradientType Property

Returns the preset gradient type for the specified fill. Read-only
MsoPresetGradientType. Use the PresetGradient method to set the preset
gradient type for the fill.

MsoPresetGradientType can be one of these MsoPresetGradientType constants.

- msoGradientBrass
- msoGradientCalmWater
- msoGradientChrome
- msoGradientChromeII
- msoGradientDaybreak
- msoGradientDesert
- msoGradientEarlySunset
- msoGradientFire
- msoGradientFog
- msoGradientGold
- msoGradientGoldII
- msoGradientHorizon
- msoGradientLateSunset
- msoGradientMahogany
- msoGradientMoss
- msoGradientNightfall
- msoGradientOcean
- msoGradientParchment
- msoGradientPeacock
- msoGradientRainbow
- msoGradientRainbowII
- msoGradientSapphire
- msoGradientSilver
msoGradientWheat
msoPresetGradientMixed

expression.PresetGradientType

expression  Required. An expression that returns one of the objects in the Applies To list.
**Example**

This example changes the fill for all shapes in myDocument with the Moss preset gradient fill to the Fog preset gradient fill.

Set myDocument = ActivePresentation.Slides(1)
For Each s In myDocument.Shapes
    With s.Fill
        If .PresetGradientType = msoGradientMoss Then
            .PresetGradient = msoGradientFog
        End If
    End With
End For

PresetLightingDirection Property

Returns or sets the position of the light source relative to the extrusion. Read/write `MsoPresetLightingDirection`.

`MsoPresetLightingDirection` can be one of these `MsoPresetLightingDirection` constants:

- `msoLightingBottom`
- `msoLightingBottomLeft`
- `msoLightingBottomRight`
- `msoLightingLeft`
- `msoLightingNone`
- `msoLightingRight`
- `msoLightingTop`
- `msoLightingTopLeft`
- `msoLightingTopRight`
- `msoPresetLightingDirectionMixed`

`expression.PresetLightingDirection`

`expression` Required. An expression that returns one of the objects in the Applies To list.

**Note** You won't see the lighting effects you set if the extrusion has a wire frame surface.
Example

This example specifies that the extrusion for shape one on myDocument extend toward the top of the shape and that the lighting for the extrusion come from the left.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(1).ThreeD
    .Visible = True
    .SetExtrusionDirection msoExtrusionTop
    .PresetLightingDirection = msoLightingLeft
End With


PresetLightingSoftness Property

Returns or sets the intensity of the extrusion lighting. Read/write MsoPresetLightingSoftness.

MsoPresetLightingSoftness can be one of these MsoPresetLightingSoftness constants.

msoLightingBright
msoLightingDim
msoLightingNormal
msoPresetLightingSoftnessMixed

expression.PresetLightingSoftness

expression Required. An expression that returns one of the objects in the Applies To list.
Example

This example specifies that the extrusion for shape one on myDocument be lit brightly from the left.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(1).ThreeD
    .Visible = True
    .PresetLightingSoftness = msoLightingBright
    .PresetLightingDirection = msoLightingLeft
End With
PresetMaterial Property

Returns or sets the extrusion surface material. Read/write MsoPresetMaterial.

MsoPresetMaterial can be one of these MsoPresetMaterial constants.

msoMaterialMatte
msoMaterialMetal
msoMaterialPlastic
msoMaterialWireFrame
msoPresetMaterialMixed

expression.PresetMaterial

expression Required. An expression that returns one of the objects in the Applies To list.
Example

This example specifies that the extrusion surface for shape one in myDocument be wire frame.

```
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(1).ThreeD
    .Visible = True
    .PresetMaterial = msoMaterialWireFrame
End With
```
PresetShape Property

Returns or sets the shape of the specified WordArt. Read/write
MsoPresetTextEffectShape.

MsoPresetTextEffectShape can be one of these MsoPresetTextEffectShape constants.
- msoTextEffectShapeArchDownCurve
- msoTextEffectShapeArchDownPour
- msoTextEffectShapeArchUpCurve
- msoTextEffectShapeArchUpPour
- msoTextEffectShapeButtonCurve
- msoTextEffectShapeButtonPour
- msoTextEffectShapeCanDown
- msoTextEffectShapeCanUp
- msoTextEffectShapeCascadeDown
- msoTextEffectShapeCascadeUp
- msoTextEffectShapeChevronDown
- msoTextEffectShapeChevronUp
- msoTextEffectShapeCircleCurve
- msoTextEffectShapeCirclePour
- msoTextEffectShapeCurveDown
- msoTextEffectShapeCurveUp
- msoTextEffectShapeDeflate
- msoTextEffectShapeDeflateBottom
- msoTextEffectShapeDeflateInflate
- msoTextEffectShapeDeflateInflateDeflate
- msoTextEffectShapeDeflateTop
- msoTextEffectShapeDoubleWave2
- msoTextEffectShapeFadeDown
expression.**PresetShape**

*expression*  Required. An expression that returns one of the objects in the Applies To list.
Remarks

Setting the `PresetTextEffect` property automatically sets the `PresetShape` property.
Example

This example sets the shape of all WordArt on myDocument to a chevron whose center points down.

Set myDocument = ActivePresentation.Slides(1)
For Each s In myDocument.Shapes
    If s.Type = msoTextEffect Then
        s.TextEffect.PresetShape = msoTextEffectShapeChevronDown
    End If
Next
PresetTextEffect Property

Returns or sets the style of the specified WordArt. The values for this property correspond to the formats in the **WordArt Gallery** dialog box (numbered from left to right, top to bottom). Read/write **MsoPresetTextEffect**.

MsoPresetTextEffect can be one of these MsoPresetTextEffect constants.

- **msoTextEffect1**
- **msoTextEffect2**
- **msoTextEffect3**
- **msoTextEffect4**
- **msoTextEffect5**
- **msoTextEffect6**
- **msoTextEffect7**
- **msoTextEffect8**
- **msoTextEffect9**
- **msoTextEffect10**
- **msoTextEffect11**
- **msoTextEffect12**
- **msoTextEffect13**
- **msoTextEffect14**
- **msoTextEffect15**
- **msoTextEffect16**
- **msoTextEffect17**
- **msoTextEffect18**
- **msoTextEffect19**
- **msoTextEffect20**
- **msoTextEffect21**
- **msoTextEffect22**
- **msoTextEffect23**
msoTextEffect24
msoTextEffect25
msoTextEffect26
msoTextEffect27
msoTextEffect28
msoTextEffect29
msoTextEffect30
msoTextEffectMixed

expression.PresetTextEffect

expression Required. An expression that returns one of the objects in the Applies To list.
Remarks

Setting the **PresetTextEffect** property automatically sets many other formatting properties of the specified shape.
Example

This example sets the style for all WordArt on myDocument to the first style listed in the WordArt Gallery dialog box.

Set myDocument = ActivePresentation.Slides(1)
For Each s In myDocument.Shapes
    If s.Type = msoTextEffect Then
        s.TextEffect.PresetTextEffect = msoTextEffect1
    End If
Next
**PresetTexture Property**

Returns the preset texture for the specified fill. Read-only `MsoPresetTexture`.

MsoPresetTexture can be one of these `MsoPresetTexture` constants.

- `msoPresetTextureMixed`
- `msoTextureBlueTissuePaper`
- `msoTextureBouquet`
- `msoTextureBrownMarble`
- `msoTextureCanvas`
- `msoTextureCork`
- `msoTextureDenim`
- `msoTextureFishFossil`
- `msoTextureGranite`
- `msoTextureGreenMarble`
- `msoTextureMediumWood`
- `msoTextureNewsprint`
- `msoTextureOak`
- `msoTexturePaperBag`
- `msoTexturePapyrus`
- `msoTextureParchment`
- `msoTexturePinkTissuePaper`
- `msoTexturePurpleMesh`
- `msoTextureRecycledPaper`
- `msoTextureSand`
- `msoTextureStationery`
- `msoTextureWalnut`
- `msoTextureWaterDroplets`
- `msoTextureWhiteMarble`
- `msoTextureWovenMat`
expression.\texttt{PresetTexture}

expression  Required. An expression that returns one of the objects in the Applies To list.

Use the \texttt{PresetTextured} method to set the preset texture for the fill.
Example

This example adds a rectangle to the myDocument and sets its preset texture to match that of shape two. For the example to work, shape two must have a preset textured fill.

```vba
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes
    presetTexture2 = .Item(2).Fill.PresetTexture
    .AddShape(msoShapeRectangle, 100, 0, 40, 80).Fill _
        .PresetTextured presetTexture2
End With
```
PresetThreeDFormat Property

Returns the preset extrusion format. Each preset extrusion format contains a set of preset values for the various properties of the extrusion. The values for this property correspond to the options (numbered from left to right, top to bottom) displayed when you click the **3-D** button on the **Drawing** toolbar. Read-only

MsoPresetThreeDFormat can be one of these MsoPresetThreeDFormat constants.

- **msoPresetThreeDFormatMixed** The extrusion has a custom format rather than a preset format.
- **msoThreeD1**
- **msoThreeD2**
- **msoThreeD3**
- **msoThreeD4**
- **msoThreeD5**
- **msoThreeD6**
- **msoThreeD7**
- **msoThreeD8**
- **msoThreeD9**
- **msoThreeD10**
- **msoThreeD11**
- **msoThreeD12**
- **msoThreeD13**
- **msoThreeD14**
- **msoThreeD15**
- **msoThreeD16**
- **msoThreeD17**
- **msoThreeD18**
- **msoThreeD19**
msoThreeD20

expression.PresetThreeDFormat

expression  Required. An expression that returns one of the objects in the Applies To list.
Remarks

This property is read-only. To set the preset extrusion format, use the `SetThreeDFormat` method.
Example

This example sets the extrusion format for shape one on myDocument to 3D Style 12 if the shape initially has a custom extrusion format.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(1).ThreeD
    If .PresetThreeDFormat = msoPresetThreeDFormatMixed Then
        .SetThreeDFormat msoThreeD12
    End If
End With
PrintColorType Property

Returns or sets the way the specified document will be printed: in black and white, in pure black and white (also referred to as high contrast), or in color. The default value is set by the printer. Read/write PpPrintColorType.

PpPrintColorType can be one of these PpPrintColorType constants.

- ppPrintBlackAndWhite
- ppPrintColor
- ppPrintPureBlackAndWhite

expression.PrintColorType

expression Required. An expression that returns one of the objects in the Applies To list.
Example

This example prints the slides in the active presentation in color.

With Application.ActivePresentation
    .PrintOptions.PrintColorType = ppPrintColor
    .PrintOut
End With
PrintComments Property

Sets or returns whether comments will be printed. Read/write `MsoTriState`.

`MsoTriState` can be one of these `MsoTriState` constants.
- `msoCTrue` Doesn't apply to this property.
- `msoFalse` Default. Comments will not be printed.
- `msoTriStateMixed` Doesn't apply to this property.
- `msoTriStateToggle` Doesn't apply to this property.
- `msoTrue` Comments will be printed.

`expression.PrintComments`

`expression` Required. An expression that returns one of the objects in the Applies To list.
Example

This example instructs Microsoft PowerPoint to print comments.

Sub PrintPresentationComments
    ActivePresentation.PrintOptions.PrintComments = msoTrue
End Sub
PrintFontsAsGraphics Property

Determines whether TrueType fonts are printed as graphics. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants:

msoCTrue
msoFalse
msoTriStateMixed
msoTriStateToggle
msoTrue TrueType fonts are printed as graphics.
Example

This example specifies that TrueType fonts in the active presentation be printed as graphics.

ActivePresentation.PrintOptions.PrintFontsAsGraphics = msoTrue
PrintHiddenSlides Property

Determines whether hidden slides in the specified presentation will be printed. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.

msoCTrue
msoFalse Default.

msoTriStateMixed
msoTriStateToggle

msoTrue The hidden slides in the specified presentation will be printed.
Example

This example prints all slides, whether visible or hidden, in the active presentation.

With ActivePresentation
    .PrintOptions.PrintHiddenSlides = msoTrue
    .PrintOut
End With
PrintInBackground Property

Determines whether the specified presentation is printed in the background. Read/write \texttt{MsoTriState}.

\texttt{MsoTriState} can be one of these \texttt{MsoTriState} constants.
\begin{verbatim}
  msoCTrue
  msoFalse
  msoTriStateMixed
  msoTriStateToggle
  msoTrue
\end{verbatim}

\texttt{msoTrue} Default. The specified presentation is printed in the background, which means that you can continue to work while it's being printed.
**Example**

This example prints the active presentation in the background.

```vba
With ActivePresentation
    .PrintOptions.PrintInBackground = msoTrue
    .PrintOut
End With
```
PrintOptions Property

Returns a PrintOptions object that represents print options that are saved with the specified presentation. Read-only.
Example

This example causes hidden slides in the active presentation to be printed, and it scales the printed slides to fit the paper size.

```
With Application.ActivePresentation
    With .PrintOptions
        .PrintHiddenSlides = True
        .FitToPage = True
    End With
    .PrintOut
End With
```
PrintSteps Property

Returns the number of slides you’d need to print to simulate the builds on the specified slide, slide master, or range of slides. Read-only Long.
**Example**

This example sets a variable to the number of slides you'd need to print to simulate the builds on slide one in the active presentation and then displays the value of the variable.

```vba
steps1 = ActivePresentation.Slides(1).PrintSteps
MsgBox steps1
```
ProductCode Property

Returns the Microsoft PowerPoint globally unique identifier (GUID). You might use the GUID, for example, when making program calls to an Application Programming Interface (API). Read-only String.
Example

This example returns the PowerPoint GUID to the variable pptGUID.

Dim pptGUID As String
pptGUID = Application.ProductCode
ProgID Property

Returns the programmatic identifier (ProgID) for the specified OLE object. Read-only String.
Example

This example loops through all the objects on all the slides in the active presentation and sets all linked Microsoft Excel worksheets to be updated manually.

For Each sld In ActivePresentation.Slides
    For Each sh In sld.Shapes
        If sh.Type = msoLinkedOLEObject Then
            If sh.OLEFormat.ProgID = "Excel.Sheet" Then
            End If
        End If
    Next
Next
Show All
Property Property

Sets or returns an MsoAnimProperty constant that represents an animation property. Read/write.

MsoAnimProperty can be one of these MsoAnimProperty constants.

- msoAnimColor
- msoAnimHeigth
- msoAnimNone Default.
- msoAnimOpacity
- msoAnimRotation
- msoAnimShape3DExtrudeForward
- msoAnimShape3DExtrusionColor
- msoAnimShape3DXRotationAngle
- msoAnimShape3DYRotationAngle
- msoAnimShapefBackColor
- msoAnimShapefColor
- msoAnimShapefGradientPreset
- msoAnimShapefGradientType
- msoAnimShapeFlipH
- msoAnimShapeFlipV
- msoAnimShapefOn
- msoAnimShapefOpacity
- msoAnimShapefType
- msoAnimShapelColor
- msoAnimShapelDashes
- msoAnimShapelEndArrowHead
- msoAnimShapelEndArrowLength
- msoAnimShapelEndArrowWidth
- msoAnimShapelOn
msoAnimShapelStartArrowHead
msoAnimShapelStartArrowLength
msoAnimShapelStartArrowWidth
msoAnimShapelStyle
msoAnimShapelWidth
msoAnimShapepBrightness
msoAnimShapepContrast
msoAnimShapepCropFromBottom
msoAnimShapepCropFromLeft
msoAnimShapepCropFromRight
msoAnimShapepCropFromTop
msoAnimShapepFilename
msoAnimShapepGamma
msoAnimShapepGrayscale
msoAnimShapeRotation
msoAnimShapesColor
msoAnimShapesEmbossed
msoAnimShapesOffsetX
msoAnimShapesOffsetY
msoAnimShapesOn
msoAnimShapesOpacity
msoAnimShapesType
msoAnimShapeType
msoAnimShapewfontBold
msoAnimShapewfontItalic
msoAnimShapewfontName
msoAnimShapewfontShadow
msoAnimShapewfontSize
msoAnimShapewfontSmallCaps
msoAnimShapewfontStrikeThrough
msoAnimShapewfontUnderline
msoAnimShapewSpacing
msoAnimShapewVertical
expression.Property

expression  Required. An expression that returns one of the objects in the Applies To list.
Example

The following example adds a shape, adds a three-second fill animation to that shape, and sets the fill animation to color.

Sub AddShapeSetAnimFill()
    Dim effBlinds As Effect
    Dim shpRectangle As Shape
    Dim animProperty As AnimationBehavior

    Set shpRectangle = ActivePresentation.Slides(1).Shapes.AddShape(Type:=msoShapeRectangle, Left:=100, Top:=100, Width:=50, Height:=50)
    Set effBlinds = ActivePresentation.Slides(1).TimeLine.MainSequence.AddEffect(Shape:=shpRectangle, effectId:=msoAnimEffectBlinds)
    effBlinds.Timing.Duration = 3

    Set animProperty = effBlinds.Behaviors.Add(msoAnimTypeProperty)

    With animProperty.PropertyEffect
        .Property = msoAnimColor
        .From = RGB(Red:=0, Green:=0, Blue:=255)
        .To = RGB(Red:=255, Green:=0, Blue:=0)
    End With
End Sub
PropertyEffect Property

- Returns a PropertyEffect object for a given animation behavior.

expression.PropertyEffect

expression  Required. An expression that returns one of the objects in the Applies To list.
Example

The following example adds a shape with an effect to the active presentation and sets the animation effect properties for the shape to change colors.

Sub AddShapeSetAnimFill()
    Dim effBlinds As Effect
    Dim shpRectangle As Shape
    Dim animBlinds As AnimationBehavior

    'Adds rectangle and sets animation effect
    Set shpRectangle = ActivePresentation.Slides(1).Shapes _
        .AddShape(Type:=msoShapeRectangle, Left:=100, _
            Top:=100, Width:=50, Height:=50)
    Set effBlinds = ActivePresentation.Slides(1).TimeLine.MainSequence _
        .AddEffect(Shape:=shpRectangle, effectId:=msoAnimEffectBlinds)

    'Sets the duration of the animation
    effBlinds.Timing.Duration = 3

    'Adds a behavior to the animation
    Set animBlinds = effBlinds.Behaviors.Add(msoAnimTypeProperty)

    'Sets the animation color effect and the formula to use
    With animBlinds.PropertyEffect
        .Property = msoAnimColor
        .From = RGB(Red:=0, Green:=0, Blue:=255)
        .To = RGB(Red:=255, Green:=0, Blue:=0)
    End With
End Sub
PublishObjects Property

Returns a PublishObjects collection representing the set of complete or partial loaded presentations that are available to publish to HTML. Read-only.
Example

This example publishes slides three through five of the active presentation to HTML. It names the published presentation Mallard.htm.

With ActivePresentation.PublishObjects.Item(1)
    .FileName = "C:\Test\Mallard.htm"
    .SourceType = ppPublishSlideRange
    .RangeStart = 3
    .RangeEnd = 5
    .Publish
End With
RangeEnd Property

Returns or sets the number of the last slide in a range of slides you are publishing as a Web presentation. Read/write Integer.
**Example**

This example publishes slides three through five of the active presentation to HTML. It names the published presentation Mallard.htm.

```vbnet
With ActivePresentation.PublishObjects(1)
    .FileName = "C:\Test\Mallard.htm"
    .SourceType = ppPublishSlideRange
    .RangeStart = 3
    .RangeEnd = 5
    .Publish
End With
```
Ranges Property

Returns the `PrintRanges` object, which represents the ranges of slides in the presentation to be printed. Read-only.
Remarks

If you don't want to print an entire presentation, you must use the Add method to create a PrintRange object for each consecutive run of slides you want to print. For example, if you want to print slide 1, slides 3 through 5, and slides 8 and 9 in a specified presentation, you must create three PrintRange objects: one that represents slide 1; one that represents slides 3 through 5; and one that represents slides 8 and 9. For more information, see the example for this property.

The RangeType property must be set to ppPrintSlideRange for the ranges in the PrintRanges collection to be applied.

To clear all the existing print ranges from the PrintRanges collection, use the ClearAll method.

Specifying a value for the To and From arguments of the PrintOut method sets the contents of the PrintRanges object.
Example

This example prints slide 1, slides 3 through 5, and slides 8 and 9 in the active presentation.

With ActivePresentation
    With .PrintOptions
        .RangeType = ppPrintSlideRange
        With .Ranges
            .Add 1, 1
            .Add 3, 5
            .Add 8, 9
        End With
    End With
End With
RangeStart Property

Returns or sets the number of the first slide in a range of slides you are publishing as a Web presentation. Read/write Integer.
Example

This example publishes slides three through five of the active presentation to HTML. It names the published presentation Mallard.htm.

```
With ActivePresentation.PublishObjects(1)
    .FileName = "C:\Test\Mallard.htm"
    .SourceType = ppPublishSlideRange
    .RangeStart = 3
    .RangeEnd = 5
    .Publish
End With
```
**RangeType Property**

- **RangeType property as it applies to the PrintOptions object.**

  Returns or sets the type of print range for the presentation. Read/write **PpPrintRangeType**.

  PpPrintRangeType can be one of these PpPrintRangeType constants.
  - ppPrintAll
  - ppPrintCurrent
  - ppPrintNamedSlideShow
  - ppPrintSelection
  - ppPrintSlideRange

  `expression.RangeType`

  `expression`  Required. An expression that returns one of the above objects.

- **RangeType property as it applies to the SlideShowSettings object.**

  Returns or sets the type of slide show to run. Read/write **PpSlideShowRangeType**.

  PpSlideShowRangeType can be one of these PpSlideShowRangeType constants.
  - ppShowAll
  - ppShowNamedSlideShow
  - ppShowSlideRange

  `expression.RangeType`

  `expression`  Required. An expression that returns one of the above objects.
Remarks

To print the slides ranges you've defined in the PrintRanges collection, you must first set the RangeType property to ppPrintSlideRange. Setting RangeType to anything other than ppPrintSlideRange means that the ranges you've defined in the PrintRanges collection won't be applied. However, this doesn't affect the contents of the PrintRanges collection in any way. That is, if you define some print ranges, set the RangeType property to a value other than ppPrintSlideRange, and then later set RangeType back to ppPrintSlideRange, the print ranges you defined before will remain unchanged.

Specifying a value for the To and From arguments of the PrintOut method sets the value of this property.
Example

- **As it applies to the `PrintOptions` object.**

  This example prints the current slide the active presentation.

  ```vba
  With ActivePresentation
    .PrintOptions.RangeType = ppPrintCurrent
    .PrintOut
  End With
  ```

- **As it applies to the `SlideShowSettings` object.**

  This example runs the named slide show "Quick Show."

  ```vba
  With ActivePresentation.SlideShowSettings
    .RangeType = ppShowNamedSlideShow
    .SlideShowName = "Quick Show"
    .Run
  End With
  ```
ReadOnly Property

Returns whether the specified presentation is read-only. Read-only MsoTriState.

MsoTriState can be one of these MsoTriState constants.

msoCTrue
msoFalse
msoTriStateMixed
msoTriStateToggle
msoTrue The specified presentation is read-only.
**Example**

If the active presentation is read-only, this example saves it as Newfile.ppt.

```
With Application.ActivePresentation
    If .ReadOnly Then .SaveAs FileName:="newfile"
End With
```
Registered Property

Returns whether the specified add-in is registered in the Windows registry. Read/write **MsoTriState**.

MsoTriState can be one of these MsoTriState constants.

- **msoCTrue**
- **msoFalse**
- **msoTriStateMixed**
- **msoTriStateToggle**
- **msoTrue** The specified add-in is registered in the Windows registry.
Example

This example registers the add-in named "MyTools" in the Windows registry.

Application.Addins("MyTools").Registered = msoTrue
Relative Property

\textbf{MsoTrue} to set the motion position relative to the position of the shape. This property is only used in conjunction with motion paths. Read/write.

\textbf{MsoTriState} can be one of these \textbf{MsoTriState} constants.

\textbf{msoCTrue} Doesn't apply to this property.
\textbf{msoFalse} Default. The motion path is absolute.
\textbf{msoTriStateMixed} Doesn't apply to this property.
\textbf{msoTriStateToggle} Doesn't apply to this property.
\textbf{msoTrue} The motion path is relative.

\textit{expression} . \textit{Relative}

\textit{expression} Required. An expression that returns one of the objects in the Applies To list.
Example

The following example adds a shape, adds an animated motion path to the shape, and reports on its motion path relativity.

Sub AddShapeSetAnimPath()
    Dim effDiamond As Effect
    Dim shpCube As Shape

    Set shpCube = ActivePresentation.Slides(1).Shapes.AddShape(Type:=msoShapeCube, Left:=100, _
        Top:=100, Width:=50, Height:=50)
    Set effDiamond = ActivePresentation.Slides(1).TimeLine.MainSequence.AddEffect(Shape:=shpCube, effectId:=msoAnimEffectPathDiamond)
    effDiamond.Timing.Duration = 3
    MsgBox "Is motion path relative or absolute: " & _
        effDiamond.EffectParameters.Relative & vbCrLf & _
        "0 = Relative, -1 = Absolute"
End Sub
RelativeSize Property

Returns or sets the bullet size relative to the size of the first text character in the paragraph. Can be a floating-point value from 0.25 through 4, indicating that the bullet size can be from 25 percent through 400 percent of the text-character size. Read/write Single.
Example

This example sets the formatting for the bullet in shape two on slide one in the active presentation. The size of the bullet is 125 percent of the size of the first text character in the paragraph.

```vba
With ActivePresentation.Slides(1).Shapes(2)
        .Visible = True
        .RelativeSize = 1.25
        .Character = 169
    With .Font
        .Name = "Symbol"
        .Color.RGB = RGB(255, 0, 0)
    End With
End With
End With
```
RelyOnVML Property

Determines whether image files are generated from drawing objects when you save or publish a complete or partial presentation as a Web page. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.

**msoCTrue**

**msoFalse** Default. Images are not generated from drawing objects when you save or publish a complete or partial presentation as a Web page.

**msoTriStateMixed**

**msoTriStateToggle**

**msoTrue** Image files are generated from drawing objects when you save or publish a complete or partial presentation as a Web page.
Remarks

You can reduce file sizes by not generating images for drawing objects, if your Web browser supports Vector Markup Language (VML). For example, Microsoft Internet Explorer 5 and higher support this feature, and you should set the RelyOnVML property to msoTrue if you are targeting this browser. For browsers that do not support VML, the image will not appear when you view a Web page saved with this property set to msoTrue.

For example, you should not generate images if your Web page uses image files that you have generated earlier, and if the location where you save the presentation is different from the final location of the page on the Web server.
**Example**

This example specifies that image files are generated when saving or publishing the active presentation to a Web page.

`ActivePresentation.WebOptions.ReplyOnVML = msoFalse`
RemovePersonalInformation Property

MsoTriState for Microsoft PowerPoint to remove all user information from comments, revisions, and the Properties dialog box upon saving a presentation. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.

msoCTrue Doesn't apply to this property.

msoFalse Comments, revisions, and personal information remain in the presentation.

msoTriStateMixed Doesn't apply to this property.

msoTriStateToggle Doesn't apply to this property.

msoTrue Removes comments, revisions, and personal information when saving presentation.

expression.RemovePersonalInformation

expression Required. An expression that returns one of the objects in the Applies To list.
Example

This example sets the active presentation to remove personal information the next time the user saves it.

Sub RemovePersonalInfo()
    ActivePresentation.RemovePersonalInformation = msoTrue
End Sub
RepeatCount Property

Sets or returns an **Long** that represents the number of times to repeat an animation. Read/write.

`expression.RepeatCount`

`expression` Required. An expression that returns one of the objects in the Applies To list.
**Example**

This example creates a shape and adds an animation to it, then repeats the animation twice.

```vba
Sub AddShapeSetTiming()
    Dim effDiamond As Effect
    Dim shpRectangle As Shape

    Set shpRectangle = ActivePresentation.Slides(1).Shapes.
        .AddShape(Type:=msoShapeRectangle, Left:=100, _
        Top:=100, Width:=50, Height:=50)
    Set effDiamond = ActivePresentation.Slides(1).TimeLine.MainSequence.
        .AddEffect(Shape:=shpRectangle, effectId:=msoAnimEffectPathDiamond)

    With effDiamond.Timing
        .Duration = 5 ' Length of effect.
        .RepeatCount = 2 ' How many times to repeat.
    End With
End Sub
```
RepeatDuration Property

Sets or returns a **Single** that represents, in seconds, how long repeated animations should last. Read/write.

**expression.**RepeatDuration

**expression**  Required. An expression that returns one of the objects in the Applies To list.
Remarks

An animation will stop at the end of its time sequence or the value of the RepeatDuration property, whichever is shorter.
Example

This example adds a shape and an animation to it, then repeats the animation ten times. However, after five seconds, the animation will be cut off, even though the animation is dimensioned for a 20-second timeline (if the **Duration** property is not specified, an animation defaults to two seconds).

Sub AddShapeSetTiming()
    Dim effDiamond As Effect
    Dim shpRectangle As Shape

    'Adds new shape and sets animation effect
    Set shpRectangle = ActivePresentation.Slides(1).Shapes._
        .AddShape(Type:=msoShapeRectangle, Left:=100, _
            Top:=100, Width:=50, Height:=50)
    Set effDiamond = ActivePresentation.Slides(1).TimeLine.MainSequence._
        .AddEffect(Shape:=shpRectangle, effectId:=msoAnimEffectPathD

    'Sets repeat duration and number of times to repeat animation
    With effDiamond.Timing
        .RepeatDuration = 5
        .RepeatCount = 10
    End With

End Sub
ResizeGraphics Property

Determines whether slides and any graphics on them are sized to fit the Web page display area of the target Web browser. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.

msoCTrue
msoFalse Slides and graphics remain the size they are in the source presentation, regardless of the Web browser display area.

msoTriStateMixed
msoTriStateToggle

msoTrue Default. Slides and any graphics on them are sized to fit the Web page display area of the target Web browser.
Example

This example sets graphics in the specified Web presentation to be resized for the target Web browser. It then publishes the complete presentation, with speaker's notes, to a file named "Mallard.htm."

With Presentations(2)
  .WebOptions.ResizeGraphics = msoTrue
  With .PublishObjects(1)
    .FileName = "C:\Mallard.htm"
    .SourceType = ppPublishAll
    .SpeakerNotes = True
    .Publish
  End With
End With
Restart Property

Sets or returns an **MsoAnimEffectRestart** constant that represents whether the animation effect restarts after the effect has started once. Read/write.

MsoAnimEffectRestart can be one of these MsoAnimEffectRestart constants.

- **msoAnimEffectRestartAlways**
- **msoAnimEffectRestartNever** Default.
- **msoAnimEffectRestartWhenOff**

*expression*.Restart

*expression*  Required. An expression that returns one of the objects in the Applies To list.
Example

The following example adds a shape and an animation to it, then sets the animation's restart behavior.

Sub AddShapeSetTiming()
    Dim effDiamond As Effect
    Dim shpRectangle As Shape

    'Adds shape and sets animation
    Set shpRectangle = ActivePresentation.Slides(1).Shapes.
        .AddShape(Type:=msoShapeRectangle, Left:=100, Top:=100, _
            Width:=50, Height:=50)
    Set effDiamond = ActivePresentation.Slides(1).Timeline.MainSequence.
        .AddEffect(Shape:=shpRectangle, effectId:=msoAnimEffectPathDiamond)

    With effDiamond.Timing
        .Duration = 3
        .RepeatDuration = 5
        .RepeatCount = 3
        .Restart = msoAnimEffectRestartAlways
    End With
End Sub
Reverse Property

Sets or returns an **MsoTriState** constant that represents a diagram's reverse state. Read/write.

**MsoTriState** can be one of these **MsoTriState** constants.
- **msoCTrue** Doesn't apply to this property.
- **msoFalse** The diagram is not reversed.
- **msoTriStateMixed** Doesn't apply to this property.
- **msoTriStateToggle** Doesn't apply to this property.
- **msoTrue** The diagram is reversed.

`expression.Reverse`

`expression`  Required. An expression that returns one of the objects in the Applies To list.
Remarks

This method generates an error if the value of the target diagram's Type property is an organization chart (msoDiagramTypeOrgChart).
Example

The following example creates a pyramid diagram, and reverses its coloring.

Sub ReversePyramidDiagram()
    Dim dgnNode As DiagramNode
    Dim shpDiagram As Shape
    Dim intNodes As Integer

    'Adds a pyramid diagram and first child node
    Set shpDiagram = ActivePresentation.Slides(1).Shapes.AddDiagram
        (Type:=msoDiagramPyramid, Left:=10, Top:=15, _
         Width:=400, Height:=475)

    'Adds three additional nodes to diagram
    For intNodes = 1 To 3
        dgnNode.AddNode
    Next intNodes

    'Automatically places nodes, and reverses node order
    With dgnNode.Diagram
        .AutoLayout = msoTrue
        .Reverse = msoTrue
    End With
End Sub
RewindAtEnd Property

Sets or returns an **MsoTriState** constant that represents whether an object returns to its beginning position after an animation has ended. Read/write.

**MsoTriState** can be one of these **MsoTriState** constants.

- **msoCTrue** Doesn't apply to this property.
- **msoFalse** Default. The object does not return to its beginning position after an animation has ended.
- **msoTriStateMixed** Doesn't apply to this property.
- **msoTriStateToggle** Doesn't apply to this property.
- **msoTrue** The object returns to its beginning position after an animation has ended.

`expression.RewindAtEnd`

`expression` Required. An expression that returns one of the objects in the Applies To list.
Example

The following example adds a shape and an animation to the shape, then instructs the shape to return to its beginning position after the animation has ended.

Sub AddShapeSet Timing()
    Dim effDiamond As Effect
    Dim shpRectangle As Shape

    'Adds shape and sets animation effect
    Set shpRectangle = ActivePresentation.Slides(1).Shapes _
        .AddShape(Type:=msoShapeRectangle, Left:=100, _
            Top:=100, Width:=50, Height:=50)
    Set effDiamond = ActivePresentation.Slides(1).TimeLine.MainSequence _
        .AddEffect(Shape:=shpRectangle, effectId:=msoAnimEffectPathDiamond)

    'Sets duration of animation and returns shape to its original po
    With effDiamond.Timing
        .Duration = 3
        .RewindAtEnd = msoTrue
    End With
End Sub
RewindMovie Property

Determines whether the first frame of the specified movie is automatically redisplayed as soon as the movie has finished playing. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.
- msoFalse
- msoTriStateMixed
- msoTriStateToggle

msoTrue The first frame of the specified movie is automatically redisplayed as soon as the movie has finished playing.
Example

This example specifies that the first frame of the movie represented by shape three on slide one in the active presentation will be automatically redisplayed when the movie has finished playing. Shape three must be a movie object.

```vba
Set OLEobj = ActivePresentation.Slides(1).Shapes(3)
OLEobj.AnimationSettings.PlaySettings.RewindMovie = msoTrue
```
RGB Property

- RGB property as it applies to the ColorFormat object.

Returns or sets the red-green-blue (RGB) value of the specified color. Read/write Long.

- RGB property as it applies to the RGBColor object.

Returns or sets the red-green-blue (RGB) value of a specified color-scheme color or extra color when used with a read/write PpColorSchemeIndex constant. The Colors method is used to return the RGBColor object.

PpColorSchemeIndex can be one of these PpColorSchemeIndex constants.

ppAccent1
ppAccent2
ppAccent3
ppBackground
ppFill
ppForeground
ppShadow
ppTitle
Example

As it applies to the **ColorFormat** object.

This example sets the background color for color scheme three in the active presentation and then applies the color scheme to all slides in the presentation that are based on the slide master.

```vba
With ActivePresentation
    Set cs1 = .ColorSchemes(3)
    cs1.Colors(ppBackground).RGB = RGB(128, 128, 0)
    .SlideMaster.ColorScheme = cs1
End With
```

As it applies to the **RGBColor** object.

This example displays the value of the red, green, and blue components of the fill forecolor for shape one on slide one in the active document.

```vba
Set myDocument = ActivePresentation.Slides(1)
c = myDocument.Shapes(1).Fill.ForeColor.RGB
redComponent = c Mod 256
greenComponent = c \ 256 Mod 256
blueComponent = c \ 65536 Mod 256
MsgBox "RGB components: " & redComponent & ", " & greenComponent & ", " & blueComponent
```
Root Property

Returns a DiagramNode object that represents the root diagram node to which the source diagram node belongs.

expression.Root

expression Required. An expression that returns one of the objects in the Applies To list.
Example

The following example creates an organization chart and adds child nodes to the root diagram node.

Sub AddChildNodesToRoot()
    Dim dgnNode As DiagramNode
    Dim shpOrgChart As Shape
    Dim intNodes As Integer

    'Adds organization chart and first node
    Set shpOrgChart = ActivePresentation.Slides(1).Shapes(1).AddDiagram(Type:=msoDiagramOrgChart, Left:=10, Top:=15, Width:=400, Height:=475)
    shpOrgChart.DiagramNode.Children.AddNode

    Set dgnNode = shpOrgChart.DiagramNode.Root

    'Adds three child nodes to root node
    For intNodes = 1 To 3
        dgnNode.Children.AddNode
    Next intNodes
End Sub
RotatedChars Property

Determines whether characters in the specified WordArt are rotated 90 degrees relative to the WordArt's bounding shape. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.

msoCTrue
msoFalse Characters in the specified WordArt retain their original orientation relative to the bounding shape.
msoTriStateMixed
msoTriStateToggle
msoTrue Characters in the specified WordArt are rotated 90 degrees relative to the WordArt's bounding shape.
Remarks

If the WordArt has horizontal text, setting the `RotatedChars` property to `msoTrue` rotates the characters 90 degrees counterclockwise. If the WordArt has vertical text, setting the `RotatedChars` property to `msoFalse` rotates the characters 90 degrees clockwise. Use the `ToggleVerticalText` method to switch between horizontal and vertical text flow.

The `Flip` method and `Rotation` property of the `Shape` object and the `RotatedChars` property and `ToggleVerticalText` method of the `TextEffectFormat` object all affect the character orientation and direction of text flow in a `Shape` object that represents WordArt. You may have to experiment to find out how to combine the effects of these properties and methods to get the result you want.
Example

This example adds WordArt that contains the text "Test" to myDocument and rotates the characters 90 degrees counterclockwise.

```vba
Set myDocument = ActivePresentation.Slides(1)
Set newWordArt = myDocument.Shapes.AddTextEffect _
    (PresetTextEffect:=msoTextEffect1, Text:="Test", _
     FontName:="Arial Black", FontSize:=36, _
     FontBold:=msoFalse, FontItalic:=msoFalse, Left:=10, Top:=10)
newWordArt.TextEffect.RotatedChars = msoTrue
```
Rotation Property

Returns or sets the number of degrees the specified shape is rotated around the z-axis. A positive value indicates clockwise rotation; a negative value indicates counterclockwise rotation. Read/write Single
Remarks

To set the rotation of a three-dimensional shape around the x-axis or the y-axis, use the `RotationX` property or the `RotationY` property of the `ThreeDFormat` object.
**Example**

This example matches the rotation of all shapes on myDocument to the rotation of shape one.

```vba
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes
    sh1Rotation = .Item(1).Rotation
    For o = 1 To .Count
        .Item(o).Rotation = sh1Rotation
    Next
End With
```
RotationEffect Property

- Returns a RotationEffect object for an animation behavior.

expression.RotationEffect

expression  Required. An expression that returns one of the objects in the Applies To list.
Example

The following example adds a new shape to the first slide and sets the rotation animation behavior.

Sub AddRotation()

    Dim shpNew As Shape
    Dim effNew As Effect
    Dim aniNew As AnimationBehavior

    Set shpNew = ActivePresentation.Slides(1).Shapes(1).AddShape(Type:=msoShape5pointStar, Left:=0, Top:=0, Width:=100, Height:=100)
    Set effNew = ActivePresentation.Slides(1).TimeLine.MainSequence.AddEffect(Shape:=shpNew, effectId:=msoAnimEffectCustom)
    Set aniNew = effNew.Behaviors.Add(msoAnimTypeRotation)

    With aniNew.RotationEffect
        'Rotate 270 degrees from current position
        .By = 270
    End With

End Sub
RotationX Property

Returns or sets the rotation of the extruded shape around the x-axis, in degrees. Can be a value from –90 through 90. A positive value indicates upward rotation; a negative value indicates downward rotation. Read/write Single.
Remarks

To set the rotation of the extruded shape around the y-axis, use the `RotationY` property of the `ThreeDFormat` object. To set the rotation of the extruded shape around the z-axis, use the `Rotation` property of the `Shape` object. To change the direction of the extrusion's sweep path without rotating the front face of the extrusion, use the `SetExtrusionDirection` method.
Example

This example adds three identical extruded ovals to myDocument and sets their rotation around the x-axis to $-30$, $0$, and $30$ degrees, respectively.

```vba
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes
    With .AddShape(msoShapeOval, 30, 60, 50, 25).ThreeD
        .Visible = True
        .RotationX = -30
    End With
    With .AddShape(msoShapeOval, 90, 60, 50, 25).ThreeD
        .Visible = True
        .RotationX = 0
    End With
    With .AddShape(msoShapeOval, 150, 60, 50, 25).ThreeD
        .Visible = True
        .RotationX = 30
    End With
End With
```
RotationY Property

Returns or sets the rotation of the extruded shape around the y-axis, in degrees. Can be a value from –90 through 90. A positive value indicates rotation to the left; a negative value indicates rotation to the right. Read/write Single.
Remarks

To set the rotation of the extruded shape around the x-axis, use the `RotationX` property of the `ThreeDFormat` object. To set the rotation of the extruded shape around the z-axis, use the `Rotation` property of the `Shape` object. To change the direction of the extrusion's sweep path without rotating the front face of the extrusion, use the `SetExtrusionDirection` method.
**Example**

This example adds three identical extruded ovals to *myDocument* and sets their rotation around the y-axis to $-30$, $0$, and $30$ degrees, respectively.

```vba
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes
    With .AddShape(msoShapeOval, 30, 30, 50, 25).ThreeD
        .Visible = True
        .RotationY = -30
    End With
    With .AddShape(msoShapeOval, 30, 70, 50, 25).ThreeD
        .Visible = True
        .RotationY = 0
    End With
    With .AddShape(msoShapeOval, 30, 110, 50, 25).ThreeD
        .Visible = True
        .RotationY = 30
    End With
End With
```
Rows Property

Returns a **Rows** collection that represents all the rows in a table. Read-only.

For information about returning a single member of a collection, see [Returning an Object from a Collection](#).
Example

This example deletes the third row from the table in shape five of slide two in the active presentation.

ActivePresentation.Slides(2).Shapes(5).Table.Rows(3).Delete

This example applies a dashed line style to the bottom border of the second row of table cells.

ActiveWindow.Selection.ShapeRange.Table.Rows(2)_
Ruler Property

Returns a `Ruler` object that represents the ruler for the specified text. Read-only.
Example

This example sets a left-aligned tab stop at 2 inches (144 points) for the text in shape two on myDocument.

Set myDocument = ActivePresentation.Slides(1)
    .Add ppTabStopLeft, 144
Run Property

Returns or sets the name of the presentation or macro to be run when the specified shape is clicked or the mouse pointer passes over the shape during a slide show. The Action property must be set to `ppActionRunMacro` or `ppActionRunProgram` for this property to affect the slide show action. Read/write String.
Remarks

If the value of the Action property is `ppActionRunMacro`, the specified string value should be the name of a global macro that's currently loaded. If the value of the Action property is `ppActionRunProgram`, the specified string value should be the full path and file name of a program.

You can set the Run property to a macro that takes no arguments or a macro that takes a single Shape or Object argument. The shape that was clicked during the slide show will be passed as this argument.
Example

This example specifies that the CalculateTotal macro be run whenever the mouse pointer passes over the shape during a slide show.

With ActivePresentation.Slides(1) _
    .Shapes(3).ActionSettings(ppMouseOver)
        .Action = ppActionRunMacro
        .Run = "CalculateTotal"
        .AnimateAction = True
End With
Saved Property

- Saves whether changes have been made to a presentation since it was last saved. Read/write **MsoTriState**.

MsoTriState can be one of these MsoTriState constants.

- **msoCTrue**
- **msoFalse**
- **msoTriStateMixed**
- **msoTriStateToggle**
- **msoTrue** No changes have been made to a presentation since it was last saved.
Remarks

If the Saved property of a modified presentation is set to msoTrue, the user won't be prompted to save changes when closing the presentation, and all changes made to it since it was last saved will be lost.
Example

This example saves the active presentation if it's been changed since the last time it was saved.

```vbnet
With Application.ActivePresentation
    If Not .Saved And .Path <> "" Then .Save
End With
```
SaveNewWebPagesAsWebArchives Property

MsoTrue for Microsoft PowerPoint to save new Web pages as Web archives. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.
  msoCTrue Doesn't apply to this property.
  msoFalse Saves new Web pages as individual Web pages.
  msoTriStateMixed Doesn't apply to this property.
  msoTriStateToggle Doesn't apply to this property.
  msoTrue Saves new Web pages as Web archives.

expression.SaveNewWebPagesAsWebArchives

expression Required. An expression that returns one of the objects in the Applies To list.
Remarks

Setting the `SaveNewWebPagesAsWebArchives` property won't change the format of any currently open Web pages. You must individually save open Web pages and explicitly set the Web page format using the `SaveAs` method.
Example

This example enables the **SaveNewWebPagesAsWebArchives** property, so that when new Web pages are saved, they are saved as Web archives.

```vba
Sub SetWebOption()
    Application.DefaultWebOptions.
        .SaveNewWebPagesAsWebArchives = True
End Sub
```
ScaleEffect Property

- Returns a `ScaleEffect` object for a given animation behavior.

\[ expression.ScaleEffect \]

- Required. An expression that returns one of the objects in the Applies To list.
Example

This example scales the first shape on the first slide starting at zero and increasing in size until it reaches 100 percent of its original size.

Sub ChangeScale()
    Dim shpFirst As Shape
    Dim effNew As Effect
    Dim aniScale As AnimationBehavior
    Set shpFirst = ActivePresentation.Slides(1).Shapes(1)
    Set effNew = ActivePresentation.Slides(1).TimeLine.MainSequence.AddEffect(Shape:=shpFirst, effectId:=msoAnimEffectCustom)
    Set aniScale = effNew.Behaviors.Add(msoAnimTypeScale)
    With aniScale.ScaleEffect
    'Starting size
    .FromX = 0
    .FromY = 0
    'Size after scale effect
    .ToX = 100
    .ToY = 100
    End With
End Sub
**SchemeColor Property**

Returns or sets the color in the applied color scheme that's associated with the specified object. Read/write `PpColorSchemeIndex`.

PpColorSchemeIndex can be one of these PpColorSchemeIndex constants.  
`ppAccent1`  
`ppAccent2`  
`ppAccent3`  
`ppBackground`  
`ppFill`  
`ppForeground`  
`ppNotSchemeColor`  
`ppSchemeColorMixed`  
`ppShadow`  
`pageTitle`

`expression.SchemeColor`

`expression`  Required. An expression that returns one of the objects in the Applies To list.
**Example**

This example switches the background color on slide one in the active presentation between an explicit red-green-blue value and the color-scheme background color.

```vba
With ActivePresentation.Slides(1)
    .FollowMasterBackground = False
    With .Background.Fill.ForeColor
        If .Type = msoColorTypeScheme Then
            .RGB = RGB(0, 128, 128)
        Else
            .SchemeColor = ppBackground
        End If
    End With
End With
```
ScreenSize Property

Returns or sets the ideal minimum screen size (width by height, in pixels) that you should use when viewing the saved presentation in a Web browser. Read/write [MsoScreenSize](#).

MsoScreenSize can be one of these MsoScreenSize constants.

- `msoScreenSize1024x768`
- `msoScreenSize1152x882`
- `msoScreenSize1152x900`
- `msoScreenSize1280x1024`
- `msoScreenSize1600x1200`
- `msoScreenSize1800x1440`
- `msoScreenSize1920x1200`
- `msoScreenSize544x376`
- `msoScreenSize640x480`
- `msoScreenSize720x512`
- `msoScreenSize800x600` Default.

`expression.ScreenSize`

`expression` Required. An expression that returns one of the objects in the Applies To list.
Example

This example sets the target screen size to 640x480 pixels.

```
Presentations(2).WebOptions.ScreenSize = _
    msoScreenSize640x480
```
ScreenTip Property

Returns or sets the ScreenTip text of a hyperlink. Read/write String.
Remarks

ScreenTip text appears, for example, when you save a presentation to HTML, view it in a Web browser, and rest the mouse pointer over a hyperlink. Some browsers may not support ScreenTips.
Example

This example sets the ScreenTip text for the first hyperlink.

ActivePresentation.Slides(1).Hyperlinks(1).ScreenTip = "Go to the Microsoft home page"
Returns a `Script` object that represents a block of script code on a Microsoft PowerPoint slide. In PowerPoint, script is associated with an anchor shape. If no script is associated with the specified shape, then nothing is returned. Read-only.
Remarks

Script code inserted on a slide can only be run in Web presentations.

By default, script anchor shapes are not visible. To make them visible, use the PowerPoint user interface. You cannot make script anchor shapes visible with Visual Basic code.

It is possible to use the **Script** property on a range of shapes (`ShapeRange.Script`) instead of specifying a single anchor shape. However, if the range contains more than one shape, your code will not work and will return a message that indicates the **Script** property cannot be accessed.
Example

This example sets the scripting language for the script anchor (shape eight on slide one) to Microsoft Visual Basic Scripting Edition (VBScript).

```vbscript
With ActivePresentation.Slides(1).Shapes(8)
    .Script.Language = msoScriptLanguageVisualBasic
End With
```
Scripts Property

Returns a Scripts collection that represents all Script objects (blocks of script code) in a presentation. Read-only.
Remarks

Script code, represented by a **Script** object, can be run only in a Web presentation.
SegmentType Property

Returns a value that indicates whether the segment associated with the specified node is straight or curved. Read-only **MsoSegmentType**.

MsoSegmentType can be one of these MsoSegmentType constants.

- **msoSegmentCurve** The SegmentType property returns this value if the specified node is a control point for a curved segment.
- **msoSegmentLine**

```
expression.SegmentType
```

*expression*   Required. An expression that returns one of the objects in the Applies To list.
Remarks

This property is read-only. Use the SetSegmentType method to set the value of this property.
Example

This example changes all straight segments to curved segments in shape three on myDocument. Shape three must be a freeform drawing.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(3).Nodes
    n = 1
    While n <= .Count
        If .Item(n).SegmentType = msoSegmentLine Then
            .SetSegmentType n, msoSegmentCurve
        End If
        n = n + 1
    Wend
End With
Selected Property

True if the specified table cell is selected. Read-only Boolean.

expression.Selected

expression Required. An expression that returns one of the objects in the Applies To list.
Example

This example puts a border around the first cell in the specified table if the cell is selected.

Sub IsCellSelected()
    Dim celSelected As Cell
    Set celSelected = ActivePresentation.Slides(1).Shapes(1) 
        .Table.Columns(1).Cells(1)
    If celSelected.Selected Then
        With celSelected
            .Borders(ppBorderTop).DashStyle = msoLineRoundDot
            .Borders(ppBorderBottom).DashStyle = msoLineRoundDot
            .Borders(ppBorderLeft).DashStyle = msoLineRoundDot
            .Borders(ppBorderRight).DashStyle = msoLineRoundDot
        End With
    End If
End Sub
Selection Property

Returns a Selection object that represents the selection in the specified document window. Read-only.
Example

If there's text selected in the active window, this example makes the text italic.

```vba
With Application.ActiveWindow.Selection
    If .Type = ppSelectionText Then
        .TextRange.Font.Italic = True
    End If
End With
```
Shadow Property

- Shadow property as it applies to the Font object.

Determines whether the specified text has a shadow. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.
- msoCTrue
- msoFalse The specified text doesn't have a shadow.
- msoTriStateMixed Some of the text has a shadow and some doesn't.
- msoTriStateToggle
- msoTrue The specified text has a shadow.

expression.Shadow

expression Required. An expression that returns one of the above objects.

- Shadow property as it applies to the Shape and ShapeRange objects.

Returns a read/write ShadowFormat object that contains shadow formatting properties for the specified shape or shapes.

expression.Shadow

expression Required. An expression that returns one of the above objects.
Example

As it applies to the **Font** object.

This example adds a shadow to the title text on slide one in the active presentation.

```vba
Application.ActivePresentation.Slides(1).Shapes.Title _
```

As it applies to the **Shape** and **ShapeRange** objects.

This example adds a shadowed rectangle to slide one in the active presentation. The blue, embossed shadow is offset 3 points to the right of and 2 points down from the rectangle.

```vba
Set myShap = Application.ActivePresentation.Slides(1).Shapes
With myShap.AddShape(msoShapeRectangle, 10, 10, 150, 90).Shadow
    .Type = msoShadow17
    .ForeColor.RGB = RGB(0, 0, 128)
    .OffsetX = 3
    .OffsetY = 2
End With
```
Shape Property

Returns a Shape object that represents a shape in a table cell (for the Cell object), a diagram node in a diagram (for the DiagramNode object), or an animated shape (for the Effect object).

expression.Shape

expression  Required. An expression that returns one of the above objects.
Example

This example creates a 3x3 table in a new presentation and inserts a four-pointed star into the first cell of the table.

With Presentations.Add
    With .Slides.Add(1, ppLayoutBlank)
        .Shapes.AddTable(3, 3).Select
        .Shapes(1).Table.Cell(1, 1).Shape _
            .AutoShapeType = msoShape4pointStar
    End With
End With

The following example creates a diagram and adds child nodes to the root mode. As each child is added, the root node displays the number of child nodes it has.

Sub CountChildNodes()
    Dim dgnNode As DiagramNode
    Dim shpDiagram As Shape
    Dim intNodes As Integer

    Set shpDiagram = ActivePresentation.Slides(1).Shapes.AddDiagram (_
        Type:=msoDiagramRadial, Left:=10, Top:=15, _
        Width:=400, Height:=475)
    shpDiagram.DiagramNode.Children.AddNode

    Set dgnNode = shpDiagram.DiagramNode.Root

    For intNodes = 1 To 3
        dgnNode.Children.AddNode
        dgnNode.Shape.TextFrame.TextRange.Text = intNodes
    Next intNodes

End Sub
ShapeRange Property

Returns a ShapeRange object that represents all the slide objects that have been selected on the specified slide. This range can contain the drawings, shapes, OLE objects, pictures, text objects, titles, headers, footers, slide number placeholder, and date and time objects on a slide. Read-only.
Remarks

You can return a shape range from a selection when the presentation is in normal, slide, or any master view.
Example

This example sets the fill foreground color for all the selected shapes in window one.

Windows(1).Selection.ShapeRange.Fill _
  .ForeColor.RGB = RGB(255, 0, 255)
Shapes Property

Returns a Shapes collection that represents all the elements that have been placed or inserted on the specified slide, slide master, or range of slides. This collection can contain the drawings, shapes, OLE objects, pictures, text objects, titles, headers, footers, slide numbers, and date and time objects on a slide, or on the slide image on a notes page. Read-only.

For information about returning a single member of a collection, see Returning an Object from a Collection.
Example

This example adds a rectangle that's 100 points wide and 50 points high, and whose upper-left corner is 5 points from the left edge of slide one in the active presentation and 25 points from the top of the slide.

Set firstSlide = ActivePresentation.Slides(1)
firstSlide.Shapes.AddShape msoShapeRectangle, 5, 25, 100, 50

This example sets the fill texture for shape three on slide one in the active presentation.

Set newRect = ActivePresentation.Slides(1).Shapes(3)
newRect.Fill.PresetTextured msoTextureOak

Assuming that slide one in the active presentation contains a title, both the second and third lines of code in the following example set the title text on slide one in the presentation.

Set firstSl = ActivePresentation.Slides(1)
firstSl.Shapes.Title.TextFrame.TextRange.Text = "Some title text"
firstSl.Shapes(1).TextFrame.TextRange.Text = "Other title text"

Assuming that shape two on slide two in the active presentation contains a text frame, the following example adds a series of paragraphs to the slide. Note that Chr(13) is used to insert paragraph marks within the text.

Set tShape = ActivePresentation.Slides(2).Shapes(2)
tShape.TextFrame.TextRange.Text = "First Item" & Chr(13) & _
   "Second Item" & Chr(13) & "Third Item"

For most slide layouts, the first shapes on the slide are text placeholders, and the following example accomplishes the same task as the preceding example.

Set testShape = ActivePresentation.Slides(2).Shapes.Placeholders(2)
testShape.TextFrame.TextRange.Text = "First Item" & _
   Chr(13) & "Second Item" & Chr(13) & "Third Item"
ShowScrollbar Property

- **MsoTrue** to display the scroll bar during a slide show in browse mode. Read/write **MsoTriState**.

MsoTriState can be one of these MsoTriState constants.

- **msoCTrue** Not used with this property.
- **msoFalse**
- **msoTriStateMixed** Not used with this property.
- **msoTriStateToggle** Not used with this property.
- **msoTrue**

`expression.ShowScrollbar`

`expression` Required. An expression that returns one of the objects in the Applies To list.
Remarks

Use the ShowType property prior to setting the ShowScrollbar property.
Example

This example specifies to display the slide show for the active presentation in a window and displays a scrollbar used for browsing through the slides during a slide show.

Sub ShowSlideShowScrollBar()
    With ActivePresentation.SlideShowSettings
        .ShowType = ppShowTypeWindow
        .ShowScrollBar = msoTrue
    End With
End Sub
ShowSlideAnimation Property

Determines whether slide animations are enabled when previewing, saving, or publishing a Web presentation. Read/write **MsoTriState**.

MsoTriState can be one of these MsoTriState constants.

- **msoCTrue**
- **msoFalse** Default.
- **msoTriStateMixed**
- **msoTriStateToggle**
- **msoTrue** Slide animations are enabled when previewing, saving, or publishing a Web presentation.
Example

This example specifies that slide animations in presentation two are enabled for the Web presentation. It then previews the Web page.

With Presentations(2)
    .WebOptions.ShowSlideAnimation = msoTrue
    .WebPagePreview
End With
ShowStartupDialog Property

MsoTrue to display the New Presentation task pane when Microsoft PowerPoint is started. Read/write.

MsoTriState can be one of these MsoTriState constants.

msoCTrue Doesn't apply to this property.
msoFalse Hides the New Presentation side pane.
msoTriStateMixed Doesn't apply to this side pane.
msoTriStateToggle Doesn't apply to this property.
msoTrue Default. Displays the New Presentation side pane.

expression.ShowStartupDialog

expression Required. An expression that returns one of the objects in the Applies To list.
Example

The following line of code disables the **New Presentation** task pane when PowerPoint starts.

```vba
Sub DontShowStartup
    Application.ShowStartupDialog = msoFalse
End Sub
```
ShowType Property

Returns or sets the show type for the specified slide show. Read/write 
**PpSlideShowType**.

PpSlideShowType can be one of these PpSlideShowType constants. 
**ppShowTypeKiosk**  
**ppShowTypeSpeaker**  
**ppShowTypeWindow**

`expression.ShowType`  

`expression` Required. An expression that returns one of the objects in the Applies To list.
Example

This example runs a slide show of the active presentation in a window, starting with slide two and ending with slide four. The new slide show window is placed in the upper-left corner of the screen, and its width and height are both 300 points.

With ActivePresentation.SlideShowSettings
  .RangeType = ppShowSlideRange
  .StartingSlide = 2
  .EndingSlide = 4
  .ShowType = ppShowTypeWindow
With .Run
  .Left = 0
  .Top = 0
  .Width = 300
  .Height = 300
End With
End With
ShowWindowsInTaskbar Property

Determined whether there is a separate Windows taskbar button for each open presentation. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.

msoCTrue
msoFalse
msoTriStateMixed
msoTriStateToggle
msoTrue Default. There is a separate Windows taskbar button for each open presentation.
Remarks

When set to **True**, this property simulates the look of a single-document interface (SDI), which makes it easier to navigate between open presentations. However, if you work with multiple presentations while other applications are open, you may want to set this property to **False** to avoid filling your taskbar with unnecessary buttons.

This property is available only when using Microsoft Office with Windows Update or Windows 2000.
Example

This example specifies that each open presentation doesn't have a separate Windows taskbar button.

Application.ShowWindowsInTaskbar = msoFalse
ShowWithAnimation Property

Determines whether the specified slide show displays shapes with assigned animation settings. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.

msoCTrue
msoFalse
msoTriStateMixed
msoTriStateToggle
msoTrue The specified slide show displays shapes with assigned animation settings.
Example

This example runs a slide show of the active presentation with animation and narration turned off.

With ActivePresentation.SlideShowSettings
  .ShowWithAnimation = msoFalse
  .ShowWithNarration = msoFalse
  .Run
End With
ShowWithNarration Property

Determines whether the specified slide show is shown with narration. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants:
- msoCTrue
- msoFalse
- msoTriStateMixed
- msoTriStateToggle
- msoTrue The specified slide show is shown with narration.
Example

This example runs a slide show of the active presentation with animation and narration turned off.

With ActivePresentation.SlideShowSettings
    .ShowWithAnimation = msoFalse
    .ShowWithNarration = msoFalse
    .Run
End With
Signatures Property

- Returns a `SignatureSet` object that represents a collection of digital signatures.

`expression.Signatures`

`expression`  Required. An expression that returns one of the objects in the Applies To list.
Example

The following line of code displays the number of digital signatures.

Sub DisplayNumberOfSignatures
    MsgBox "Number of digital signatures: " & _
    ActivePresentation.Signatures.Count
End Sub
Size Property

Returns or sets the character size, in points. Read/write Single.
Example

This example sets the size of the text attached to shape one on slide one to 24 points.

```
Application.ActivePresentation.Slides(1) .
 .Size = 24
```
Slide Property

- Slide property as it applies to the View object.

Returns or sets a Slide object that represents the slide that's currently displayed in the specified document window view. Read/write.

expression.Slide

expression Required. An expression that returns one of the above objects.

- Slide property as it applies to the SlideShowView object.

Returns a Slide object that represents the slide that's currently displayed in the specified slide show window view. Read-only.

expression.Slide

expression Required. An expression that returns one of the above objects.
Remarks

If the currently displayed slide is from an embedded presentation, you can use the Parent property of the Slide object returned by the Slide property to return the embedded presentation that contains the slide. (The Presentation property of the SlideShowWindow object or DocumentWindow object returns the presentation from which the window was created, not the embedded presentation.)
Example

- As it applies to the View object.

This example places on the Clipboard a copy of the slide that's currently displayed in slide show window one.

SlideShowWindows(1).View.Slide.Copy

This example displays the name of the presentation currently running in slide show window one.

MsgBox SlideShowWindows(1).View.Slide.Parent.Name
SlideElapsedTime Property

Returns the number of seconds that the current slide has been displayed. Read/write Long.
Remarks

Use the `ResetSlideTime` method to reset the elapsed time for the slide that's currently displayed.
Example

This example sets a variable to the elapsed time for the slide that's currently displayed in slide show window one and then displays the value of the variable.

currTime = SlideShowWindows(1).View.SlideElapsedTime
MsgBox currTime
SlideHeight Property

Returns or sets the slide height, in points. Read/write Single.
Example

This example sets the slide height to 8.5 inches and the slide width to 11 inches for the active presentation.

With Application.ActivePresentation.PageSetup
  .SlideWidth = 11 * 72
  .SlideHeight = 8.5 * 72
End With
SlideID Property

Returns a unique ID number for the specified slide. Read-only Long.
Remarks

Unlike the SlideIndex property, the SlideID property of a Slide object won't change when you add slides to the presentation or rearrange the slides in the presentation. Therefore, using the FindBySlideID method with the slide's ID number can be a more reliable way to return a specific Slide object from a Slides collection than using the Item method with the slide's index number.
Example

This example demonstrates how to retrieve the unique ID number for a Slide object and then use this number to return that Slide object from the Slides collection.

Set gslides = ActivePresentation.Slides

'Get slide ID
graphSlideID = gslides.Add(2, ppLayoutChart).SlideID
gslides.FindBySlideID(graphSlideID) _
  .SlideShowTransition.EntryEffect = _
  ppEffectCoverLeft 'Use ID to return specific slide
SlideIDs Property

Returns an array of slide IDs for the specified named slide show. Read-only Variant.
Example

This example adds the current slide in the active window to the custom slide show named "Marketing Short Version." Note that to save a modified version of the custom slide show, you must delete the original custom show and then add it again, using the same name. Also note that if you want to resize an array contained in a **Variant** variable, you must explicitly declare the variable before attempting to resize its array.

'NOTE - The following code line is NOT optional.  
'Can't redim array without this  
Dim customShowSlideIDs As Variant  
Dim customShowToExpand As NamedSlideShow

customShowName = "Marketing Short Version"  
Set customShowToExpand = ActivePresentation.SlideShowSettings .NamedSlideShows(customShowName)  
slideToAddID = ActiveWindow.View.Slide.SlideID  
customShowSlideIDs = customShowToExpand.**SlideIDs**  
numSlides = UBound(customShowSlideIDs)

ReDim Preserve customShowSlideIDs(numSlides + 1)

customShowSlideIDs(numSlides + 1) = slideToAddID  
customShowToExpand.Delete  
ActivePresentation.SlideShowSettings.NamedSlideShows .Add customShowName, customShowSlideIDs
SlideIndex Property

Returns the index number of the specified slide within the Slides collection. Read-only Long.
Remarks

Unlike the **SlideID** property, the **SlideIndex** property of a **Slide** object can change when you add slides to the presentation or rearrange the slides in the presentation. Therefore, using the **FindBySlideID** method with the slide's ID number can be a more reliable way to return a specific **Slide** object from a **Slides** collection than using the **Item** method with the slide's index number.
Example

This example displays the index number of the currently displayed slide in slide show window one.

MsgBox SlideShowWindows(1).View.Slide.SlideIndex
SlideMaster Property

- 

Returns a Master object that represents the slide master.

expression.SlideMaster

expression Required. An expression that returns one of the objects in the Applies To list.
Example

This example sets the background pattern for the slide master for the active presentation.

**SlideNumber Property**

- **SlideNumber property as it applies to the HeadersFooters object.**

Returns a HeaderFooter object that represents the slide number in the lower-right corner of a slide, or the page number in the lower-right corner of a notes page or a page of a printed handout or outline. Read-only.

```
expression.SlideNumber
```

*expression*  Required. An expression that returns one of the above objects.

- **SlideNumber property as it applies to the Slide and SlideRange objects.**

Returns the slide number. Read-only Integer.

```
expression.SlideNumber
```

*expression*  Required. An expression that returns one of the above objects.
Remarks

The **SlideNumber** property of a **Slide** object is the actual number that appears in the lower-right corner of the slide when you display slide numbers. This number is determined by the number of the slide within the presentation (the **SlideIndex** property value) and the starting slide number for the presentation (the **FirstSlideNumber** property value). The slide number is always equal to the starting slide number + the slide index number – 1.
Example

- **As it applies to the HeadersFooters object.**

This example hides the slide number on slide two in the active presentation if the number is currently visible, or it displays the slide number if it's currently hidden.

```vba
With Application.ActivePresentation.Slides(2) _
  .HeadersFooters.SlideNumber
  If .Visible Then
    .Visible = False
  Else
    .Visible = True
  End If
End With
```

- **As it applies to the Slide and SlideRange objects.**

This example shows how changing the first slide number affects the slide number of a specific slide.

```vba
With Application.ActivePresentation .PageSetup.FirstSlideNumber = 1 'starts slide numbering at 1 MsgBox .Slides(2).SlideNumber 'returns 2
    .PageSetup.FirstSlideNumber = 10 'starts slide numbering at 10 MsgBox .Slides(2).SlideNumber 'returns 11
End With
```
SlideOrientation Property

Returns or sets the on-screen and printed orientation of slides in the specified presentation. Read/write `MsoOrientation`.

MsoOrientation can be one of these MsoOrientation constants.

- `msoOrientationHorizontal`
- `msoOrientationMixed`
- `msoOrientationVertical`

`expression.SlideOrientation`

`expression` Required. An expression that returns one of the objects in the Applies To list.
Example

This example sets orientation of all slides in the active presentation to vertical (portrait).

SlideRange Property

Returns a SlideRange object that represents a range of selected slides. Read-only.
Remarks

A slide range can be constructed in slide view, slide sorter view, normal view, notes page view, or outline view. In slide view, \texttt{SlideRange} returns one slide — the current, displayed slide.
Example

This example sets the background scheme color for all the selected slides in window one.

`Windows(1).Selection.SlideRange.ColorScheme.Colors(ppBackground).RGB = RGB(0, 0, 255)`
Slides Property

Returns a `Slides` collection that represents all slides in the specified presentation. Read-only.
Example

This example adds a slide to the active presentation.

Application.ActivePresentation.Slides.Add 1, ppLayoutTitle
SlideShowName Property

- SlideShowName property as it applies to the ActionSetting, PrintOptions, PublishObject, and SlideShowSettings objects.

Returns or sets the name of the custom slide show to run in response to a mouse action on the shape during a slide show (ActionSetting object), returns or sets the name of the custom slide show to print (PrintOptions object), or returns or sets the name of the custom slide show published as a web presentation (PublishObject object). Read/write String.

expression.SlideShowName

expression  Required. An expression that returns one of the above objects.
Remarks

The **RangeType** property must be set to **ppPrintNamedSlideShow** to print a custom slide show.

- **SlideShowName property as it applies to the SlideShowView object.**

Returns the name of the custom slide show that's currently running in the specified slide show view. Read-only **String**.

*expression*.SlideShowName

*expression*  Required. An expression that returns one of the above objects.
Example

- As it applies to the **ActionSetting**, **PrintOptions**, **PublishObject**, and **SlideShowSettings** objects.

This example prints an existing custom slide show named "tech talk."

```vba
With ActivePresentation.PrintOptions
    .RangeType = ppPrintNamedSlideShow
    .SlideShowName = "tech talk"
End With
ActivePresentation.PrintOut
```

The following example saves the current presentation as an HTML version 4.0 file with the name "mallard.htm." It then displays a message indicating that the current named presentation is being saved in both PowerPoint and HTML formats.

```vba
With Pres.PublishObjects(1)
    PresName = .SlideShowName
    .SourceType = ppPublishAll
    .FileName = "C:\HTMLPres\mallard.htm"
    .HTMLVersion = ppHTMLVersion4
    MsgBox ("Saving presentation " & "" _
            & PresName & "" & " in PowerPoint" _
            & Chr(10) & Chr(13) _
            & " format and HTML version 4.0 format")
    .Publish
End With
```

- As it applies to the **SlideShowView** object.

If the slide show running in slide show window one is a custom slide show, this example displays its name.

```vba
With SlideShowWindows(1).View
    If .IsNamedShow Then
        MsgBox "Now showing in slide show window 1: " _
            & .SlideShowName
    End If
End With
```
SlideShowSettings Property

Returns a SlideShowSettings object that represents the slide show settings for the specified presentation. Read-only.
Example

This example starts a slide show meant to be presented by a speaker. The slide show will run with animation and narration turned off.

With Application.ActivePresentation.SlideShowSettings
    .ShowType = ppShowTypeSpeaker
    .ShowWithNarration = False
    .ShowWithAnimation = False
    .Run
End With
SlideShowTransition Property

Returns a SlideShowTransition object that represents the special effects for the specified slide transition. Read-only.
Example

This example sets slide two in the active presentation to advance automatically after 5 seconds during a slide show and to play a dog bark sound at the slide transition.

```
With ActivePresentation.Slides(2).SlideShowTransition
    .AdvanceOnTime = True
    .AdvanceTime = 5
    .SoundEffect.ImportFromFile "c:\windows\media\dogbark.wav"
End With
ActivePresentation.SlideShowSettings.AdvanceMode = _ppSlideShowUseSlideTimings
```
SlideShowWindow Property

Returns a SlideShowWindow object that represents the slide show window in which the specified presentation is running. Read-only.
Remarks

You can use this property in conjunction with the \texttt{Me} keyword and the \texttt{Parent} property to return the slide show window in which an ActiveX control event was fired, as shown in the example.
**Example**

The following example shows the Click event procedures for buttons named "cmdBack" and "cmdForward". If you add these buttons to the slide master and add these event procedures to them, all slides based on the master (and set to show master background graphics) will have these navigation buttons that will be active during a slide show. The **Me** keyword returns the **Master** object that represents the slide master that contains the control. If the control were on an individual slide, the **Me** keyword in an event procedure for that control would return a **Slide** object.

```vba
Private Sub cmdBack_Click()
    Me.Parent.SlideShowWindow.View.Previous
End Sub

Private Sub cmdForward_Click()
End Sub
```
SlideShowWindows Property

Returns a `SlideShowWindows` collection that represents all open slide show windows. Read-only.

For information about returning a single member of a collection, see [Returning an Object from a Collection](#).
**Example**

This example runs a slide show in a window and sets the height and width of the slide show window.

```vba
With Application
    .Presentations(1).SlideShowSettings.Run
    With .SlideShowWindows(1)
        .Height = 250
        .Width = 250
    End With
End With
```
SlideSize Property

Returns or sets the slide size for the specified presentation. Read/write \texttt{PpSlideSizeType}.

\texttt{PpSlideSizeType} can be one of these \texttt{PpSlideSizeType} constants.
\begin{itemize}
  \item \texttt{ppSlideSize35MM}
  \item \texttt{ppSlideSizeA3Paper}
  \item \texttt{ppSlideSizeA4Paper}
  \item \texttt{ppSlideSizeB4ISOPaper}
  \item \texttt{ppSlideSizeB4JISPaper}
  \item \texttt{ppSlideSizeB5ISOPaper}
  \item \texttt{ppSlideSizeB5JISPaper}
  \item \texttt{ppSlideSizeBanner}
  \item \texttt{ppSlideSizeCustom}
  \item \texttt{ppSlideSizeHagakiCard}
  \item \texttt{ppSlideSizeLedgerPaper}
  \item \texttt{ppSlideSizeLetterPaper}
  \item \texttt{ppSlideSizeOnScreen}
  \item \texttt{ppSlideSizeOverhead}
\end{itemize}

\textit{expression}.\texttt{SlideSize}

\textit{expression}  Required. An expression that returns one of the objects in the Applies To list.
**Example**

This example sets the slide size to overhead for the active presentation.

```vba
Application.ActivePresentation.PageSetup._SlideSize = ppSlideSizeOverhead
```
SlideWidth Property

Returns or sets the slide width, in points. Read/write Single.
Example

This example sets the slide height to 8.5 inches and the slide width to 11 inches for the active presentation.

With Application.ActivePresentation.PageSetup
    .SlideWidth = 11 * 72
    .SlideHeight = 8.5 * 72
End With
Smooth Property

Sets or returns an **MsoTriState** that represents whether the transition from one animation point to another is smoothed. Read/write.

MsoTriState can be one of these MsoTriState constants.

- **msoCTrue**
- **msoFalse** The animation point should not be smoothed.
- **msoTriStateMixed**
- **msoTriStateToggle**
- **msoTrue** Default. The animation should be smoothed.

*expression*.Smooth

*expression* Required. An expression that returns one of the objects in the Applies To list.
**Example**

This example changes smoothing for an animation point.

```vbnet
Sub ChangeSmooth(ByVal ani As AnimationBehavior, ByVal bln As MsoTriState)
    ani.PropertyEffect.Points.Smooth = bln
End Sub
```
**SmoothEnd Property**

Sets or returns an **MsoTriState** constant that represents whether an animation should decelerate as it ends. Read/write.

**MsoTriState** can be one of these **MsoTriState** constants.
- **msoCTrue** Doesn't apply to this property.
- **msoFalse** Default. An animation does not decelerate when it ends.
- **msoTriStateMixed** Doesn't apply to this property.
- **msoTriStateToggle** Doesn't apply to this property.
- **msoTrue** An animation decelerates when it ends.

`expression.SmoothEnd`

`expression` Required. An expression that returns one of the objects in the Applies To list.
**Example**

The following example adds a shape to a slide, animates the shape, and instructs the shape to decelerate when it ends.

Sub AddShapeSetTiming()

    Dim effDiamond As Effect
    Dim shpRectangle As Shape

    'Adds shape and sets animation effect
    Set shpRectangle = ActivePresentation.Slides(1).Shapes _
        .AddShape(Type:=msoShapeRectangle, Left:=100, _
        Top:=100, Width:=50, Height:=50)
    Set effDiamond = ActivePresentation.Slides(1).TimeLine.MainSequence _
        .AddEffect(Shape:=shpRectangle, effectId:=msoAnimEffectPathDiamond)

    'Sets duration of effect and slows animation at end
    With effDiamond.Timing
        .Duration = 5
        .SmoothEnd = msoTrue
    End With

End Sub
SmoothStart Property

Sets or returns an MsoTriState constant that represents whether an animation should accelerate when it starts. Read/write.

MsoTriState can be one of these MsoTriState constants.
- msoCTrue Doesn't apply to this property.
- msoFalse Default. The animation does not accelerate when it starts.
- msoTriStateMixed Doesn't apply to this property.
- msoTriStateToggle Doesn't apply to this property.
- msoTrue The animation accelerates when it starts.

expression.SmoothStart

expression  Required. An expression that returns one of the objects in the Applies To list.
Example

The following example adds a shape to a slide, animates the shape, and instructs the shape to accelerate when it starts.

Sub AddShapeSetTiming()
    Dim effDiamond As Effect
    Dim shpRectangle As Shape

    Set shpRectangle = ActivePresentation.Slides(1).Shapes.AddShape(Type:=msoShapeRectangle, Left:=100, Top:=100, Width:=50, Height:=50)
    Set effDiamond = ActivePresentation.Slides(1).TimeLine.MainSequence.AddEffect(Shape:=shpRectangle, effectId:=msoAnimEffectPathDiamond)

    With effDiamond.Timing
        .Duration = 5
        .SmoothStart = msoTrue
    End With
End Sub
SnapToGrid Property

MsoTrue to snap shapes to the grid lines in the specified presentation. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.

- msoCTrue
- msoFalse
- msoTriStateMixed
- msoTriStateToggle
- msoTrue

expression.SnapToGrid

expression Required. An expression that returns one of the objects in the Applies To list.
Example

This example toggles snapping shapes to the grid lines in the active presentation.

Sub ToggleSnapToGrid()
    With ActivePresentation
        If .SnapToGrid = msoTrue Then
            .SnapToGrid = msoFalse
        Else
            .SnapToGrid = msoTrue
        End If
    End With
End Sub
SoundEffect Property

**ActionSetting** object: Returns a **SoundEffect** object that represents the sound to be played when the specified shape is clicked or the mouse pointer passes over the shape. If you don't hear the sound that you assigned to the shape when you run the slide show, make sure that the **TextLevelEffect** property is set to a value other than **ppAnimateLevelNone** and that the **Animate** property is set to **True**.

**AnimationSettings** and **EffectInformation** objects: Returns a **SoundEffect** object that represents the sound to be played during the animation of the specified shape.

**SlideShowTransition** object: Returns a **SoundEffect** object that represents the sound to be played during the transition to the specified slide.

expression.**SoundEffect**

expression  Required. An expression that returns one of the objects in the Applies To list.
Example

This example sets the file Bass.wav to be played whenever shape one on slide one in the active presentation is animated.

```vbnet
With ActivePresentation.Slides(1).Shapes(1).AnimationSettings
    .Animate = True
    .TextLevelEffect = ppAnimateByAllLevels
    .SoundEffect.ImportFromFile "c:\bass.wav"
End With
```
SourceFullName Property

Returns or sets the name and path of the source file for the linked OLE object. Read/write String.
Example

This example sets the source file for shape one on slide one in the active presentation to Wordtest.doc and specifies that the object's image be updated automatically.

With ActivePresentation.Slides(1).Shapes(1)
    If .Type = msoLinkedOLEObject Then
        With .LinkFormat
            .SourceFullName = "c:\my documents\wordtest.doc"
            .AutoUpdate = ppUpdateOptionAutomatic
        End With
    End If
End With
SourceType Property

Returns or sets the source type of the presentation to be published to HTML. Read/write PpPublishSourceType.

PpPublishSourceType can be one of these PpPublishSourceType constants. ppPublishAll
ppPublishNamedSlideShow Use this value to publish a custom slide show, specifying the name of the custom slide show with the SlideShowName property.
ppPublishSlideRange

expression.SourceType

expression Required. An expression that returns one of the objects in the Applies To list.
Example

This example publishes the specified slide range (slides three through five) of the active presentation to HTML. It names the published presentation Mallard.htm.

With ActivePresentation.PublishObjects(1)
  .FileName = "C:\Test\Mallard.htm"
  .SourceType = ppPublishSlideRange
  .RangeStart = 3
  .RangeEnd = 5
  .Publish
End With
SpaceAfter Property

Returns or sets the amount of space after the last line in each paragraph of the specified text, in points or lines. Read/write Single.
**Example**

This example sets the spacing after paragraphs to 6 points for the text in shape two on slide one in the active presentation.

```vba
With Application.ActivePresentation.Slides(1).Shapes(2)
    With .TextFrame.TextRange.ParagraphFormat
        .LineRuleAfter = False
        .SpaceAfter = 6
    End With
End With
```
SpaceBefore Property

Returns or sets the amount of space before the first line in each paragraph of the specified text, in points or lines. Read/write Single.
Example

This example sets the spacing before paragraphs to 6 points for the text in shape two on slide in the active presentation.

```
With Application.ActivePresentation.Slides(1).Shapes(2)
    With .TextFrame.TextRange.ParagraphFormat
        .LineRuleBefore = False
        .SpaceBefore = 6
    End With
End With
```
SpaceWithin Property

Returns or sets the amount of space between base lines in the specified text, in points or lines. Read/write Single.
Example

This example sets line spacing to 21 points for the text in shape two on slide two in the active presentation.

```vba
With Application.ActivePresentation.Slides(2).Shapes(2)
    With .TextFrame.TextRange.ParagraphFormat
        .LineRuleWithin = False
        .SpaceWithin = 21
    End With
End With
```
SpeakerNotes Property

Determines whether speaker notes are to be published with the presentation. Read/write **MsoTriState**.

MsoTriState can be one of these MsoTriState constants.

- **msoCTrue**
- **msoFalse**
- **msoTriStateMixed**
- **msoTriStateToggle**
- **msoTrue** Speaker notes are to be published with the presentation.
Example

This example publishes slides three through five of the active presentation to HTML. It includes the associated speaker's notes with the published presentation and names it Mallard.htm.

With ActivePresentation.PublishObjects(1)
  .FileName = "C:\Test\Mallard.htm"
  .SourceType = ppPublishSlideRange
  .RangeStart = 3
  .RangeEnd = 5
  .SpeakerNotes = msoTrue
  .Publish
End With
Show All
Speed Property

- Speed property as it applies to the SlideShowTransition object.

Returns or sets a PpTransitionSpeed constant that represents the speed of the transition to the specified slide. Read/write.

PpTransitionSpeed can be one of these PpTransitionSpeed constants.
ppTransitionSpeedFast
ppTransitionSpeedMedium
ppTransitionSpeedMixed
ppTransitionSpeedSlow

expression.Speed

expression Required. An expression that returns a SlideShowTransition object.

- Speed property as it applies to the Timing object.

Returns or sets a Single that represents the speed, in seconds, of the specified animation. Read/write.

expression.Speed

expression Required. An expression that returns a Timing object.
Example

► As it applies to the SlideShowTransition object.

This example sets the special effect for the transition to the first slide in the active presentation and specifies that the transition be fast.

With ActivePresentation.Slides(1).SlideShowTransition .EntryEffect = ppEffectStripsDownLeft .Speed = ppTransitionSpeedFast
End With

► As it applies to the Timing object.

This example sets the animation for the main sequence to reverse and sets the speed to one second.

Sub AnimPoints()
    Dim tmlAnim As TimeLine
    Dim spdAnim As Timing
    Set tmlAnim = ActivePresentation.Slides(1).TimeLine
    Set spdAnim = tlnAnim.MainSequence(1).Timing
    With spdAnim
        .AutoReverse = msoTrue
        .Speed = 1
    End With
End Sub
SplitHorizontal Property

Returns or sets the percentage of the document window width that the outline pane occupies in normal view. Corresponds to the pane divider position between the slide and outline panes. Read/write Long.
Remarks

The maximum value of the `SplitHorizontal` property is always less than 100% because the slide pane has a minimum width that depends on a 10% zoom level. The actual maximum value may vary depending on the size of the application window.
Example

The following example sets the vertical pane divider for the active document window to divide at 15% outline pane and 85% slide pane.

ActiveWindow.SplitHorizontal = 15
SplitVertical Property

Returns or sets the percentage of the document window height that the slide pane occupies in normal view. Corresponds to the pane divider position between the slide and notes panes. Read/write Long.
Remarks

The minimum value of the SplitVertical property is always greater than 0% because the slide pane has a minimum height that depends on a 10% zoom level. The actual minimum value may vary depending on the size of the application window.
Example

The following example sets the horizontal pane divider for the active document window to divide at 60% slide pane and 40% notes pane.

ActiveWindow.SplitVertical = 60
Start Property

- Start property as it applies to the PrintRange object.

Returns the number of the first slide in the range of slides to be printed. Read-only Integer.

expression.Start

expression  Required. An expression that returns one of the above objects.

- Start property as it applies to the TextRange object.

Returns the position of the first character in the specified text range relative to the first character in the shape that contains the text. Read-only Long.

expression.Start

expression  Required. An expression that returns one of the above objects.
Example

As it applies to the **PrintRange** object.

This example displays a message that indicates the starting and ending slide numbers for print range one in the active presentation.

```vba
With ActivePresentation.PrintOptions.Ranges
    If .Count > 0 Then
        With .Item(1)
            MsgBox "Print range 1 starts on slide " & .Start & " and ends on slide " & .End
        End With
    End If
End With
```
StartingSlide Property

Returns or sets the first slide to be displayed in the specified slide show. Read/write Long.
Example

This example runs a slide show of the active presentation, starting with slide two and ending with slide four.

```
With ActivePresentation.SlideShowSettings
    .RangeType = ppShowSlideRange
    .StartingSlide = 2
    .EndingSlide = 4
    .Run
End With
```
StartValue Property

Returns or sets the beginning value of a bulleted list when the Type property of the *BulletFormat* object is set to *ppBulletNumbered*. The value must be in the range of 1 to 32767. Read/write *Integer*. 
Example

This example sets the bullets in the text box specified by shape two on slide one to start with the number five.

```vba
With ActivePresentation.Slides(1).Shapes(2).TextFrame
        .Type = ppBulletNumbered
        .StartValue = 5
    End With
End With
```
State Property

Returns or sets the state of the slide show. Read/write \texttt{PpSlideShowState}.

\texttt{PpSlideShowState} can be one of these \texttt{PpSlideShowState} constants.

\texttt{ppSlideShowBlackScreen}
\texttt{ppSlideShowDone}
\texttt{ppSlideShowPaused}
\texttt{ppSlideShowRunning}
\texttt{ppSlideShowWhiteScreen}

\textit{expression}.\texttt{State}

\textit{expression}  Required. An expression that returns one of the objects in the Applies To list.
Example

This example sets the view state in slide show window one to a black screen.

`SlideShowWindows(1).View.State = ppSlideShowBlackScreen`
StopAfterSlides Property

Returns or sets the number of slides to be displayed before the media clip stops playing. Read/write Long.
Remarks

For the StopAfterSlides property setting to take effect, the PauseAnimation property of the specified slide must be set to False, and the PlayOnEntry property must be set to True.

The media clip will stop playing when the specified number of slides have been displayed or when the clip comes to an end — whichever comes first. A value of 0 (zero) specifies that the clip will stop playing after the current slide.
Example

This example specifies that the media clip represented by shape three on slide one in the active presentation will be played automatically when it's animated, that the slide show will continue while the media clip is playing in the background, and that the clip will stop playing after three slides are displayed or when the end of the clip is reached — whichever comes first. Shape three must be a sound or movie object.

Set OLEobj = ActivePresentation.Slides(1).Shapes(3)
With OLEobj.AnimationSettings.PlaySettings
    .PlayOnEntry = True
    .PauseAnimation = False
    .StopAfterSlides = 3
End With
Show All
Style Property

- **Style property as it applies to the LineFormat object.**

Returns or sets the line style. Read/write **MsoLineStyle**.

MsoLineStyle can be one of these MsoLineStyle constants.
* msoLineSingle
* msoLineStyleMixed
* msoLineThickBetweenThin
* msoLineThickThin
* msoLineThinThick
* msoLineThinThin

`expression.Style`

`expression`  Required. An expression that returns one of the above objects.

- **Style property as it applies to the BulletFormat object.**

Returns or sets the bullet style. Read/write **PpNumberedBulletStyle**. Some of these constants may not be available to you, depending on the language support (U.S. English, for example) that you’ve selected or installed.

PpNumberedBulletStyle can be one of these PpNumberedBulletStyle constants.
* **ppBulletAlphaLCParenBoth** Lowercase alphabetic characters with both parentheses.
* **ppBulletAlphaLCParenRight** Lowercase alphabetic characters with right parenthesis.
* **ppBulletAlphaLCPeriod** Lowercase alphabetic characters with a period.
* **ppBulletAlphaUCParenBoth** Uppercase alphabetic characters with both parentheses.
**ppBulletAlphaUCParenRight**  Uppercase alphabetic characters with right parenthesis.

**ppBulletAlphaUCPeriod**  Uppercase alphabetic characters with a period.

**ppBulletArabicAbjadDash**  Arabic Abjad alphabets with a dash.

**ppBulletArabicAlphaDash**  Arabic language alphabetic characters with a dash.

**ppBulletArabicDBPeriod**  Double-byte Arabic numbering scheme with double-byte period.

**ppBulletArabicDBPlain**  Double-byte Arabic numbering scheme (no punctuation).

**ppBulletArabicParenBoth**  Arabic numerals with both parentheses.

**ppBulletArabicParenRight**  Arabic numerals with right parenthesis.

**ppBulletArabicPeriod**  Arabic numerals with a period.

**ppBulletArabicPlain**  Arabic numerals.

**ppBulletCircleNumDBPlain**  Double-byte circled number for values up to 10.

**ppBulletCircleNumWDBlackPlain**  Shadow color number with circular background of normal text color.

**ppBulletCircleNumWDWhitePlain**  Text colored number with same color circle drawn around it.

**ppBulletHebrewAlphaDash**  Hebrew language alphabetic characters with a dash.

**ppBulletHindiAlphaPeriod**

**ppBulletHindiNumPeriod**

**ppBulletKanjiKoreanPeriod**  Japanese/Korean numbers with a period.

**ppBulletKanjiKoreanPlain**  Japanese/Korean numbers without a period.

**ppBulletRomanLCParenBoth**  Lowercase Roman numerals with both parentheses.

**ppBulletRomanLCParenRight**  Lowercase Roman numerals with right parenthesis.

**ppBulletRomanLCPeriod**  Lowercase Roman numerals with period.

**ppBulletRomanUCParenBoth**  Uppercase Roman numerals with both parentheses.

**ppBulletRomanUCParenRight**  Uppercase Roman numerals with right parenthesis.

**ppBulletRomanUCPeriod**  Uppercase Roman numerals with period.
**ppBulletSimpChinPeriod** Simplified Chinese with a period.
**ppBulletSimpChinPlain** Simplified Chinese without a period.
**ppBulletStyleMixed** Any undefined style.
**ppBulletThaiAlphaParenBoth**
**ppBulletThaiAlphaParenRight**
**ppBulletThaiAlphaPeriod**
**ppBulletThaiNumParenBoth**
**ppBulletThaiNumParenRight**
**ppBulletThaiNumPeriod**
**ppBulletTradChinPeriod** Traditional Chinese with a period.
**ppBulletTradChinPlain** Traditional Chinese without a period.

*expression.Style*

*expression*  Required. An expression that returns one of the above objects.
Example

- As it applies to the **LineFormat** object.

This example adds a thick, blue compound line to `myDocument`. The compound line consists of a thick line with a thin line on either side of it.

```vba
Set myDocument = ActivePresentation.Slides(1)
    .Style = msoLineThickBetweenThin
    .Weight = 8
    .ForeColor.RGB = RGB(0, 0, 255)
End With
```

- As it applies to the **BulletFormat** object.

This example sets the bullet style for the bulleted list, represented by shape one on the first slide, to a shadow color number with circular background of normal text color.

```vba
```
SubAddress Property

Returns or sets the location within a document — such as a bookmark in a word document, a range in a Microsoft Excel worksheet, or a slide in a PowerPoint presentation — associated with the specified hyperlink. Read/write String.
Example

This example sets shape one on slide one in the active presentation to jump to the slide named "Last Quarter" in Latest Figures.ppt when the shape is clicked during a slide show.

With ActivePresentation.Slides(1).Shapes(1) _
  .ActionSettings(ppMouseClick)
  .Action = ppActionHyperlink
With .Hyperlink
  .Address = "c:\sales\latest figures.ppt"
  .SubAddress = "last quarter"
End With
End With

This example sets shape one on slide one in the active presentation to jump to range A1:B10 in Latest.xls when the shape is clicked during a slide show.

With ActivePresentation.Slides(1).Shapes(1) _
  .ActionSettings(ppMouseClick)
  .Action = ppActionHyperlink
With .Hyperlink
  .Address = "c:\sales\latest.xls"
  .SubAddress = "A1:B10"
End With
End With
Subscript Property

Determines whether the specified text is subscript. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.

msoCTrue
msoFalse Default. The specified text is not subscript.
msoTriStateMixed Some characters are subscript and some aren't.
msoTriStateToggle
msoTrue The specified text is subscript.
Remarks

Setting the **BaselineOffset** property to a negative value automatically sets the **Subscript** property to **msoTrue** and the **Superscript** property to **msoFalse**.

Setting the **BaselineOffset** property to a positive value automatically sets the **Subscript** property to **msoFalse** and the **Superscript** property to **msoTrue**.

Setting the **Subscript** property to **msoTrue** automatically sets the **BaselineOffset** property to $-0.25$ ($-25$ percent).
Example

This example enlarges the first character in the title on slide one if that character is subscript.

With Application.ActivePresentation.Slides(1) _
  .Shapes.Title.TextFrame.TextRange
  With .Characters(1, 1).Font
    If .Subscript Then
      scaleChar = -20 * .BaselineOffset
      .Size = .Size * scaleChar
    End If
  End With
End With
Superscript Property

Determines whether the specified text is superscript. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.

- **msoCTrue**
- **msoFalse** Default. The specified text is not superscript.
- **msoTriStateMixed** Some characters are superscript and some aren't.
- **msoTriStateToggle**
- **msoTrue** The specified text is superscript.
Remarks

Setting the `BaselineOffset` property to a negative value automatically sets the `Subscript` property to `msoTrue` and the `Superscript` property to `msoFalse`.

Setting the `BaselineOffset` property to a positive value automatically sets the `Subscript` property to `msoFalse` and the `Superscript` property to `msoTrue`.

Setting the `Superscript` property to `msoTrue` automatically sets the `BaselineOffset` property to 0.3 (30 percent).
Example

This example sets the text for shape two on slide one and then makes the fifth character superscript with a 30-percent offset.

With Application.ActivePresentation.Slides(1).Shapes(2).TextFrame
    With .TextRange
        .Text = "E=mc2"
        .Characters(5, 1).Font.Superscript = msoTrue
    End With
End With
Table Property

Returns a Table object that represents a table in a shape or in a shape range. Read-only.
Example

This example sets the width of the first column in the table in shape five on the second slide to 80 points.

ActivePresentation.Slides(2).Shapes(5).Table.Columns(1).Width = 80
TableDirection Property

Returns or sets the direction in which the table cells are ordered. Read/write PpDirection.

PpDirection can be one of these PpDirection constants.

- ppDirectionLeftToRight
- ppDirectionMixed
- ppDirectionRightToLeft

expression.TableDirection

expression Required. An expression that returns one of the objects in the Applies To list.
Remarks

The default value of the TableDirection property is ppDirectionLeftToRight unless the LanguageSettings property or the DefaultLanguageID property is set to a right-to-left language, in which case the default value is ppDirectionRightToLeft. The ppDirectionMixed constant may be returned when using the TextDirection property.
Example

This example sets the direction in which cells in the selected table are ordered to left to right (first column is the leftmost column).

ActiveWindow.Selection.ShapeRange.Table.TableDirection = _ppDirectionLeftToRight
TabStops Property

Returns a TabStops collection that represents the tab stops for the specified text. Read-only.
**Example**

This example adds a slide with two text columns to the active presentation, sets a left-aligned tab stop for the title on the new slide, aligns the title box to the left, and assigns title text utilizing the tab stop just created.

```vba
With Application.ActivePresentation.Slides._
  .Add(2, ppLayoutTwoColumnText).Shapes
  With .Title.TextFrame
    With .Ruler
      .Levels(1).FirstMargin = 0
      .TabStops.Add ppTabStopLeft, 310
    End With
    .TextRange = "first column" + Chr(9) + "second column"
  End With
End With
```
Tags Property

Returns a Tags object that represents the tags for the specified object. Read-only.
**Example**

**Note**  Tag values are added and stored in uppercase text. You should perform tests on tag values using uppercase text, as shown in the second example.

This example adds a tag named "REGION" and a tag named "PRIORITY" to slide one in the active presentation.

```vba
With Application.ActivePresentation.Slides(1).Tags
    .Add "Region", "East" 'Adds "Region" tag with value "East"
    .Add "Priority", "Low" 'Adds "Priority" tag with value "Low"
End With
```

This example searches through the tags for each slide in the active presentation. If there's a tag named "PRIORITY," a message box displays the tag value. If the object doesn't have a tag named "PRIORITY," the example adds this tag with the value "Unknown."

```vba
For Each s In Application.ActivePresentation.Slides
    With s.Tags
        found = False
        For i = 1 To .Count
            If .Name(i) = "PRIORITY" Then
                found = True
                slNum = .Parent.SlideIndex
                MsgBox "Slide " & slNum & " Priority: " & .Value(i)
            End If
        Next
        If Not found Then
            slNum = .Parent.SlideIndex
            .Add "Priority", "Unknown"
            MsgBox "Slide " & slNum & " Priority tag added: Unknown"
        End If
    End With
Next
```
TargetBrowser Property

Sets or returns an MsoTargetBrowser constant that represents the browser used with Microsoft PowerPoint. Read/write.

MsoTargetBrowser can be one of these MsoTargetBrowser constants.

- msoTargetBrowserIE4
- msoTargetBrowserIE5
- msoTargetBrowserIE6
- msoTargetBrowserV3
- msoTargetBrowserV4

expression. TargetBrowser

expression  Required. An expression that returns one of the objects in the Applies To list.
Example

This example sets the target browser for the active presentation to Microsoft Internet Explorer 6 if the current target browser is an earlier version.

Sub SetWebBrowser()
    With ActivePresentation.WebOptions
        If .TargetBrowser < msoTargetBrowserIE6 Then
            .TargetBrowser = msoTargetBrowserIE6
        End If
    End With
End Sub

This example sets the target browser for all presentations to Internet Explorer 6.

Sub GlobalTargetBrowser()
    Application.DefaultWebOptions .TargetBrowser = msoTargetBrowserIE6
End Sub
TemplateName Property

Returns the name of the design template associated with the specified presentation. Read-only String.
Remarks

The returned string includes the MS-DOS file name extension (for file types that are registered) but doesn't include the full path.
Example

The following example applies the design template Professional.pot to the presentation Pres1.ppt if it's not already applied to it.

```vba
With Presentations("Pres1.ppt")
    If .TemplateName <> "Professional.pot" Then
        .ApplyTemplate "c:\program files\microsoft office" & _
                        "\templates\presentation designs\Professional.pot"
    End If
End With
```
Show All
Text Property

- Text property as it applies to the HeaderFooter, TextEffectFormat, and TextRange objects.

Returns or sets a **String** that represents the text contained in the specified object. Read/write.

expression.Text

expression Required. An expression that returns one of the above objects.

- Text property as it applies to the Comment object.

Returns a **String** that represents the text in a comment. Read-only.

expression.Text

expression Required. An expression that returns a **Comment** object.
**Example**

- As it applies to the `TextRange` object.

This example sets the text and font style for the title on slide one in the active presentation.

```vbnet
Set myPres = Application.ActivePresentation
    .Text = "Welcome!"
    .Font.Italic = True
End With
```
TextDirection Property

Returns or sets the text direction for the specified paragraph. Read/write \texttt{PpDirection}. The default value depends on the language support you have selected or installed.

PpDirection can be one of these PpDirection constants.
\texttt{ppDirectionLeftToRight}
\texttt{ppDirectionMixed}
\texttt{ppDirectionRightToLeft}

\textit{expression}.\texttt{TextDirection}

\textit{expression} Required. An expression that returns one of the objects in the Applies To list.
Example

This example displays the text direction for the paragraphs in shape two on slide one in the active presentation.

TextEffect Property

Returns a TextEffectFormat object that contains text-effect formatting properties for the specified shape. Applies to Shape or ShapeRange objects that represent WordArt.

expression.TextEffect

expression  Required. An expression that returns one of the objects in the Applies To list.
Example

This example sets the font style to bold for shape three on myDocument if the shape is WordArt.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(3)
    If .Type = msoTextEffect Then
        .TextEffect.FontBold = True
    End If
End With
TextFrame Property

Returns a TextFrame object that contains the alignment and anchoring properties for the specified shape or master text style.
Remarks

Use the `TextRange` property of the `TextFrame` object to return the text in the text frame.

Use the `HasTextFrame` property to determine whether a shape contains a text frame before you apply the `TextFrame` property.
Example

This example adds a rectangle to myDocument, adds text to the rectangle, and sets the top margin for the text frame.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes _
    .AddShape(msoShapeRectangle, 180, 175, 350, 140).TextFrame
    .TextRange.Text = "Here is some test text"
    .MarginTop = 10
End With
TextLevelEffect Property

Returns or sets a **PpTextLevelEffect** constant that indicates whether the text in the specified shape is animated by first-level paragraphs, second-level paragraphs, or some other level (up to fifth-level paragraphs). Read/write.

PpTextLevelEffect can be one of these PpTextLevelEffect constants:

- `ppAnimateByAllLevels`
- `ppAnimateByFifthLevel`
- `ppAnimateByFirstLevel`
- `ppAnimateByFourthLevel`
- `ppAnimateBySecondLevel`
- `ppAnimateByThirdLevel`
- `ppAnimateLevelMixed`
- `ppAnimateLevelNone`

`expression.TextLevelEffect`

`expression` Required. An expression that returns one of the objects in the Applies To list.
Remarks

For the TextLevelEffect property setting to take effect, the Animate property must be set to True.
Example

This example adds a title slide and title text to the active presentation and sets the title to be built letter by letter.

```vba
    With .AnimationSettings
        .Animate = True
        .TextLevelEffect = ppAnimateByFirstLevel
        .TextUnitEffect = ppAnimateByCharacter
        .EntryEffect = ppEffectFlyFromLeft
    End With
End With
```
TextRange Property

Returns a TextRange object that represents the selected text (Selection object) or the text in the specified text frame (TextFrame object).

expression.TextRange

expression Required. An expression that returns one of the above objects.
Remarks

You can construct a text range from a selection when the presentation is in slide view, normal view, outline view, notes page view, or any master view.
Example

This example makes the selected text bold in the first window.

TextRangeLength Property

Returns or sets an **Long** that represents the length of a text range. Read-only.

*expression*.TextRangeLength

*expression*   Required. An expression that returns one of the objects in the Applies To list.
Example

This example adds a shape with text and rotates the shape without rotating the text.

Sub SetTextRange()
    Dim shpStar As Shape
    Dim sldOne As Slide
    Dim effNew As Effect

    Set sldOne = ActivePresentation.Slides(1)
    Set shpStar = sldOne.Shapes.AddShape(Type:=msoShape5pointStar, _
        Left:=32, Top:=32, Width:=300, Height:=300)


    Set effNew = sldOne.TimeLine.MainSequence.AddEffect(Shape:=shpStar, _
        EffectId:=msoAnimEffectPath5PointStar, Level:=msoAnimateTextByAllLevels, _
        Trigger:=msoAnimTriggerAfterPrevious)
    With effNew
        If .TextRangeStart = 0 And .TextRangeLength > 0 Then
            With .Behaviors.Add(Type:=msoAnimTypeRotation).RotationE
                .From = 0
                .To = 360
            End With
        End If
    End With
End Sub
TextRangeStart Property

Returns or sets an **Long** that represents the start of a text range. Read-only.

*expression*.TextRangeStart

*expression*  Required. An expression that returns one of the objects in the Applies To list.
Example

This example adds a shape with text and rotates the shape without rotating the text.

Sub SetTextRange()
    Dim shpStar As Shape
    Dim sldOne As Slide
    Dim effNew As Effect

    Set sldOne = ActivePresentation.Slides(1)
    Set shpStar = sldOne.Shapes.AddShape(Type:=msoShape5pointStar, _
        Left:=32, Top:=32, Width:=300, Height:=300)


    Set effNew = sldOne.TimeLine.MainSequence.AddEffect(Shape:=shpStar, _
        EffectId:=msoAnimEffectPath5PointStar, Level:=msoAnimateText_
        Trigger:=msoAnimTriggerAfterPrevious)

    With effNew
        If .TextRangeStart = 0 And .TextRangeLength > 0 Then
            With .Behaviors.Add(Type:=msoAnimTypeRotation).RotationE
                .From = 0
                .To = 360
            End With
        End If
    End With
End Sub
TextShape Property

`expression.TextShape`

`expression`  Required. An expression that returns one of the objects in the Applies To list.
**Example**

The following example adds child nodes to a parent node, and displays text in the parent node indicating the number of child nodes created.

Sub CountChildNodes()

    Dim dgnNode As DiagramNode
    Dim shpDiagram As Shape
    Dim intNodes As Integer
    Dim shpText As Shape

    'Adds diagram and first node to first slide
    Set shpDiagram = ActivePresentation.Slides(1).Shapes(
        .AddDiagram(Type:=msoDiagramRadial, Left:=200, Top:=75, _
        Width:=300, Height:=475)

    'Adds three child nodes to first node
    For intNodes = 1 To 3
        dgnNode.Children.AddNode
    Next intNodes

    'Enters node number into each child node
    For intNodes = 1 To dgnNode.Children.Count
        Set shpText = shpDiagram.DiagramNode.Children(1) _
        .Children(intNodes).TextShape
        shpText.TextFrame.TextRange.Text = CStr(intNodes)
    Next intNodes

End Sub
TextStyles Property

Returns a TextStyles collection that represents three text styles — title text, body text, and default text — for the specified slide master. Read-only.

For information about returning a single member of a collection, see Returning an Object from a Collection.
**Example**

This example sets the font name and font size for level-one body text on slides in the active presentation.

```vba
With ActivePresentation.SlideMaster_.TextStyles(ppBodyStyle).Levels(1)
    With .Font
        .Name = "arial"
        .Size = 36
    End With
End With
```
TextToDisplay Property

Returns or sets the display text for a hyperlink not associated with a graphic. Read/write String.
Remarks

This property will cause a run-time error if used with a hyperlink that is not associated with a text range. You can use code similar to the following to test whether or not a given hyperlink, represented here by `myHyperlink`, is associated with a text range.

```vba
If TypeName(myHyperlink.Parent.Parent) = "TextRange" Then
  strTRtest = "True"
End If
```
Example

This example creates an associated hyperlink with the text in shape two on slide one. It then sets the display text to "Microsoft Home Page" and sets the hyperlink address to the correct URL.

```vba
With ActivePresentation.Slides(1).Shapes(2) 
    .TextFrame.TextRange
    With .ActionSettings(ppMouseClick)
        .Action = ppActionHyperlink
        .Hyperlink.TextToDisplay = "Microsoft Home Page"
    End With
End With
```
TextUnitEffect Property

- TextUnitEffect property as it applies to the AnimationSettings object.

Returns or sets a PpTextUnitEffect constant that indicates whether the text in the specified shape is animated paragraph by paragraph, word by word, or letter by letter. Read/write.

PpTextUnitEffect can be one of these PpTextUnitEffect constants.  
ppAnimateByCharacter  
ppAnimateByParagraph  
ppAnimateByWord  
ppAnimateUnitMixed

expression.TextUnitEffect

expression Required. An expression that returns an AnimationSettings object.
Remarks

For the `TextUnitEffect` property setting to take effect, the `TextLevelEffect` property for the specified shape must have a value other than `ppAnimateLevelNone` or `ppAnimateByAllLevels`, and the `Animate` property must be set to `True`.

- `TextUnitEffect` property as it applies to the `EffectInformation` object.

Returns an `MsoAnimTextUnitEffect` constant that indicates whether the text in the specified shape is animated paragraph by paragraph, word by word, or letter by letter. Read-only.

MsoAnimTextUnitEffect can be one of these MsoAnimTextUnitEffect constants.

- `msoAnimTextUnitEffectByCharacter`
- `msoAnimTextUnitEffectByParagraph`
- `msoAnimTextUnitEffectByWord`
- `msoAnimTextUnitEffectMixed`

`expression.TextUnitEffect`

`expression` Required. An expression that returns an `EffectInformation` object.
Example

- As it applies to the **AnimationSettings** object.

This example adds a title slide and title text to the active presentation and sets the title to be built letter by letter.

```vba
With ActivePresentation.Slides.Add(Index:=1, _
    Layout:=ppLayoutTitleOnly).Shapes(1)
    .TextFrame.TextRange.Text = "Sample title"
    With .AnimationSettings
        .Animate = True
        .TextLevelEffect = ppAnimateByFirstLevel
        .TextUnitEffect = ppAnimateByCharacter
        .EntryEffect = ppEffectFlyFromLeft
    End With
End With
```
TextureName Property

Returns the name of the custom texture file for the specified fill. Read-only String.

This property is read-only. Use the UserTextured method to set the texture file for the fill.
Example

This example adds an oval to myDocument. If shape one on myDocument has a user-defined textured fill, the new oval will have the same fill as shape one. If shape one has any other type of fill, the new oval will have a green marble fill.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes
  Set newFill = .AddShape(msoShapeOval, 0, 0, 200, 90).Fill
  With .Item(1).Fill
    If .Type = msoFillTextured And _
      .TextureType = msoTextureUserDefined Then
      newFill.UserTextured .TextureName
    Else
      newFill.PresetTextured msoTextureGreenMarble
    End If
  End With
End With
TextureType Property

Returns the texture type for the specified fill. Read-only MsoTextureType. Use the PresetTextured or UserTextured method to set the texture type for the fill.

MsoTextureType can be one of these MsoTextureType constants.

- msoTexturePreset
- msoTextureTypeMixed
- msoTextureUserDefined

expression.TextureType

expression  Required. An expression that returns one of the objects in the Applies To list.
Example

This example changes the fill to canvas for all shapes on myDocument that have a custom textured fill.

```vba
Set myDocument = ActivePresentation.Slides(1)
For Each s In myDocument.Shapes
    With s.Fill
        If .TextureType = msoTextureUserDefined Then
            .PresetTextured msoTextureCanvas
        End If
    End With
Next
```
ThreeD Property

Returns a ThreeDFormat object that contains 3-D – effect formatting properties for the specified shape. Read-only.
Example

This example sets the depth, extrusion color, extrusion direction, and lighting direction for the 3-D effects applied to shape one on myDocument.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(1).ThreeD
  .Visible = True
  .Depth = 50
  'RGB value for purple
  .ExtrusionColor.RGB = RGB(255, 100, 255)
  .SetExtrusionDirection msoExtrusionTop
  .PresetLightingDirection = msoLightingLeft
End With
Time Property

Sets or returns a **Single** that represents the time at a given animation point. Read/write.

*expression*.**Time**

*expression*  Required. An expression that returns one of the objects in the Applies To list.
Remarks

The value of the **Time** property can be any floating-point value between 0 and 1, representing a percentage of the entire timeline from 0% to 100%. For example, a value of 0.2 would correspond to a point in time at 20% of the entire timeline duration from left to right.
**Example**

This example inserts three fill color animation points in the main sequence animation timeline on the first slide.

```vba
Sub BuildTimeLine()

    Dim shpFirst As Shape
    Dim effMain As Effect
    Dim tmlMain As TimeLine
    Dim aniBhvr As AnimationBehavior
    Dim aniPoint As AnimationPoint

    Set shpFirst = ActivePresentation.Slides(1).Shapes(1)
    Set tmlMain = ActivePresentation.Slides(1).TimeLine
    Set effMain = tmlMain.MainSequence.AddEffect(Shape:=shpFirst, EffectId:=msoAnimEffectBlinds)
    Set aniBhvr = tmlMain.MainSequence(1).Behaviors.Add (Type:=msoAnimTypeProperty)

    With aniBhvr.PropertyEffect
        .Property = msoAnimShapeFillColor
        Set aniPoint = .Points.Add
        aniPoint.Time = 0.2
        aniPoint.Value = RGB(0, 0, 0)
        Set aniPoint = .Points.Add
        aniPoint.Time = 0.5
        aniPoint.Value = RGB(0, 255, 0)
        Set aniPoint = .Points.Add
        aniPoint.Time = 1
        aniPoint.Value = RGB(0, 255, 255)
    End With

End Sub
```
Returns a **TimeLine** object representing the animation timeline for the slide.

`expression.TimeLine`

*expression*  Required. An expression that returns one of the objects in the Applies To list.
Example

The following example adds a bouncing animation to the first shape on the first slide.

Sub NewTimeLineEffect()

    Dim sldFirst As Slide
    Dim shpFirst As Shape

    Set sldFirst = ActivePresentation.Slides(1)
    Set shpFirst = sldFirst.Shapes(1)

    sldFirst.Timeline.MainSequence.AddEffect _
        Shape:=shpFirst, EffectId:=msoAnimEffectBounce

End Sub
Timing Property

Returns a `Timing` object that represents the timing properties for an animation sequence.

`expression.Timing`

`expression`  Required. An expression that returns one of the objects in the Applies To list.
Example

The following example sets the duration of the first animation sequence on the first slide.

Sub SetTiming()
    ActivePresentation.Slides(1).Timeline_.
        .MainSequence(1).Timing.Duration = 1
End Sub
TintAndShade Property

Returns a **Single** that represents the lightening or darkening of the color of a specified shape. Read/write.

*expression*.**TintAndShade**

*expression*   Required. An expression that returns one of the objects in the Applies To list.
Remarks

You can enter a value from -1 (darkest) to 1 (lightest) for the TintAndShade property, 0 (zero) being neutral.
Example

This example creates a new shape in the active document, sets the fill color, and lightens the color shade.

Sub PrinterPlate()
    Dim shpHeart As Shape
    Set shpHeart = ActivePresentation.Slides(1).Shapes._
    .AddShape(Type:=msoShapeHeart, Left:=150, _
    Top:=150, Width:=250, Height:=250)
    With shpHeart.Fill.ForeColor
        .CMYK = 16111872
        .TintAndShade = 0.3
        .OverPrint = msoTrue
        .Ink(Index:=1) = 0
        .Ink(Index:=2) = 1
        .Ink(Index:=3) = 1
        .Ink(Index:=4) = 0
    End With
End Sub
Title Property

Returns a Shape object that represents the slide title. Read-only.
Remarks

You can also use the Item method of the Shapes or Placeholders collection to return the slide title.
Example

This example sets the title text on myDocument.

    Set myDocument = ActivePresentation.Slides(1)
TitleMaster Property

- Returns a Master object that represents the title master for the specified presentation. If the presentation doesn't have a title master, an error occurs.

expression.TitleMaster

description Required. An expression that returns one of the objects in the Applies To list.
Remarks

Use the AddTitleMaster method to add a title master to a presentation.
Example

If the active presentation has a title master, this example sets the footer text for the title master.

With Application.ActivePresentation
    If .HasTitleMaster Then
        .TitleMaster.HeadersFooters.Footer.Text = "Introduction"
    End If
End With
To Property

- To property as it applies to the ColorEffect object.

Sets or returns a ColorFormat object that represents the RGB color value of an animation behavior. Read/write.

expression.To

expression Required. An expression that returns a ColorEffect object.
Remarks

Use this property in conjunction with the **From** property to transition from one color to another.

- **To property as it applies to the RotationEffect object.**

Sets or returns a **Single** that represents the ending rotation of an object in degrees, specified relative to the screen (for example, 90 degrees is completely horizontal). Read/write.

`expression.To`

expression Required. An expression that returns a **RotationEffect** object.
Remarks

Use this property in conjunction with the **From** property to transition from one rotation angle to another.

The default value is **Empty** in which case the current position of the object is used.

- **To property as it applies to the PropertyEffect object.**

Sets or returns a **Variant** that represents the ending value of an object’s property. Read/write.


equation.To
equation Required. An expression that returns a **PropertyEffect** object.
Remarks

The default value is **Empty**, in which case the current position of the object is used.
Remarks

Do not confuse this property with the ToX or ToY properties of the ScaleEffect and MotionEffect objects, which are only used for scaling or motion effects.
Example

- As it applies to the ColorEffect object.

The following example adds a color effect and changes its color from a light bluish green to yellow.

Sub AddAndChangeColorEffect()
    Dim effBlinds As Effect
    Dim tmlTiming As TimeLine
    Dim shpRectangle As Shape
    Dim animColor As AnimationBehavior
    Dim clrEffect As ColorEffect

    Set shpRectangle = ActivePresentation.Slides(1).Shapes(1).AddShape(Type:=msoShapeRectangle, Left:=100, Top:=100, Width:=50, Height:=50)
    Set tmlTiming = ActivePresentation.Slides(1).TimeLine
    Set effBlinds = tmlTiming.MainSequence.AddEffect(Shape:=shpRectangle, effectId:=msoAnimEffectBlinds)
    Set animColor = tmlTiming.MainSequence(1).Behaviors.Add(Type:=msoAnimTypeColor)
    Set clrEffect = animColor.ColorEffect

    clrEffect.From.RGB = RGB(Red:=255, Green:=255, Blue:=0)
    clrEffect.To.RGB = RGB(Red:=0, Green:=255, Blue:=255)
End Sub

- As it applies to the RotationEffect object.

The following example adds a rotation effect and immediately changes its rotation angle from 90 degrees to 270 degrees.

Sub AddAndChangeRotationEffect()
    Dim effBlinds As Effect
    Dim tmlTiming As TimeLine
    Dim shpRectangle As Shape
    Dim animColor As AnimationBehavior
    Dim rtnEffect As RotationEffect

    Set shpRectangle = ActivePresentation.Slides(1).Shapes(1)
    Set tmlTiming = ActivePresentation.Slides(1).TimeLine
    Set effBlinds = tmlTiming.MainSequence.AddEffect(Shape:=shpRecta
effectId:=msoAnimEffectBlinds)
Set animColor = tmlTiming.MainSequence(1).Behaviors.Add(Type:=msoAnimTypeRotation)
Set rtnEffect = animColor.RotationEffect

rtnEffect.From = 90
rtnEffect.To = 270
End Sub
Top Property

- Top property as it applies to the Application, DocumentWindow, Shape, ShapeRange, and SlideShowWindow objects.

Application, DocumentWindow and SlideShowWindow objects: Returns or sets a Single that represents the distance in points from the top edge of the document, application, and slide show window to the top edge of the application window's client area. Setting this property to a very large positive or negative value may position the window completely off the desktop. Read/write.

Shape object: Returns or sets a Single that represents the distance from the top edge of the shape's bounding box to the top edge of the document. Read/write.

ShapeRange object: Returns or sets a Single that represents the distance from the top edge of the topmost shape in the shape range to the top edge of the document. Read/write.

expression.Top

expression  Required. An expression that returns one of the above objects.

- Top property as it applies to the Comment object.

Comment object: Returns a Single that represents the distance in points from the left edge of the comment to the left edge of the slide. Read-only.

expression.Top

expression  Required. An expression that returns a Comment object.
Example

- As it applies to the Application, DocumentWindow, Shape, ShapeRange, and SlideShowWindow objects.

This example arranges windows one and two horizontally; in other words, each window occupies half the available vertical space and all the available horizontal space in the application window's client area. For this example to work, there must be only two document windows open.

```vba
Windows.Arrange ppArrangeTiled
sngHeight = Windows(1).Height ' available height
sngWidth = Windows(1).Width + Windows(2).Width ' available width
With Windows(1)
    .Width = sngWidth
    .Height = sngHeight / 2
    .Left = 0
End With
With Windows(2)
    .Width = sngWidth
    .Height = sngHeight / 2
    .Top = sngHeight / 2
    .Left = 0
End With
```
**ToX Property**

Sets or returns a **Single** that represents the ending width or horizontal position of a **ScaleEffect** or **MotionEffect** object, respectively, specified as a percent of the screen width. Read/write.

*expression*.ToX

*expression*    Required. An expression that returns one of the objects in the Applies To list.
Remarks

The default value of this property is *Empty*, in which case the current position of the object is used.

Use this property in conjunction with the *FromX* property to resize or jump from one position to another.

Do not confuse this property with the *To* property of the *ColorEffect*, *RotationEffect*, or *PropertyEffect* objects, which is used to set or change colors, rotations, or other properties of an animation behavior, respectively.
**Example**

The following example adds an animation path and sets the starting and ending horizontal and vertical positions.

```vba
Sub AddMotionPath()
    Dim effCustom As Effect
    Dim animMotion As AnimationBehavior
    Dim shpRectangle As Shape

    'Adds shape and sets effect and animation properties
    Set shpRectangle = ActivePresentation.Slides(1).Shapes._
        .AddShape(Type:=msoShapeRectangle, Left:=100, _
                Top:=100, Width:=50, Height:=50)
    Set effCustom = ActivePresentation.Slides(1).TimeLine.MainSequence._
        .AddEffect(Shape:=shpRectangle, effectId:=msoAnimEffectCustom)
    Set animMotion = effCustom.Behaviors.Add(msoAnimTypeMotion)

    'Sets starting and ending horizontal and vertical positions
    With animMotion.MotionEffect
        .FromX = 0
        .FromY = 0
        .ToX = 50
        .ToY = 50
    End With

End Sub
```
**ToY Property**

Returns or sets a **Single** that represents the ending height or vertical position of a **ScaleEffect** or **MotionEffect** object, respectively, specified as a percentage of the screen width. Read/write.

*expression*.**ToY**

*expression*  Required. An expression that returns one of the objects in the Applies To list.
Remarks

The default value of this property is **Empty**, in which case the current position of the object is used.

Use this property in conjunction with the **FromY** property to resize or jump from one position to another.

Do not confuse this property with the **To** property of the **ColorEffect**, **RotationEffect**, or **PropertyEffect** objects, which is used to set or change colors, rotations, or other properties of an animation behavior, respectively.
**Example**

The following example adds an animation path and sets the starting and ending horizontal and vertical positions.

```vba
Sub AddMotionPath()
    Dim effCustom As Effect
    Dim animMotion As AnimationBehavior
    Dim shpRectangle As Shape

    'Adds shape and sets effect and animation properties
    Set shpRectangle = ActivePresentation.Slides(1).Shapes._
        .AddShape(Type:=msoShapeRectangle, Left:=100, _
        Top:=100, Width:=50, Height:=50)
    Set effCustom = ActivePresentation.Slides(1).TimeLine.MainSequence._
        .AddEffect(Shape:=shpRectangle, effectId:=msoAnimEffectCustom)
    Set animMotion = effCustom.Behaviors.Add(msoAnimTypeMotion)

    'Sets starting and ending horizontal and vertical positions
    With animMotion.MotionEffect
        .FromX = 0
        .FromY = 0
        .ToX = 50
        .ToY = 50
    End With

End Sub
```
Tracking Property

Returns or sets the ratio of the horizontal space allotted to each character in the specified WordArt to the width of the character. Can be a value from 0 (zero) through 5. (Large values for this property specify ample space between characters; values less than 1 can produce character overlap.) Read/write Single.

The following table gives the values of the Tracking property that correspond to the settings available in the user interface.

<table>
<thead>
<tr>
<th>User interface setting</th>
<th>Equivalent Tracking property value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Tight</td>
<td>0.8</td>
</tr>
<tr>
<td>Tight</td>
<td>0.9</td>
</tr>
<tr>
<td>Normal</td>
<td>1.0</td>
</tr>
<tr>
<td>Loose</td>
<td>1.2</td>
</tr>
<tr>
<td>Very Loose</td>
<td>1.5</td>
</tr>
</tbody>
</table>
Example

This example adds WordArt that contains the text "Test" to myDocument and specifies that the characters be very tightly spaced.

Set myDocument = ActivePresentation.Slides(1)
Set newWordArt = myDocument.Shapes.AddTextEffect _
    (PresetTextEffect:=msoTextEffect1, Text:="Test", _
     FontName:="Arial Black", FontSize:=36, _
     FontBold:=False, FontItalic:=False, Left:=100, Top:=100)
newWordArt.TextEffect.Tracking =0.8
Transparency Property

Returns or sets the degree of transparency of the specified fill, shadow, or line as a value between 0.0 (opaque) and 1.0 (clear). Read/write Single.
Remarks

The value of this property affects the appearance of solid-colored fills and lines only; it has no effect on the appearance of patterned lines or patterned, gradient, picture, or textured fills.
Example

This example sets the shadow for shape three on myDocument to semitransparent red. If the shape doesn't already have a shadow, this example adds one to it.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(3).Shadow
  .Visible = True
  .ForeColor.RGB = RGB(255, 0, 0)
  .Transparency = 0.5
End With
TransparencyColor Property

Returns or sets the transparent color for the specified picture as a red-green-blue (RGB) value. For this property to take effect, the TransparentBackground property must be set to True. Applies to bitmaps only. Read/write Long.
Remarks

If you want to be able to see through the transparent parts of the picture all the way to the objects behind the picture, you must set the Visible property of the picture's FillFormat object to False. If your picture has a transparent color and the Visible property of the picture's FillFormat object is set to True, the picture's fill will be visible through the transparent color, but objects behind the picture will be obscured.
Example

This example sets the color that has the RGB value returned by the function RGB(0, 0, 255) as the transparent color for shape one on myDocument. For the example to work, shape one must be a bitmap.

blueScreen = RGB(0, 0, 255)
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(1)
    With .PictureFormat
        .TransparentBackground = True
        .TransparencyColor = blueScreen
    End With
    .Fill.Visible = False
End With
TransparentBackground Property

Determines whether parts of the picture that are the color defined as the transparent color appear transparent. Read/write **MsoTriState**. Applies to bitmaps only.

MsoTriState can be one of these MsoTriState constants.

- **msoCTrue**
- **msoFalse**
- **msoTriStateMixed**
- **msoTriStateToggle**
- **msoTrue** Parts of the picture that are the color defined as the transparent color appear transparent.
Remarks

Use the **TransparencyColor** property to set the transparent color.

If you want to be able to see through the transparent parts of the picture all the way to the objects behind the picture, you must set the **Visible** property of the picture's **FillFormat** object to **msoFalse**. If your picture has a transparent color and the **Visible** property of the picture's **FillFormat** object is set to **msoTrue**, the picture's fill will be visible through the transparent color, but objects behind the picture will be obscured.
Example

This example sets the color that has the RGB value returned by the function RGB(0, 24, 240) as the transparent color for shape one on myDocument. For the example to work, shape one must be a bitmap.

blueScreen = RGB(0, 0, 255)
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(1)
    With .PictureFormat
        .TransparentBackground = msoTrue
        .TransparencyColor = blueScreen
    End With
    .Fill.Visible = msoFalse
End With
**TriggerDelayTime Property**

Sets or returns a **Single** that represents the delay, in seconds, from when an animation trigger is enabled. Read/write.

*expression*.TriggerDelayTime

*expression* Required. An expression that returns one of the objects in the Applies To list.
**Example**

The following example adds a shape to a slide, adds an animation to the shape, and instructs the shape to begin the animation three seconds after it is clicked.

```
Sub AddShapeSetTiming()
    Dim effDiamond As Effect
    Dim shpRectangle As Shape

    Set shpRectangle = ActivePresentation.Slides(1).Shapes .
        .AddShape(Type:=msoShapeRectangle, Left:=100, _
        Top:=100, Width:=50, Height:=50)
    Set effDiamond = ActivePresentation.Slides(1).TimeLine.MainSequence .
        .AddEffect(Shape:=shpRectangle, effectId:=msoAnimEffectPathD

    With effDiamond.Timing
        .Duration = 5
        .TriggerShape = shpRectangle
        .TriggerType = msoAnimTriggerOnShapeClick
        .TriggerDelayTime = 3
    End With

End Sub
```
TriggerShape Property

Sets or returns a Shape object that represents the shape associated with an animation trigger. Read/write.

expression.TriggerShape

expression  Required. An expression that returns one of the objects in the Applies To list.
Example

The following example adds a shape to a slide, adds an animation to the shape, and begins the animation three seconds after the shape is clicked.

Sub AddShapeSetTiming()
    Dim effDiamond As Effect
    Dim shpRectangle As Shape

    Set shpRectangle = ActivePresentation.Slides(1).Shapes.AddShape(Type:=msoShapeRectangle, Left:=100, Top:=100, Width:=50, Height:=50)
    Set effDiamond = ActivePresentation.Slides(1).TimeLine.MainSequence.AddEffect(Shape:=shpRectangle, effectId:=msoAnimEffectPathDiamond)

    With effDiamond.Timing
        .Duration = 5
        .TriggerShape = shpRectangle
        .TriggerType = msoAnimTriggerOnShapeClick
        .TriggerDelayTime = 3
    End With
End Sub
TriggerType Property

Sets or returns a `MsoAnimTriggerType` constant that represents the trigger that starts an animation. Read/write.

MsoAnimTriggerType can be one of these MsoAnimTriggerType constants:
- `msoAnimTriggerAfterPrevious`
- `msoAnimTriggerMixed`
- `msoAnimTriggerNone`
- `msoAnimTriggerOnPageClick` Default.
- `msoAnimTriggerOnShapeClick`
- `msoAnimTriggerWithPrevious`

`expression.TriggerType`

`expression` Required. An expression that returns one of the objects in the Applies To list.
Example

The following example adds a shape to a slide, adds an animation to the shape, and instructs the shape to begin the animation three seconds after it is clicked.

Sub AddShapeSetTiming()

    Dim effDiamond As Effect
    Dim shpRectangle As Shape

    Set shpRectangle = ActivePresentation.Slides(1).Shapes.AddShape(Type:=msoShapeRectangle, Left:=100, Top:=100, Width:=50, Height:=50)
    Set effDiamond = ActivePresentation.Slides(1).TimeLine.MainSequence.AddEffect(Shape:=shpRectangle, effectId:=msoAnimEffectPathDiamond)

    With effDiamond.Timing
        .Duration = 5
        .TriggerType = msoAnimTriggerOnShapeClick
        .TriggerDelayTime = 3
    End With

End Sub
Type Property

- **Type property as it applies to the **AnimationBehavior** object.**

Returns or sets an **MsoAnimType** constant that represents the type of animation. Read/write.

MsoAnimType can be one of these MsoAnimType constants.
- **MsoAnimTypeColor**
- **MsoAnimTypeMixed**
- **MsoAnimTypeMotion**
- **MsoAnimTypeNone**
- **MsoAnimTypeProperty**
- **MsoAnimTypeRoatation**
- **MsoAnimTypeScale**
- **MsoAnimTypeTransition**

```
expression.Type
```

**expression** Required. An expression that returns an **AnimationBehavior** object.

- **Type property as it applies to the **BulletFormat** object.**

Returns or sets a **PpBulletType** constant that represents the type of bullet. Read/write.

PpBulletType can be one of these PpBulletType constants.
- **PpBulletMixed**
- **PpBulletNone**
- **PpBulletNumbered**
- **PpBulletPicture**
- **PpBulletUnnumbered**
expression.Type

expression  Required. An expression that returns a BulletFormat object.

➤ Type property as it applies to the CalloutFormat object.

Returns or sets an MsoCalloutType constant that represents the type of callout. Read/write.

MsoCalloutType can be one of these MsoCalloutType constants.

msoCalloutFour
msoCalloutMixed
msoCalloutOne
msoCalloutThree
msoCalloutTwo

expression.Type

expression  Required. An expression that returns a CalloutFormat object.

➤ Type property as it applies to the ColorFormat object.

Returns the MsoColorType constant that represents the type of color. Read-only.

MsoColorType can be one of these MsoColorType constants.

msoColorTypeCMS
msoColorTypeCMYK
msoColorTypeInk
msoColorTypeMixed
msoColorTypeRGB
msoColorTypeScheme

expression.Type

expression  Required. An expression that returns one of the above objects.

➤ Type property as it applies to the ConnectorFormat object.
Returns or sets an `MsoConnectorType` constant that represents the type of connector. Read/write.

`MsoConnectorType` can be one of these `MsoConnectorType` constants.

- `msoConnectorCurve`
- `msoConnectorElbow`
- `msoConnectorStraight`
- `msoConnectorTypeMixed`

`expression.Type`

- `expression` Required. An expression that returns a `ConnectorFormat` object.

  - Type property as it applies to the `Diagram` object.

Returns an `MsoDiagramType` constant that represents the type of diagram. Read-only.

`MsoDiagramType` can be one of these `MsoDiagramType` constants.

- `msoDiagramCycle`
- `msoDiagramMixed`
- `msoDiagramOrgChart`
- `msoDiagramPyramid`
- `msoDiagramRadial`
- `msoDiagramTarget`
- `msoDiagramVenn`

`expression.Type`

- `expression` Required. An expression that returns a `Diagram` object.

  - Type property as it applies to the `FillFormat` object.

Returns an `MsoFillType` constant that represents the type of fill. Read-only.

`MsoFillType` can be one of these `MsoFillType` constants.

- `msoFillBackground`
msoFillGradient
msoFillMixed
msoFillPatterned
msoFillPicture
msoFillSolid
msoFillTextured

expression.Type

expression  Required. An expression that returns a FillFormat object.

- **Type property as it applies to the Hyperlink object.**

Returns an MsoHyperlinkType constant that represents the type of hyperlink. Read-only.

MsoHyperlinkType can be one of these MsoHyperlinkType constants.

- msoHyperlinkInlineShape  For use in Microsoft Word only.
- msoHyperlinkRange
- msoHyperlinkShape

expression.Type

expression  Required. An expression that returns a Hyperlink object.

- **Type property as it applies to the PlaceholderFormat object.**

Returns a PpPlaceholderType constant that represents the type of placeholder. Read-only.

PpPlaceholderType can be one of these PpPlaceholderType constants.

- ppPlaceholderBitmap
- ppPlaceholderBody
- ppPlaceholderCenterTitle
- ppPlaceholderChart
- ppPlaceholderDate
- ppPlaceholderFooter
expression.Type

expression Required. An expression that returns a **PlaceholderFormat** object.

- **Type property as it applies to the Selection object.**

Returns a **PpSelectionType** constant that represents the type of objects in a selection. Read-only.

PpSelectionType can be one of these PpSelectionType constants.

- **ppSelectionNone**
- **ppSelectionShapes**
- **ppSelectionSlides**
- **ppSelectionText**

expression.Type

expression Required. An expression that returns a **Selection** object.

- **Type property as it applies to the ShadowFormat object.**

Returns or sets an **MsoShadowType** constant that represents the type of shadow. Read/write.

MsoShadowType can be one of these MsoShadowType constants.
expression.Type

expression Required. An expression that returns a ShadowFormat object.

Type property as it applies to the Shape and ShapeRange objects.

Returns an MsoShapeType constant that represents the type of shape or shapes in a range of shapes. Read-only.

MsoShapeType can be one of these MsoShapeType constants.
msAutoShape
msCallout
msCanvas
expression*.Type

expression  Required. An expression that returns one of the above objects.

▶ **Type property as it applies to the SoundEffect object.**

Returns or sets a PpSoundEffectType constant that represents the type of sound effect. Read/write.

PpSoundEffectType can be one of these PpSoundEffectType constants.

- ppSoundEffectsMixed
- ppSoundFile
- ppSoundNone
- ppSoundStopPrevious
expression.Type

expression Required. An expression that returns a SoundEffect object.

Type property as it applies to the TabStop object.

Returns or sets a PpTabStopType constant that represents the formatting of a tab stop. Read/write.

PpTabStopType can be one of these PpTabStopType constants.
  ppTabStopCenter
  ppTabStopDecimal
  ppTabStopLeft
  ppTabStopMixed
  ppTabStopRight

expression.Type

expression Required. An expression that returns a TabStop object.

Type property as it applies to the View object.

Returns a PpViewType constant that represents the type of view. Read-only.

PpViewType can be one of these PpViewType constants.
  ppViewHandoutMaster
  ppViewMasterThumbnails
  ppViewNormal
  ppViewNotesMaster
  ppViewNotesPage
  ppViewOutline
  ppViewPrintPreview
  ppViewSlide
  ppViewSlideMaster
  ppViewSlideSorter
  ppViewThumbnails
**ppViewTitleMaster**

*expression*.

**Type**

*expression*  Required. An expression that returns a [View](#) object.
Example

As it applies to the Shape object.

This example loops through all the shapes on all the slides in the active presentation and sets all linked Microsoft Excel worksheets to be updated manually.

For Each sld In ActivePresentation.Slides
    For Each sh In sld.Shapes
        If sh.Type = msoLinkedOLEObject Then
            If sh.OLEFormat.ProgID = "Excel.Sheet" Then
            End If
        End If
    Next
Next
Underline Property

Determines whether the specified text (for the **Font** object) or the font style (for the **FontInfo** object) is underlined. Read/write **MsoTriState**.

MsoTriState can be one of these MsoTriState constants.

- **msoCTrue**
- **msoFalse** The specified text (or font style) isn't underlined.
- **msoTriStateMixed** Some characters are underlined (for the specified text) and some aren't.
- **msoTriStateToggle**
- **msoTrue** The specified text (or font style) is underlined.

```
expression.Underline
```

*expression*  Required. An expression that returns one of the objects in the Applies To list.
Example

This example sets the formatting for the text in shape two on slide one in the active presentation.

With Application.ActivePresentation.Slides(1).Shapes(2)
    With .TextFrame.TextRange.Font
        .Size = 32
        .Name = "Palatino"
        .Underline = msoTrue
    End With
End With
**UpdateLinksOnSave Property**

Determines whether hyperlinks and paths to all supporting files are automatically updated before you save or publish the presentation as a Web page. Read/write **MsoTriState**.

MsoTriState can be one of these MsoTriState constants.

- **msoCTrue**
- **msoFalse** Hyperlinks and paths to all supporting files are not automatically updated before you save or publish the presentation as a Web page.
- **msoTriStateMixed**
- **msoTriStateToggle**
- **msoTrue** Default. Hyperlinks and paths to all supporting files are automatically updated before you save or publish the presentation as a Web page, ensuring that the links are up-to-date at the time the presentation is saved.
Remarks

You should set this property to **False** if the location where the presentation is saved is different from the final location on the Web server and the supporting files are not available at the first location.
Example

This example specifies that links are not updated before the presentation is saved.

Application.DefaultWebOptions.UpdateLinksOnSave = msoFalse
UseFormat Property

Determines whether the date and time object contains automatically updated information. Read/write **MsoTriState**.

MsoTriState can be one of these MsoTriState constants.

- **msoCTrue**
- **msoFalse** The date and time object is a fixed string.
- **msoTriStateMixed**
- **msoTriStateToggle**
- **msoTrue** The date and time object contains automatically updated information.
Remarks

This property applies only to a **HeaderFooter** object that represents a date and time (returned by the **DateAndTime** property). Set the **UseFormat** property of a date and time **HeaderFooter** object to **True** when you want to set or return the date and time format by using the **Format** property. Set the **UseFormat** property to **msoFalse** when you want to set or return the text string for the fixed date and time.
Example

This example sets the date and time for the slide master of the active presentation to be updated automatically and then it sets the date and time format to show hours, minutes, and seconds.

Set myPres = Application.ActivePresentation
With myPres.SlideMaster.HeadersFooters.DateAndTime
    .UseFormat = msoTrue
    .Format = ppDateTimeHmmss
End With
UseLongFileNames Property

Determines whether long file names are used. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.

msoCTrue
msoFalse Long file names are not used and the DOS file name format (8.3) is used.

msoTriStateMixed
msoTriStateToggle
msoTrue Default. Long file names are used when you save or publish a complete or partial presentation as a Web page.
Remarks

If you don't use long file names and your presentation has supporting files, Microsoft PowerPoint automatically organizes those files in a separate folder. Otherwise, use the OrganizeInFolder property to determine whether supporting files are organized in a separate folder.
Example

This example disallows the use of long file names as the global default for the application.

Application.DefaultWebOptions.**UseLongFileNames** = msoFalse
UseTextColor Property

Determines whether the specified bullets are set to the color of the first text character in the paragraph. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.

\texttt{msoCTrue}  
\texttt{msoFalse} The specified bullets are set to any other color.  
\texttt{msoTriStateMixed}  
\texttt{msoTriStateToggle}  
\texttt{msoTrue} The specified bullets are set to the color of the first text character in the paragraph.
Remarks

You cannot explicitly set this property to msoFalse. Setting the bullet format color (using the Color property of the Font object) sets this property to msoFalse. When UseTextColor is msoFalse, you can set it to msoTrue to reset the bullet format to the default color.
Example

This example resets bullets in shape two on slide one in the active presentation to their default character, font, and color.

With ActivePresentation.Slides(1).Shapes(2)
        .RelativeSize = 1
        .UseTextColor = msoTrue
        .UseTextFont = msoTrue
        .Character = 8226
    End With
End With
UseTextFont Property

Determines whether the specified bullets are set to the font of the first text character in the paragraph. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.

- msoCTrue
- msoFalse The specified bullets are set to a custom font.
- msoTriStateMixed
- msoTriStateToggle
- msoTrue The specified bullets are set to the font of the first text character in the paragraph.
Remarks

You cannot explicitly set this property to `msoFalse`. Setting the bullet format font (using the `Name` property of the `Font` object) sets this property to `msoFalse`. When `UseTextFont` is `msoFalse`, you can set it to `msoTrue` to reset the bullet format to the default font.
Example

This example resets bullets in shape two on slide one in the active presentation to their default character, font, and color.

With ActivePresentation.Slides(1).Shapes(2)
        .RelativeSize = 1
        .UseTextColor = msoTrue
        .**UseTextFont** = msoTrue
        .Character = 8226
    End With
End With
**Value Property**

Sets or returns a **Variant** that represents the value of a property for an animation point.

```
expression.Value
```

*expression* Required. An expression that returns one of the objects in the Applies To list.
**Example**

This example inserts three fill color animation points in the main sequence animation timeline on the first slide.

```vba
Sub BuildTimeLine()
    Dim shpFirst As Shape
    Dim effMain As Effect
    Dim tmlMain As TimeLine
    Dim aniBhvr As AnimationBehavior
    Dim aniPoint As AnimationPoint

    Set shpFirst = ActivePresentation.Slides(1).Shapes(1)
    Set tmlMain = ActivePresentation.Slides(1).TimeLine
    Set effMain = tmlMain.MainSequence.AddEffect(Shape:=shpFirst, _
            EffectId:=msoAnimEffectBlinds)
    Set aniBhvr = tmlMain.MainSequence(1).Behaviors.Add _
            (Type:=msoAnimTypeProperty)

    With aniBhvr.PropertyEffect
        .Property = msoAnimShapeFillColor
        Set aniPoint = .Points.Add
        aniPoint.Time = 0.2
        aniPoint.Value = RGB(0, 0, 0)
        Set aniPoint = .Points.Add
        aniPoint.Time = 0.5
        aniPoint.Value = RGB(0, 255, 0)
        Set aniPoint = .Points.Add
        aniPoint.Time = 1
        aniPoint.Value = RGB(0, 255, 255)
    End With
End Sub
```
VBASigned Property

Determines whether the Visual Basic for Applications (VBA) project for the specified document has been digitally signed. Read-only MsoTriState.

MsoTriState can be one of these MsoTriState constants.

- msoCTrue
- msoFalse
- msoTriStateMixed
- msoTriStateToggle
- msoTrue The VBA project for the specified document has been digitally signed.
Example

This example loads a presentation called MyPres.ppt and tests to see whether or not it has a digital signature. If there's no digital signature, the code displays a warning message.

```vba
Presentations.Open FileName:="c:\My Documents\MyPres.ppt", _
    ReadOnly:=msoFalse, WithWindow:=msoTrue
With ActivePresentation
    If .VBASigned = msoFalse And _
        .VBProject.VBComponents.Count > 0 Then
        MsgBox "Warning! The Visual Basic project for" _
            & vbCrLf & "this presentation has not" _
            & vbCrLf & "been digitally signed." _
            & vbCrLf, vbCritical, "Digital Signature Warning"
End If
End With
```
VBE Property

Returns a **VBE** object that represents the Visual Basic Editor. Read-only.
Example

This example sets the name of the active project in the Visual Basic Editor.

Application.VBE.ActiveVBProject.Name = "TestProject"
VBProject Property

Returns a VBProject object that represents the individual Visual Basic project for the presentation. Read-only.
Example

This example changes the name of the Visual Basic project for the active presentation.

`ActivePresentation.VBProject.Name = "TestProject"`
Version Property

Returns the PowerPoint version number. Read-only String.
Example

This example displays a message box that contains the PowerPoint version number and build number, and the name of the operating system.

With Application
MsgBox "Welcome to PowerPoint version " & .Version & _
    ", build " & .Build & ", running on " & .OperatingSystem & "!
End With
VerticalAnchor Property

Returns or sets the vertical alignment of text in a text frame. Read/write MsoVerticalAnchor.

MsoVerticalAnchor can be one of these MsoVerticalAnchor constants.

**msoAnchorBottom**
**msoAnchorBottomBaseline** Anchors the bottom of the text string to the current position regardless of the resizing of text. When you resize text without baseline anchoring, the text centers itself on the previous position.

**msoAnchorMiddle**

**msoAnchorTop**
**msoAnchorTopBaseline** Anchors the bottom of the text string to the current position regardless of the resizing of text. When you resize text without baseline anchoring, the text centers itself on the previous position.

**msoVerticalAnchorMixed** Read-only. Returned when two or more text boxes within a shape range have this property set to different values.

*expression*.VerticalAnchor

*expression*  Required. An expression that returns one of the objects in the Applies To list.
Example

This example sets the alignment of the text in shape one on myDocument to top centered.

Set myDocument = ActivePresentation.SlideMaster
With myDocument.Shapes(1)
    .TextFrame.HorizontalAnchor = msoAnchorCenter
    .TextFrame.VerticalAnchor = msoAnchorTop
End With
VerticalFlip Property

Determines whether the specified shape is flipped around the vertical axis. Read-only **MsoTriState**.

MsoTriState can be one of these MsoTriState constants:

- **msoCTrue**
- **msoFalse**
- **msoTriStateMixed**
- **msoTriStateToggle**
- **msoTrue** The specified shape is flipped around the vertical axis.
Example

This example restores each shape on myDocument to its original state if it's been flipped horizontally or vertically.

Set myDocument = ActivePresentation.Slides(1)
For Each s In myDocument.Shapes
    If s.HorizontalFlip Then s.Flip msoFlipHorizontal
    If s.VerticalFlip Then s.Flip msoFlipVertical
Next
Vertices Property

Returns the coordinates of the specified freeform drawing's vertices (and control points for Bézier curves) as a series of coordinate pairs. You can use the array returned by this property as an argument to the AddCurve method or AddPolyline method. Read-only Variant.

The following table shows how the Vertices property associates the values in the array vertArray() with the coordinates of a triangle's vertices.

<table>
<thead>
<tr>
<th>VertArray element</th>
<th>Contains</th>
</tr>
</thead>
<tbody>
<tr>
<td>VertArray(1, 1)</td>
<td>The horizontal distance from the first vertex to the left side of the slide</td>
</tr>
<tr>
<td>VertArray(1, 2)</td>
<td>The vertical distance from the first vertex to the top of the slide</td>
</tr>
<tr>
<td>VertArray(2, 1)</td>
<td>The horizontal distance from the second vertex to the left side of the slide</td>
</tr>
<tr>
<td>VertArray(2, 2)</td>
<td>The vertical distance from the second vertex to the top of the slide</td>
</tr>
<tr>
<td>VertArray(3, 1)</td>
<td>The horizontal distance from the third vertex to the left side of the slide</td>
</tr>
<tr>
<td>VertArray(3, 2)</td>
<td>The vertical distance from the third vertex to the top of the slide</td>
</tr>
</tbody>
</table>
Example

This example assigns the vertex coordinates for shape one on myDocument to the array variable vertArray() and displays the coordinates for the first vertex.

```vba
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(1)
    vertArray = .Vertices
    x1 = vertArray(1, 1)
    y1 = vertArray(1, 2)
    MsgBox "First vertex coordinates: " & x1 & ", " & y1
End With
```

This example creates a curve that has the same geometric description as shape one on myDocument. Shape one must contain 3n+1 vertices for this example to succeed.

```vba
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes
    .AddCurve .Item(1).Vertices
End With
```
View Property

- View property as it applies to the SlideShowWindow object.

Returns a SlideShowView object. Read-only.

expression.View

expression  Required. An expression that returns one of the above objects.

- View property as it applies to the DocumentWindow object.

Returns a View object that represents the view in the specified document window. Read-only.

expression.View

expression  Required. An expression that returns one of the above objects.
Example

- As it applies to the SlideShowWindow object.

This example uses the View property to exit the current slide show, sets the view in the active window to slide view, and then displays slide three.

```
Application.SlideShowWindows(1).View.Exit
With Application.ActiveWindow
    .ViewType = ppViewSlide
    .View.GotoSlide 3
End With
```
**ViewType Property**

- ViewType property as it applies to the DocumentWindow object.

Returns or sets the type of the view contained in the specified document window. Read/write **PpViewType**.

PpViewType can be one of these PpViewType constants.

- ppViewHandoutMaster
- ppViewMasterThumbnails
- ppViewNormal
- ppViewNotesMaster
- ppViewNotesPage
- ppViewOutline
- ppViewPrintPreview
- ppViewSlide
- ppViewSlideMaster
- ppViewSlideSorter
- ppViewThumbnails
- ppViewTitleMaster

`expression.ViewType`

`expression`  Required. An expression that returns one of the above objects.

- ViewType property as it applies to the Pane object.

In any view with panes, returns the type of view for the specified pane. When referencing a view without panes, returns the type of view for the parent DocumentWindow object. Read-only **PpViewType**.
PpViewType can be one of these PpViewType constants.

```
ppViewHandoutMaster
ppViewMasterThumbnails
ppViewNormal
ppViewNotesMaster
ppViewNotesPage
ppViewOutline
ppViewPrintPreview
ppViewSlide
ppViewSlideMaster
ppViewSlideSorter
ppViewThumbnails
ppViewTitleMaster
```

`expression.ViewType`

`expression`  Required. An expression that returns one of the above objects.
Example

- **As it applies to the **DocumentWindow** object.**

  This example changes the view in the active window to slide sorter view if the window is currently displayed in normal view.

  ```vba
  With Application.ActiveWindow
    If .ViewType = ppViewNormal Then
      .ViewType = ppViewSlideSorter
    End If
  End With
  ```

- **As it applies to the **Pane** object.**

  If the view in the active pane is slide view, this example makes the notes pane the active pane. The notes pane is the third member of the **Panes** collection.

  ```vba
  With ActiveWindow
    If .ActivePane.ViewType = ppViewSlide Then
      .Panes(3).Activate
    End If
  End With
  ```
Visible Property

Returns or sets the visibility of the specified object or the formatting applied to the specified object. Read/write MsoTriState.

MsoTriState can be one of these MsoTriState constants.

msoCTrue
msoFalse
msoTriStateMixed
msoTriStateToggle
msoTrue  The specified object or object formatting is visible.
Example

This example sets the horizontal and vertical offsets for the shadow of shape three on the first slide in the active presentation. The shadow is offset 5 points to the right of the shape and 3 points above it. If the shape doesn't already have a shadow, this example adds one to it.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes(3).Shadow
    .Visible = msoTrue
    .OffsetX = 5
    .OffsetY = -3
End With
WebOptions Property

Returns the WebOptions object, which contains presentation-level attributes used by Microsoft PowerPoint when you save or publish a complete or partial presentation as a Web page or open a Web page. Read-only.
Example

This example specifies that when saving or publishing the active presentation as a Web page, Portable Network Graphics (PNG) are allowed, and the text color for the outline pane is white and the background color for the outline and slide panes is black.

With ActivePresentation.WebOptions
    .FrameColors = ppFrameColorsWhiteTextOnBlack
    .AllowPNG = True
End With
Weight Property

Returns or sets the thickness of the specified line, in points. Read/write Single.
Example

This example adds a green dashed line two points thick to myDocument.

```
Set myDocument = ActivePresentation.Slides(1)
    .DashStyle = msoLineDashDotDot
    .ForeColor.RGB = RGB(0, 255, 255)
    .Weight = 2
End With
```
Width Property

Returns or sets the width of the specified object, in points. Read-only Single for the **Master** object, read/write Single for all other objects.
Example

This example arranges windows one and two horizontally; in other words, each window occupies half the available vertical space and all the available horizontal space in the application window's client area. For this example to work, there must be only two document windows open.

Windows.Arrange ppArrangeTiled
ah = Windows(1).Height ' available height
aw = Windows(1).Width + Windows(2).Width ' available width
With Windows(1)
  .Width = aw
  .Height = ah / 2
  .Left = 0
End With
With Windows(2)
  .Width = aw
  .Height = ah / 2
  .Top = ah / 2
  .Left = 0
End With

This example sets the width for column one in the specified table to 80 points (72 points per inch).

ActivePresentation.Slides(2).Shapes(5).Table.Columns(1).Width = 80
Windows Property

- Windows property as it applies to the Application object.

Returns a DocumentWindows collection that represents all open document windows. Read-only.

- Windows property as it applies to the Presentation object.

Returns a DocumentWindows collection that represents all document windows associated with the specified presentation. This property doesn't return any slide show windows associated with the presentation. Read-only.

For information about returning a single member of a collection, see Returning an Object from a Collection.
Example

- As it applies to the Application object.

This example closes all windows except the active window.

With Application.Windows
    For i = .Count To 2 Step -1
        .Item(i).Close
    Next
End With
WindowState Property

Returns or sets the state of the specified window. Read/write `PpWindowState`.

`PpWindowState` can be one of these `PpWindowState` constants.

- `ppWindowMaximized`
- `ppWindowMinimized`
- `ppWindowNormal`

`expression.WindowState`

`expression` Required. An expression that returns one of the objects in the Applies To list.
Remarks

When the state of the window is ppWindowNormal, the window is neither maximized nor minimized.
Example

This example maximizes the active window.

Application.ActiveWindow.WindowState = ppWindowMaximized
**WordWrap Property**

- **WordWrap property as it applies to the TextFrame object.**

Determines whether lines break automatically to fit inside the shape. Read/write **MsoTriState**.

MsoTriState can be one of these MsoTriState constants.
- **msoCTrue**
- **msoFalse**
- **msoTriStateMixed**
- **msoTriStateToggle**
- **msoTrue** Lines break automatically to fit inside the shape.

*expression.WordWrap*

*expression*  Required. An expression that returns one of the objects in the Applies To list.

- **WordWrap property as it applies to the ParagraphFormat object.**

Used only with Kanji characters. Read/write **Long**.
**Example**

- As it applies to the **TextFrame** object.

This example adds a rectangle that contains text to *myDocument*, and then turns off word wrapping in the new rectangle.

```vba
Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes.AddShape(msoShapeRectangle, _
    0, 0, 100, 300).TextFrame
    .TextRange.Text = _
    "Here is some test text that is too long for this box"
    .WordWrap = False
End With
```
WritePassword Property

Sets or returns a **String** that represents a password for saving changes to the specified document. Read/write.

`expression.WritePassword`

`expression` Required. An expression that returns one of the objects in the Applies To list.
Example

This example sets the password to secret for saving changes to the active presentation.

Sub SetSavePassword()
    ActivePresentation.WritePassword = "secret"
End Sub
This keyword is not implemented. It is reserved for future use.
Zoom Property

- Zoom property as it applies to the View object.

Returns or sets the zoom setting of the specified view as a percentage of normal size. Can be a value from 10 to 400 percent. Read/write Integer.

expression.Zoom

expression  Required. An expression that returns one of the above objects.

- Zoom property as it applies to the SlideShowView object.

Returns the zoom setting of the specified slide show window view as a percentage of normal size. Can be a value from 10 to 400 percent. Read-only Integer.

expression.Zoom

expression  Required. An expression that returns one of the above objects.
Example

- As it applies to the View object.

The following example sets the zoom to 30 percent for the view in document window one.

Windows(1).View. Zoom = 30
ZoomToFit Property

Determines whether the view is zoomed to fit the dimensions of the document window every time the document window is resized. Read/write MsoTriState. This property applies only to slide view, notes page view, or master view.

MsoTriState can be one of these MsoTriState constants.

- msoCTrue
- msoFalse
- msoTriStateMixed
- msoTriStateToggle
- msoTrue The view is zoomed to fit the dimensions of the document window every time the document window is resized.
Remarks

When the value of the *Zoom* property is explicitly set, the value of the *ZoomToFit* property is automatically set to *msoFalse*. 
Example

The following example sets the view in document window one to slide view, with the zoom automatically set to fit the dimensions of the window.

With Windows(1)
    .ViewType = ppViewSlide
    .View.ZoomToFit = msoTrue
End With
ZOrderPosition Property

Returns the position of the specified shape in the z-order. Shapes(1) returns the shape at the back of the z-order, and Shapes(Shapes.Count) returns the shape at the front of the z-order. Read-only **Long**.

This property is read-only. To set the shape's position in the z-order, use the **ZOrder** method.
Remarks

A shape's position in the z-order corresponds to the shape's index number in the Shapes collection. For example, if there are four shapes on the slide, the expression myDocument.Shapes(1) returns the shape at the back of the z-order, and the expression myDocument.Shapes(4) returns the shape at the front of the z-order.

Whenever you add a new shape to a collection, it's added to the front of the z-order by default.
Example

This example adds an oval to myDocument and then places the oval second from the back in the z-order if there is at least one other shape on the slide.

Set myDocument = ActivePresentation.Slides(1)
With myDocument.Shapes.AddShape(msoShapeOval, 100, 100, 100, 300)
    While .ZOrderPosition > 2
        .ZOrder msoSendBackward
    Wend
End With
ColorSchemeChanged Event

Occurs after a color scheme is changed.

Private Sub object_ColorSchemeChanged(ByVal SldRange As SlideRange)

object A variable that references an object of type Application declared with events in a class module.

SldRange The range of slides affected by the change.
Remarks

Actions which trigger this event would include actions such as modifying a slide's or slide master's color scheme, or applying a template.

To access the Application events, declare an Application variable in the General Declarations section of your code. Then set the variable equal to the Application object for which you want to access events. For information about using events with the Microsoft PowerPoint Application object, see Using Events with the Application Object.
Example

This example displays a message when the color scheme for the selected slide or slides is changed. This example assumes an **Application** object called PPTApp has been declared using the ** WithEvents** keyword.

Private Sub PPTApp_ColorSchemeChanged(ByVal SldRange As SlideRange)
    If SldRange.Count = 1 Then
        MsgBox "You've changed the color scheme for "
        & SldRange.Name & "."
    Else
        MsgBox "You've changed the color scheme for "
        & SldRange.Count & " slides."
    End If
End Sub
NewPresentation Event

Occurs after a presentation is created, as it is added to the Presentations collection.

Private Sub application_NewPresentation(ByVal Pres As Presentation)

application An object of type Application declared with events in a class module. For information about using events with the Application object, see Using Events with the Application Object.

Pres The new presentation.
**Example**

This example uses the **RGB** function to set the slide master background color for the new presentation to salmon pink, and then applies the third color scheme to the new presentation.

```vba
Private Sub App_NewPresentation(ByVal Pres As Presentation)
    With Pres
        Set CS3 = .ColorSchemes(3)
        CS3.Colors(ppBackground).RGB = RGB(240, 115, 100)
        .SlideMaster.ColorScheme = CS3
    End With
End Sub
```
PresentationBeforeSave Event

Occurs before a presentation is saved.

Private Sub object_PresentationBeforeSave(ByVal Pres As Presentation, Cancel As Boolean)

object A variable that references an object of type Application declared with events in a class module.

Pres The presentation being saved.

Cancel True to cancel the save process.
Remarks

This event is triggered as the **Save As** dialog box appears.

To access the **Application** events, declare an **Application** variable in the General Declarations section of your code. Then set the variable equal to the **Application** object for which you want to access events. For information about using events with the Microsoft PowerPoint **Application** object, see [Using Events with the Application Object](#).
Example

This example checks if there are revisions in a presentation and, if there are, asks whether to save the presentation. If a user's response is no, the save process is cancelled. This example assumes an **Application** object called PPTApp has been declared using the ** WithEvents** keyword.

```vba
Private Sub PPTApp_PresentationBeforeSave(ByVal Pres As Presentation
    Cancel As Boolean)
    Dim intResponse As Integer
    Set Pres = ActivePresentation
    If Pres.HasRevisionInfo Then
        intResponse = MsgBox(Prompt:="The presentation contains revisions.
            Do you want to accept the revisions before saving?", Buttons:=vbYesNo)
        If intResponse = vbYes Then
            Cancel = True
            MsgBox "Your presentation was not saved."
        End If
    End If
End Sub
```
PresentationClose Event

Occurs immediately before any open presentation closes, as it is removed from the Presentations collection.

Private Sub application_PresentationClose(ByVal Pres As Presentation)

application  An object of type Application declared with events in a class module. For information about using events with the Application object, see Using Events with the Application Object.

Pres  The presentation that is being closed.
**Example**

This example saves a copy of the active presentation as an HTML file, with the same name and within the same folder.

```vba
Private Sub App_PresentationClose(ByVal Pres As Presentation)
    FindNum = InStr(1, Pres.FullName, ".")
    HTMLName = Mid(Pres.FullName, 1, FindNum - 1) & ".htm"
    Pres.SaveCopyAs HTMLName, ppSaveAsHTML
End Sub
```
PresentationNewSlide Event

Occurs when a new slide is created in any open presentation, as the slide is added to the Slides collection.

Private Sub application_PresentationNewSlide(ByVal Sld As Slide)

application An object of type Application declared with events in a class module. For information about using events with the Application object, see Using Events with the Application Object.

Sld The new slide.
Example

This example modifies the background color for color scheme three and then applies the modified color scheme to the new slide. Next, it adds default text to shape one if it has a text frame.

Private Sub App_PresentationNewSlide(ByVal Sld As Slide)
    With ActivePresentation
        Set CS3 = .ColorSchemes(3)
        CS3.Colors(ppBackground).RGB = RGB(240, 115, 100)
        Windows(1).Selection.SlideRange.ColorScheme = CS3
    End With

    If Sld.Layout <> ppLayoutBlank Then
        With Sld.Shapes(1)
            If .HasTextFrame = msoTrue Then
                .TextFrame.TextRange.Text = "King Salmon"
            End If
        End With
    End If
End Sub
PresentationOpen Event

Occurs after an existing presentation is opened, as it is added to the Presentations collection.

Private Sub application_PresentationOpen(ByVal Pres As Presentation)

application An object of type Application declared with events in a class module. For information about using events with the Application object, see Using Events with the Application Object.

Pres The presentation that is opened.
Example

This example modifies the background color for color scheme three, applies the modified color scheme to the presentation that was just opened, and displays the presentation in slide view.

Private Sub App_PresentationOpen(ByVal Pres As Presentation)
    With Pres
        Set CS3 = .ColorSchemes(3)
        CS3.Colors(ppBackground).RGB = RGB(240, 115, 100)
        With Windows(1)
            .Selection.SlideRange.ColorScheme = CS3
            .ViewType = ppViewSlide
        End With
    End With
End Sub
Show All
PresentationPrint Event

Occurs before a presentation is printed.

**Private Sub** `application_PresentationPrint(ByVal Pres As Presentation)`

*application*  An object of type `Application` declared with events in a `class` module. For information about using events with the `Application` object, see [Using Events with the Application Object](#).

*Pres*  The presentation to be printed.
Example

This example sets the `PrintHiddenSlides` property to `True` so that every time the active presentation is printed, the hidden slides are printed as well.

```vba
Private Sub App_PresentationPrint(ByVal Pres As Presentation)
    Pres.PrintOptions.PrintHiddenSlides = True
End Sub
```
PresentationSave Event

Occurs before any open presentation is saved.

Private Sub application_PresentationSave(ByVal Pres As Presentation)

application An object of type Application declared with events in a class module. For information about using events with the Application object, see Using Events with the Application Object.

Pres The presentation to be saved.


Example

This example saves the current presentation as an HTML version 4.0 file with the name "mallard.htm." It then displays a message indicating that the current named presentation is being saved in both PowerPoint and HTML formats.

Private Sub App_PresentationSave(ByVal Pres As Presentation)
    With Pres.PublishObjects(1)
        PresName = .SlideShowName
        .SourceType = ppPublishAll
        .FileName = "C:\HTMLPres\mallard.htm"
        .HTMLVersion = ppHTMLVersion4
        MsgBox ("Saving presentation " & "'" _
                & PresName & "'" & " in PowerPoint" _
                & Chr(10) & Chr(13) _
                & " format and HTML version 4.0 format")
        .Publish
    End With
End Sub
SlideSelectionChanged Event

This event occurs at different times depending on the current view.

<table>
<thead>
<tr>
<th>View</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal, Master</td>
<td>Occurs when the slide in the slide pane changes.</td>
</tr>
<tr>
<td>Slide Sorter</td>
<td>Occurs when the selection changes.</td>
</tr>
<tr>
<td>Slide, Notes</td>
<td>Occurs when the slide changes.</td>
</tr>
<tr>
<td>Outline</td>
<td>Does not occur.</td>
</tr>
</tbody>
</table>

Private Sub object_SlideSelectionChanged(ByVal SldRange As SlideRange)

object A variable that references an object of type Application declared with events in a class module.

SldRange The selection of slides. In most cases this would be a single slide (for example, in Slide View you navigate to the next slide), but in some cases this could be multiple slides (for example, a marquee selection in Slide Sorter View).
Remarks

To access the Application events, declare an Application variable in the General Declarations section of your code. Then set the variable equal to the Application object for which you want to access events. For information about using events with the Microsoft PowerPoint Application object, see Using Events with the Application Object.
Example

This example displays a message every time a user selects a different slide. This example assumes an Application object called PPTApp has been declared using the WithEvents keyword.

Private Sub PPTApp_SlideSelectionChanged(ByVal SldRange As SlideRange)  
    MsgBox "Slide selection changed."
End Sub
SlideShowBegin Event

Occurs when you start a slide show. Microsoft PowerPoint creates the slide show window and passes it to this event. If one slide show branches to another, the SlideShowBegin event does not occur again when the second slide show begins.

Private Sub application_SlideShowBegin(ByVal Wn As SlideShowWindow)

application An object of type Application declared with events in a class module. For information about using events with the Application object, see Using Events with the Application Object.

Wn The slide show window initialized prior to this event.
Example

This example adjusts the size and position of the slide show window and then reactivates it.

Private Sub App_SlideShowBegin(ByVal Wn As SlideShowWindow)
    With Wn
        .Height = 325
        .Width = 400
        .Left = 100
        .Activate
    End With
End Sub
SlideShowEnd Event

Occurs after a slide show ends — immediately after the last SlideShowNextSlide event occurs.

Private Sub application_SlideShowEnd(ByVal Pres As Presentation)

application An object of type Application declared with events in a class module. For information about using events with the Application object, see Using Events with the Application Object.

Pres The presentation closed when this event occurs.
Remarks

The SlideShowEnd event always occurs before a slide show ends if the SlideShowBegin event has occurred. You can use the SlideShowEnd event to return any property settings and variable initializations that occur in the SlideShowBegin event to their original settings.
Example

This example turns off the entry effect and automatic advance timing slide show transition effects for slides one through four at the end of the slide show. It also sets the slides to advance manually.

Private Sub App_SlideShowEnd(ByVal Pres As Presentation)
    With Pres.Slides.Range(Array(1, 4))
        .SlideShowTransition
            .EntryEffect = ppEffectNone
            .AdvanceOnTime = msoFalse
        End With

    With Pres.SlideShowSettings
        .AdvanceMode = ppSlideShowManualAdvance
    End With
End Sub
SlideShowNextBuild Event

Occurs upon mouse-click or timing animation, but before the animated object becomes visible.

Private Sub application_SlideShowNextBuild(ByVal Wn As SlideShowWindow)

application An object of type Application declared with events in a class module. For information about using events with the Application object, see Using Events with the Application Object.

Wn The active slide show window.
Example

If the current shape on slide one is a movie, this example plays the movie continuously until stopped manually by the presenter. This code is designed to be used with the second SlideShowNextSlide event example.

Private Sub App_SlideShowNextBuild(ByVal Wn As SlideShowWindow)
If EvtCounter <> 0 Then
    With ActivePresentation.Slides(1) _
        .Shapes(shpAnimArray(2, EvtCounter))
        If .Type = msoMedia Then
            If .MediaType = ppMediaTypeMovie
                .AnimationSettings.PlaySettings _
                    .LoopUntilStopped
            End If
        End If
    End With
End If
EvtCounter = EvtCounter + 1
End Sub
Show All
SlideShowNextClick Event

Occurs on the next click on the slide.

**Private Sub** application_SlideShowNextClick(ByVal Wn As SlideShowWindow, ByVal nEffect As Effect)

*application*  An object of type **Application** declared with events in a **class** module. For information about using events with the **Application** object, see **Using Events with the Application Object**.

*Wn*  The slide show window initialized prior to this event.

*nEffect*  The effect to animate on next click.
SlideShowNextSlide Event

Occurs immediately before the transition to the next slide. For the first slide, occurs immediately after the SlideShowBegin event.

Private Sub application_SlideShowNextSlide(ByVal Wn As SlideShowWindow)

application  An object of type Application declared with events in a class module. For information about using events with the Application object, see Using Events with the Application Object.

Wn  The active slide show window.
Example

This example determines the slide position for the slide following the SlideShowNextSlide event. If the next slide is slide three, the example changes the type of pointer to a pen and the pen color to red.

Private Sub App_SlideShowNextSlide(ByVal Wn As SlideShowWindow)
    Dim Showpos As Integer
    Showpos = Wn.View.CurrentShowPosition + 1
    If Showpos = 3 Then
        With ActivePresentation.SlideShowSettings.Run.View
            .PointerColor.RGB = RGB(255, 0, 0)
            .PointerType = ppSlideShowPointerPen
        End With
    Else
        With ActivePresentation.SlideShowSettings.Run.View
            .PointerColor.RGB = RGB(0, 0, 0)
            .PointerType = ppSlideShowPointerArrow
        End With
    End If
End Sub

This example sets a global counter variable to zero. Then it calculates the number of shapes on the slide following this event, determines which shapes have animation, and fills a global array with the animation order and the number of each shape.

Note The array created in this example is also used in the SlideShowNextBuild event example.

Private Sub App_SlideShowNextSlide(ByVal Wn As SlideShowWindow)
    Dim i as Integer, j as Integer, numShapes As Integer
    Dim objSld As Slide
    Set objSld = ActivePresentation.Slides (ActivePresentation.SlideShowWindow.View .CurrentShowPosition + 1)
    With objSld.Shapes
        numShapes = .Count
    End With
End Sub
If numShapes > 0 Then
    j = 1
    ReDim shpAnimArray(1 To 2, 1 To numShapes)
    For i = 1 To numShapes
        If .Item(i).AnimationSettings.Animate Then
            shpAnimArray(1, j) = _
            .Item(i).AnimationSettings.AnimationOrder
            shpAnimArray(2, j) = i
            j = j + 1
        End If
    Next
    End If
End With
End Sub
WindowActivate Event

Occurs when the application window or any document window is activated.

Private Sub application_WindowActivate(ByVal Pres As Presentation, ByVal Wn As DocumentWindow)

application    An object of type Application declared with events in a class module. For information about using events with the Application object, see Using Events with the Application Object.

Pres    The presentation displayed in the activated window.

Wn    The activated document window.
Example

This example opens every activated presentation in slide sorter view.

Private Sub App_WindowActivate _ (ByVal Pres As Presentation
    Wn.ViewType = ppViewSlideSorter
End Sub
WindowBeforeDoubleClick Event

Occurs when you double-click the items in the views listed in the following table.

<table>
<thead>
<tr>
<th>View</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal or slide view</td>
<td>Shape</td>
</tr>
<tr>
<td>Slide sorter view</td>
<td>Slide</td>
</tr>
<tr>
<td>Notes page view</td>
<td>Slide image</td>
</tr>
</tbody>
</table>

The default double-click action occurs after this event unless the Cancel argument is set to True.

Private Sub application_WindowBeforeDoubleClick(ByVal Sel As Selection, ByVal Cancel As Boolean)

application  An object of type Application declared with events in a class module. For information about using events with the Application object, see Using Events with the Application Object.

Sel   The selection below the mouse pointer when the double-click occurs.

Cancel  False when the event occurs. If the event procedure sets this argument to True, the default double-click action isn't performed when the procedure is finished.
Example

In slide sorter view, the default double-click event for any slide is to change to slide view. In this example, if the active presentation is displayed in slide sorter view, the default action is preempted by the WindowBeforeDoubleClick event. The event procedure changes the view to normal view and then cancels the change to slide view by setting the Cancel argument to True.

Private Sub App_WindowBeforeDoubleClick _
    (ByVal Sel As Selection, ByVal Cancel As Boolean)
    With Application.ActiveWindow
        If .ViewType = ppViewSlideSorter Then
            .ViewType = ppViewNormal
            Cancel = True
        End If
    End With
End Sub
Show All
WindowBeforeRightClick Event

Occurs when you right-click a shape, a slide, a notes page, or some text. This event is triggered by the MouseUp event.

Private Sub application_WindowBeforeRightClick(ByVal Sel As Selection, ByVal Cancel As Boolean)

application An object of type Application declared with events in a class module. For information about using events with the Application object, see Using Events with the Application Object.

Sel The selection below the mouse pointer when the right-click occurred.

Cancel False when the event occurs. If the event procedure sets this argument to True, the default context menu does not appear when the procedure is finished.
**Example**

This example creates a duplicate of the selected shape. If the shape has a text frame, it adds the text "Duplicate Shape" to the new shape. Setting the *Cancel* argument to *True* then prevents the default context menu from appearing.

```vba
Private Sub App_WindowBeforeRightClick ()
    With ActivePresentation.Selection.ShapeRange
        If .HasTextFrame Then
            .Duplicate.TextFrame.TextRange.Text = "Duplicate Shape"
        Else
            .Duplicate
        End If
    Cancel = True
    End With
End Sub
```
WindowDeactivate Event

Occurs when the application window or any document window is deactivated.

Private Sub application_WindowDeactivate(ByVal Pres As Presentation, ByVal Wn As DocumentWindow)

application An object of type Application declared with events in a class module. For information about using events with the Application object, see Using Events with the Application Object.

Pres The presentation displayed in the deactivated window.

Wn The deactivated document window.
Example

This example finds the file name (without its extension) for the presentation in the window that is being deactivated. It then appends the .htm extension to the file name and saves it as a Web page in the same folder as the presentation.

Private Sub App_WindowDeactivate _ (. . .) (ByVal Pres As Presentation
    FindNum = InStr(1, Wn.Presentation.FullName, ".")
    If FindNum = 0 Then
        HTMLName = Wn.Presentation.FullName & ".htm"
    Else
        HTMLName = Mid(Wn.Presentation.FullName, 1, FindNum - 1) & ".htm"
    End If
    Wn.Presentation.SaveCopyAs HTMLName, ppSaveAsHTML
    MsgBox "Presentation being saved in HTML format as " & HTMLName & " ."
End Sub
WindowSelectionChange Event

Occurs when the selection of text, a shape, or a slide in the active document window changes, whether through the user interface or through code.

Private Sub application_WindowSelectionChange(ByVal Sel As Selection)

application An object of type Application declared with events in a class module. For information about using events with the Application object, see Using Events with the Application Object.

Sel Represents the object selected.
**Example**

This example determines when a different slide is being selected and changes the background color of the newly selected slide.

```vba
Private Sub App_WindowSelectionChange(ByVal Sel As Selection)
    With Sel
        If .Type = ppSelectionNone Then
            With .SlideRange(1)
                .ColorScheme.Colors(ppBackground).RGB = RGB(240, 115, 100)
            End With
        End If
    End With
End Sub
```
Hyperlinks Collection Object

Multiple objects  Hyperlinks
   Hyperlink

A collection of all the Hyperlink objects on a slide or master.
Using the Hyperlinks Collection

Use the **Hyperlinks** property to return the **Hyperlinks** collection. The following example updates all hyperlinks on slide one in the active presentation that have the specified address.

```vba
For Each hl In ActivePresentation.Slides(1).Hyperlinks
    If hl.Address = "c:\current work\sales.ppt" Then
        hl.Address = "c:\new\newsales.ppt"
    End If
Next
```

Use the **Hyperlink** property to create a hyperlink and add it to the **Hyperlinks** collection. The following example sets a hyperlink that will be followed when the user clicks shape three on slide one in the active presentation during a slide show and adds the new hyperlink to the collection. Note that if shape three already has a mouse-click hyperlink defined, the following example will delete this hyperlink from the collection when it adds the new one, so the number of items in the **Hyperlinks** collection won't change.

```vba
With ActivePresentation.Slides(1).Shapes(3) _
    .ActionSettings(ppMouseClick) _
    .Action = ppActionHyperlink _
End With
```
Microsoft PowerPoint Objects (Shape)

- Shape
  - ActionSettings
    - ActionSetting
      - Hyperlink
      - SoundEffect
    - Adjustments
  - AnimationSettings
    - ColorFormat
    - PlaySettings
    - SoundEffect
  - CalloutFormat
  - ConnectorFormat
  - Diagram
    - DiagramNodes
  - DiagramNode
    - DiagramNodeChildren
  - FillFormat
    - ColorFormat
  - GroupShapes
  - LineFormat
    - ColorFormat
  - LinkFormat
  - OLEFormat
    - ObjectVerbs
  - PictureFormat
Legend

Object and collection
Object only
Microsoft PowerPoint Objects (Presentation)

- Presentation
  - ColorSchemes
    - ColorScheme
      - RGBColor
  - Designs
    - Design
  - DocumentProperties
  - ExtraColors
    - Fonts
      - Font
        - ColorFormat
  - HTMLProject
    - HTMLProjectItems
      - HTMLProjectItem
  - Master
    - ColorScheme
      - Design
        - HeadersFooters
          - HeaderFooter
        - Hyperlinks
          - Hyperlink
        - Scripts
          - Script
        - ShapeRange
      - Shapes
Legend

Object and collection
Object only
New Objects

Visit the [Office Developer Center](https://developer.microsoft.com) at MSDN Online for the latest Microsoft PowerPoint development information, including new technical articles, downloads, samples, product news, and more.

Objects that were added to Visual Basic in Microsoft PowerPoint 2002 are listed in the following table.

<table>
<thead>
<tr>
<th>Object</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AnimationBehavior</strong></td>
<td>The behavior of an animation effect, the main animation sequence, or an interactive animation sequence.</td>
</tr>
<tr>
<td><strong>AnimationBehaviors</strong></td>
<td>A collection of <strong>AnimationBehavior</strong> objects.</td>
</tr>
<tr>
<td><strong>AnimationPoint</strong></td>
<td>An individual point for an animation behavior.</td>
</tr>
<tr>
<td><strong>AnimationPoints</strong></td>
<td>A collection of animation points for a <strong>PropertyEffect</strong> object.</td>
</tr>
<tr>
<td><strong>AutoCorrect</strong></td>
<td>Contains properties for the AutoCorrect functionality in Microsoft PowerPoint.</td>
</tr>
<tr>
<td><strong>ColorEffect</strong></td>
<td>A color effect for an animation behavior.</td>
</tr>
<tr>
<td><strong>Comment</strong></td>
<td>A comment on a slide or slide range.</td>
</tr>
<tr>
<td><strong>Comments</strong></td>
<td>A collection of comments in a presentation.</td>
</tr>
<tr>
<td><strong>Design</strong></td>
<td>An individual slide design template.</td>
</tr>
<tr>
<td><strong>Designs</strong></td>
<td>A collection of slide design templates.</td>
</tr>
<tr>
<td><strong>Diagram</strong></td>
<td>A single diagram in a document. <strong>Diagram</strong> objects are members of the <strong>Shapes</strong> collection.</td>
</tr>
<tr>
<td><strong>DiagramNode</strong></td>
<td>A node in a diagram.</td>
</tr>
<tr>
<td><strong>DiagramNodeChildren</strong></td>
<td>A collection of <strong>DiagramNode</strong> objects that represents child nodes in a diagram.</td>
</tr>
<tr>
<td><strong>DiagramNodes</strong></td>
<td>A collection of <strong>DiagramNode</strong> objects that represents all the nodes in a diagram.</td>
</tr>
<tr>
<td><strong>Effect</strong></td>
<td>The timing information for an animation.</td>
</tr>
<tr>
<td>Term</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>EffectInformation</td>
<td>Contains animation options for an Effect object.</td>
</tr>
<tr>
<td>EffectParameters</td>
<td>Contains animation parameters for an Effect object, such as colors, fonts, sizes, and directions.</td>
</tr>
<tr>
<td>MotionEffect</td>
<td>A motion effect for an AnimationBehavior object.</td>
</tr>
<tr>
<td>Options</td>
<td>Application options in Microsoft PowerPoint.</td>
</tr>
<tr>
<td>PropertyEffect</td>
<td>A property effect for an AnimationBehavior object.</td>
</tr>
<tr>
<td>RotationEffect</td>
<td>A rotation effect for an AnimationBehavior object.</td>
</tr>
<tr>
<td>ScaleEffect</td>
<td>A scaling effect for an AnimationBehavior object.</td>
</tr>
<tr>
<td>Sequence</td>
<td>A collection of Effect objects for a slide's interactive animation sequences.</td>
</tr>
<tr>
<td>Sequences</td>
<td>A collection of Sequence objects.</td>
</tr>
<tr>
<td>TimeLine</td>
<td>Contains animation information for a Master, Slide or SlideRange object.</td>
</tr>
<tr>
<td>Timing</td>
<td>Contains timing properties for an animation effect.</td>
</tr>
</tbody>
</table>
# New Properties (by Object)

Properties that have been added to existing objects in Microsoft PowerPoint 2002 are listed in the following table (sorted by object name).

<table>
<thead>
<tr>
<th>Object</th>
<th>New Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addin</td>
<td><strong>DisplayAlerts</strong></td>
</tr>
<tr>
<td>AnimationBehavior</td>
<td><strong>Accumulate</strong>, <strong>Additive</strong>, <strong>ColorEffect</strong>, <strong>MotionEffect</strong>, <strong>PropertyEffect</strong>, <strong>RotationEffect</strong>, <strong>ScaleEffect</strong>, <strong>Timing</strong></td>
</tr>
<tr>
<td>AnimationPoint</td>
<td><strong>Formula</strong>, <strong>Time</strong>, <strong>Value</strong></td>
</tr>
<tr>
<td>AnimationPoints</td>
<td><strong>Smooth</strong></td>
</tr>
<tr>
<td>AutoCorrect</td>
<td><strong>DisplayAutoCorrectOptions</strong>, <strong>DisplayAutoLayoutOptions</strong></td>
</tr>
<tr>
<td>ColorEffect</td>
<td><strong>By</strong>, <strong>From</strong>, <strong>To</strong></td>
</tr>
<tr>
<td>ColorFormat</td>
<td><strong>Black</strong>, <strong>Cyan</strong>, <strong>Ink</strong>, <strong>Magenta</strong>, <strong>OverPrint</strong>, <strong>TintAndShade</strong>, <strong>Yellow</strong></td>
</tr>
<tr>
<td>Comment</td>
<td><strong>Author</strong>, <strong>AuthorIndex</strong>, <strong>AuthorInitials</strong>, <strong>DateTime</strong></td>
</tr>
<tr>
<td>DefaultWebOptions</td>
<td><strong>SaveNewWebPagesAsWebArchives</strong>, <strong>TargetBrowser</strong></td>
</tr>
<tr>
<td>Design</td>
<td><strong>Index</strong>, <strong>Preserved</strong></td>
</tr>
<tr>
<td>Diagram</td>
<td><strong>AutoFormat</strong>, <strong>AutoLayout</strong>, <strong>Reverse</strong></td>
</tr>
<tr>
<td>DiagramNode</td>
<td><strong>Children</strong>, <strong>Diagram</strong>, <strong>Root</strong>, <strong>TextShape</strong></td>
</tr>
<tr>
<td>DiagramNodeChildren</td>
<td><strong>FirstChild</strong>, <strong>LastChild</strong></td>
</tr>
<tr>
<td>EffectInformation</td>
<td><strong>BuildByLevelEffect</strong>, <strong>Dim</strong></td>
</tr>
<tr>
<td>EffectParameters</td>
<td><strong>Amount</strong>, <strong>Color1</strong>, <strong>Color2</strong>, <strong>Direction</strong>, <strong>Relative</strong></td>
</tr>
<tr>
<td>LineFormat</td>
<td>InsetPen</td>
</tr>
<tr>
<td>-----------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Master</td>
<td>Design, TimeLine</td>
</tr>
<tr>
<td>MotionEffect</td>
<td>ByX, ByY, FromX, FromY, ToX, ToY</td>
</tr>
<tr>
<td>Options</td>
<td>DisplayPasteOptions</td>
</tr>
<tr>
<td></td>
<td>Designs, GridDistance, HasRevisionInfo, Password, PasswordEncryptionAlgorithm, PasswordEncryptionFileProperties, PasswordEncryptionKeyLength, PasswordEncryptionProvider, RemovePersonalInformation, Signatures, SnapToGrid, WritePassword</td>
</tr>
<tr>
<td>Presentation</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>PrintOptions</td>
<td>PrintComments</td>
</tr>
<tr>
<td>PropertyEffect</td>
<td>From, Property, To</td>
</tr>
<tr>
<td>RotationEffect</td>
<td>By, From, To</td>
</tr>
<tr>
<td>ScaleEffect</td>
<td>ByX, ByY, FromX, FromY, ToX, ToY</td>
</tr>
<tr>
<td>Selection</td>
<td>ChildShapeRange, HasChildShapeRange</td>
</tr>
<tr>
<td>Shape</td>
<td>Child, Diagram, DiagramNode, HasDiagram, HasDiagramNode, Id, ParentGroup</td>
</tr>
<tr>
<td>ShapeRange</td>
<td>Child, Diagram, DiagramNode, HasDiagram, HasDiagramNode, Id, ParentGroup</td>
</tr>
<tr>
<td>Slide</td>
<td>Comments, Design, TimeLine</td>
</tr>
<tr>
<td>SlideRange</td>
<td>Comments, Design, TimeLine</td>
</tr>
<tr>
<td>SlideShowSettings</td>
<td>ShowScrollbar</td>
</tr>
<tr>
<td>TimeLine</td>
<td>InteractiveSequences, MainSequence</td>
</tr>
<tr>
<td></td>
<td>Accelerate, AutoReverse, Decelerate, Duration, RepeatCount, RepeatDuration, Restart, RewindAtEnd, SmoothEnd, SmoothStart, TriggerDelayTime, TriggerShape, TriggerType</td>
</tr>
<tr>
<td>Timing</td>
<td></td>
</tr>
<tr>
<td>WebOptions</td>
<td>TargetBrowser</td>
</tr>
</tbody>
</table>
## New Properties (Alphabetical)

Properties that have been added to existing objects in Microsoft PowerPoint 2002 are listed in the following table (sorted alphabetically).

<table>
<thead>
<tr>
<th>New Property</th>
<th>Object(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accelerate</td>
<td>Timing</td>
</tr>
<tr>
<td>Accumulate</td>
<td>AnimationBehavior</td>
</tr>
<tr>
<td>Additive</td>
<td>AnimationBehavior</td>
</tr>
<tr>
<td>Amount</td>
<td>EffectParameters</td>
</tr>
<tr>
<td>Author</td>
<td>Comment</td>
</tr>
<tr>
<td>AuthorIndex</td>
<td>Comment</td>
</tr>
<tr>
<td>AuthorInitials</td>
<td>Comment</td>
</tr>
<tr>
<td>AutoCorrect</td>
<td>Application</td>
</tr>
<tr>
<td>AutoFormat</td>
<td>Diagram</td>
</tr>
<tr>
<td>AutoLayout</td>
<td>Diagram</td>
</tr>
<tr>
<td>AutomationSecurity</td>
<td>Application</td>
</tr>
<tr>
<td>AutoReverse</td>
<td>Diagram, Timing</td>
</tr>
<tr>
<td>Behaviors</td>
<td>Effect</td>
</tr>
<tr>
<td>Black</td>
<td>ColorFormat</td>
</tr>
<tr>
<td>BuildByLevelEffect</td>
<td>EffectInformation</td>
</tr>
<tr>
<td>By</td>
<td>ColorEffect, RotationEffect</td>
</tr>
<tr>
<td>ByX</td>
<td>MotionEffect, ScaleEffect</td>
</tr>
<tr>
<td>ByY</td>
<td>MotionEffect, ScaleEffect</td>
</tr>
<tr>
<td>Child</td>
<td>Shape, ShapeRange</td>
</tr>
<tr>
<td>Children</td>
<td>DiagramNode</td>
</tr>
<tr>
<td>ChildShapeRange</td>
<td>Selection</td>
</tr>
<tr>
<td>Color1</td>
<td>EffectParameters</td>
</tr>
<tr>
<td>Color2</td>
<td>EffectParameters</td>
</tr>
<tr>
<td>ColorEffect</td>
<td>AnimationBehavior</td>
</tr>
</tbody>
</table>
Comments, Slide, SlideRange
Cyan, ColorFormat
DateTime, Comment
Decelerate, Timing
Design, Master, Slide, SlideRange
Designs, Presentation
Diagram, DiagramNode, Shape, ShapeRange
DiagramNode, Shape, ShapeRange
Dim, EffectInformation
Direction, EffectParameters
DisplayAlerts, Addin, Application
DisplayAutoCorrectOptions, AutoCorrect
DisplayAutoLayoutOptions, AutoCorrect
DisplayGridLines, Application
DisplayName, Effect
DisplayPasteOptions, Options
Duration, Timing
EffectInformation, Effect
EffectParameters, Effect
EffectType, Effect
Exit, Effect
FileDialog, Application
FirstChild, DiagramNodeChildren
Formula, AnimationPoint
From, ColorEffect, PropertyEffect, RotationEffect
FromX, MotionEffect, ScaleEffect
FromY, MotionEffect, ScaleEffect
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HasChildShapeRange, Selection
HasDiagram, Shape, ShapeRange
HasDiagramNode, Shape, ShapeRange
HasRevisionInfo, Presentation
Id, Shape, ShapeRange
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InsetPen, LineFormat
InteractiveSequences, TimeLine
LastChild, DiagramNodeChildren
Magenta, ColorFormat
MainSequence, TimeLine
MotionEffect, AnimationBehavior
NewPresentation, Application
Options, Application
OverPrint, ColorFormat
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ParentGroup, Shape, ShapeRange
Password, Presentation
PasswordEncryptionAlgorithm, Presentation
PasswordEncryptionFileProperties, Presentation
PasswordEncryptionKeyLength, Presentation
PasswordEncryptionProvider, Presentation
Preserved, Design
PrintComments, PrintOptions
Property, PropertyEffect
PropertyEffect, AnimationBehavior
Relative, EffectParameters
RemovePersonalInformation, Presentation
RepeatCount, Timing
RepeatDuration, Timing
Restart, Timing
Reverse, Diagram
RewindAtEnd, Timing
Root, DiagramNode
RotationEffect, AnimationBehavior
SaveNewWebPagesAsWebArchives, DefaultWebOptions
ScaleEffect  AnimationBehavior
ShowScrollbar  SlideShowSettings
ShowStartupDialog  Application
Signatures  Presentation
Smooth  AnimationPoints
SmoothEnd  Timing
SmoothStart  Timing
SnapToGrid  Presentation
TargetBrowser  DefaultWebOptions, WebOptions
TextRangeLength  Effect
TextRangeStart  Effect
TextShape  DiagramNode
Time  AnimationPoint
TimeLine  Master, Slide, SlideRange
Timing  AnimationBehavior, Effect
TintAndShade  ColorFormat
To  ColorEffect, PropertyEffect, RotationEffect
ToX  MotionEffect, ScaleEffect
ToY  MotionEffect, ScaleEffect
TriggerDelayTime  Timing
TriggerShape  Timing
TriggerType  Timing
Value  AnimationPoint
WritePassword  Presentation
Yellow  ColorFormat
# New Methods (by Object)

Methods that have been added to existing objects in Microsoft PowerPoint 2002 are listed in the following table (sorted by object name).

<table>
<thead>
<tr>
<th>Object</th>
<th>New Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>ColorFormat</td>
<td>SetCMYK</td>
</tr>
<tr>
<td>Design</td>
<td>MoveTo</td>
</tr>
<tr>
<td>Designs</td>
<td>Clone, Load</td>
</tr>
<tr>
<td>Diagram</td>
<td>Convert</td>
</tr>
<tr>
<td></td>
<td>AddNode, CloneNode, MoveNode, ReplaceNode, SwapNode, TransferChildren</td>
</tr>
<tr>
<td>DiagramNode</td>
<td>AddNode</td>
</tr>
<tr>
<td></td>
<td>MoveAfter, MoveBefore, MoveTo</td>
</tr>
<tr>
<td></td>
<td>AddBaseline, CanCheckIn, CheckIn, EndReview, RemoveBaseline, ReplyWithChanges, SendForReview, SetPasswordEncryptionOptions</td>
</tr>
<tr>
<td>Presentation</td>
<td>CanCheckOut, CheckOut, DiscordConflict, OfflineConflict</td>
</tr>
<tr>
<td>Presentations</td>
<td>AddEffect, Clone, ConvertToAfterEffect, ConvertToAnimateBackground, ConvertToAnimateInReverse, ConvertToBuildLevel, ConvertToTextUnitEffect, FindFirstAnimationFor, FindFirstAnimationForClick</td>
</tr>
<tr>
<td>Sequence</td>
<td>AddDiagram, PasteSpecial</td>
</tr>
<tr>
<td>Shapes</td>
<td>MoveTo</td>
</tr>
<tr>
<td>Slide</td>
<td>MoveTo</td>
</tr>
<tr>
<td>SlideRange</td>
<td>MoveTo</td>
</tr>
<tr>
<td>TextRange</td>
<td>PasteSpecial</td>
</tr>
</tbody>
</table>
# New Methods (Alphabetical)

Methods that have been added to existing objects in Microsoft PowerPoint 2002 are listed in the following table (sorted alphabetically).

<table>
<thead>
<tr>
<th>New Method</th>
<th>Object</th>
</tr>
</thead>
<tbody>
<tr>
<td>AddBaseline</td>
<td>Presentation</td>
</tr>
<tr>
<td>AddDiagram</td>
<td>Shapes</td>
</tr>
<tr>
<td>AddEffect</td>
<td>Sequence</td>
</tr>
<tr>
<td>AddNode</td>
<td>DiagramNode, DiagramNodeChildren</td>
</tr>
<tr>
<td>CanCheckIn</td>
<td>Presentation</td>
</tr>
<tr>
<td>CanCheckOut</td>
<td>Presentations</td>
</tr>
<tr>
<td>CheckIn</td>
<td>Presentation</td>
</tr>
<tr>
<td>CheckOut</td>
<td>Presentations</td>
</tr>
<tr>
<td>Clone</td>
<td>Designs, Sequence</td>
</tr>
<tr>
<td>CloneNode</td>
<td>DiagramNode</td>
</tr>
<tr>
<td>Convert</td>
<td>Diagram</td>
</tr>
<tr>
<td>ConvertToAfterEffect</td>
<td>Sequence</td>
</tr>
<tr>
<td>ConvertToAnimateBackground</td>
<td>Sequence</td>
</tr>
<tr>
<td>ConvertToAnimateInReverse</td>
<td>Sequence</td>
</tr>
<tr>
<td>ConvertToBuildLevel</td>
<td>Sequence</td>
</tr>
<tr>
<td>ConvertToTextUnitEffect</td>
<td>Sequence</td>
</tr>
<tr>
<td>DiscardConflict</td>
<td>Presentations</td>
</tr>
<tr>
<td>EndReview</td>
<td>Presentation</td>
</tr>
<tr>
<td>FindFirstAnimationFor</td>
<td>Sequence</td>
</tr>
<tr>
<td>FindFirstAnimationForClick</td>
<td>Sequence</td>
</tr>
<tr>
<td>Load</td>
<td>Designs</td>
</tr>
<tr>
<td>MoveAfter</td>
<td>Effect</td>
</tr>
<tr>
<td>MoveBefore</td>
<td>Effect</td>
</tr>
<tr>
<td>Function</td>
<td>Class</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>MoveNode</td>
<td>DiagramNode</td>
</tr>
<tr>
<td>MoveTo</td>
<td>Design, Effect, Slide, SlideRange</td>
</tr>
<tr>
<td>NextNode</td>
<td>DiagramNode</td>
</tr>
<tr>
<td>OfflineConflict</td>
<td>Presentations</td>
</tr>
<tr>
<td>PasteSpecial</td>
<td>Shapes, TextRange, View</td>
</tr>
<tr>
<td>PrevNode</td>
<td>DiagramNode</td>
</tr>
<tr>
<td>RemoveBaseline</td>
<td>Presentation</td>
</tr>
<tr>
<td>ReplaceNode</td>
<td>DiagramNode</td>
</tr>
<tr>
<td>ReplyWithChanges</td>
<td>Presentation</td>
</tr>
<tr>
<td>SendForReview</td>
<td>Presentation</td>
</tr>
<tr>
<td>SetCMYK</td>
<td>ColorFormat</td>
</tr>
<tr>
<td>SetPasswordEncryptionOptions</td>
<td>Presentation</td>
</tr>
<tr>
<td>SwapNode</td>
<td>DiagramNode</td>
</tr>
<tr>
<td>TransferChildren</td>
<td>DiagramNode</td>
</tr>
</tbody>
</table>
New Events

Events that have been added to the Application object in Microsoft PowerPoint 2002 are given in the following alphabetical list.

ColorSchemeChanged

PresentationBeforeSave

SlideSelectionChanged
Language-Specific Properties and Methods

The Microsoft PowerPoint Visual Basic object model has language-specific keywords for use with Asian and right-to-left languages. The availability of these language-specific keywords depends on the language support you have selected or installed.
## Language-Specific Properties and Methods

Properties and methods that are available only in Asian or right-to-left languages are listed in the following table.

<table>
<thead>
<tr>
<th>Property or Method</th>
<th>Object</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AutoRotateNumbers</strong> property</td>
<td><strong>Font</strong></td>
</tr>
<tr>
<td><strong>FarEastLineBreakLanguage</strong> property</td>
<td><strong>Presentation</strong></td>
</tr>
<tr>
<td><strong>FarEastLineBreakLevel</strong> property</td>
<td><strong>Presentation</strong></td>
</tr>
<tr>
<td><strong>FarEastLineBreakControl</strong> property</td>
<td><strong>ParagraphFormat</strong></td>
</tr>
<tr>
<td><strong>HangingPunctuation</strong> property</td>
<td><strong>ParagraphFormat</strong></td>
</tr>
<tr>
<td><strong>LayoutDirection</strong> property</td>
<td><strong>Presentation</strong></td>
</tr>
<tr>
<td><strong>LtrRun</strong> method</td>
<td><strong>TextRange</strong></td>
</tr>
<tr>
<td><strong>NameAscii</strong> property</td>
<td><strong>Font</strong></td>
</tr>
<tr>
<td><strong>NameFarEast</strong> property</td>
<td><strong>Font</strong></td>
</tr>
<tr>
<td><strong>NameOther</strong> property</td>
<td><strong>Font</strong></td>
</tr>
<tr>
<td><strong>NoLineBreakAfter</strong> property</td>
<td><strong>Presentation</strong></td>
</tr>
<tr>
<td><strong>NoLineBreakBefore</strong> property</td>
<td><strong>Presentation</strong></td>
</tr>
<tr>
<td><strong>RtlRun</strong> method</td>
<td><strong>TextRange</strong></td>
</tr>
<tr>
<td><strong>TableDirection</strong> property</td>
<td><strong>Table</strong></td>
</tr>
<tr>
<td><strong>TextDirection</strong> property</td>
<td><strong>ParagraphFormat</strong></td>
</tr>
</tbody>
</table>
## Language-Specific Arguments

Properties and methods that are available in all languages, but that have one or more language-specific arguments, are listed in the following table.

<table>
<thead>
<tr>
<th>Property or Method</th>
<th>Object</th>
</tr>
</thead>
<tbody>
<tr>
<td>AddLabel method</td>
<td>Shapes</td>
</tr>
<tr>
<td>AddTextBox method</td>
<td>Shapes</td>
</tr>
<tr>
<td>Orientation property</td>
<td>TextFrame</td>
</tr>
<tr>
<td>SaveAs method</td>
<td>Presentation</td>
</tr>
</tbody>
</table>

**Note**  In order to **enable** the language-specific features in Microsoft PowerPoint, you must be running a 32-bit version of the Microsoft Windows operating system that has support for that particular language — for example, the Arabic version of Microsoft Windows 95 has right-to-left support.
Hyperlink Object

Multiple objects

Represents a hyperlink associated with a non-placeholder shape or text. You can use a hyperlink to jump to an Internet or intranet site, to another file, or to a slide within the active presentation. The Hyperlink object is a member of the Hyperlinks collection. The Hyperlinks collection contains all the hyperlinks on a slide or a master.
Using the Hyperlink Object

Use the Hyperlink property to return a hyperlink for a shape. A shape can have two different hyperlinks assigned to it: one that's followed when the user clicks the shape during a slide show, and another that's followed when the user passes the mouse pointer over the shape during a slide show. For the hyperlink to be active during a slide show, the Action property must be set to ppActionHyperlink. The following example sets the mouse-click action for shape three on slide one in the active presentation to an Internet link.

```vba
With ActivePresentation.Slides(1).Shapes(3)
    .ActionSettings(ppMouseClick)
    .Action = ppActionHyperlink
End With
```

A slide can contain more than one hyperlink. Each non-placeholder shape can have a hyperlink; the text within a shape can have its own hyperlink; and each individual character can have its own hyperlink. Use Hyperlinks(index), where index is the hyperlink number, to return a single Hyperlink object. The following example adds the shape three mouse-click hyperlink to the Favorites folder.

```vba
ActivePresentation.Slides(1).Shapes(3)
    .ActionSettings(ppMouseClick).Hyperlink.AddToFavorites
```

Note When you use this method to add a hyperlink to the Microsoft Internet Explorer Favorites folder, an icon is added to the Favorites menu without a corresponding name. You must add the name from within Internet Explorer.
Working with shapes (drawing objects)

Shapes, or drawing objects, are represented by three different objects: the \texttt{Shapes} collection, the \texttt{ShapeRange} collection, and the \texttt{Shape} object. In general, you use the \texttt{Shapes} collection to create shapes and when you want to iterate through all the shapes on a slide; you use the \texttt{Shape} object when you want to modify a single shape; and you use the \texttt{ShapeRange} collection when you want to modify multiple shapes the same way you can work with multiple selected shapes in the user interface.
Setting properties for a shape

Many formatting properties of shapes aren't set by properties that apply directly to the **Shape** or **ShapeRange** object. Instead, related shape attributes are grouped under secondary objects, such as the **FillFormat** object, which contains all the properties that relate to the shape's fill, or the **LinkFormat** object, which contains all the properties that are unique to linked OLE objects. To set properties for a shape, you must first return the object that represents the set of related shape attributes and then set properties of that returned object. For example, you use the **Fill** property to return the **FillFormat** object, and then you set the **ForeColor** property of the **FillFormat** object to set the fill foreground color for the specified shape, as shown in the following example.

```vba
Set myDocument = ActivePresentation.Slides(1)
myDocument.Shapes(1).Fill.ForeColor.RGB = RGB(255, 0, 0)
```
Applying a property or method to several shapes at the same time

In the user interface, there are some operations you can perform with several shapes selected; for example, you can select several shapes and set all their individual fills at once. There are other operations you can only perform with a single shape selected; for example, you can only edit the text in a shape if a single shape is selected.

In Visual Basic, there are two ways to apply properties and methods to a set of shapes. These two ways allow you to perform any operation that you can perform on a single shape on a range of shapes, whether or not you can perform the same operation in the user interface.

- If the operation works on multiple selected shapes in the user interface, you can perform the same operation in Visual Basic by constructing a \texttt{ShapeRange} collection that contains the shapes you want to work with, and applying the appropriate properties and methods directly to the \texttt{ShapeRange} collection.
- If the operation doesn't work on multiple selected shapes in the user interface, you can still perform the operation in Visual Basic by looping through the \texttt{Shapes} collection or through a \texttt{ShapeRange} collection that contains the shapes you want to work with, and applying the appropriate properties and methods to the individual \texttt{Shape} objects in the collection.

Many properties and methods that apply to the \texttt{Shape} object and \texttt{ShapeRange} collection fail if applied to certain kinds of shapes. For example, the \texttt{TextFrame} property fails if applied to a shape that cannot contain text. If you are not positive that each shape in a \texttt{ShapeRange} collection can have a certain property or method applied to it, don't apply the property or method to the \texttt{ShapeRange} collection. If you want to apply one of these properties or methods to a collection of shapes, you must loop through the collection and test each individual shape to make sure it is an appropriate type of shape before applying the property or method to it.
Applying a property or method to a ShapeRange collection

If you can perform an operation on multiple selected shapes in the user interface at the same time, you can do the programmatic equivalent by constructing a ShapeRange collection and then applying the appropriate properties or methods to it. The following example constructs a shape range that contains the AutoShapes named "Big Star" and "Little Star" on myDocument and applies a gradient fill to them.

```vba
Set myDocument = ActivePresentation.Slides(1)
Set myRange = myDocument.Shapes.Range(Array("Big Star", "Little Star"))
myRange.Fill.PresetGradient msoGradientHorizontal, 1, msoGradientBrass
```

The following are general guidelines for how properties and methods behave when they're applied to a ShapeRange collection.

- Applying a method to a the collection is equivalent to applying the method to each individual Shape object in that collection.
- Setting the value of a property of the collection is equivalent to setting the value of the property of each individual shape in that range.
- A property of the collection that returns a constant returns the value of the property for an individual shape in the collection if all shapes in the collection have the same value for that property. If not all shapes in the collection have the same value for the property, it returns the "mixed" constant.
- A property of the collection that returns a simple data type (such as Long, Single, or String) returns the value of the property for an individual shape if all shapes in the collection have the same value for that property.
- The value of some properties can be returned or set only if there's exactly one shape in the collection. If there's more than one shape in the collection, a run-time error occurs. This is generally the case for returning or setting properties when the equivalent action in the user interface is possible only with a single shape (actions such as editing text in a shape or editing the points of a freeform).
The preceding guidelines also apply when you are setting properties of shapes that are grouped under secondary objects of the \texttt{ShapeRange} collection, such as the \texttt{FillFormat} object. If the secondary object represents operations that can be performed on multiple selected objects in the user interface, you will be able to return the object from a \texttt{ShapeRange} collection and set its properties. For example, you can use the \texttt{Fill} property to return the \texttt{FillFormat} object that represents the fills of all the shapes in the \texttt{ShapeRange} collection. Setting the properties of this \texttt{FillFormat} object will set the same properties for all the individual shapes in the \texttt{ShapeRange} collection.
Loops through a Shapes or ShapeRange collection

Even if you cannot perform an operation on several shapes in the user interface at the same time by selecting them and then using a command, you can perform the equivalent action programmatically by looping through the Shapes collection or through a ShapeRange collection that contains the shapes you want to work with, and applying the appropriate properties and methods to the individual Shape objects in the collection. The following example loops through all the shapes on myDocument and adds text to each shape that is an AutoShape.

```vbnet
Set myDocument = ActivePresentation.Slides(1)
For Each sh In myDocument.Shapes
    If sh.Type = msoAutoShape Then
        sh.TextFrame.TextRange.InsertAfter " (version 1)"
    End If
Next
```

The following example constructs ShapeRange collection that contains all the currently selected shapes in the active window and sets the text in each shape in the collection that can contain text.

```vbnet
For Each sh in ActiveWindow.Selection.ShapeRange
    If sh.HasTextFrame Then
        sh.TextFrame.TextRange = "Initially selected"
    End If
Next
```
Aligning, distributing, and grouping shapes in a shape range

Use the Align and Distribute methods to position a set of shapes relative to one another or relative to the document that contains them. Use the Group method or the Regroup method to form a single grouped shape from a set of shapes.
AddOLEObject Method

Creates an OLE object. Returns a Shape object that represents the new OLE object.

expression.AddOLEObject(Left, Top, Width, Height, ClassName, FileName, DisplayAsIcon, IconFileName, IconIndex, IconLabel, Link)

expression  Required. An expression that returns a Shapes object.

Left, Top  Optional Float. The position (in points) of the upper-left corner of the new object relative to the upper-left corner of the slide. The default value is 0 (zero).

Width, Height  Optional Float. The initial dimensions of the OLE object, in points.

ClassName  Optional String. The OLE long class name or the ProgID for the object that's to be created. You must specify either the ClassName or FileName argument for the object, but not both.

FileName  Optional String. The file from which the object is to be created. If the path isn't specified, the current working folder is used. You must specify either the ClassName or FileName argument for the object, but not both.

DisplayAsIcon  Optional MsoTriState. Determines whether the OLE object will be displayed as an icon.

MsoTriState can be one of these MsoTriState constants:

msoCTrue
msoFalse  Default.

msoTriStateMixed
msoTriStateToggle
msoTrue  Displays the OLE object as an icon.
**IconFileName**  Optional **String**. The file that contains the icon to be displayed.

**IconIndex**  Optional **Integer**. The index of the icon within **IconFileName**. The order of icons in the specified file corresponds to the order in which the icons appear in the **Change Icon** dialog box (accessed from the **Insert Object** dialog box when the **Display as icon** check box is selected). The first icon in the file has the index number 0 (zero). If an icon with the given index number doesn't exist in **IconFileName**, the icon with the index number 1 (the second icon in the file) is used. The default value is 0 (zero).

**IconLabel**  Optional **String**. A label (caption) to be displayed beneath the icon.

**Link**  Optional **MsoTriState**. Determines whether the OLE object will be linked to the file from which it was created. If you specified a value for **ClassName**, this argument must be **msoFalse**.

MsoTriState can be one of these MsoTriState constants.

- **msoCTrue**
- **msoFalse** Default. Makes the OLE object an independent copy of the file.
- **msoTriStateMixed**
- **msoTriStateToggle**
- **msoTrue** Links the OLE object to the file from which it was created.
This example adds a linked Word document to myDocument.

```vba
Set myDocument = ActivePresentation.Slides(1)
myDocument.Shapes.AddOLEObject Left:=100, Top:=100, _
    Width:=200, Height:=300, _
    FileName:="c:\my documents\testing.doc", Link:=msoTrue
```

This example adds a new Microsoft Excel worksheet to myDocument. The worksheet will be displayed as an icon.

```vba
Set myDocument = ActivePresentation.Slides(1)
myDocument.Shapes.AddOLEObject Left:=100, Top:=100, _
    Width:=200, Height:=300, _
    ClassName:="Excel.Sheet", DisplayAsIcon:=True
```

This example adds a command button to myDocument.

```vba
Set myDocument = ActivePresentation.Slides(1)
myDocument.Shapes.AddOLEObject Left:=100, Top:=100, _
    Width:=150, Height:=50, ClassName:="Forms.CommandButton.1"
```
Show All
The **Item** method returns a single object from a collection. The following example sets the `firstPres` variable to a **Presentation** object that represents presentation one.

```
Set firstPres = Presentations.Item(1)
```

The **Item** method is the **default method** for most collections, so you can write the same statement more concisely by omitting the **Item** keyword.

```
Set firstPres = Presentations(1)
```

For more information about a specific collection, see the Help topic for that collection or the **Item** method for the collection.
Named Objects

Although you can usually specify an integer value with the Item method, it may be more convenient to return an object by name. Many objects are given automatically generated names when they are created. For example, the first slide you create will be automatically named "Slide1." If the first two shapes you create are a rectangle and an oval, their default names will be "Rectangle 1" and "Oval 2". You may want to give an object a more meaningful name to make it easier to refer to later. Most often, this is done by setting the object's Name property. The following example sets a meaningful name for a slide as it is added. The name can then be used instead of the index number to refer to the slide.

ActivePresentation.Slides.Add(1, 1).Name = "Home Page Slide"
With ActivePresentation.Slides("Home Page Slide")
    .FollowMasterBackground = False
    .Background.Fill.PresetGradient _
        msoGradientDiagonalDown, 1, msoGradientBrass
End With

Predefined Index Values

Some collections have predefined index values you can use to return single objects. Each predefined index value is represented by a constant. For example, you specify a PpTextStyleType constant with the Item method of the TextStyles collection to return a single text style.

The following example sets the margins for the body area on slides in the active presentation.

With ActivePresentation.SlideMaster _
    .TextStyles(ppBodyStyle).TextFrame
        .MarginBottom = 50
        .MarginLeft = 50
        .MarginRight = 50
        .MarginTop = 50
End With
Using Events with the Application Object

To create an event handler for an event of the Application object, you need to complete the following three steps:

1. Declare an object variable in a class module to respond to the events.
2. Write the specific event procedures.
3. Initialize the declared object from another module.
Declare the Object Variable

Before you can write procedures for the events of the Application object, you must create a new class module and declare an object of type Application with events. For example, assume that a new class module is created and called EventClassModule. The new class module contains the following code.

Public WithEvents App As Application
Write the Event Procedures

After the new object has been declared with events, it appears in the Object list in the class module, and you can write event procedures for the new object. (When you select the new object in the Object list, the valid events for that object are listed in the Procedure list.) Select an event from the Procedure list; an empty procedure is added to the class module.

Private Sub App_NewPresentation()

End Sub
Initializing the Declared Object

Before the procedure will run, you must connect the declared object in the class module (App in this example) with the Application object. You can do this with the following code from any module.

```vba
Dim X As New EventClassModule
Sub InitializeApp()
    Set X.App = Application
End Sub
```

Run the InitializeApp procedure. After the procedure is run, the App object in the class module points to the Microsoft PowerPoint Application object, and the event procedures in the class module will run when the events occur.