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Controlling Program Execution

You can control the flow of your script with conditional statements and looping statements. Using conditional statements, you can write VBScript code that makes decisions and repeats actions. The following conditional statements are available in VBScript:

- **If...Then...Else** statement
- **Select Case** statement

Making Decisions Using If...Then...Else

The **If...Then...Else** statement is used to evaluate whether a condition is **True** or **False** and, depending on the result, to specify one or more statements to run. Usually the condition is an expression that uses a comparison operator to compare one value or variable with another. For information about comparison operators, see <u>Comparison Operators</u>. **If...Then...Else** statements can be nested to as many levels as you need.

Running Statements if a Condition is True

To run only one statement when a condition is **True**, use the single-line syntax for the **If...Then...Else** statement. The following example shows the single-line syntax. Notice that this example omits the **Else** keyword.

Sub FixDate()

```
Dim myDate
myDate = #2/13/95#
If myDate < Now Then myDate = Now
End Sub
```

To run more than one line of code, you must use the multiple-line (or block) syntax. This syntax includes the **End If** statement, as shown in the following example:

```
Sub AlertUser(value)
If value = 0 Then
AlertLabel.ForeColor = vbRed
AlertLabel.Font.Bold = True
AlertLabel.Font.Italic = True
End If
End Sub
```

Running Certain Statements if a Condition is True and Running Others if a Condition is False

You can use an **If...Then...Else** statement to define two blocks of executable statements: one block to run if the condition is **True**, the other block to run if the condition is **False**.

```
Sub AlertUser(value)

If value = 0 Then

AlertLabel.ForeColor = vbRed

AlertLabel.Font.Bold = True

AlertLabel.Font.Italic = True
```

```
Else
AlertLabel.Forecolor = vbBlack
AlertLabel.Font.Bold = False
AlertLabel.Font.Italic = False
End If
End Sub
```

Deciding Between Several Alternatives

A variation on the **If...Then...Else** statement allows you to choose from several alternatives. Adding **ElseIf** clauses expands the functionality of the **If...Then...Else** statement so you can control program flow based on different possibilities. For example:

```
Sub ReportValue(value)
If value = 0 Then
MsgBox value
ElseIf value = 1 Then
MsgBox value
ElseIf value = 2 then
Msgbox value
Else
Msgbox value
Else
Msgbox "Value out of range!"
End If
```

You can add as many **ElseIf** clauses as you need to provide alternative choices. Extensive use of the **ElseIf** clauses often becomes cumbersome. A better way to choose between several alternatives is the **Select Case** statement.

Making Decisions with Select Case

The **Select Case** structure provides an alternative to **If...Then...ElseIf** for selectively executing one block of statements from among multiple blocks of statements. A **Select Case** statement provides capability similar to the **If...Then...Else statement**, but it makes code more efficient and readable.

A **Select Case** structure works with a single test expression that is evaluated once, at the top of the structure. The result of the expression is then compared with the values for each **Case** in the structure. If there is a match, the block of statements associated with that **Case** is executed:

Select Case Document.Form1.CardType.Options(S

Case "MasterCard"

DisplayMCLogo

ValidateMCAccount

Case "Visa"

DisplayVisaLogo

ValidateVisaAccount

Case "American Express"

DisplayAMEXCOLogo

ValidateAMEXCOAccount

Case Else

DisplayUnknownImage

PromptAgain

End Select

Notice that the **Select Case** structure evaluates an expression once at the top of the structure. In contrast, the **If...Then...ElseIf** structure can evaluate a different expression for each **ElseIf** statement. You can replace an

If...Then...ElseIf structure with a **Select Case** structure only if each **ElseIf** statement evaluates the same expression.

Microsoft® Visual Basic® Scripting Edition Looping Through Code

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Using Loops to Repeat Code

Looping allows you to run a group of statements repeatedly. Some loops repeat statements until a condition is **False**; others repeat statements until a condition is **True**. There are also loops that repeat statements a specific number of times.

The following looping statements are available in VBScript:

- **Do...Loop**: Loops while or until a condition is **True**.
- While...Wend: Loops while a condition is **True**.
- **For...Next**: Uses a counter to run statements a specified number of times.
- **For Each...Next**: Repeats a group of statements for each item in a collection or each element of an array.

Using Do Loops

You can use **Do...Loop** statements to run a block of statements an indefinite number of times. The statements are repeated either while a condition is **True** or until a condition becomes **True**.

Repeating Statements While a Condition is True

Use the **While** keyword to check a condition in a **Do...Loop** statement. You can check the condition before you enter the loop (as shown in the following ChkFirstWhile example), or you can check it after the loop has run at least once (as shown in the ChkLastWhile example). In the ChkFirstWhile procedure, if myNum is set to 9 instead of 20, the statements inside the loop will never run. In the ChkLastWhile procedure, the

statements inside the loop run only once because the condition is already **False**.

```
Sub ChkFirstWhile()
  Dim counter, myNum
  counter = 0
  myNum = 20
  Do While myNum > 10
    myNum = myNum - 1
    counter = counter + 1
  Loop
  MsgBox "The loop made " & counter & " repetitions."
End Sub
Sub ChkLastWhile()
  Dim counter, myNum
  counter = 0
  myNum = 9
  Do
    myNum = myNum - 1
    counter = counter + 1
  Loop While myNum > 10
  MsgBox "The loop made " & counter & " repetitions."
End Sub
```

Repeating a Statement Until a Condition Becomes True

You can use the **Until** keyword in two ways to check a condition in a **Do...Loop** statement. You can check the condition before you enter the loop (as shown in the following ChkFirstUntil example), or you can check it after the loop has run at least once (as shown in the ChkLastUntil example). As long as the condition is **False**, the looping occurs.

```
Sub ChkFirstUntil()
Dim counter, myNum
```

```
counter = 0
  myNum = 20
  Do Until myNum = 10
    myNum = myNum - 1
    counter = counter + 1
  Loop
  MsgBox "The loop made " & counter & " repetitions."
End Sub
Sub ChkLastUntil()
  Dim counter, myNum
  counter = 0
  myNum = 1
  Dο
    myNum = myNum + 1
    counter = counter + 1
  Loop Until myNum = 10
  MsgBox "The loop made " & counter & " repetitions."
End Sub
```

Exiting a Do...Loop Statement from Inside the Loop

You can exit a **Do...Loop** by using the **Exit Do** statement. Because you usually want to exit only in certain situations, such as to avoid an endless loop, you should use the **Exit Do** statement in the **True** statement block of an **If...Then...Else** statement. If the condition is **False**, the loop runs as usual.

In the following example, myNum is assigned a value that creates an endless loop. The **If...Then...Else** statement checks for this condition, preventing the endless repetition.

```
Sub ExitExample()
Dim counter, myNum
counter = 0
myNum = 9
```

```
Do Until myNum = 10
   myNum = myNum - 1
   counter = counter + 1
   If myNum < 10 Then Exit Do
   Loop
   MsgBox "The loop made " & counter & " repetitions."
End Sub
```

Using While...Wend

The **While...Wend** statement is provided in VBScript for those who are familiar with its usage. However, because of the lack of flexibility in **While...Wend**, it is recommended that you use **Do...Loop** instead.

Using For...Next

You can use **For...Next** statements to run a block of statements a specific number of times. For loops, use a counter variable whose value is increased or decreased with each repetition of the loop.

For example, the following procedure causes a procedure called MyProc to execute 50 times. The **For** statement specifies the counter variable x and its start and end values. The **Next** statement increments the counter variable by 1.

```
Sub DoMyProc50Times()
Dim x
For x = 1 To 50
MyProc
Next
End Sub
```

Using the **Step** keyword, you can increase or decrease the counter variable by the value you specify. In the following example, the counter variable j is incremented by 2 each time the loop repeats. When the loop is finished, total is the sum of 2, 4, 6, 8, and 10.

```
Sub TwosTotal()
```

```
Dim j, total
For j = 2 To 10 Step 2
total = total + j
Next
MsgBox "The total is " & total
End Sub
```

To decrease the counter variable, you use a negative **Step** value. You must specify an end value that is less than the start value. In the following example, the counter variable myNum is decreased by 2 each time the loop repeats. When the loop is finished, total is the sum of 16, 14, 12, 10, 8, 6, 4, and 2.

```
Sub NewTotal()
Dim myNum, total
For myNum = 16 To 2 Step -2
total = total + myNum
Next
MsgBox "The total is " & total
End Sub
```

You can exit any **For...Next** statement before the counter reaches its end value by using the **Exit For** statement. Because you usually want to exit only in certain situations, such as when an error occurs, you should use the **Exit For** statement in the **True** statement block of an **If...Then...Else** statement. If the condition is **False**, the loop runs as usual.

Using For Each...Next

A **For Each...Next** loop is similar to a **For...Next** loop. Instead of repeating the statements a specified number of times, a **For Each...Next** loop repeats a group of statements for each item in a collection of objects or for each element of an array. This is especially helpful if you don't know how many elements are in a collection.

In the following HTML code example, the contents of a **Dictionary** object is used to place text in several text boxes:

```
<HTML>
<HEAD><TITLE>Forms and Elements</TITLE></HEAD>
<SCRIPT LANGUAGE="VBScript">
<!--
Sub cmdChange_OnClick
                 'Create a variable
 Dim d
 Set d = CreateObject("Scripting.Dictionary")
 d.Add "0", "Athens" 'Add some keys and items
 d.Add "1", "Belgrade"
 d.Add "2", "Cairo"
 For Each I in d
   Document.frmForm.Elements(I).Value = D.Item(I)
 Next
End Sub
-->
</SCRIPT>
<BODY>
<CENTER>
<FORM NAME="frmForm"
<Input Type = "Text">
<Input Type = "Text">
<Input Type = "Text">
<Input Type = "Text">
<Input Type = "Button" NAME="cmdChange" VALUE="Click H</pre>
</FORM>
</CENTER>
</BODY>
</HTML>
```

VBScript and Forms

Simple Validation

You can use Visual Basic Scripting Edition to do much of the form processing that you'd usually have to do on a server. You can also do things that just can't be done on the server.

Here's an example of simple client-side validation. The HTML code is for a text box and a button. If you use Microsoft® Internet Explorer to view the <u>page produced</u> by the following code, you'll see a small text box with a button next to it.

```
<HTML>
<HEAD><TITLE>Simple Validation</TITLE>
<SCRIPT LANGUAGE="VBScript">
<!--
Sub Button1_OnClick
Dim TheForm
Set TheForm = Document.ValidForm
If IsNumeric(TheForm.Text1.Value) Then
If TheForm.Text1.Value < 1 Or TheForm.Text1.

MsgBox "Please enter a number between 1 and
Else
MsgBox "Thank you."
End If
Else
```

```
MsgBox "Please enter a numeric value."
End If
End Sub
-->
</SCRIPT>
</HEAD>
<BODY>
<H3>Simple Validation</H3><HR>
<FORM NAME="ValidForm">
Enter a value between 1 and 10:
<INPUT NAME="Text1" TYPE="TEXT" SIZE="
<INPUT NAME="Button1" TYPE="BUTTON" V
</FORM>
</BODY>
</HTML>
```

The difference between this text box and the examples on <u>A Simple VBScript Page</u> is that the **Value** property of the text box is used to check the entered value. To get the **Value** property, the code has to qualify the reference to the name of the text box.

You can always write out the full reference Document.ValidForm.Text1. However, where you have multiple references to form controls, you'll want to do what was done here. First declare a variable. Then use the <u>Set</u> statement to assign the form to the variable TheForm. A regular assignment statement, such as <u>Dim</u>, doesn't work here; you must use **Set** to preserve the reference to an object.

Using Numeric Values

Notice that the example directly tests the value against a number: it uses the IsNumeric function to make sure the string in the text box is a number. Although VBScript automatically converts strings and numbers, it's always

a good practice to test a user-entered value for its data subtype and to use <u>conversion functions</u> as necessary. When doing addition with text box values, convert the values explicitly to numbers because the plus sign (±) operator represents both addition and string concatenation. For example, if Text1 contains "1" and Text2 contains "2", you see the following results:

```
A = Text1.Value + Text2.Value 'A is "12"
A = CDbl(Text1.Value) + Text2.Value 'A is 3
```

Validating and Passing Data Back to the Server

The simple validation example uses a plain button control. If a Submit control was used, the example would never see the data to check it—everything would go immediately to the server. Avoiding the Submit control lets you check the data, but it doesn't submit the data to the server. That requires an additional line of code:

```
<SCRIPT LANGUAGE="VBScript">
<!--
Sub Button1_OnClick
 Dim TheForm
 Set TheForm = Document.ValidForm
 If IsNumeric(TheForm.Text1.Value) Then
  If TheForm.Text1.Value < 1 Or TheForm.Text1.Value > 10 The
   MsgBox "Please enter a number between 1 and 10."
  Else
   MsgBox "Thank you."
   TheForm.Submit 'Data correct; send to server.
  End If
 Else
  MsgBox "Please enter a numeric value."
 End If
End Sub
-->
```

</SCRIPT>

To send the data to the server, the code invokes the **Submit** method on the form object when the data is correct. From there, the server handles the data just as it otherwise would—except that the data is correct before it gets there. Find complete information about the **Submit** method and other methods in the Internet Explorer Scripting Object Model documentation, which can be found on the Microsoft® Web site (http://www.microsoft.com).

So far, you've seen only the standard HTML <FORM> objects. Internet Explorer also lets you exploit the full power of ActiveX® controls (formerly called OLE controls) and Java™ objects.

VBScript with Objects

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Using Objects

Whether you use an ActiveX® control (formerly called an OLE control) or a JavaTM object, Microsoft Visual Basic Scripting Edition and Microsoft® Internet Explorer handle it the same way. If you're using Internet Explorer and have installed the **Label** control, you can see the <u>page produced</u> by the following code.

You include an object using the <OBJECT> tags and set its initial property values using <PARAM> tags. If you're a Visual Basic programmer, you'll recognize that using the <PARAM> tags is just like setting initial properties for a control on a form. For example, the following set of <OBJECT> and <PARAM> tags adds the ActiveX Label control to a page:

```
<OBJECT
    classid="clsid:99B42120-6EC7-11CF-A6C7-0"
    id=lblActiveLbl
    width=250
    height=250
    align=left
    hspace=20
    vspace=0
>
```

```
<PARAM NAME="Alignment" VALUE="4">
<PARAM NAME="BackStyle" VALUE="0">
<PARAM NAME="Caption" VALUE="A Simple I
<PARAM NAME="FontName" VALUE="Verdana"
<PARAM NAME="FontSize" VALUE="20">
<PARAM NAME="FontBold" VALUE="1">
<PARAM NAME="FontBold" VALUE="1">
<PARAM NAME="FrColor" VALUE="0">
</OBJECT>
```

You can get properties, set properties, and invoke methods just as with any of the form controls. The following code, for example, includes <FORM> controls you can use to manipulate two properties of the Label control:

```
<FORM NAME="LabelControls">
<INPUT TYPE="TEXT" NAME="txtNewText" SI
<INPUT TYPE="BUTTON" NAME="cmdChange"
<INPUT TYPE="BUTTON" NAME="cmdRotate"
</FORM>
```

With the form defined, an event procedure for the cmdChangeIt button changes the label text:

```
<SCRIPT LANGUAGE="VBScript">
<!--
Sub cmdChangeIt_onClick
    Dim TheForm
    Set TheForm = Document.LabelControls
    lblActiveLbl.Caption = TheForm.txtNewText</pre>
```

End Sub

-->

</SCRIPT>

The code qualifies references to controls and values inside the forms just as in the <u>Simple Validation</u> example.

Several ActiveX controls are available for use with Internet Explorer. You can find complete information about the properties, methods, and events there, as well as the class identifiers (CLSID) for the controls on the Microsoft® Web site (http://www.microsoft.com). You can find more information about the <OBJECT> tag on the *Internet Explorer 4.0 Author's Guide and HTML Reference* page.

Note Earlier releases of Internet Explorer required braces ({}) around the classid attribute and did not conform to the W3C specification. Using braces with the current release generates a "This page uses an outdated version of the <OBJECT> tag" message.

Scripting Run-Time Library Reference

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- Constants
- Methods
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Welcome to the Scripting Run-Time Library Reference

These handy blocks of information will help you explore the many different parts of the Scripting Run-Time Library.

You'll find *all* the parts of the Scripting Run-Time Library listed alphabetically under the Alphabetic Keyword List. But if you want to examine just one category, say, objects, each language category has its own, more compact section.

How's it work? Click on one of the headings to the left to display a list of items contained in that category. From this list, select the topic that you want to view. Once you've opened that topic, you can easily link to other related sections. So, go ahead and take a look! Study some statements, mull over the methods, or figure out a few functions. You'll see just how versatile the Scripting Run-Time Library can be!

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Scripting Run-Time Library Reference Version Information

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Microsoft Scripting Run-Time Features

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Add Method (Folders)

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Microsoft® Scripting Library - FileSystemObject The

FileSystemObject Object Model

When writing scripts for Active Server Pages, the Windows Scripting Host, or other applications where scripting can be used, it's often important to add, move, change, create, or delete folders (directories) and files on the Web server. It may also be necessary to get information about and manipulate drives attached to the Web server.

Scripting allows you to process drives, folders, and files using the **FileSystemObject** (FSO) object model, which is explained in the following sections:

- <u>Introduction to the FileSystemObject</u> and the Scripting Run-Time Library Reference
- FileSystemObject Objects
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Introduction to the FileSystemObject and the Scripting Run-Time Library Reference

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The **FileSystemObject** (FSO) object model allows you to use the familiar *object.method* syntax with a rich set of properties, methods, and events to process folders and files.

Use this object-based tool with:

- HTML to create Web pages
- Windows Scripting Host to create batch files for Microsoft Windows
- Script Control to provide a scripting capability to applications developed in other languages

Because use of the FSO on the client side raises serious security issues about providing potentially unwelcome access to a client's local file system, this documentation assumes use of the FSO object model to create scripts executed by Internet Web pages on the server side. Since the server side is used, the Internet Explorer default security settings do not allow client-side use of the **FileSystemObject** object. Overriding those defaults could subject a local computer to unwelcome access to the file system, which could result in total destruction of the file system's integrity, causing loss of data, or worse.

The FSO object model gives your server-side applications the ability to create, alter, move, and delete folders, or to detect if particular folders exist, and if so, where. You can also find out information about

folders, such as their names, the date they were created or last modified, and so forth.

The FSO object model also makes it easy to process files. When processing files, the primary goal is to store data in a space- and resource-efficient, easy-to-access format. You need to be able to create files, insert and change the data, and output (read) the data. Since storing data in a database, such as Access or SQL Server, adds a significant amount of overhead to your application, storing your data in a binary or text file may be the most efficient solution. You may prefer not to have this overhead, or your data access requirements may not require all the extra features associated with a full-featured database.

The FSO object model, which is contained in the Scripting <u>type library</u> (Scrrun.dll), supports text file creation and manipulation through the **TextStream** object. Although it does not yet support the creation or manipulation of binary files, future support of binary files is planned.

FileSystemObject Objects

The **FileSystemObject** (FSO) object model contains the following objects and <u>collections</u>.

Object/Collection	Description	
FileSystemObject	Main object. Contains methods and properties that allow you to create, delete, gain information about, and generally manipulate drives, folders, and files. Many of the methods associated with this object duplicate those in other FSO objects; they are provided for convenience.	
Drive	Object. Contains methods and properties that allow you to gather information about a drive attached to the system, such as its share name and how much room is available. Note that a "drive" isn't necessarily a hard disk, but can be a CD-ROM drive, a RAM disk, and so forth. A drive doesn't need to be physically attached to the system; it can be also be logically connected through a network.	
Drives	Collection. Provides a list of the drives attached to the system, either physically or logically. The Drives collection includes all drives, regardless of type. Removable-media drives need not have media inserted for them to appear in this collection.	
File	Object. Contains methods and properties that allow you to create, delete, or move a file.	

	Also allows you to query the system for a file name, path, and various other properties.	
Files	Collection. Provides a list of all files contained within a folder.	
Folder	Object. Contains methods and properties that allow you to create, delete, or move folders. Also allows you to query the system for folder names, paths, and various other properties.	
Folders	Collection. Provides a list of all the folders within a Folder .	
TextStream	Object. Allows you to read and write text files.	

Programming the FileSystemObject

To program with the **FileSystemObject** (FSO) object model:

- Use the **CreateObject** method to create a **FileSystemObject** object.
- Use the appropriate method on the newly created object.
- Access the object's properties.

The FSO object model is contained in the Scripting type library, which is located in the Scrrun.dll file. Therefore, you must have Scrrun.dll in the appropriate system directory on your Web server to use the FSO object model.

Creating a FileSystemObject Object

First, create a **FileSystemObject** object by using the **CreateObject** method. In VBScript, use the following code to create an instance of the **FileSystemObject**:

```
Dim fso
Set fso = CreateObject("Scripting.FileSystemObject")
```

This <u>sample code</u> demonstrates how to create an instance of the **FileSystemObject**.

In JScript, use this code to do the same thing:

```
var fso;
fso = new ActiveXObject("Scripting.FileSystemObject");
```

In both of these examples, **Scripting** is the name of the type library and **FileSystemObject** is the name of the object that you want to create. You

can create only one instance of the **FileSystemObject** object, regardless of how many times you try to create another.

Using the Appropriate Method

Second, use the appropriate method of the **FileSystemObject** object. For example, to create a new object, use either **CreateTextFile** or **CreateFolder** (the FSO object model doesn't support the creation or deletion of drives).

To delete objects, use the **DeleteFile** and **DeleteFolder** methods of the **FileSystemObject** object, or the **Delete** method of the **File** and **Folder** objects. You can also copy and move files and folders, by using the appropriate methods.

Note Some functionality in the **FileSystemObject** object model is redundant. For example, you can copy a file using either the **CopyFile** method of the **FileSystemObject** object, or you can use the **Copy** method of the **File** object. The methods work the same; both exist to offer programming flexibility.

Accessing Existing Drives, Files, and Folders

To gain access to an existing drive, file, or folder, use the appropriate "get" method of the **FileSystemObject** object:

- GetDrive
- GetFolder
- GetFile

To gain access to an existing file in VBScript:

```
Dim fso, f1
Set fso = CreateObject("Scripting.FileSystemObject")
Set f1 = fso.GetFile("c:\test.txt")
```

To do the same thing in JScript, use the following code:

```
var fso, f1;
fso = new ActiveXObject("Scripting.FileSystemObject");
f1 = fso.GetFile("c:\\test.txt");
```

Do not use the "get" methods for newly created objects, since the "create" functions already return a handle to that object. For example, if you create a new folder using the **CreateFolder** method, don't use the **GetFolder** method to access its properties, such as **Name**, **Path**, **Size**, and so forth. Just set a variable to the **CreateFolder** function to gain a handle to the newly created folder, then access its properties, methods, and events. To do this in VBScript, use the following code:

```
Sub CreateFolder
Dim fso, fldr
Set fso = CreateObject("Scripting.FileSystemObject")
Set fldr = fso.CreateFolder("C:\MyTest")
Response.Write "Created folder: " & fldr.Name
End Sub
```

To set a variable to the CreateFolder function in JScript, use this syntax:

```
function CreateFolder()
{
  var fso, fldr;
  fso = new ActiveXObject("Scripting.FileSystemObject");
  fldr = fso.CreateFolder("C:\\MyTest");
  Response.Write("Created folder: " + fldr.Name);
}
```

Accessing the Object's Properties

Once you have a handle to an object, you can access its properties. For example, to get the name of a particular folder, first create an instance of the object, then get a handle to it with the appropriate method (in this case, the

GetFolder method, since the folder already exists).

Use this code to get a handle to the **GetFolder** method in VBScript:

```
Set fldr = fso.GetFolder("c:\")
```

To do the same thing in JScript, use the following code:

```
var fldr = fso.GetFolder("c:\\");
```

Now that you have a handle to a **Folder** object, you can check its **Name** property. Use the following code to check this in VBScript:

Response.Write "Folder name is: " & fldr.Name

To check a **Name** property in JScript, use this syntax:

```
Response.Write("Folder name is: " + fldr.Name);
```

To find out the last time a file was modified, use the following VBScript syntax:

Dim fso, f1

Set fso = CreateObject("Scripting.FileSystemObject")

'Get a File object to query.

Set f1 = fso.GetFile("c:\detlog.txt")

' Print information.

Response.Write "File last modified: " & f1.DateLastModified

To find out the same thing in JScript, use this code:

```
var fso, f1;
fso = new ActiveXObject("Scripting.FileSystemObject");
// Get a File object to query.
f1 = fso.GetFile("c:\\detlog.txt");
// Print information.
Response.Write("File last modified: " + f1.DateLastModified);
```

Working with Drives and Folders

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With the **FileSystemObject** (FSO) object model, you can work with drives and folders programmatically just as you can in the Windows Explorer interactively. You can copy and move folders, get information about drives and folders, and so forth.

Getting Information About Drives

The **Drive** object allows you to gain information about the various drives attached to a system, either physically or over a network. Its properties allow you to obtain information about:

- The total size of the drive in bytes (**TotalSize** property)
- How much space is available on the drive in bytes (AvailableSpace or FreeSpace properties)
- What letter is assigned to the drive (**DriveLetter** property)
- What type of drive it is, such as removable, fixed, network, CD-ROM, or RAM disk (**DriveType** property)
- The drive's serial number (**SerialNumber** property)
- The type of file system the drive uses, such as FAT, FAT32, NTFS, and so forth (**FileSystem** property)
- Whether a drive is available for use (**IsReady** property)
- The name of the share and/or volume (**ShareName** and **VolumeName** properties)
- The path or root folder of the drive (**Path** and **RootFolder** properties)

View the <u>sample code</u> to see how these properties are used in

FileSystemObject.

Example Usage of the Drive Object

Use the **Drive** object to gather information about a drive. You won't see a reference to an actual **Drive** object in the following code; instead, use the **GetDrive** method to get a reference to an existing **Drive** object (in this case, drv).

The following example demonstrates how to use the **Drive** object in VBScript:

```
Sub ShowDriveInfo(drvPath)
   Dim fso, drv, s
   Set fso = CreateObject("Scripting.FileSystemObject")
   Set drv = fso.GetDrive(fso.GetDriveName(drvPath))
   s = "Drive " & UCase(drvPath) & " - "
   s = s & drv.VolumeName & "<br>"
   s = s & "Total Space: " & FormatNumber(drv.TotalSize / 1024, 0]
   s = s & " Kb" & "<br>"
   s = s & "Free Space: " & FormatNumber(drv.FreeSpace / 1024, 0
   s = s & " Kb" & "<br>"
   Response. Write s
  End Sub
The following code illustrates the same functionality in JScript:
 function ShowDriveInfo1(drvPath)
   var fso, drv, s ="";
   fso = new ActiveXObject("Scripting.FileSystemObject");
   drv = fso.GetDrive(fso.GetDriveName(drvPath));
   s += "Drive " + drvPath.toUpperCase()+ " - ";
   s += drv.VolumeName + "<br>";
   s += "Total Space: " + drv.TotalSize / 1024;
   s += " Kb" + "<br>":
   s += "Free Space: " + drv.FreeSpace / 1024;
```

```
s += " Kb" + "<br>";
Response.Write(s);
}
```

Working with Folders

Common folder tasks and the methods for performing them are described in the following table.

Task	Method
Create a folder.	FileSystemObject.CreateFolder
Delete a folder.	Folder.Delete or FileSystemObject.DeleteFolder
Move a folder.	Folder.Move or FileSystemObject.MoveFolder
Copy a folder.	Folder.Copy or FileSystemObject.CopyFolder
Retrieve the name of a folder.	Folder.Name
Find out if a folder exists on a drive.	FileSystemObject.FolderExists
Get an instance of an existing Folder object.	FileSystemObject.GetFolder
Find out the name of a folder's parent folder.	FileSystemObject.GetParentFolderName
Find out the path of system folders.	FileSystemObject.GetSpecialFolder

View the <u>sample code</u> to see how many of these methods and properties are used in **FileSystemObject**.

The following example demonstrates how to use the **Folder** and **FileSystemObject** objects to manipulate folders and gain information about them in VBScript:

```
Sub ShowFolderInfo()
   Dim fso, fldr, s
   'Get instance of FileSystemObject.
   Set fso = CreateObject("Scripting.FileSystemObject")
   ' Get Drive object.
   Set fldr = fso.GetFolder("c:")
   ' Print parent folder name.
   Response.Write "Parent folder name is: " & fldr & "<br>"
   ' Print drive name.
   Response.Write "Contained on drive " & fldr.Drive & "<br>"
   ' Print root file name.
   If fldr.IsRootFolder = True Then
    Response.Write "This is the root folder." & ""<br>"<br>"
   Else
    Response.Write "This folder isn't a root folder." & "<br>>"
   End If
   'Create a new folder with the FileSystemObject object.
   fso.CreateFolder ("C:\Bogus")
   Response.Write "Created folder C:\Bogus" & "<br>"
   ' Print the base name of the folder.
   Response.Write "Basename = " & fso.GetBaseName("c:\bogus")
   ' Delete the newly created folder.
   fso.DeleteFolder ("C:\Bogus")
   Response.Write "Deleted folder C:\Bogus" & "<br>"
  End Sub
This example shows how to use the Folder and FileSystemObject objects
in JScript:
  function ShowFolderInfo()
   var fso, fldr, s = "";
   // Get instance of FileSystemObject.
   fso = new ActiveXObject("Scripting.FileSystemObject");
```

```
// Get Drive object.
fldr = fso.GetFolder("c:");
// Print parent folder name.
Response.Write("Parent folder name is: " + fldr + "<br>");
// Print drive name.
Response.Write("Contained on drive " + fldr.Drive + "<br>");
// Print root file name.
if (fldr.IsRootFolder)
 Response.Write("This is the root folder.");
else
 Response.Write("This folder isn't a root folder.");
Response.Write("<br>>");
// Create a new folder with the FileSystemObject object.
fso.CreateFolder ("C:\\Bogus");
Response.Write("Created folder C:\\Bogus" + "<br>");
// Print the base name of the folder.
Response.Write("Basename = " + fso.GetBaseName("c:\\bogus")
// Delete the newly created folder.
fso.DeleteFolder ("C:\\Bogus");
Response.Write("Deleted folder C:\\Bogus" + "<br>");
```

Working with Files

There are two major categories of file manipulation:

- Creating, adding, or removing data, and reading files
- Moving, copying, and deleting files

Creating Files

There are three ways to create an empty text file (sometimes referred to as a "text stream").

The first way is to use the **CreateTextFile** method. The following example demonstrates how to create a text file using this method in VBScript:

```
Dim fso, f1
Set fso = CreateObject("Scripting.FileSystemObject")
Set f1 = fso.CreateTextFile("c:\testfile.txt", True)
```

To use this method in JScript, use this code:

```
var fso, f1;
fso = new ActiveXObject("Scripting.FileSystemObject");
f1 = fso.CreateTextFile("c:\\testfile.txt", true);
```

View this <u>sample code</u> to see how the **CreateTextFile** method is used in **FileSystemObject**.

The second way to create a text file is to use the **OpenTextFile** method of the **FileSystemObject** object with the **ForWriting** flag set. In VBScript, the code looks like this example:

```
Dim fso, ts

Const ForWriting = 2

Set fso = CreateObject("Scripting. FileSystemObject")

Set ts = fso.OpenTextFile("c:\test.txt", ForWriting, True)
```

To create a text file using this method in JScript, use this code:

```
var fso, ts;
var ForWriting= 2;
fso = new ActiveXObject("Scripting.FileSystemObject");
ts = fso.OpenTextFile("c:\\test.txt", ForWriting, true);
```

A third way to create a text file is to use the **OpenAsTextStream** method with the **ForWriting** flag set. For this method, use the following code in VBScript:

```
Dim fso, f1, ts

Const ForWriting = 2

Set fso = CreateObject("Scripting.FileSystemObject")

fso.CreateTextFile ("c:\test1.txt")

Set f1 = fso.GetFile("c:\test1.txt")

Set ts = f1.OpenAsTextStream(ForWriting, True)
```

In JScript, use the code in the following example:

```
var fso, f1, ts;
var ForWriting = 2;
fso = new ActiveXObject("Scripting.FileSystemObject");
fso.CreateTextFile ("c:\\test1.txt");
f1 = fso.GetFile("c:\\test1.txt");
ts = f1.OpenAsTextStream(ForWriting, true);
```

Adding Data to the File

Once the text file is created, add data to the file using the following three steps:

- 1. Open the text file.
- 2. Write the data.
- 3. Close the file.

To open an existing file, use either the **OpenTextFile** method of the **FileSystemObject** object or the **OpenAsTextStream** method of the **File** object.

To write data to the open text file, use the **Write**, **WriteLine**, or **WriteBlankLines** methods of the **TextStream** object, according to the tasks outlined in the following table.

Task	Method
Write data to an open text file without a trailing newline character.	Write
newinic character.	WriteLine
Write one or more blank lines to an open text file.	WriteBlankLines

View this <u>sample code</u> to see how the **Write, WriteLine**, and **WriteBlankLines** methods are used in **FileSystemObject**.

To close an open file, use the **Close** method of the **TextStream** object.

View this <u>sample code</u> to see how the **Close** method is used in **FileSystemObject**.

Note The newline character contains a character or characters (depending on the operating system) to advance the cursor to the beginning of the next line (carriage return/line feed). Be aware that the end of some strings may already have such nonprinting characters.

The following VBScript example demonstrates how to open a file, use all three write methods to add data to the file, and then close the file:

Sub CreateFile()

Dim fso, tf

Set fso = CreateObject("Scripting.FileSystemObject")

Set tf = fso.CreateTextFile("c:\testfile.txt", True)

'Write a line with a newline character.

tf.WriteLine("Testing 1, 2, 3.")

```
'Write three newline characters to the file.
tf.WriteBlankLines(3)
'Write a line.
tf.Write ("This is a test.")
tf.Close
End Sub
```

This example demonstrates how to use the three methods in JScript:

```
function CreateFile()
{
  var fso, tf;
  fso = new ActiveXObject("Scripting.FileSystemObject");
  tf = fso.CreateTextFile("c:\\testfile.txt", true);
  // Write a line with a newline character.
  tf.WriteLine("Testing 1, 2, 3.");
  // Write three newline characters to the file.
  tf.WriteBlankLines(3);
  // Write a line.
  tf.Write ("This is a test.");
  tf.Close();
}
```

Reading Files

To read data from a text file, use the **Read**, **ReadLine**, or **ReadAll** method of the **TextStream** object. The following table describes which method to use for various tasks.

Task	Method
Read a specified number of characters from a file.	Read
Read an entire line (up to, but not including, the newline character).	ReadLine
Read the entire contents of a text file.	ReadAll

View this <u>sample code</u> to see how the **ReadAll** and **ReadLine** methods are used in **FileSystemObject**.

If you use the **Read** or **ReadLine** method and want to skip to a particular portion of data, use the **Skip** or **SkipLine** method. The resulting text of the read methods is stored in a string which can be displayed in a control, parsed by string functions (such as **Left**, **Right**, and **Mid**), concatenated, and so forth.

The following VBScript example demonstrates how to open a file, write to it, and then read from it:

```
Sub ReadFiles
   Dim fso, f1, ts, s
   Const ForReading = 1
   Set fso = CreateObject("Scripting.FileSystemObject")
   Set f1 = fso.CreateTextFile("c:\testfile.txt", True)
   'Write a line.
   Response.Write "Writing file <br>"
   f1.WriteLine "Hello World"
   f1.WriteBlankLines(1)
   f1.Close
   ' Read the contents of the file.
   Response.Write "Reading file <br>"
   Set ts = fso.OpenTextFile("c:\testfile.txt", ForReading)
   s = ts.ReadLine
   Response.Write "File contents = "" & s & """
   ts.Close
  End Sub
This code demonstrates the same thing in JScript:
  function ReadFiles()
   var fso, f1, ts, s;
   var ForReading = 1;
   fso = new ActiveXObject("Scripting.FileSystemObject");
   f1 = fso.CreateTextFile("c:\\testfile.txt", true);
   // Write a line.
```

```
Response.Write("Writing file <br/>
f1.WriteLine("Hello World");
f1.WriteBlankLines(1);
f1.Close();
// Read the contents of the file.
Response.Write("Reading file <br/>');
ts = fso.OpenTextFile("c:\\testfile.txt", ForReading);
s = ts.ReadLine();
Response.Write("File contents = "" + s + """);
ts.Close();
}
```

Moving, Copying, and Deleting Files

The FSO object model has two methods each for moving, copying, and deleting files, as described in the following table.

Task	Method
Move a file	File.Move or FileSystemObject.MoveFile
Copy a file	File.Copy or FileSystemObject.CopyFile
Delete a file	File.Delete or FileSystemObject.DeleteFile

View this <u>sample code</u> to see two ways to delete a file in **FileSystemObject**.

The following VBScript example creates a text file in the root directory of drive C, writes some information to it, moves it to a directory called \tmp, makes a copy of it in a directory called \temp, then deletes the copies from both directories.

To run the following example, create directories named \tmp and \temp in the root directory of drive C:

```
Sub ManipFiles
Dim fso, f1, f2, s
Set fso = CreateObject("Scripting.FileSystemObject")
Set f1 = fso.CreateTextFile("c:\testfile.txt", True)
Response.Write "Writing file <br/>' 'Write a line.
```

```
f1. Write ("This is a test.")
   'Close the file to writing.
   f1.Close
   Response.Write "Moving file to c:\tmp <br/>
   'Get a handle to the file in root of C:\.
   Set f2 = fso.GetFile("c:\testfile.txt")
   ' Move the file to \tmp directory.
   f2.Move ("c:\tmp\testfile.txt")
   Response.Write "Copying file to c:\temp <br/> ''
   'Copy the file to \temp.
   f2.Copy ("c:\temp\testfile.txt")
   Response.Write "Deleting files <br/> <br/> "
   'Get handles to files' current location.
   Set f2 = fso.GetFile("c:\tmp\testfile.txt")
   Set f3 = fso.GetFile("c:\temp\testfile.txt")
   ' Delete the files.
   f2.Delete
   f3.Delete
   Response.Write "All done!"
  End Sub
This code shows the same thing in JScript:
  function ManipFiles()
  {
   var fso, f1, f2, s;
   fso = new ActiveXObject("Scripting.FileSystemObject");
   f1 = fso.CreateTextFile("c:\\testfile.txt", true);
   Response.Write("Writing file <br>");
   // Write a line.
   f1.Write("This is a test.");
   // Close the file to writing.
   f1.Close();
```

```
Response.Write("Moving file to c:\\tmp <br/>');
// Get a handle to the file in root of C:\.
f2 = fso.GetFile("c:\\testfile.txt");
// Move the file to \tmp directory.
f2.Move ("c:\\tmp\\testfile.txt");
Response.Write("Copying file to c:\\temp <br/>');
// Copy the file to \temp.
f2.Copy ("c:\\temp\\testfile.txt");
Response.Write("Deleting files <br/> ');
// Get handles to files' current location.
f2 = fso.GetFile("c:\\tmp\\testfile.txt");
f3 = fso.GetFile("c:\\temp\\testfile.txt");
// Delete the files.
f2.Delete();
f3.Delete();
Response.Write("All done!");
```

FileSystemObject Sample Code

Previous

The sample code described in this section provides a real-world example that demonstrates many of the features available in the **FileSystemObject** object model. This code shows how all the features of the object model work together, and how to use those features effectively in your own code.

Note that since this code is fairly generic, some additional code and a little tweaking are needed to make this code actually run on your machine. These changes are necessary because of the different ways input and output to the user is handled between Active Server Pages and the Windows Scripting Host.

To run this code on an Active Server Page, use the following steps:

- 1. Create a standard Web page with an .asp extension.
- 2. Copy the following sample code into that file between the <BODY;>... </BODY> tags.
- 3. Enclose all the code within <%...%> tags.
- 4. Move the **Option Explicit** statement from its current position in the code to the very top of your HTML page, positioning it even before the opening <HTML> tag.
- 5. Place <%...%> tags around the **Option Explicit** statement to ensure that it's run on the server side.
- 6. Add the following code to the end of the sample code:

```
Sub Print(x)
Response.Write "<PRE><FONT; FACE=""Courier New"" SIZE=""1"">"
Response.Write x
Response.Write "</FONT></PRE>"
End Sub
Main
```

The previous code adds a print procedure that will run on the server side,

but display results on the client side. To run this code on the Windows Scripting Host, add the following code to the end of the sample code:

Sub Print(x)
WScript.Echo x
End Sub
Main

The code is contained in the following section:

'FileSystemObject Sample Code
'Copyright 1998 Microsoft Corporation. All Rights Reserved.
Option Explicit
'Regarding code quality:
'1) The following code does a lot of string manipulation by concatenating short 'strings together with the "&" operator. Since string concatenation 'is expensive, this is a very inefficient way to write code. However, it is a very maintainable way to write code, and is used here because this program performs extensive disk operations, and because the disk is much slower than the memory operations required to concatenate the strings. Keep in mind that this is demonstration code, not production code.
' 2) "Option Explicit" is used, because declared variable access is slightly faster than undeclared variable access. It also prevents bugs from creeping into your code, such as when you misspell DriveTypeCDROM as DriveTypeCDORM.
'3) Error handling is absent from this code, to make the code more readable. Although precautions have been taken to ensure that the code will not error in common cases, file systems can be unpredictable. In production code, use On Error Resume Next and the Err object to trap possible errors.
' Some handy global variables

```
Dim TabStop
Dim NewLine
Const TestDrive = "C"
Const TestFilePath = "C:\Test"
......
'Constants returned by Drive.DriveType
......
Const DriveTypeRemovable = 1
Const DriveTypeFixed = 2
Const DriveTypeNetwork = 3
Const DriveTypeCDROM = 4
Const DriveTypeRAMDisk = 5
......
' Constants returned by File. Attributes
.....
Const FileAttrNormal = 0
Const FileAttrReadOnly = 1
Const FileAttrHidden = 2
Const FileAttrSystem = 4
Const FileAttrVolume = 8
Const FileAttrDirectory = 16
Const FileAttrArchive = 32
Const FileAttrAlias = 64
Const FileAttrCompressed = 128
.....
'Constants for opening files
.....
Const OpenFileForReading = 1
Const OpenFileForWriting = 2
Const OpenFileForAppending = 8
......
'ShowDriveType
```

```
' Purpose:
'Generates a string describing the drive type of a given Drive object.
' Demonstrates the following
' - Drive.DriveType
.....
Function ShowDriveType(Drive)
    Dim S
    Select Case Drive.DriveType
    Case DriveTypeRemovable
        S = "Removable"
    Case DriveTypeFixed
        S = "Fixed"
    Case DriveTypeNetwork
        S = "Network"
    Case DriveTypeCDROM
        S = "CD-ROM"
    Case DriveTypeRAMDisk
        S = "RAM Disk"
    Case Else
        S = "Unknown"
    End Select
    ShowDriveType = S
End Function
......
'ShowFileAttr
' Purpose:
'Generates a string describing the attributes of a file or folder.
' Demonstrates the following
' - File. Attributes
' - Folder. Attributes
......
```

Function ShowFileAttr(File) ' File can be a file or folder

```
Dim S
    Dim Attr
    Attr = File.Attributes
    If Attr = 0 Then
         ShowFileAttr = "Normal"
         Exit Function
    End If
    If Attr And FileAttrDirectory Then S = S & "Directory "
    If Attr And FileAttrReadOnly Then S = S & "Read-Only"
    If Attr And FileAttrHidden Then S = S & "Hidden"
    If Attr And FileAttrSystem Then S = S & "System"
    If Attr And FileAttrVolume Then S = S & "Volume"
    If Attr And FileAttrArchive Then S = S & "Archive "
                               Then S = S \& "Alias"
    If Attr And FileAttrAlias
    If Attr And FileAttrCompressed Then S = S & "Compressed"
    ShowFileAttr = S
End Function
.....
'GenerateDriveInformation
' Purpose:
'Generates a string describing the current state of the available drives.
' Demonstrates the following
' - FileSystemObject.Drives
' - Iterating the Drives collection
' - Drives.Count
' - Drive.AvailableSpace
' - Drive.DriveLetter
' - Drive.DriveType
' - Drive.FileSystem
' - Drive.FreeSpace
' - Drive.IsReady
' - Drive.Path
' - Drive.SerialNumber
' - Drive.ShareName
' - Drive.TotalSize
' - Drive.VolumeName
```

.....

Function GenerateDriveInformation(FSO)

```
Dim Drives
Dim Drive
Dim S
Set Drives = FSO.Drives
S = "Number of drives:" & TabStop & Drives.Count & NewLine & NewLine
'Construct 1st line of report.
S = S & String(2, TabStop) & "Drive"
S = S & String(3, TabStop) & "File"
S = S & TabStop & "Total"
S = S & TabStop & "Free"
S = S & TabStop & "Available"
S = S & TabStop & "Serial" & NewLine
'Construct 2nd line of report.
S = S & "Letter"
S = S & TabStop & "Path"
S = S & TabStop & "Type"
S = S & TabStop & "Ready?"
S = S & TabStop & "Name"
S = S & TabStop & "System"
S = S & TabStop & "Space"
S = S & TabStop & "Space"
S = S & TabStop & "Space"
S = S & TabStop & "Number" & NewLine
' Separator line.
S = S & String(105, "-") & NewLine
For Each Drive In Drives
    S = S & Drive.DriveLetter
    S = S & TabStop & Drive.Path
    S = S & TabStop & ShowDriveType(Drive)
    S = S & TabStop & Drive.IsReady
    If Drive.IsReady Then
    If DriveTypeNetwork = Drive.DriveType Then
             S = S & TabStop & Drive.ShareName
         Else
             S = S & TabStop & Drive.VolumeName
         End If
         S = S & TabStop & Drive.FileSystem
         S = S & TabStop & Drive.TotalSize
```

```
S = S & TabStop & Drive.FreeSpace
             S = S & TabStop & Drive. Available Space
             S = S & TabStop & Hex(Drive.SerialNumber)
         End If
         S = S & NewLine
    Next
    GenerateDriveInformation = S
End Function
.....
' GenerateFileInformation
' Purpose:
'Generates a string describing the current state of a file.
' Demonstrates the following
' - File.Path
' - File.Name
' - File.Type
' - File.DateCreated
' - File.DateLastAccessed
' - File.DateLastModified
' - File.Size
Function GenerateFileInformation(File)
    Dim S
    S = NewLine & "Path:" & TabStop & File.Path
    S = S & NewLine & "Name:" & TabStop & File.Name
    S = S & NewLine & "Type:" & TabStop & File.Type
    S = S & NewLine & "Attribs:" & TabStop & ShowFileAttr(File)
    S = S & NewLine & "Created:" & TabStop & File.DateCreated
    S = S & NewLine & "Accessed:" & TabStop & File.DateLastAccessed
    S = S & NewLine & "Modified:" & TabStop & File.DateLastModified
    S = S & NewLine & "Size" & TabStop & File.Size & NewLine
    GenerateFileInformation = S
```

End Function

```
......
'GenerateFolderInformation
' Purpose:
'Generates a string describing the current state of a folder.
' Demonstrates the following
' - Folder.Path
' - Folder.Name
' - Folder.DateCreated
' - Folder.DateLastAccessed
' - Folder.DateLastModified
' - Folder.Size
Function GenerateFolderInformation(Folder)
    Dim S
    S = "Path:" & TabStop & Folder.Path
    S = S & NewLine & "Name:" & TabStop & Folder.Name
    S = S & NewLine & "Attribs:" & TabStop & ShowFileAttr(Folder)
    S = S & NewLine & "Created:" & TabStop & Folder.DateCreated
    S = S & NewLine & "Accessed:" & TabStop & Folder.DateLastAccessed
    S = S & NewLine & "Modified:" & TabStop & Folder.DateLastModified
    S = S & NewLine & "Size:" & TabStop & Folder.Size & NewLine
    GenerateFolderInformation = S
End Function
.....
'GenerateAllFolderInformation
' Purpose:
'Generates a string describing the current state of a
' folder and all files and subfolders.
' Demonstrates the following
' - Folder.Path
' - Folder.SubFolders
```

```
' - Folders.Count
.....
Function GenerateAllFolderInformation(Folder)
    Dim S
    Dim SubFolders
    Dim SubFolder
    Dim Files
    Dim File
    S = "Folder:" & TabStop & Folder.Path & NewLine & NewLine
    Set Files = Folder.Files
    If 1 = Files.Count Then
        S = S & "There is 1 file" & NewLine
    Else
        S = S & "There are " & Files.Count & " files" & NewLine
    End If
    If Files.Count <> 0 Then
        For Each File In Files
             S = S & GenerateFileInformation(File)
        Next
    End If
    Set SubFolders = Folder.SubFolders
    If 1 = SubFolders.Count Then
        S = S & NewLine & "There is 1 sub folder" & NewLine & NewLine
    Else
        S = S & NewLine & "There are " & SubFolders.Count & " sub folders" & NewLine & NewLin
    End If
    If SubFolders.Count <> 0 Then
        For Each SubFolder In SubFolders
             S = S & GenerateFolderInformation(SubFolder)
        Next
        S = S & NewLine
        For Each SubFolder In SubFolders
             S = S & GenerateAllFolderInformation(SubFolder)
        Next
```

End If

GenerateAllFolderInformation = S

End Function
'GenerateTestInformation
' Purpose:
'Generates a string describing the current state of the C:\Test 'folder and all files and subfolders.
' Demonstrates the following
' - FileSystemObject.DriveExists ' - FileSystemObject.FolderExists ' - FileSystemObject.GetFolder
Function GenerateTestInformation(FSO)
Dim TestFolder Dim S
If Not FSO.DriveExists(TestDrive) Then Exit Function If Not FSO.FolderExists(TestFilePath) Then Exit Function
Set TestFolder = FSO.GetFolder(TestFilePath)
Generate TestInformation = Generate All Folder Information (TestFolder)
End Function
' DeleteTestDirectory
'Purpose:
'Cleans up the test directory.
'Demonstrates the following
' - FileSystemObject.GetFolder ' - FileSystemObject.DeleteFile

```
' - FileSystemObject.DeleteFolder
' - Folder.Delete
' - File.Delete
.....
Sub DeleteTestDirectory(FSO)
    Dim TestFolder
    Dim SubFolder
    Dim File
    'Two ways to delete a file:
    FSO.DeleteFile(TestFilePath & "\Beatles\OctopusGarden.txt")
    Set File = FSO.GetFile(TestFilePath & "\Beatles\BathroomWindow.txt")
    File.Delete
    'Two ways to delete a folder:
    FSO.DeleteFolder(TestFilePath & "\Beatles")
    FSO.DeleteFile(TestFilePath & "\ReadMe.txt")
    Set TestFolder = FSO.GetFolder(TestFilePath)
    TestFolder.Delete
End Sub
' CreateLyrics
' Purpose:
'Builds a couple of text files in a folder.
' Demonstrates the following
' - FileSystemObject.CreateTextFile
' - TextStream.WriteLine
' - TextStream.Write
' - TextStream.WriteBlankLines
' - TextStream.Close
.....
```

Sub CreateLyrics(Folder) Dim TextStream Set TextStream = Folder.CreateTextFile("OctopusGarden.txt") TextStream.Write("Octopus' Garden") ' Note that this does not add a line feed to the file. TextStream.WriteLine("(by Ringo Starr)") TextStream.WriteBlankLines(1) TextStream.WriteLine("I'd like to be under the sea in an octopus' garden in the shade,") TextStream.WriteLine("He'd let us in, knows where we've been -- in his octopus' garden in the shade TextStream.WriteBlankLines(2) TextStream.Close Set TextStream = Folder.CreateTextFile("BathroomWindow.txt") TextStream.WriteLine("She Came In Through The Bathroom Window (by Lennon/McCartney)") TextStream.WriteLine("") TextStream.WriteLine("She came in through the bathroom window protected by a silver spoon") TextStream.WriteLine("But now she sucks her thumb and wanders by the banks of her own lagoon" TextStream.WriteBlankLines(2) TextStream.Close End Sub ' GetLyrics ' Purpose: 'Displays the contents of the lyrics files. ' Demonstrates the following ' - FileSystemObject.OpenTextFile ' - FileSystemObject.GetFile ' - TextStream.ReadAll

Function GetLyrics(FSO)

......

' - TextStream.Close
' - File.OpenAsTextStream
' - TextStream.AtEndOfStream
' - TextStream.ReadLine

Dim TextStream

Dim S Dim File

'There are several ways to open a text file, and several ways to read the

Set TextStream = FSO.OpenTextFile(TestFilePath & "\Beatles\OctopusGarden.txt", OpenFileForRe

S = TextStream.ReadAll & NewLine & NewLine TextStream.Close

Set File = FSO.GetFile(TestFilePath & "\Beatles\BathroomWindow.txt")
Set TextStream = File.OpenAsTextStream(OpenFileForReading)

Do While Not TextStream.AtEndOfStream

S = S & TextStream.ReadLine & NewLine

Loop

TextStream.Close

GetLyrics = S

End Function

' BuildTestDirectory

' Purpose:

'Builds a directory hierarchy to demonstrate the FileSystemObject.

' We'll build a hierarchy in this order:

'C:\Test

'C:\Test\ReadMe.txt

'C:\Test\Beatles

'C:\Test\Beatles\OctopusGarden.txt

'C:\Test\Beatles\BathroomWindow.txt

' Demonstrates the following

' - FileSystemObject.DriveExists

- ' FileSystemObject.FolderExists
- ' FileSystemObject.CreateFolder
- ' FileSystemObject.CreateTextFile
- ' Folders.Add
- ' Folder.CreateTextFile
- ' TextStream.WriteLine
- ' TextStream.Close

^{&#}x27; data out of a file. Here's two ways to do each:

```
......
Function BuildTestDirectory(FSO)
    Dim TestFolder
    Dim SubFolders
    Dim SubFolder
    Dim TextStream
    'Bail out if (a) the drive does not exist, or if (b) the directory being built
    ' already exists.
    If Not FSO.DriveExists(TestDrive) Then
         BuildTestDirectory = False
         Exit Function
    End If
    If FSO.FolderExists(TestFilePath) Then
         BuildTestDirectory = False
         Exit Function
    End If
    Set TestFolder = FSO.CreateFolder(TestFilePath)
    Set TextStream = FSO.CreateTextFile(TestFilePath & "\ReadMe.txt")
    TextStream.WriteLine("My song lyrics collection")
    TextStream.Close
    Set SubFolders = TestFolder.SubFolders
    Set SubFolder = SubFolders.Add("Beatles")
    CreateLyrics SubFolder
    BuildTestDirectory = True
End Function
......
'The main routine
'First, it creates a test directory, along with some subfolders and files.
'Then, it dumps some information about the available disk drives and
' about the test directory, and then cleans everything up again.
```

.....

Sub Main

End Sub

VBScript Features

Category	Keywords	
Array handling	Array Dim, Private, Public, ReDim IsArray Erase LBound, UBound	
Assignments	<u>Set</u>	
Comments	Comments using ' or Rem	
Constants/Literals	Empty Nothing Null True, False	
Control flow	DoLoop ForNext For EachNext IfThenElse Select Case WhileWend With	
Conversions	Abs Asc, AscB, AscW Chr, ChrB, ChrW CBool, CByte CCur, CDate CDbl, CInt CLng, CSng, CStr DateSerial, DateValue Hex, Oct Fix, Int Sgn TimeSerial, TimeValue	
Dates/Times	Date, Time DateAdd, DateDiff, DatePart DateSerial, DateValue Day, Month, MonthName Weekday, WeekdayName, Year Hour, Minute, Second Now TimeSerial, TimeValue	
	Class Const	

Declarations	<u>Dim, Private, Public, ReDim</u>	
	<u>Function, Sub</u> <u>Property Get, Property Let, Property Set</u>	
Error Handling	On Error Err	
	Eval	
	Execute	
Expressions	RegExp	
	<u>Replace</u>	
	<u>Test</u>	
	<u>FormatCurrency</u>	
Formatting Strings	FormatNumbar	
	FormatNumber FormatPercent	
	InputBox	
Input/Output	<u>Inputiox</u> <u>LoadPicture</u>	
input output	MsgBox	
	Empty	
	<u>False</u>	
Literals	Nothing	
	Null	
	True	
Math	Atn, Cos, Sin, Tan	
ividui	Exp, Log, Sqr Randomize, Rnd	
	Eval Function	
Miscellaneous	Execute Statement	
	RGB Function	
	<u>CreateObject</u>	
Objects	Err Object	
	<u>GetObject</u> RegExp	
	Addition (+), Subtraction (-) Exponentiation (^)	
	Modulus arithmetic (Mod)	
Operators	Multiplication (*), Division (/)	
	Integer Division (\)	
	Negation (-)	
	String concatenation (&)	
	Equality (=), Inequality (<>)	
	Less Than (<), Less Than or Equal To (<=)	
	<u>Greater Than (>)</u> Greater Than or Equal To (>=)	
	Is	
	And, Or, Xor	
	Eqv, Imp	
Options	Option Explicit	
	Call	
	<u>Function</u> , <u>Sub</u>	

Procedures	Property Get, Property Let, Property Set	
Rounding	Abs Int, Fix, Round Sgn	
Script Engine ID	ScriptEngine ScriptEngineBuildVersion ScriptEngineMajorVersion ScriptEngineMinorVersion	
Strings	Asc, AscB, AscW Chr, ChrB, ChrW Filter, InStr, InStrB InStrRev Join Len, LenB LCase, UCase Left, LeftB Mid, MidB Right, RightB Replace Space Split StrComp String StrReverse LTrim, RTrim, Trim	
Variants	IsArray IsDate IsEmpty IsNull IsNumeric IsObject TypeName VarType	

Microsoft® Visual Basic® Scripting Edition **Visual**

Basic for Applications Features not in **VBScript**

Language Reference

Category	Omitted Feature/Keyword	
Array Handling	Option Base Declaring arrays with lower bound <> 0	
Collection	Add, Count, Item, Remove Access to collections using! character (e.g., MyCollection!Foo)	
Conditional Compilation	#Const #IfThen#Else	
Control Flow	DoEvents GoSubReturn, GoTo On Error GoTo OnGoSub, OnGoTo Line numbers, Line labels	
Conversion	CVar, CVDate Str, Val	
Data Types	All intrinsic data types except Variant TypeEnd Type	
Date/Time	Date statement, Time statement	
DDE	LinkExecute, LinkPoke, LinkRequest, LinkSend	
	Debug.Print	

Debugging	End, Stop	
Declaration	Declare (for declaring DLLs) Optional ParamArray Static	
Error Handling	Erl Error Resume, Resume Next	
File Input/Output	All traditional Basic file I/O	
Financial	All financial functions	
Object Manipulation	TypeOf	
Objects	Clipboard Collection	
Operators	Like	
Options	Def <i>type</i> Option Base Option Compare Option Private Module	
Select Case	Expressions containing Is keyword or any comparison operators Expressions containing a range of values using the To keyword.	
Strings	Fixed-length strings LSet, RSet Mid Statement StrConv	
Using Objects	Collection access using!	

VBScript Features not in Visual Basic for Applications

Language Reference

Category	Feature/Keyword
Declarations	Class
Miscellaneous	Eval Execute
Objects	RegExp
Script Engine Identification	ScriptEngine ScriptEngineBuildVersion ScriptEngineMajorVersion ScriptEngineMinorVersion

Microsoft Scripting Run-Time Library Reference Features

Language Reference

Category	Feature/Keyword	
Collections	Drives Files Folders	
Data Storage	<u>Dictionary</u>	
Dictionary	Add Exists Items, Keys Remove, RemoveAll Count Item, Key	
File System	Drive File FileSystemObject Folder TextStream	
	BuildPath CopyFile, CopyFolder CreateFolder,CreateTextFile DeleteFile,DeleteFolder DriveExists, FileExists, FolderExists GetAbsolutePathName, GetBaseName	

FileSystemObject	<u>GetDrive, GetDriveName</u> GetFile, GetExtensionName GetFileName	
	GetFolder, GetParentFolderName	
	GetSpecialFolder	
	GetTempName	
	MoveFile, MoveFolder	
	OpenTextFile	
	<u>Drives</u>	
	AvailableSpace	
	Count	
	DriveLetter	
	<u>DriveType</u>	
	<u>FileSystem</u>	
	<u>FreeSpace</u>	
Drive, Drives	<u>IsReady</u>	
	<u>Item</u>	
	RootFolder	
	<u>SerialNumber</u>	
	<u>ShareName</u>	
	TotalSize	
	<u>VolumeName</u>	
	Add	
	<u>Attributes</u>	
	Copy, Delete, Move	
	Count	
	<u>OpenAsTextStream</u>	
P.1 P.1	DateCreated, DateLastAccessed,	
File, Files Folder, Folders	<u>DateLastModified</u>	
	<u>Drive</u>	
	<u>Item</u>	
	<u>ParentFolder</u>	
	Name, Path	
	ShortName, ShortPath	
	<u>Size</u>	
	Close	
	Read, ReadAll, ReadLine	

TextStream	Skip, SkipLine
	Write, WriteBlankLines, WriteLine
	AtEndOfLine, AtEndOfStream
	Column, Line



Function

See Also

Description

Returns the absolute value of a number.

Syntax

Abs(number)

The *number* argument can be any valid <u>numeric expression</u>. If *number* contains **Null**, **Null** is returned; if it is an uninitialized variable, zero is returned.

Remarks

The absolute value of a number is its unsigned magnitude. For example, **Abs(-1)** and **Abs(1)** both return 1.

The following example uses the **Abs** function to compute the absolute value of a number:

```
Dim MyNumber
```

MyNumber = Abs(50.3) 'Returns 50.3.

MyNumber = Abs(-50.3) 'Returns 50.3.



Operator

See Also

Description

Sums two numbers.

Syntax

result = expression1 + expression2

The + operator syntax has these parts:

Part	Description	
result	Any numeric variable.	
expression1	Any <u>expression</u> .	
expression2	Any expression.	

Remarks

Although you can also use the + operator to concatenate two character strings, you should use the & operator for concatenation to eliminate ambiguity and provide self-documenting code.

When you use the + operator, you may not be able to determine whether addition or string concatenation will occur.

The underlying subtype of the expressions determines the behavior of the + operator in the following way:

If	Then
Both expressions are numeric	Add.
Both expressions are strings	Concatenate.
	Add.

One expression is numeric and the other is a string

If one or both expressions are <u>Null</u> expressions, *result* is **Null**. If both expressions are <u>Empty</u>, *result* is an **Integer** subtype. However, if only one expression is **Empty**, the other expression is returned unchanged as *result*.



Operator

See Also

Description

Performs a logical conjunction on two expressions.

Syntax

result = expression1 **And** expression2

The **And** operator syntax has these parts:

Part	Description
result	Any numeric variable.
expression1	Any <u>expression</u> .
expression2	Any expression.

Remarks

If, and only if, both expressions evaluate to **True**, *result* is **True**. If either expression evaluates to **False**, *result* is **False**. The following table illustrates how *result* is determined:

If expression1 is	And expression2 is	The result is
True	True	True
True	False	False
True	Null	Null
False	True	False
False	False	False
False	Null	False
	ĺ	

Null	True	Null
Null	False	False
Null	Null	Null

The **And** operator also performs a <u>bitwise comparison</u> of identically positioned bits in two <u>numeric expressions</u> and sets the corresponding bit in *result* according to the following table:

If bit in expression1 is	And bit in expression2 is	The <i>result</i> is
0	0	0
0	1	0
1	0	0
1	1	1

Function

See Also

Description

Returns a **Variant** containing an <u>array</u>.

Syntax

Array(arglist)

The required *arglist* argument is a comma-delimited list of values that are assigned to the elements of an array contained with the **Variant**. If no arguments are specified, an array of zero length is created.

Remarks

The notation used to refer to an element of an array consists of the variable name followed by parentheses containing an index number indicating the desired element. In the following example, the first statement creates a variable named A. The second statement assigns an array to variable A. The last statement assigns the value contained in the second array element to another variable.

Dim A

$$A = Array(10,20,30)$$

$$B = A(2) ' B is now 30.$$

NoteVersion Version A variable that is not declared as an array can still contain an array. Although a **Variant** variable containing an array is conceptually different from an array variable containing **Variant** elements, the array elements are accessed in the same way.



Function

See Also

Description

Returns the ANSI character code corresponding to the first letter in a string.

Syntax

Asc(string)

The *string* argument is any valid <u>string expression</u>. If the *string* contains no characters, a <u>run-time error</u> occurs.

Remarks

In the following example, **Asc** returns the ANSI character code of the first letter of each string:

```
Dim MyNumber
MyNumber = Asc("A") 'Returns 65.
MyNumber = Asc("a") 'Returns 97.
MyNumber = Asc("Apple") 'Returns 65.
```

Note The **AscB** function is used with byte data contained in a string. Instead of returning the character code for the first character, **AscB** returns the first byte. **AscW** is provided for 32-

bit platforms that use Unicode characters. It returns the Unicode (wide) character code, thereby avoiding the conversion from Unicode to ANSI.



See Also

Description

Assigns a value to a <u>variable</u> or <u>property</u>.

Syntax

variable = value

The = operator syntax has these parts:

Part	Description	
variable	Any variable or any writable property.	
value	Any numeric or string literal, <u>constant</u> , or <u>expression</u> .	

Remarks

The name on the left side of the equal sign can be a simple scalar variable or an element of an <u>array</u>. Properties on the left side of the equal sign can only be those properties that are writable at <u>run time</u>.



Function

See Also

Description

Returns the arctangent of a number.

Syntax

Atn(number)

The *number* argument can be any valid <u>numeric expression</u>.

Remarks

The **Atn** function takes the ratio of two sides of a right triangle (*number*) and returns the corresponding angle in radians. The ratio is the length of the side opposite the angle divided by the length of the side adjacent to the angle. The range of the result is -pi/2 to pi/2 radians.

To convert degrees to radians, multiply degrees by pi/180. To convert radians to degrees, multiply radians by 180/pi.

The following example uses **Atn** to calculate the value of pi:

Dim pi
pi =
$$4 * Atn(1)$$
 'Calculate the value of pi.

Note Atn is the inverse trigonometric function of **Tan**, which

takes an angle as its argument and returns the ratio of two sides of a right triangle. Do not confuse **Atn** with the cotangent, which is the simple inverse of a tangent (1/tangent).

Statement

Description

Transfers control to a **Sub** or **Function** procedure.

Syntax

[Call] name [argumentlist]

The **Call** statement syntax has these parts:

Part	Description
Call	Optional keyword. If specified, you must enclose argumentlist in parentheses. For example:
II I	Call MyProc(0)

name Required. Name of the procedure to call. *argumentlist* Optional. Commadelimited list of variables, <u>arrays</u>, or <u>expressions</u> to pass to the procedure.

Remarks

You are not required to use the **Call** keyword when calling a procedure. However, if you use the **Call** keyword to call a procedure that requires arguments, *argumentlist* must be enclosed in parentheses. If you omit the **Call** keyword, you also must omit the parentheses around *argumentlist*. If you use either **Call** syntax to call any intrinsic or user-defined function, the function's return value is discarded.

Call MyFunction("Hello World")

Function MyFunction(text)
MsgBox text
End Function

See Also

Description

Returns an expression that has been converted to a **Variant** of subtype **Boolean**.

Syntax

CBool(expression)

The *expression* argument is any valid expression.

Remarks

If *expression* is zero, **False** is returned; otherwise, **True** is returned. If *expression* can't be interpreted as a numeric value, a <u>run-time error</u> occurs.

The following example uses the **CBool** function to convert an expression to a **Boolean**. If the expression evaluates to a nonzero value, **CBool** returns **True**; otherwise, it returns **False**.



See Also

Description

Returns an expression that has been converted to a **Variant** of subtype **Byte**.

Syntax

CByte(expression)

The *expression* argument is any valid expression.

Remarks

In general, you can document your code using the subtype conversion functions to show that the result of some operation should be expressed as a particular data type rather than the default data type. For example, use **CByte** to force byte arithmetic in cases where currency, single-precision, double-precision, or integer arithmetic normally would occur.

Use the **CByte** function to provide internationally aware conversions from any other data type to a **Byte** subtype. For example, different decimal separators are properly recognized depending on the **locale** setting of your system, as are different thousand separators.

If *expression* lies outside the acceptable range for the **Byte** subtype, an error occurs. The following example uses the **CByte** function to convert an expression to a byte:

Dim MyDouble, MyByte

MyDouble = 125.5678 'MyDouble is a Double

MyByte = CByte(MyDouble) 'MyByte contains



See Also

Description

Returns an expression that has been converted to a **Variant** of subtype **Currency**.

Syntax

CCur(expression)

The *expression* argument is any valid expression.

Remarks

In general, you can document your code using the subtype conversion functions to show that the result of some operation should be expressed as a particular data type rather than the default data type. For example, use **CCur** to force currency arithmetic in cases where integer arithmetic normally would occur.

You should use the **CCur** function to provide internationally aware conversions from any other data type to a **Currency** subtype. For example, different decimal separators and thousands separators are properly recognized depending on the <u>locale</u> setting of your system.

The following example uses the **CCur** function to convert an expression to a Currency:

Dim MyDouble, MyCurr
MyDouble = 543.214588 'MyDouble is a Double of the control o



See Also

Description

Returns an expression that has been converted to a **Variant** of subtype **Date**.

Syntax

CDate(date)

The *date* argument is any valid <u>date expression</u>.

Remarks

Use the **IsDate** function to determine if *date* can be converted to a date or time. **CDate** recognizes <u>date literals</u> and time literals as well as some numbers that fall within the range of acceptable dates. When converting a number to a date, the whole number portion is converted to a date. Any fractional part of the number is converted to a time of day, starting at midnight.

CDate recognizes date formats according to the <u>locale</u> setting of your system. The correct order of day, month, and year may not be determined if it is provided in a format other than one of the recognized date settings. In addition, a long date format is not recognized if it also contains the day-of-the-week string.

The following example uses the **CDate** function to convert a string to a

date. In general, hard coding dates and times as strings (as shown in this example) is not recommended. Use date and time literals (such as #10/19/1962#, #4:45:23 PM#) instead.

MyDate = "October 19, 1962" ' Define date.

MyShortDate = CDate(MyDate) ' Convert to Dat

MyTime = "4:35:47 PM" ' Define time.

MyShortTime = CDate(MyTime) ' Convert to Dat



See Also

Description

Returns an expression that has been converted to a **Variant** of subtype **Double**.

Syntax

CDbl(expression)

The *expression* argument is any valid expression.

Remarks

In general, you can document your code using the subtype conversion functions to show that the result of some operation should be expressed as a particular data type rather than the default data type. For example, use **CDbl** or **CSng** to force double-precision or single-precision arithmetic in cases where currency or integer arithmetic normally would occur.

Use the **CDbl** function to provide internationally aware conversions from any other data type to a **Double** subtype. For example, different decimal separators and thousands separators are properly recognized depending on the <u>locale</u> setting of your system.

This example uses the **CDbl** function to convert an expression to a **Double**.

Dim MyCurr, MyDouble

MyCurr = CCur(234.456784) 'MyCurr is MyDouble = CDbl(MyCurr * 8.2 * 0.01) 'Conve



See Also

Description

Returns the character associated with the specified ANSI character code.

Syntax

Chr(charcode)

The *charcode* argument is a number that identifies a <u>character</u>.

Remarks

Numbers from 0 to 31 are the same as standard, nonprintable <u>ASCII</u> codes. For example, **Chr(**10**)** returns a linefeed character.

The following example uses the **Chr** function to return the character associated with the specified character code:

```
Dim MyChar
```

MyChar = Chr(65) 'Returns A.

MyChar = Chr(97) 'Returns a.

MyChar = Chr(62) 'Returns >.

MyChar = Chr(37) 'Returns %.

Note The **ChrB** function is used with byte data contained in a string. Instead of returning a character, which may be one or two bytes, **ChrB** always returns a single byte. **ChrW** is provided for 32-bit platforms that use Unicode characters. Its argument is a Unicode (wide) character code, thereby avoiding the conversion from ANSI to Unicode.



See Also

Description

Returns an expression that has been converted to a **Variant** of subtype **Integer**.

Syntax

CInt(expression**)**

The *expression* argument is any valid expression.

Remarks

In general, you can document your code using the subtype conversion functions to show that the result of some operation should be expressed as a particular data type rather than the default data type. For example, use **CInt** or **CLng** to force integer arithmetic in cases where currency, single-precision, or double-precision arithmetic normally would occur.

Use the **CInt** function to provide internationally aware conversions from any other data type to an **Integer** subtype. For example, different decimal separators are properly recognized depending on the <u>locale</u> setting of your system, as are different thousand separators.

If *expression* lies outside the acceptable range for the <u>Integer</u> subtype, an error occurs.

The following example uses the **CInt** function to convert a value to an

Integer:

Dim MyDouble, MyInt

MyDouble = 2345.5678 'MyDouble is a Double

MyInt = CInt(MyDouble) 'MyInt contains 2346.

Note CInt differs from the **Fix** and **Int** functions, which truncate, rather than round, the fractional part of a number. When the fractional part is exactly 0.5, the **CInt** function always rounds it to the nearest even number. For example, 0.5 rounds to 0, and 1.5 rounds to 2.



Object

See Also

Events

Description

The object created using the **Class** statement. Provides access to the events of the class.

Remarks

You cannot explicitly declare a <u>variable</u> to be of type Class. In the VBScript context, the term "class object" refers to any object defined using the VBScript **Class** statement.

Once you have created a class definition using the **Class** statement, you can create an instance of the class using the following form:

Dim X
Set X = New *classname*

Because VBScript is a late-bound language, you cannot do any of the following:

Dim X as New classname

or

Dim X

X = New classname

or

Set X = New Scripting.FileSystemObject



Statement

See Also

Description

Declares the name of a <u>class</u>, as well as a definition of the variables, properties, and methods that comprise the class.

Syntax

Class name statements End Class

The **Class** statement syntax has these parts:

Part	Description
пате	Required. Name of the Class ; follows standard <u>variable</u> naming conventions.
statements	Required. One or more statements that define the variables, <u>properties</u> , and methods of the Class .

Remarks

Within a **Class** block, members are declared as either **Private** or **Public** using the appropriate declaration statements. Anything declared as **Private** is visible only within the **Class** block. Anything declared as **Public** is visible within the **Class** block, as well as by code outside the **Class** block. Anything not explicitly declared as either **Private** or **Public** is **Public** by default.

Procedures (either **Sub** or **Function**) declared **Public** within the class block become methods of the class. **Public** variables serve as properties of the class, as do properties explicitly declared using **Property Get**, **Property Let**, and **Property Set**. Default properties and methods for the class are specified in their declarations using the **Default** keyword. See the individual declaration statement topics for information on how this <u>keyword</u> is used.



Method

See Also

Applies to

Description

Clears all property settings of the **Err** object.

Syntax

object.Clear

The object is always the **Err** object.

Remarks

Use **Clear** to explicitly clear the **Err** object after an error has been handled. This is necessary, for example, when you use deferred error handling with **On Error Resume Next**. VBScript calls the **Clear** method automatically whenever any of the following statements is executed:

- On Error Resume Next
- Exit Sub
- Exit Function

The following example illustrates use of the **Clear** method:

On Error Resume Next

Err.Raise 6 'Raise an overflow error.

MsgBox ("Error # " & CStr(Err.Number) & " " & Err.Description)

Err.Clear 'Clear the error.



See Also

Description

Returns an expression that has been converted to a **Variant** of subtype **Long**.

Syntax

CLng(expression**)**

The *expression* argument is any valid expression.

Remarks

In general, you can document your code using the subtype conversion functions to show that the result of some operation should be expressed as a particular data type rather than the default data type. For example, use **CInt** or **CLng** to force integer arithmetic in cases where currency, single-precision, or double-precision arithmetic normally would occur.

Use the **CLng** function to provide internationally aware conversions from any other data type to a **Long** subtype. For example, different decimal separators are properly recognized depending on the <u>locale</u> setting of your system, as are different thousand separators.

If *expression* lies outside the acceptable range for the **Long** subtype, an error occurs.

The following example uses the **CLng** function to convert a value to a

Long:

```
Dim MyVal1, MyVal2, MyLong1, MyLong2

MyVal1 = 25427.45: MyVal2 = 25427.55 'MyVa

MyLong1 = CLng(MyVal1) 'MyLong1

MyLong2 = CLng(MyVal2) 'MyLong2
```

Note CLng differs from the **Fix** and **Int** functions, which truncate, rather than round, the fractional part of a number. When the fractional part is exactly 0.5, the **CLng** function always rounds it to the nearest even number. For example, 0.5 rounds to 0, and 1.5 rounds to 2.

Language Reference Version 2

Comparison Constants

See Also

Since these constants are built into VBScript, you don't have to define them before using them. Use them anywhere in your code to represent the values shown for each.

Constant	Value	Description
vbBinaryCompare	0	Perform a binary comparison.
vbTextCompare	1	Perform a textual comparison.



Operator

See Also

Description

Forces string concatenation of two expressions.

Syntax

result = expression1 & expression2

The & operator syntax has these parts:

Part	Description
result	Any variable.
expression1	Any <u>expression</u> .
expression2	Any expression.

Remarks

Whenever an *expression* is not a string, it is converted to a **String** subtype. If both expressions are **Null**, *result* is also **Null**. However, if only one *expression* is **Null**, that expression is treated as a zero-length string ("") when concatenated with the other expression. Any expression that is **Empty** is also treated as a zero-length string.



Statement

See Also

Description

Declares **constants** for use in place of literal values.

Syntax

[**Public** | **Private**] **Const** *constname* = *expression*

The **Const** statement syntax has these parts:

Part	Description
	Optional. Keyword used at <u>script level</u> to declare constants that are available to all procedures in all scripts. Not allowed in procedures.
Drivate	Optional. Keyword used at script level to declare constants that are available only within the script where the declaration is made. Not allowed in procedures.
constname	Required. Name of the constant; follows standard variable naming conventions.
expression	Required. Literal or other constant, or any combination that includes all arithmetic or logical operators except Is .

Remarks

Constants are public by default. Within procedures, constants are always private; their visibility can't be changed. Within a script, the default visibility of a script-level constant can be changed using the **Private**

keyword.

To combine several constant declarations on the same line, separate each constant assignment with a comma. When constant declarations are combined in this way, the **Public** or **Private** keyword, if used, applies to all of them.

You can't use variables, user-defined functions, or intrinsic VBScript functions (such as **Chr**) in constant declarations. By definition, they can't be constants. You also can't create a constant from any expression that involves an operator, that is, only simple constants are allowed. Constants declared in a **Sub** or **Function** procedure are local to that procedure. A constant declared outside a procedure is defined throughout the script in which it is declared. You can use constants anywhere you can use an expression. The following code illustrates the use of the **Const** statement:

Note Constants can make your scripts self-documenting and easy to modify. Unlike variables, constants can't be inadvertently changed while your script is running.

See Also

Description

Returns the cosine of an angle.

Syntax

Cos(number)

The *number* argument can be any valid <u>numeric expression</u> that expresses an angle in radians.

Remarks

The **Cos** function takes an angle and returns the ratio of two sides of a right triangle. The ratio is the length of the side adjacent to the angle divided by the length of the hypotenuse. The result lies in the range -1 to 1.

To convert degrees to radians, multiply degrees by <u>pi</u>/180. To convert radians to degrees, multiply radians by 180/pi.

The following example uses the **Cos** function to return the cosine of an angle:

Dim MyAngle, MySecant

MyAngle = 1.3 'Define angle in radians.

MySecant = 1 / Cos(MyAngle) 'Calculate secant.

Language Reference Version 2

CreateObject Function

See Also

Description

Creates and returns a reference to an **Automation object**.

Syntax

CreateObject(servername.typename [, location])

The **CreateObject** function syntax has these parts:

Part	Description
servername	Required. The name of the application providing the object.
	Required.The type or class of the object to create.
location	Optional. The name of the network server where the object is to be created. This feature is available in version 5.1 or later.

Remarks

Automation servers provide at least one type of object. For example, a word-processing application may provide an application object, a document object, and a toolbar object.

To create an Automation object, assign the object returned by **CreateObject** to an object variable:

Dim ExcelSheet
Set ExcelSheet = CreateObject("Excel.Sheet")

This code starts the application that creates the object (in this case, a Microsoft Excel spreadsheet). Once an object is created, refer to it in code using the object variable you defined. As shown in the following example, you can access properties and methods of the new object using the object variable, ExcelSheet, and other Excel objects, including the Application object and the ActiveSheet.Cells collection:

'Make Excel visible through the Application objec ExcelSheet.Application.Visible = True 'Place some text in the first cell of the sheet. ExcelSheet.ActiveSheet.Cells(1,1).Value = "This is 'Save the sheet. ExcelSheet.SaveAs "C:\DOCS\TEST.XLS"

'Close Excel with the Quit method on the Applicat ExcelSheet.Application.Quit

'Release the object variable.

Set ExcelSheet = Nothing

Creating an object on a remote server can only be accomplished when Internet security is turned off. You can create an object on a remote networked computer by passing the name of the computer to the *servername* argument of **CreateObject**. That name is the same as the machine name portion of a sharename. For a network share named "\myserver\public", the *servername* is "myserver". In addition, you can specify *servername* using DNS format or an IP address.

The following code returns the version number of an instance of Excel running on a remote network computer named "myserver":

Function GetVersion
Dim XLApp
Set XLApp = CreateObject("Excel.Application",

GetVersion = XLApp.Version End Function

An error occurs if the specified remote server does not exist or cannot be found.

See Also

Description

Returns an expression that has been converted to a **Variant** of subtype **Single**.

Syntax

CSng(expression)

The *expression* argument is any valid expression.

Remarks

In general, you can document your code using the data type conversion functions to show that the result of some operation should be expressed as a particular data type rather than the default data type. For example, use **CDbl** or **CSng** to force double-precision or single-precision arithmetic in cases where currency or integer arithmetic normally would occur.

Use the **CSng** function to provide internationally aware conversions from any other data type to a **Single** subtype. For example, different decimal separators are properly recognized depending on the <u>locale</u> setting of your system, as are different thousand separators.

If *expression* lies outside the acceptable range for the <u>Single</u> subtype, an error occurs.

The following example uses the **CSng** function to convert a value to a

Single:



See Also

Description

Returns an expression that has been converted to a **Variant** of subtype **String**.

Syntax

CStr(expression)

The *expression* argument is any valid expression.

Remarks

In general, you can document your code using the data type conversion functions to show that the result of some operation should be expressed as a particular data type rather than the default data type. For example, use **CStr** to force the result to be expressed as a **String**.

You should use the **CStr** function instead of **Str** to provide internationally aware conversions from any other data type to a **String** subtype. For example, different decimal separators are properly recognized depending on the <u>locale</u> setting of your system.

The data in *expression* determines what is returned according to the following table:

If	

expression is	CStr returns
Boolean	A String containing True or False .
Date	A String containing a date in the short-date format of your system.
Null	A run-time error.
Empty	A zero-length String ("").
Error	A String containing the word Error followed by the error number.
Other numeric	A String containing the number.

The following example uses the **CStr** function to convert a numeric value to a **String**:

```
Dim MyDouble, MyString
MyDouble = 437.324 'MyDouble is a Double
MyString = CStr(MyDouble) 'MyString contains
```

${\tt Microsoft @ Visual \, Basic @ \, Scripting \, Edition} \, {\tt Date}$

and Time Constants

See Also

Since these constants are built into VBScript, you don't have to define them before using them. Use them anywhere in your code to represent the values shown for each.

Constant	Value	Description
vbSunday	1	Sunday
vbMonday	2	Monday
vbTuesday	3	Tuesday
vbWednesday	4	Wednesday
vbThursday	5	Thursday
vbFriday	6	Friday
vbSaturday	7	Saturday
vbUseSystem	0	Use the date format contained in the regional settings for your computer.
vbUseSystemDayOfWeek	0	Use the day of the week specified in your system settings for the first day of the week.
vbFirstJan1	1	Use the week in which January 1 occurs (default).
vbFirstFourDays	2	Use the first week that has at least four days in the new year.
/1		T

vbFirstFullWeek	∥ 3	Use the first full week of the year.
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Microsoft® Visual Basic® Scripting Edition Date Format Constants

See Also

Since these constants are built into VBScript, you don't have to define them before using them. Use them anywhere in your code to represent the values shown for each.

Constant	Value	Description	
vbGeneralDate	0	Display a date and/or time. For real numbers, display a date and time. If there is no fractional part, display only a date. If there is no integer part, display time only. Date and time display is determined by your system settings.	
vbLongDate	1	Display a date using the long date format specified in your computer's regional settings.	
vbShortDate	2	Display a date using the short date format specified in your computer's regional settings.	
vbLongTime	3	Display a time using the long time format specified in your computer's regional settings.	
vbShortTime	4	Display a time using the short time format specified in your computer's regional settings.	



See Also

Description

Returns the current system date.

Syntax

Date

Remarks

The following example uses the **Date** function to return the current system date:

Dim MyDate

MyDate = Date 'MyDate contains the current system date.

DateAdd Function

See Also

Description

Returns a date to which a specified time interval has been added.

Syntax

DateAdd(interval, number, date)

The **DateAdd** function syntax has these parts:

Part	Description
interval	Required. String expression that is the interval you want to add. See Settings section for values.
numbar	Required. Numeric expression that is the number of interval you want to add. The numeric expression can either be positive, for dates in the future, or negative, for dates in the past.
date	Required. Variant or literal representing the date to which <i>interval</i> is added.

Settings

The *interval* argument can have the following values:

Setting	Description
уууу	Year
q	Quarter
m	Month
у	Day of year
d	Day

w	Weekday
ww	Week of year
h	Hour
n	Minute
S	Second

Remarks

You can use the **DateAdd** function to add or subtract a specified time interval from a date. For example, you can use **DateAdd** to calculate a date 30 days from today or a time 45 minutes from now. To add days to *date*, you can use Day of Year ("y"), Day ("d"), or Weekday ("w").

The **DateAdd** function won't return an invalid date. The following example adds one month to January 31:

In this case, **DateAdd** returns 28-Feb-95, not 31-Feb-95. If *date* is 31-Jan-96, it returns 29-Feb-96 because 1996 is a leap year.

If the calculated date would precede the year 100, an error occurs.

If number isn't a **Long** value, it is rounded to the nearest whole number before being evaluated.

DateDiff Function

See Also

Description

Returns the number of intervals between two dates.

Syntax

DateDiff(*interval*, *date1*, *date2* [,*firstdayofweek*[, *firstweekofyear*]])

The **DateDiff** function syntax has these parts:

Part	Description	
interval	Required. String expression that is the interval you want to use to calculate the differences between <i>date1</i> and <i>date2</i> . See Settings section for values.	
lante i ante i	Required. Date expressions. Two dates you want to use in the calculation.	
	Optional. Constant that specifies the day of the week. If not specified, Sunday is assumed. See Settings section for values.	
firstweekofyear	Optional. Constant that specifies the first week of the year. If not specified, the first week is assumed to be the week in which January 1 occurs. See Settings section for values.	

Settings

The *interval* argument can have the following values:

Setting De	Description	
уууу Үе	'ear	

q	Quarter
m	Month
у	Day of year
d	Day
W	Weekday
ww	Week of year
h	Hour
n	Minute
S	Second

The *firstdayofweek* argument can have the following values:

Constant	Value	Description	
v.b.U.c.Cv.ctom	0	Use National Language Support (NLS)	
vbUseSystem		API setting.	
vbSunday	1	Sunday (default)	
vbMonday	2	Monday	
vbTuesday	3	Tuesday	
vbWednesday	4	Wednesday	
vbThursday	5	Thursday	
vbFriday	6	Friday	
vbSaturday	7	Saturday	

The *firstweekofyear* argument can have the following values:

Constant	Value	Description
vbUseSystem	1 () 1	Use National Language Support (NLS) API setting.
vbFirstJan1		Start with the week in which January 1 occurs (default).
vbFirstFourDays	1 7 1	Start with the week that has at least four days in the new year.
		Start with the first full weekof the new

vbFirstFullWeek	3	year.	
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Remarks

You can use the **DateDiff** function to determine how many specified time intervals exist between two dates. For example, you might use **DateDiff** to calculate the number of days between two dates, or the number of weeks between today and the end of the year.

To calculate the number of days between *date1* and *date2*, you can use either Day of year ("y") or Day ("d"). When *interval* is Weekday ("w"), **DateDiff** returns the number of weeks between the two dates. If *date1* falls on a Monday, **DateDiff** counts the number of Mondays until *date2*. It counts *date2* but not *date1*. If *interval* is Week ("ww"), however, the **DateDiff** function returns the number of calendar weeks between the two dates. It counts the number of Sundays between *date1* and *date2*. **DateDiff** counts *date2* if it falls on a Sunday; but it doesn't count *date1*, even if it does fall on a Sunday.

If *date1* refers to a later point in time than *date2*, the **DateDiff** function returns a negative number.

The *firstdayofweek* argument affects calculations that use the "w" and "ww" interval symbols.

If *date1* or *date2* is a date literal, the specified year becomes a permanent part of that date. However, if *date1* or *date2* is enclosed in quotation marks (" ") and you omit the year, the current year is inserted in your code each time the *date1* or *date2* expression is evaluated. This makes it possible to write code that can be used in different years.

When comparing December 31 to January 1 of the immediately succeeding year, **DateDiff** for Year ("yyyy") returns 1 even though only a day has elapsed.

The following example uses the **DateDiff** function to display the number of days between a given date and today:

Function DiffADate(theDate)
DiffADate = "Days from today: " & DateDiff("d", Now, theDate)
End Function

DatePart Function

See Also

Description

Returns the specified part of a given date.

Syntax

DatePart(interval, date[, firstdayofweek[, firstweekofyear]])

The **DatePart** function syntax has these parts:

Part	Description	
interval	Required. String expression that is the interval of time you want to return. See Settings section for values.	
date	Required. Date expression you want to evaluate.	
firstdayof week	Optional. Constant that specifies the day of the week. If not specified, Sunday is assumed. See Settings section for values.	
firstweekofyear	Optional. Constant that specifies the first week of the year. If not specified, the first week is assumed to be the week in which January 1 occurs. See Settings section for values.	

Settings

The *interval* argument can have the following values:

Setting	Description	
уууу	Year	
q	Quarter	

m	Month
У	Day of year
d	Day
W	Weekday
ww	Week of year
h	Hour
n	Minute
S	Second

The *firstdayofweek* argument can have the following values:

Constant	Value	Description	
LIIC4	0	Use National Language Support (NLS)	
vbUseSystem		API setting.	
vbSunday	1	Sunday (default)	
vbMonday	2	Monday	
vbTuesday	3	Tuesday	
vbWednesday	4	Wednesday	
vbThursday	5	Thursday	
vbFriday	6	Friday	
vbSaturday	7	Saturday	

The *firstweekofyear* argument can have the following values:

Constant	Value	Description
vbUseSystem	0	Use National Language Support (NLS) API setting.
vbFirstJan1		Start with the week in which January 1 occurs (default).
vbFirstFourDays	1 7 1	Start with the week that has at least four days in the new year.
vbFirstFullWeek	3	Start with the first full weekof the new year.

Remarks

You can use the **DatePart** function to evaluate a date and return a specific interval of time. For example, you might use **DatePart** to calculate the day of the week or the current hour.

The *firstdayofweek* argument affects calculations that use the "w" and "ww" interval symbols.

If *date* is a date literal, the specified year becomes a permanent part of that date. However, if *date* is enclosed in quotation marks (" "), and you omit the year, the current year is inserted in your code each time the *date* expression is evaluated. This makes it possible to write code that can be used in different years.

This example takes a date and, using the **DatePart** function, displays the quarter of the year in which it occurs.

Function GetQuarter(TheDate)
GetQuarter = DatePart("q", TheDate)
End Function

Language Reference Version 1

DateSerial Function

See Also

Description

Returns a **Variant** of subtype **Date** for a specified year, month, and day.

Syntax

DateSerial(year, month, day)

The **DateSerial** function syntax has these arguments:

Part	Description
llvear I	Number between 100 and 9999, inclusive, or a <u>numeric</u> <u>expression</u> .
month	Any numeric expression.
day	Any numeric expression.

Remarks

To specify a date, such as December 31, 1991, the range of numbers for each **DateSerial** argument should be in the accepted range for the unit; that is, 1–31 for days and 1–12 for months. However, you can also specify relative dates for each argument using any numeric expression that represents some number of days, months, or years before or after a certain date.

The following example uses numeric expressions instead of absolute date

numbers. Here the **DateSerial** function returns a date that is the day before the first day (1-1) of two months before August (8-2) of 10 years before 1990 (1990 – 10); in other words, May 31, 1980.

```
Dim MyDate1, MyDate2
MyDate1 = DateSerial(1970, 1, 1) 'Retu
MyDate2 = DateSerial(1990 - 10, 8 - 2, 1 - 1) '
```

For the *year* argument, values between 0 and 99, inclusive, are interpreted as the years 1900–1999. For all other *year* arguments, use a complete four-digit year (for example, 1800).

When any argument exceeds the accepted range for that argument, it increments to the next larger unit as appropriate. For example, if you specify 35 days, it is evaluated as one month and some number of days, depending on where in the year it is applied. However, if any single argument is outside the range -32,768 to 32,767, or if the date specified by the three arguments, either directly or by expression, falls outside the acceptable range of dates, an error occurs.

DateValue Function

Language Reference Version 1

See Also

Description

Returns a **Variant** of subtype **Date**.

Syntax

DateValue(date)

The *date* argument is normally a <u>string expression</u> representing a date from January 1, 100 through December 31, 9999. However, *date* can also be any expression that can represent a date, a time, or both a date and time, in that range.

Remarks

If the *date* argument includes time information, **DateValue** doesn't return it. However, if *date* includes invalid time information (such as "89:98"), an error occurs.

If *date* is a string that includes only numbers separated by valid <u>date separators</u>, **DateValue** recognizes the order for month, day, and year according to the short date format you specified for your system. **DateValue** also recognizes unambiguous dates that contain month names, either in long or abbreviated form. For example, in addition to recognizing 12/30/1991 and 12/30/91, **DateValue** also recognizes December 30, 1991 and Dec 30, 1991.

If the year part of *date* is omitted, **DateValue** uses the current year from your computer's system date.

The following example uses the **DateValue** function to convert a string to a date. You can also use date literals to directly assign a date to a **Variant** variable, for example, MyDate = #9/11/63#.

Dim MyDate
MyDate = DateValue("September 11, 1963") ' Re

Function

See Also

Description

Returns a whole number between 1 and 31, inclusive, representing the day of the month.

Syntax

Day(date)

The *date* argument is any expression that can represent a date. If *date* contains <u>Null</u>, **Null** is returned.

The following example uses the **Day** function to obtain the day of the month from a specified date:

Language Reference Version 1

Description Property

See Also

Applies to

Description

Returns or sets a descriptive string associated with an error.

Syntax

object.Description [= stringexpression]

The **Description** property syntax has these parts:

Part	Description	
object	Always the Err object.	
stringexpression	A string expression containing a description of	
	the error.	

Remarks

The **Description** property consists of a short description of the error. Use this property to alert the user to an error that you can't or don't want to handle. When generating a user-defined error, assign a short description of your error to this property. If **Description** isn't filled in, and the value of **Number** corresponds to a VBScript <u>run-time error</u>, the descriptive string associated with the error is returned.

On Error Resume Next
Err.Raise 6 'Raise an overflow error.
MsgBox ("Error # " & CStr(Err.Number) & " " & Err.Description)
Err.Clear 'Clear the error.



Statement

See Also

Description

Declares variables and allocates storage space.

Syntax

Dim varname[([subscripts])][, varname[([subscripts])]]...

The **Dim** statement syntax has these parts:

Part	Description	
varname	Name of the variable; follows standard <u>variable</u> naming conventions.	
	Dimensions of an <u>array</u> variable; up to 60 multiple dimensions may be declared. The <i>subscripts</i> argument uses the following syntax:	
subscripts	upperbound [,upperbound]	
	The lower bound of an array is always zero.	

Remarks

Variables declared with **Dim** at the <u>script level</u> are available to all procedures within the script. At the <u>procedure level</u>, variables are available only within the procedure.

You can also use the **Dim** statement with empty parentheses to

declare a dynamic array. After declaring a dynamic array, use the **ReDim** statement within a procedure to define the number of dimensions and elements in the array. If you try to redeclare a dimension for an array variable whose size was explicitly specified in a **Dim** statement, an error occurs.

Tip When you use the **Dim** statement in a procedure, you generally put the **Dim** statement at the beginning of the procedure.

The following examples illustrate the use of the **Dim** statement:

Dim Names(9) 'Declare an array with 10 elements.

Dim Names() 'Declare a dynamic array.

Dim MyVar, MyNum ' Declare two variables.



Operator

See Also

Description

Divides two numbers and returns a floating-point result.

Syntax

result = number1/number2

The / operator syntax has these parts:

Part	Description
result	Any numeric variable.
number1	Any <u>numeric expression</u> .
number2	Any numeric expression.

Remarks

If one or both expressions are <u>Null</u> expressions, *result* is **Null**. Any expression that is <u>Empty</u> is treated as 0.

Do...Loop Statement

See Also

Description

Repeats a block of statements while a condition is **True** or until a condition becomes **True**.

Syntax

```
Do [{While | Until} condition]
  [statements]
  [Exit Do]
  [statements]
```

Loop

Or, you can use this syntax:

Do

[statements]
[**Exit Do**]
[statements]

Loop [{While | Until} condition]

The **Do...Loop** statement syntax has these parts:

Part	Description	
condition	Numeric or string expression that is True or False . If condition is Null , condition is treated as False .	
statements	One or more statements that are repeated while or until <i>condition</i> is True .	

Remarks

The **Exit Do** can only be used within a **Do...Loop** control structure to

provide an alternate way to exit a **Do...Loop**. Any number of **Exit Do** statements may be placed anywhere in the **Do...Loop**. Often used with the evaluation of some condition (for example, **If...Then**), **Exit Do** transfers control to the statement immediately following the **Loop**.

When used within nested **Do...Loop** statements, **Exit Do** transfers control to the loop that is nested one level above the loop where it occurs.

The following examples illustrate use of the **Do...Loop** statement:

```
Do Until DefResp = vbNo
 MyNum = Int (6 * Rnd + 1) ' Generate a random integer between
 DefResp = MsgBox (MyNum & " Do you want another number?
Loop
Dim Check, Counter
Check = True: Counter = 0
                                 'Initialize variables.
                        'Outer loop.
Do
                            'Inner loop.
 Do While Counter < 20
                                 ' Increment Counter.
  Counter = Counter + 1
  If Counter = 10 Then
                            ' If condition is True...
   Check = False
                            ' set value of flag to False.
   Exit Do
                       'Exit inner loop.
  End If
 Loop
Loop Until Check = False
                                 'Exit outer loop immediately.
```



See Also

Description

The **Empty** keyword is used to indicate an uninitialized variable value. This is not the same thing as **Null**.



Operator

See Also

Description

Performs a logical equivalence on two expressions.

Syntax

result = expression1 **Eqv** expression2

The **Eqv** operator syntax has these parts:

Part	Description
result	Any numeric variable.
expression1	Any <u>expression</u> .
expression2	Any expression.

Remarks

If either expression is **Null**, *result* is also **Null**. When neither expression is **Null**, *result* is determined according to the following table:

If expression1 is	And expression2 is	The <i>result</i> is
True	True	True
True	False	False
False	True	False
False	False	True

The **Eqv** operator performs a <u>bitwise comparison</u> of identically positioned bits in two <u>numeric expressions</u> and sets the corresponding bit in *result* according to the following table:

A - d bis in a	The weet 14 is
And bit in <i>expression2</i> is	I ne <i>resuit</i> is

If bit in expression1 is		
0	0	1
0	1	0
1	0	0
1	1	1



Statement

See Also

Description

Reinitializes the elements of fixed-size <u>arrays</u> and deallocates dynamicarray storage space.

Syntax

Erase *array*

The *array* argument is the name of the array <u>variable</u> to be erased.

Remarks

It is important to know whether an array is fixed-size (ordinary) or dynamic because **Erase** behaves differently depending on the type of array. **Erase** recovers no memory for fixed-size arrays. **Erase** sets the elements of a fixed array as follows:

Type of array	Effect of Erase on fixed-array elements
Fixed numeric array	Sets each element to zero.
Fixed string array	Sets each element to zero-length ("").
Array of objects	Sets each element to the special value Nothing.

Erase frees the memory used by dynamic arrays. Before your program can refer to the dynamic array again, it must redeclare the array variable's dimensions using a **ReDim** statement.

The following example illustrates the use of the **Erase** statement:

Dim NumArray(9)

Dim DynamicArray()
ReDim DynamicArray(9) 'Allocate storage space.

Erase NumArray 'Each element is reinitialize

Erase DynamicArray 'Free memory used by arra



Object

<u>See Also</u> <u>Properties</u> <u>Methods</u>

Description

Contains information about <u>run-time errors</u>. Accepts the **Raise** and **Clear** methods for generating and clearing run-time errors.

Remarks

The **Err** object is an intrinsic object with global <u>scope</u> — there is no need to create an instance of it in your code. The properties of the **Err** object are set by the generator of an error — Visual Basic, an Automation object, or the VBScript programmer.

The default property of the **Err** object is **Number**. **Err.Number** contains an integer and can be used by an <u>Automation object</u> to return an <u>SCODE</u>.

When a run-time error occurs, the properties of the **Err** object are filled with information that uniquely identifies the error and information that can be used to handle it. To generate a run-time error in your code, use the **Raise** method.

The **Err** object's properties are reset to zero or zero-length strings ("") after an **On Error Resume Next** statement. The **Clear** method can be used to explicitly reset **Err**.

The following example illustrates use of the **Err** object:

On Error Resume Next

Err.Raise 6 'Raise an overflow error.



Function

See Also

Description

Evaluates an <u>expression</u> and returns the result.

Syntax

[result =]**Eval**(*expression*)

The **Eval** function syntax has these parts:

Part	Description	
result	Optional. Variable to which return value assignment is made. If <i>result</i> is not specified, consider using the Execute statement instead.	
ll <i>exnre</i> ssion	Required. String containing any legal VBScript expression.	

Remarks

In VBScript, x = y can be interpreted two ways. The first is as an assignment statement, where the value of y is assigned to x. The second interpretation is as an expression that tests if x and y have the same value. If they do, result is **True**; if they are not, result is **False**. The **Eval** method always uses the second interpretation, whereas the **Execute** statement always uses the first.

Note In Microsoft® JScript, no confusion exists between assignment and comparison, because the assignment operator (=) is different from the <u>comparison operator</u> (==).

The following example illustrates the use of the **Eval** function:

```
Sub GuessANumber
Dim Guess, RndNum
RndNum = Int((100) * Rnd(1) + 1)
Guess = CInt(InputBox("Enter your guess:",,0))
Do
If Eval("Guess = RndNum") Then
MsgBox "Congratulations! You guessed it!"
Exit Sub
Else
Guess = CInt(InputBox("Sorry! Try again.",,0))
End If
Loop Until Guess = 0
End Sub
```

Microsoft® Visual Basic® Scripting Edition

Execute Method

See Also

Applies to

Description

Executes a regular expression search against a specified string.

Syntax

object.Execute(string)

The **Execute** method syntax has these parts:

Part	Description
object	Required. Always the name of a RegExp object.
string	Required. The text string upon which the regular expression is executed.

Remarks

The actual pattern for the regular expression search is set using the **Pattern** property of the **RegExp** object.

The **Execute** method returns a **Matches** collection containing a **Match** object for each match found in *string*. **Execute** returns an empty **Matches** collection if no match is found.

The following code illustrates the use of the **Execute** method:

Function RegExpTest(patrn, strng)

```
'Create variable.
Dim regEx, Match, Matches
Set regEx = New RegExp
                                      ' Create a regular expressi
regEx.Pattern = patrn
                                 ' Set pattern.
regEx.IgnoreCase = True
                                      ' Set case insensitivity.
regEx.Global = True
                                 ' Set global applicability.
Set Matches = regEx.Execute(strng) 'Execute search.
For Each Match in Matches
                                 ' Iterate Matches collection.
```

RetStr = RetStr & "Match found at position "

RetStr = RetStr & Match.FirstIndex & ". Match Value is "

RetStr = RetStr & Match.Value & ""." & vbCRLF

Next

RegExpTest = RetStr

End Function

MsgBox(RegExpTest("is.", "IS1 is2 IS3 is4"))

Statement

See Also

Description

Executes one or more specified statements.

Syntax

Execute *statement*

The required *statement* argument is a <u>string expression</u> containing one or more statements for execution. Include multiple statements in the *statement* argument, using colons or embedded line breaks to separate them.

Remarks

In VBScript, x = y can be interpreted two ways. The first is as an assignment statement, where the value of y is assigned to x. The second interpretation is as an <u>expression</u> that tests if x and y have the same value. If they do, *result* is **True**; if they are not, *result* is **False**. The **Execute** statement always uses the first interpretation, whereas the **Eval** method always uses the second.

Note In Microsoft® JScript�, no confusion exists between assignment and comparison, because the assignment operator (=) is different from the <u>comparison operator(==)</u>.

The context in which the **Execute** statement is invoked determines what objects and <u>variables</u> are available to the code being run. In-scope objects and variables are available to code running in an **Execute** statement. However, it is important to understand that if you execute code that creates a <u>procedure</u>, that procedure does not inherit the <u>scope</u> of the procedure in which it occurred.

Like any procedure, the new procedure's scope is global, and it inherits everything in the global scope. Unlike any other procedure, its context is not global scope, so it can only be executed in the context of the procedure where the **Execute** statement occurred. However, if the same **Execute** statement is invoked outside of a procedure (i.e., in global scope), not only does it inherit everything in global scope, but it can also be called from anywhere, since its context is global. The following example illustrates this behavior:

Dim X 'Declare X in global scope.

X = "Global" 'Assign global X a value.

Sub Proc1 ' Declare procedure.

Dim X 'Declare X in local scope. X = "Local" 'Assign local X a value.

' The Execute statement here creates a ' procedure that, when invoked, prints X.

' It print the global X because Proc2 ' inherits everything in global scope.

Execute "Sub Proc2: Print X: End Sub"

Print Eval("X") 'Print local X.

Proc2 'Invoke Proc2 in Proc1's scope.

End Sub

Proc2 'This line causes an error since

' Proc2 is unavailable outside Proc1.

Proc1 'Invoke Proc1.

Execute "Sub Proc2: Print X: End Sub"

Proc2 'This invocation succeeds because Proc2

' is now available globally.

The following example shows how the **Execute** statement can be rewritten so you don't have to enclose the entire procedure in the quotation marks:

S = "Sub Proc2" & vbCrLf

S = S & " Print X" & vbCrLf

S = S & "End Sub"

Execute S



Statement

See Also

Description

Exits a block of **Do...Loop**, **For...Next**, **Function**, or **Sub** code.

Syntax

Exit Do

Exit For

Exit Function

Exit Property

Exit Sub

The **Exit** statement syntax has these forms:

Statement	Description
Exit Do	Provides a way to exit a DoLoop statement. It can be used only inside a DoLoop statement. Exit Do transfers control to the statement following the Loop statement. When used within nested DoLoop statements, Exit Do transfers control to the loop that is one nested level above the loop where it occurs.
Exit For	Provides a way to exit a For loop. It can be used only in a ForNext or For EachNext loop. Exit For transfers control to the statement following the Next statement. When used within nested For loops, Exit For transfers control to the loop that is one nested level above the loop where it occurs.
	Immediately exits the Function procedure in which

	it appears. Execution continues with the statement following the statement that called the Function .
Exit	Immediately exits the Property procedure in which it appears. Execution continues with the statement following the statement that called the Property procedure.
	Immediately exits the Sub procedure in which it appears. Execution continues with the statement following the statement that called the Sub .

The following example illustrates the use of the **Exit** statement:

```
Sub RandomLoop
 Dim I, MyNum
                   ' Set up infinite loop.
 Do
  For I = 1 To 1000
                       'Loop 1000 times.
   MyNum = Int(Rnd * 100) 'Generate random nu
   Select Case MyNum 'Evaluate random num
    Case 17: MsgBox "Case 17"
                    ' If 17, exit For...Next.
     Exit For
    Case 29: MsgBox "Case 29"
     Exit Do
                    ' If 29, exit Do...Loop.
    Case 54: MsgBox "Case 54"
                    ' If 54, exit Sub procedure.
     Exit Sub
    End Select
  Next
 Loop
End Sub
```

Function

See Also

Description

Returns e (the base of natural logarithms) raised to a power.

Syntax

Exp(number)

The *number* argument can be any valid <u>numeric expression</u>.

Remarks

If the value of *number* exceeds 709.782712893, an error occurs. The constant *e* is approximately 2.718282.

Note The **Exp** function complements the action of the **Log** function and is sometimes referred to as the antilogarithm.

The following example uses the **Exp** function to return e raised to a power:

Dim MyAngle, MyHSin 'Define angle in radians. MyAngle = 1.3 'Calculate hyperbolic sine. MyHSin = (Exp(MyAngle) - Exp(-1 * MyAngle))



See Also

Description

Raises a number to the power of an exponent.

Syntax

result = *number*^*exponent*

The ^ operator syntax has these parts:

Part	Description	
result	Any numeric variable.	
number	Any numeric expression.	
exponent	Any numeric expression.	

Remarks

Number can be negative only if *exponent* is an integer value. When more than one exponentiation is performed in a single expression, the ^ operator is evaluated as it is encountered from left to right.

If either *number* or *exponent* is a **Null** expression, *result* is also **Null**.



See Also

Description

The **False** keyword has a value equal to 0.



Function

See Also

Description

Returns a zero-based <u>array</u> containing a subset of a string array based on a specified filter criteria.

Syntax

Filter(InputStrings, Value[, Include[, Compare]])

The **Filter** function syntax has these parts:

Part	Description		
InputStrings	Required. One-dimensional array of strings to be searched.		
Value	Required. String to search for.		
	Optional. Boolean value indicating whether to return substrings that include or exclude <i>Value</i> . If <i>Include</i> is True , Filter returns the subset of the array that contains <i>Value</i> as a substring. If <i>Include</i> is False , Filter returns the subset of the array that does not contain <i>Value</i> as a substring.		
Compare	Optional. Numeric value indicating the kind of string comparison to use. See Settings section for values.		

Settings

The *Compare* argument can have the following values:

Constant	Value Description	

vbBinaryCompare	0	Perform a binary comparison.
vbTextCompare	1	Perform a textual comparison.

Remarks

If no matches of *Value* are found within *InputStrings*, **Filter** returns an empty array. An error occurs if *InputStrings* is **Null** or is not a one-dimensional array.

The array returned by the **Filter** function contains only enough elements to contain the number of matched items.

The following example uses the **Filter** function to return the array containing the search criteria "Mon":

```
Dim MyIndex
Dim MyArray (3)
MyArray(0) = "Sunday"
MyArray(1) = "Monday"
MyArray(2) = "Tuesday"
MyIndex = Filter(MyArray, "Mon") ' MyIndex(0)
```

<u>Language Reference</u> Version 5

FirstIndex Property

See Also

Applies To

Description

Returns the position in a search string where a match occurs.

Syntax

object.FirstIndex

The *object* argument is always a **Match** object.

Remarks

The **FirstIndex** property uses a zero-based offset from the beginning of the search string. In other words, the first character in the string is identified as character zero (0). The following code illustrates the use of the **FirstIndex** property:

```
Function RegExpTest(patrn, strng)
```

Dim regEx, Match, Matches 'Create variable.

Set regEx = New RegExp 'Create regular expression

regEx.Pattern = patrn 'Set pattern.

regEx.IgnoreCase = True 'Set case insensitivity.

regEx.Global = True 'Set global applicability.

Set Matches = regEx.Execute(strng) 'Execute search.

For Each Match in Matches 'Iterate Matches collection.

RetStr = RetStr & "Match " & I & " found at position "

RetStr = RetStr & Match.FirstIndex & ". Match Value is "

RetStr = RetStr & Match.Value & ""." & vbCRLF

Next RegExpTest = RetStr End Function

MsgBox(RegExpTest("is.", "IS1 is2 IS3 is4"))

Functions

See Also

Description

Returns the integer portion of a number.

Syntax

Int(number)

Fix(number)

The *number* argument can be any valid <u>numeric expression</u>. If *number* contains <u>Null</u>, **Null** is returned.

Remarks

Both **Int** and **Fix** remove the fractional part of *number* and return the resulting integer value.

The difference between **Int** and **Fix** is that if *number* is negative, **Int** returns the first negative integer less than or equal to *number*, whereas **Fix** returns the first negative integer greater than or equal to *number*. For example, **Int** converts -8.4 to -9, and **Fix** converts -8.4 to -8.

Fix(*number*) is equivalent to:

The following examples illustrate how the **Int** and **Fix** functions return integer portions of numbers:

```
MyNumber = Int(99.8) 'Returns 99.
MyNumber = Fix(99.2) 'Returns 99.
MyNumber = Int(-99.8) 'Returns -100.
```

```
MyNumber = Fix(-99.8) 'Returns -99.
MyNumber = Int(-99.2) 'Returns -100.
MyNumber = Fix(-99.2) 'Returns -99.
```

For...Next Statement

See Also

Description

Repeats a group of statements a specified number of times.

Syntax

```
For counter = start To end [Step step]
  [statements]
  [Exit For]
  [statements]
```

Next

The **For...Next** statement syntax has these parts:

Part	Description	
	Numeric variable used as a loop counter. The variable can't be an <u>array</u> element or an element of a user-defined type.	
start	Initial value of <i>counter</i> .	
end	Final value of <i>counter</i> .	
step	Amount <i>counter</i> is changed each time through the loop. If not specified, <i>step</i> defaults to one.	
statements	One or more statements between For and Next that are executed the specified number of times.	

Remarks

The *step* argument can be either positive or negative. The value of the *step* argument determines loop processing as follows:

Value	Loop executes if
Positive or 0	counter <= end
Negative	counter >= end

Once the loop starts and all statements in the loop have executed, *step* is added to *counter*. At this point, either the statements in the loop execute again (based on the same test that caused the loop to execute initially), or the loop is exited and execution continues with the statement following the **Next** statement.

Tip Changing the value of *counter* while inside a loop can make it more difficult to read and debug your code.

Exit For can only be used within a **For Each...Next** or **For...Next** control structure to provide an alternate way to exit. Any number of **Exit For** statements may be placed anywhere in the loop. **Exit For** is often used with the evaluation of some condition (for example, **If...Then**), and transfers control to the statement immediately following **Next**.

You can nest **For...Next** loops by placing one **For...Next** loop within another. Give each loop a unique variable name as its *counter*. The following construction is correct:

```
For I = 1 To 10

For J = 1 To 10

For K = 1 To 10

...

Next

Next

Next
```



Each...Next Statement

See Also

Description

Repeats a group of statements for each element in an <u>array</u> or <u>collection</u>.

Syntax

For Each element In group

[statements]

[Exit For]

[statements]

Next [element]

The **For Each...Next** statement syntax has these parts:

Part	Description
element	Variable used to iterate through the elements of the collection or array. For collections, <i>element</i> can only be a Variant variable, a generic Object variable, or any specific Automation object variable. For arrays, <i>element</i> can only be a Variant variable.
group	Name of an object collection or array.
statements	One or more statements that are executed on each item in <i>group</i> .

Remarks

The **For Each** block is entered if there is at least one element in *group*.

Once the loop has been entered, all the statements in the loop are executed for the first element in *group*. As long as there are more elements in *group*, the statements in the loop continue to execute for each element. When there are no more elements in *group*, the loop is exited and execution continues with the statement following the **Next** statement.

The **Exit For** can only be used within a **For Each...Next** or **For...Next** control structure to provide an alternate way to exit. Any number of **Exit For** statements may be placed anywhere in the loop. The **Exit For** is often used with the evaluation of some condition (for example, **If...Then**), and transfers control to the statement immediately following **Next**.

You can nest **For Each...Next** loops by placing one **For Each...Next** loop within another. However, each loop *element* must be unique.

Note If you omit *element* in a **Next** statement, execution continues as if you had included it. If a **Next** statement is encountered before its corresponding **For** statement, an error occurs.

The following example illustrates use of the **For Each...Next** statement:

```
Function ShowFolderList(folderspec)
Dim fso, f, f1, fc, s
Set fso = CreateObject("Scripting.FileSystemObject")
Set f = fso.GetFolder(folderspec)
Set fc = f.Files
For Each f1 in fc
s = s & f1.name
s = s & "<BR>"
Next
ShowFolderList = s
End Function
```

Language Reference Version 2

FormatCurrency Function

See Also

Description

Returns an expression formatted as a currency value using the currency symbol defined in the system control panel.

Syntax

FormatCurrency(Expression[,NumDigitsAfterDecimal [,IncludeLeadingDigit [,UseParensForNegativeNumbers [,GroupDigits]]]])

The **FormatCurrency** function syntax has these parts:

Part	Description
Expression	Required. Expression to be formatted.
NumDigitsAfterDecimal	Optional. Numeric value indicating how many places to the right of the decimal are displayed. Default value is -1, which indicates that the computer's regional settings are used.
IncludeLeadingDigit	Optional. Tristate constant that indicates whether or not a leading zero is displayed for fractional values. See Settings section for values.
	Optional. Tristate constant that indicates whether or not to

<i>UseParensForNegativeNumbers</i>	place negative values within
	parentheses. See Settings
	section for values.
	Optional. Tristate constant that
	indicates whether or not
<i>GroupDigits</i>	numbers are grouped using the
GroupDigits	group delimiter specified in the
	computer's regional settings.
	See Settings section for values.

Settings

The *IncludeLeadingDigit*, *UseParensForNegativeNumbers*, and *GroupDigits* arguments have the following settings:

Constant	Value	Description
TristateTrue	-1	True
TristateFalse	0	False
TristateUseDefault	I -/	Use the setting from the computer's regional settings.

Remarks

When one or more optional arguments are omitted, values for omitted arguments are provided by the computer's regional settings. The position of the currency symbol relative to the currency value is determined by the system's regional settings.

Note All settings information comes from the Regional Settings Currency tab, except leading zero which comes from the Number tab.

The following example uses the **FormatCurrency** function to format the expression as a currency and assign it to MyCurrency:

Dim MyCurrency
MyCurrency = FormatCurrency(1000) ' MyCurren

Language Reference Version 2

FormatDateTime Function

See Also

Description

Returns an expression formatted as a date or time.

Syntax

FormatDateTime(Date[, NamedFormat])

The **FormatDateTime** function syntax has these parts:

Part	Description
Date	Required. Date expression to be formatted.
NamedFormat	Optional. Numeric value that indicates the
	date/time format used. If omitted,
	vbGeneralDate is used.

Settings

The *NamedFormat* argument has the following settings:

Constant	Value	Description
vbGeneralDate	0	Display a date and/or time. If there is a date part, display it as a short date. If there is a time part, display it as a long time. If present, both parts are displayed.
vbLongDate	1	Display a date using the long date format specified in your computer's regional settings.
		Display a date using the short date

vbShortDate		format specified in your computer's regional settings.
vbLongTime		Display a time using the time format specified in your computer's regional settings.
vbShortTime	4	Display a time using the 24-hour format (hh:mm).

Remarks

The following example uses the **FormatDateTime** function to format the expression as a long date and assign it to MyDateTime:

Function GetCurrentDate

'FormatDateTime formats Date in long date.

GetCurrentDate = FormatDateTime(Date, 1)

End Function

Language Reference Version 2

FormatNumber Function

See Also

Description

Returns an expression formatted as a number.

Syntax

FormatNumber(*Expression* [,*NumDigitsAfterDecimal* [,*IncludeLeadingDigit* [,*UseParensForNegativeNumbers* [,*GroupDigits*]]])

The **FormatNumber** function syntax has these parts:

Part	Description
Expression	Required. Expression to be formatted.
NumDigitsAfterDecimal	Optional. Numeric value indicating how many places to the right of the decimal are displayed. Default value is -1, which indicates that the computer's regional settings are used.
IncludeLeadingDigit	Optional. Tristate constant that indicates whether or not a leading zero is displayed for fractional values. See Settings section for values.
<i>UseParensForNegativeNumbers</i>	Optional. Tristate constant that indicates whether or not to place negative values within

	parentheses. See Settings section for values.
GroupDigits	Optional. Tristate constant that indicates whether or not numbers are grouped using the group delimiter specified in the control panel. See Settings section for values.

Settings

The *IncludeLeadingDigit*, *UseParensForNegativeNumbers*, and *GroupDigits* arguments have the following settings:

Constant	Value	Description
TristateTrue	-1	True
TristateFalse	0	False
TristateUseDefault	I -/	Use the setting from the computer's regional settings.

Remarks

When one or more of the optional arguments are omitted, the values for omitted arguments are provided by the computer's regional settings.

Note All settings information comes from the Regional Settings Number tab.

The following example uses the **FormatNumber** function to format a number to have four decimal places:

Function FormatNumberDemo

Dim MyAngle, MySecant, MyNumber
MyAngle = 1.3 'Define angle in radians
MySecant = 1 / Cos(MyAngle) 'Calculate secant
FormatNumberDemo = FormatNumber(MySecan
End Function

Language Reference Version 2

FormatPercent Function

See Also

Description

Returns an expression formatted as a percentage (multiplied by 100) with a trailing % character.

Syntax

FormatPercent(*Expression*[,*NumDigitsAfterDecimal* [,*IncludeLeadingDigit* [,*UseParensForNegativeNumbers* [,*GroupDigits*]]])

The **FormatPercent** function syntax has these parts:

Part	Description	
Expression	Required. Expression to be formatted.	
NumDigitsAfterDecimal	Optional. Numeric value indicating how many places to the right of the decimal are displayed. Default value is -1, which indicates that the computer's regional settings are used.	
IncludeLeadingDigit	Optional. Tristate constant that indicates whether or not a leading zero is displayed for fractional values. See Settings section for values.	
	Optional. Tristate constant that indicates whether or not to	

<i>UseParensForNegativeNumbers</i>	place negative values within		
	parentheses. See Settings		
	section for values.		
	Optional. Tristate constant that		
	indicates whether or not		
GroupDigits	numbers are grouped using the		
GroupDigits	group delimiter specified in the		
	control panel. See Settings		
	section for values.		

Settings

The *IncludeLeadingDigit*, *UseParensForNegativeNumbers*, and *GroupDigits* arguments have the following settings:

Constant	Value	Description
TristateTrue	-1	True
TristateFalse	0	False
TristateUseDefault	I -/ I	Use the setting from the computer's regional settings.

Remarks

When one or more optional arguments are omitted, the values for the omitted arguments are provided by the computer's regional settings.

Note All settings information comes from the Regional Settings Number tab.

The following example uses the **FormatPercent** function to format an expression as a percent:

Dim MyPercent MyPercent = FormatPercent(2/32) ' MyPercent cor.

Language Reference Version 1

Function Statement

See Also

Description

Declares the name, arguments, and code that form the body of a **Function** procedure.

Syntax

[**Public** [**Default**] | **Private**] **Function** *name* [(arglist)]

[statements]

[name = expression]

[Exit Function]

[statements]

[name = expression]

End Function

The **Function** statement syntax has these parts:

Part	Description
Public	Indicates that the Function procedure is accessible to all other procedures in all scripts.
Default	Used only with the Public keyword in a Class block to indicate that the Function procedure is the default method for the <u>class</u> . An error occurs if more than one Default procedure is specified in a class.
Private	Indicates that the Function procedure is accessible only to other procedures in the script where it is declared or if the function is a member of a class, and that the Function procedure is accessible only to other procedures in that class.
name	Name of the Function ; follows standard <u>variable</u> naming conventions.
arglist	List of variables representing arguments that are passed to the Function procedure when it is called. Multiple variables are separated by commas.

statements	Any group of statements to be executed within the body of the Function procedure.
expression	Return value of the Function .

The *arglist* argument has the following syntax and parts:

[ByVal | ByRef] varname[()]

Part	Description
ByVal	Indicates that the <u>argument</u> is passed <u>by value</u> .
ByRef	Indicates that the argument is passed by reference.
varname	Name of the variable representing the argument; follows standard variable naming conventions.

Remarks

If not explicitly specified using either **Public** or **Private**, **Function** procedures are public by default, that is, they are visible to all other procedures in your script. The value of local variables in a **Function** is not preserved between calls to the procedure.

You can't define a **Function** procedure inside any other procedure (e.g. **Sub** or **Property Get**).

The **Exit Function** statement causes an immediate exit from a **Function** procedure. Program execution continues with the statement that follows the statement that called the **Function** procedure. Any number of **Exit Function** statements can appear anywhere in a **Function** procedure.

Like a **Sub** procedure, a **Function** procedure is a separate procedure that can take arguments, perform a series of statements, and change the values of its arguments. However, unlike a **Sub** procedure, you can use a **Function** procedure on the right side of an <u>expression</u> in the same way you use any

intrinsic function, such as **Sqr**, **Cos**, or **Chr**, when you want to use the value returned by the function.

You call a **Function** procedure using the function name, followed by the argument list in parentheses, in an expression. See the **Call** statement for specific information on how to call **Function** procedures.

Caution Function procedures can be recursive, that is, they can call themselves to perform a given task. However, recursion can lead to stack overflow.

To return a value from a function, assign the value to the function name. Any number of such assignments can appear anywhere within the procedure. If no value is assigned to *name*, the procedure returns a default value: a numeric function returns 0 and a string function returns a zero-length string (""). A function that returns an object reference returns **Nothing** if no object reference is assigned to *name* (using **Set**) within the **Function**.

The following example shows how to assign a return value to a function named BinarySearch. In this case, **False** is assigned to the name to indicate that some value was not found.

```
Function BinarySearch(. . .)

' Value not found. Return a value of False.
If lower > upper Then
BinarySearch = False
Exit Function
End If

...

End Function
```

Variables used in **Function** procedures fall into two categories: those that are explicitly declared within the procedure and those that are not. Variables that are explicitly declared in a procedure (using **Dim** or the equivalent) are always local to the procedure. Variables that are used but not explicitly declared in a procedure are also local unless they are explicitly declared at some higher level outside the procedure.

Caution A procedure can use a variable that is not explicitly declared in the procedure, but a naming conflict can occur if anything you have defined at the <u>script level</u> has the same name. If your procedure refers to an undeclared variable that has the same name as another procedure, <u>constant</u>, or variable, it is assumed that your procedure is referring to that script-level name. To avoid this kind of conflict, use an **Option Explicit** statement to force explicit declaration of variables.

Caution VBScript may rearrange arithmetic expressions to increase internal efficiency. Avoid using a **Function** procedure in an arithmetic expression when the function changes the value of variables in the same expression.

GetObject Function

See Also

Description

Returns a reference to an **Automation object** from a file.

Syntax

GetObject([pathname] [, class])

The **GetObject** function syntax has these parts:

Part	Description
pathname	Optional; String. Full path and name of the file containing the object to retrieve. If <i>pathname</i> is omitted, <i>class</i> is required.
class	Optional; String. <u>Class</u> of the object.

The *class* <u>argument</u> uses the syntax *appname.objectype* and has these parts:

Part	Description
appname	Required; String. Name of the application providing the object.
objectype	Required; String. Type or class of object to create.

Remarks

Use the **GetObject** function to access an Automation object from a file and assign the object to an object variable. Use the **Set** statement to assign the object returned by **GetObject** to the object variable. For example:

Dim CADObject Set CADObject = GetObject("C:\CAD\SCHEMA.

When this code is executed, the application associated with the specified pathname is started and the object in the specified file is activated. If *pathname* is a zero-length string (""), **GetObject** returns a new object instance of the specified type. If the *pathname* argument is omitted, **GetObject** returns a currently active object of the specified type. If no object of the specified type exists, an error occurs.

Some applications allow you to activate part of a file. Add an exclamation point (!) to the end of the file name and follow it with a string that identifies the part of the file you want to activate. For information on how to create this string, see the documentation for the application that created the object.

For example, in a drawing application you might have multiple layers to a drawing stored in a file. You could use the following code to activate a layer within a drawing called SCHEMA.CAD:

Set LayerObject = GetObject("C:\CAD\SCHEMA.

If you don't specify the object's class, Automation determines the application to start and the object to activate, based on the file name you provide. Some files, however, may support more than one class of object. For example, a drawing might support three different types of objects: an Application object, a Drawing object, and a Toolbar object, all of which are part of the same file. To specify which object in a file you want to activate, use the optional *class* argument. For example:

Dim MyObject Set MyObject = GetObject("C:\DRAWINGS\SAM

In the preceding example, FIGMENT is the name of a drawing application and DRAWING is one of the object types it supports. Once an object is activated, you reference it in code using the object variable you defined. In the preceding example, you access <u>properties</u> and methods of the new

object using the object variable MyObject. For example:

MyObject.Line 9, 90 MyObject.InsertText 9, 100, "Hello, world." MyObject.SaveAs "C:\DRAWINGS\SAMPLE.DR

Note Use the **GetObject** function when there is a current instance of the object or if you want to create the object with a file already loaded. If there is no current instance, and you don't want the object started with a file loaded, use the **CreateObject** function.

If an object has registered itself as a single-instance object, only one instance of the object is created, no matter how many times **CreateObject** is executed. With a single-instance object, **GetObject** always returns the same instance when called with the zero-length string ("") syntax, and it causes an error if the *pathname* argument is omitted.



Function

See Also

Description

Returns a reference to a <u>procedure</u> that can be bound to an event.

Syntax

Set *object.eventname* = **GetRef**(*procname*)

The **GetRef** function syntax has these parts:

Part	Description		
11/10/11/2017	Required. Name of the object with which <i>event</i> is associated.		
11 <i>0\10\11</i>	Required. Name of the event to which the function is to be bound.		
procname	Required. String containing the name of the Sub or Function procedure being associated with the <i>ever</i>		

Remarks

The **GetRef** function allows you to connect a VBScript procedure (**Function** or **Sub**) to any available event on your DHTML (Dynamic HTML) pages. The DHTML object model provides information about what events are available for its various objects.

In other scripting and programming languages, the functionality provided by **GetRef** is referred to as a function pointer, that is, it points to the address of a procedure to be executed when the specified event occurs.

The following example illustrates the use of the **GetRef** function:

<SCRIPT LANGUAGE="VBScript">

```
Function GetRefTest()
Dim Splash
Splash = "GetRefTest Version 1.0" & vbCrLf
Splash = Splash & Chr(169) & " YourCompany 1999 "
MsgBox Splash
End Function

Set Window.Onload = GetRef("GetRefTest")

</SCRIPT>
```

Global Property

See Also

Applies To

Description

Sets or returns a **Boolean** value that indicates if a pattern should match all occurrences in an entire search string or just the first one.

Syntax

```
object.Global [= True | False ]
```

The *object* argument is always a **RegExp** object. The value of the **Global** property is **True** if the search applies to the entire string, **False** if it does not. Default is **False**.

Remarks

The following code illustrates the use of the **Global** property (change the value assigned to **Global** property to see its effect):

```
Function RegExpTest(patrn, strng)

Dim regEx, Match, Matches 'Create variable.

Set regEx = New RegExp 'Create a regular expressi regEx.Pattern = patrn 'Set pattern.

regEx.IgnoreCase = True 'Set case insensitivity.

regEx.Global = True 'Set global applicability.

Set Matches = regEx.Execute(strng) 'Execute search.
```

For Each Match in Matches 'Iterate Matches collection.

RetStr = RetStr & "Match found at position "

RetStr = RetStr & Match.FirstIndex & ". Match Value is "

RetStr = RetStr & Match.Value & ""." & vbCRLF

Next

RegExpTest = RetStr

End Function

MsgBox(RegExpTest("is.", "IS1 is2 IS3 is4"))



Function

See Also

Description

Returns a string representing the hexadecimal value of a number.

Syntax

Hex(number)

The *number* argument is any valid expression.

Remarks

If *number* is not already a whole number, it is rounded to the nearest whole number before being evaluated.

If number is	Hex returns	
Null	Null.	
Empty	Zero (0).	
Any other number	Up to eight hexadecimal characters.	

You can represent hexadecimal numbers directly by preceding numbers in the proper range with &H. For example, &H10 represents decimal 16 in hexadecimal notation.

The following example uses the **Hex** function to return the hexadecimal value of a number:

Dim MyHex
MyHex = Hex(5) 'Returns 5.
MyHex = Hex(10) 'Returns A.
MyHex = Hex(459) 'Returns 1CB.

HelpContext Property

Language Reference Version 2

See Also

Applies to

Description

Sets or returns a context ID for a topic in a Help File.

Syntax

object.HelpContext [= contextID]

The **HelpContext** property syntax has these parts:

Part	Description
object	Required. Always the Err object.
contextID	Optional. A valid identifier for a Help topic within the Help file.

Remarks

If a Help file is specified in **HelpFile**, the **HelpContext** property is used to automatically display the Help topic identified. If both **HelpFile** and **HelpContext** are empty, the value of the **Number** property is checked. If it corresponds to a VBScript <u>run-time error</u> value, then the VBScript Help context ID for the error is used. If the **Number** property doesn't correspond to a VBScript error, the contents screen for the VBScript Help file is displayed.

The following example illustrates use of the **HelpContext** property:

On Error Resume Next Dim Msg Err.Clear Err.Raise 6 'Generate "Overflow" error.

Err.Helpfile = "yourHelp.hlp"

Err.HelpContext = yourContextID

If Err.Number <> 0 Then

Msg = "Press F1 or Help to see " & Err.Helpfile & " topic for" & " the following HelpContext: " & Err.HelpContext

MsgBox Msg, , "error: " & Err.Description, Err.Helpfile, Err.Hel End If

HelpFile Property

See Also

Applies to

Description

Sets or returns a fully qualified path to a Help File.

Syntax

object.HelpFile [= contextID]

The **HelpFile** property syntax has these parts:

Part	Description
object	Required. Always the Err object.
contextID	Optional. Fully qualified path to the Help file.

Remarks

If a Help file is specified in **HelpFile**, it is automatically called when the user clicks the Help button (or presses the F1 key) in the error message dialog box. If the **HelpContext** property contains a valid context ID for the specified file, that topic is automatically displayed. If no **HelpFile** is specified, the VBScript Help file is displayed.

On Error Resume Next

Dim Msg

Err.Clear

Err.Raise 6 'Generate "Overflow" error.

Err.Helpfile = "yourHelp.hlp"

Err.HelpContext = *yourContextID*

If Err.Number <> 0 Then

Msg = "Press F1 or Help to see " & Err.Helpfile & " topic for" &

" the following HelpContext: " & Err.HelpContext MsgBox Msg, , "error: " & Err.Description, Err.Helpfile, Err.Hel End If



See Also

Description

Returns a whole number between 0 and 23, inclusive, representing the hour of the day.

Syntax

Hour(time)

The *time* argument is any expression that can represent a time. If *time* contains <u>Null</u>, **Null** is returned.

The following example uses the **Hour** function to obtain the hour from the current time:

Dim MyTime, MyHour MyTime = Now

MyHour = Hour(MyTime) ' MyHour contains th ' the current hour.

<u>Language Reference</u> Version 1

If...Then...Else Statement

Description

Conditionally executes a group of statements, depending on the value of an expression.

Syntax

If condition **Then** statements [**Else** elsestatements]

Or, you can use the block form syntax:

If condition Then
[statements]
[ElseIf condition-n Then
[elseifstatements]]...
[Else
[elsestatements]]
End If

The **If...Then...Else** statement syntax has these parts:

Part	Description
	One or more of the following two types of expressions:
11	A <u>numeric</u> or <u>string expression</u> that evaluates to True or False . If condition is <u>Null</u> , condition is treated as False .
	An expression of the form TypeOf <i>objectname</i> Is <i>objecttype</i> . The <i>objectname</i> is any object reference and <i>objecttype</i> is any valid object type. The expression is True if <i>objectname</i> is of the object type specified by <i>objecttype</i> ; otherwise it is False .

statements One or more statements separated by colons; executed if *condition* is **True**. *condition-n* Same as *condition*. *elseifstatements* One or more statements executed if the associated *condition-n* is **True**. *elsestatements* One or more statements executed if no previous *condition* or *condition-n* expression is **True**.

Remarks

You can use the single-line form (first syntax) for short, simple tests. However, the block form (second syntax) provides more structure and flexibility than the single-line form and is usually easier to read, maintain, and debug.

Note With the single-line syntax, it is possible to have multiple statements executed as the result of an **If...Then** decision, but they must all be on the same line and separated by colons, as in the following statement:

If
$$A > 10$$
 Then $A = A + 1 : B = B + A : C = C + B$

When executing a block **If** (second syntax), *condition* is tested. If *condition* is **True**, the statements following **Then** are executed. If *condition* is **False**, each **ElseIf** (if any) is evaluated in turn. When a **True** condition is found, the statements following the associated **Then** are executed. If none of the **ElseIf** statements are **True** (or there are no **ElseIf** clauses), the statements following **Else** are executed. After executing the statements following **Then** or **Else**, execution continues with the statement following **End If**.

The **Else** and **ElseIf** clauses are both optional. You can have as many **ElseIf** statements as you want in a block **If**, but none can appear after the **Else** clause. Block **If** statements can be nested; that is, contained within one another.

What follows the **Then** keyword is examined to determine whether or not a statement is a block **If**. If anything other than a comment appears after **Then** on the same line, the statement is treated as a single-line **If** statement.

A block **If** statement must be the first statement on a line. The block **If** must end with an **End If** statement.

<u>Language Reference</u> Version 5

IgnoreCase Property

See Also

Applies To

Description

Sets or returns a **Boolean** value that indicates if a pattern search is case-sensitive or not.

Syntax

```
object.IgnoreCase [= True | False ]
```

The *object* argument is always a **RegExp** object. The value of the **IgnoreCase** property is **False** if the search is case-sensitive, **True** if it is not. Default is **False**.

Remarks

The following code illustrates the use of the **IgnoreCase** property (change the value assigned to **IgnoreCase** property to see its effect):

```
Function RegExpTest(patrn, strng)
Dim regEx, Match, Matches
Set regEx = New RegExp
regEx.Pattern = patrn
regEx.IgnoreCase = True
'Create variable.
'Create a regular expressi
'Set pattern.
'Set case insensitivity.
```

```
regEx.Global = True 'Set global applicability.
Set Matches = regEx.Execute(strng) 'Execute search.
For Each Match in Matches 'Iterate Matches collection.
RetStr = RetStr & "Match found at position"
RetStr = RetStr & Match.FirstIndex & ". Match Value is "
RetStr = RetStr & Match.Value & ""." & vbCRLF
Next
RegExpTest = RetStr
End Function
```

MsgBox(RegExpTest("is.", "IS1 is2 IS3 is4"))



Operator

See Also

Description

Performs a logical implication on two expressions.

Syntax

result = expression1 Imp expression2

The **Imp** operator syntax has these parts:

Part	Description
result	Any numeric variable.
expression1	Any <u>expression</u> .
expression2	Any expression.

Remarks

The following table illustrates how *result* is determined:

If expression1 is	And expression2 is	Then result is
True	True	True
True	False	False
True	Null	Null
False	True	True
False	False	True
False	Null	True
Null	True	True
Null	False	Null
		7 i

Null	Null	Null
------	------	------

The **Imp** operator performs a <u>bitwise comparison</u> of identically positioned bits in two <u>numeric expressions</u> and sets the corresponding bit in *result* according to the following table:

If bit in <i>expression1</i> is	And bit in <i>expression2</i> is	Then result is
0	0	1
0	1	1
1	0	0
1	1	1

Initialize Event

See Also

Applies To

Description

Occurs when an instance of the associated class is created.

Syntax

Private Sub Class_Initialize() statements **End Sub**

The *statements* part consists of zero or more code statements to be run when the class is initlized.

Remarks

The following example illustrates the use of the **Initialize** event:

```
Class TestClass
 Private Sub Class_Initialize 'Setup Initialize event.
  MsgBox("TestClass started")
 End Sub
 Private Sub Class_Terminate 'Setup Terminate event.
  MsgBox("TestClass terminated")
 End Sub
End Class
```

Set X = New TestClass 'Create an instance of TestClass.

InputBox Function

See Also

Description

Displays a prompt in a dialog box, waits for the user to input text or click a button, and returns the contents of the text box.

Syntax

InputBox(prompt[, title][, default][, xpos][, ypos][, helpfile, context])

The **InputBox** function syntax has these arguments:

Part	Description		
prompt	String expression displayed as the message in the dialog box. The maximum length of <i>prompt</i> is approximately 1024 characters, depending on the width of the characters used. If <i>prompt</i> consists of more than one line, you can separate the lines using a carriage return character (Chr(13)), a linefeed character (Chr(10)), or carriage return—linefeed character combination (Chr(13) & Chr(10)) between each line.		
title	String expression displayed in the title bar of the dialog box. If you omit <i>title</i> , the application name is placed in the title bar.		
default	String expression displayed in the text box as the default response if no other input is provided. If you omit default, the text box is displayed empty.		
xpos	Numeric expression that specifies, in twips, the horizontal distance of the left edge of the dialog box from the left edge of the screen. If <i>xpos</i> is omitted, the dialog box is horizontally centered.		
	Numeric expression that specifies, in twips, the vertical		

ypos	distance of the upper edge of the dialog box from the top of the screen. If <i>ypos</i> is omitted, the dialog box is vertically positioned approximately one-third of the way down the screen.
helpfile	String expression that identifies the Help file to use to provide context-sensitive Help for the dialog box. If helpfile is provided, context must also be provided.
context	Numeric expression that identifies the Help context number assigned by the Help author to the appropriate Help topic. If <i>context</i> is provided, <i>helpfile</i> must also be provided.

Remarks

When both *helpfile* and *context* are supplied, a Help button is automatically added to the dialog box.

If the user clicks **OK** or presses **ENTER**, the **InputBox** function returns whatever is in the text box. If the user clicks **Cancel**, the function returns a zero-length string ("").

The following example uses the **InputBox** function to display an input box and assign the string to the variable Input:

Dim Input

Input = InputBox("Enter your name")

MsgBox ("You entered: " & Input)



See Also

Description

Returns the position of the first occurrence of one string within another.

Syntax

InStr([start,]string1, string2[, compare])

The **InStr** function syntax has these arguments:

Part	Description
start	Optional. Numeric expression that sets the starting position for each search. If omitted, search begins at the first character position. If <i>start</i> contains Null, an error occurs. The <i>start</i> argument is required if <i>compare</i> is specified.
string1	Required. String expression being searched.
string2	Required. String expression searched for.
compare	Optional. Numeric value indicating the kind of comparison to use when evaluating substrings. See Settings section for values. If omitted, a binary comparison is performed.

Settings

The *compare* argument can have the following values:

Constant	Value	Description
vbBinaryCompare	0	Perform a binary comparison.
vbTextCompare	1	Perform a textual comparison.

Return Values

The **InStr** function returns the following values:

If	InStr returns
string1 is zero-length	0
string1 is Null	Null
string2 is zero-length	start
string2 is Null	Null
string2 is not found	0
string2 is found within string1	Position at which match is found
start > Len(string2)	0

Remarks

The following examples use **InStr** to search a string:

```
Dim SearchString, SearchChar, MyPos
SearchString ="XXpXXpXXPXXP"

SearchChar = "P" 'Search

MyPos = Instr(4, SearchString, SearchChar, 1) 'position 4

MyPos = Instr(1, SearchString, SearchChar, 0) 'position 1

MyPos = Instr(SearchString, SearchChar) '
```

' (last argui ' Returns 9

MyPos = Instr(1, SearchString, "W")

'Returns 0

Note The **InStrB** function is used with byte data contained in a string. Instead of returning the character position of the first occurrence of one string within another, **InStrB** returns the byte position.

Operator

See Also

Description

Divides two numbers and returns an integer result.

Syntax

result = number1\number2

The \operator syntax has these parts:

Part	Description
result	Any numeric variable.
number1	Any <u>numeric expression</u> .
number2	Any numeric expression.

Remarks

Before division is performed, numeric expressions are rounded to **Byte**, **Integer**, or **Long** subtype expressions.

If any expression is **Null**, *result* is also **Null**. Any expression that is **Empty** is treated as 0.

Operator

See Also

Description

Compares two object reference variables.

Syntax

result = object1 **Is** object2

The **Is** operator syntax has these parts:

Part	Description	
result	Any numeric variable.	
object1	Any object name.	
object2	Any object name.	

Remarks

If *object1* and *object2* both refer to the same object, *result* is **True**; if they do not, *result* is **False**. Two variables can be made to refer to the same object in several ways.

In the following example, A has been set to refer to the same object as B:

Set
$$A = B$$

The following example makes A and B refer to the same object as C:

Set
$$A = C$$

See Also

Description

Returns a Boolean value indicating whether a variable is an <u>array</u>.

Syntax

IsArray(varname)

The *varname* argument can be any <u>variable</u>.

Remarks

IsArray returns **True** if the variable is an array; otherwise, it returns **False**. **IsArray** is especially useful with variants containing arrays.

The following example uses the **IsArray** function to test whether MyVariable is an array:

Dim MyVariable

Dim MyArray(3)

MyArray(0) = "Sunday"

MyArray(1) = "Monday"

MyArray(2) = "Tuesday"

MyVariable = IsArray(MyArray) ' MyVariable con



See Also

Description

Returns a Boolean value indicating whether an expression can be converted to a date.

Syntax

IsDate(expression)

The *expression* argument can be any <u>date expression</u> or <u>string expression</u> recognizable as a date or time

Remarks

IsDate returns **True** if the expression is a date or can be converted to a valid date; otherwise, it returns **False**. In Microsoft Windows, the range of valid dates is January 1, 100 A.D. through December 31, 9999 A.D.; the ranges vary among operating systems.

The following example uses the **IsDate** function to determine whether an expression can be converted to a date:

Dim MyDate, YourDate, NoDate, MyCheck
MyDate = "October 19, 1962": YourDate = #10/19
MyCheck = IsDate(MyDate) 'Returns True.
MyCheck = IsDate(YourDate) 'Returns True
MyCheck = IsDate(NoDate) 'Returns False

IsEmpty Function

See Also

Description

Returns a Boolean value indicating whether a variable has been initialized.

Syntax

IsEmpty(expression)

The *expression* argument can be any <u>expression</u>. However, because **IsEmpty** is used to determine if individual variables are initialized, the *expression* argument is most often a single <u>variable</u> name.

Remarks

IsEmpty returns **True** if the variable is uninitialized, or is explicitly set to **Empty**; otherwise, it returns **False**. **False** is always returned if *expression* contains more than one variable.

The following example uses the **IsEmpty** function to determine whether a variable has been initialized:

```
Dim MyVar, MyCheck

MyCheck = IsEmpty(MyVar) 'Returns True.

MyVar = Null 'Assign Null.

MyCheck = IsEmpty(MyVar) 'Returns False.

MyVar = Empty 'Assign Empty.
```

MyCheck = IsEmpty(MyVar) 'Returns True.



See Also

Description

Returns a Boolean value that indicates whether an expression contains no valid data (Null).

Syntax

IsNull(expression)

The *expression* argument can be any <u>expression</u>.

Remarks

IsNull returns **True** if *expression* is **Null**, that is, it contains no valid data; otherwise, **IsNull** returns **False**. If *expression* consists of more than one variable, **Null** in any constituent variable causes **True** to be returned for the entire expression.

The **Null** value indicates that the variable contains no valid data. **Null** is not the same as **Empty**, which indicates that a variable has not yet been initialized. It is also not the same as a zero-length string (""), which is sometimes referred to as a null string.

Important Use the **IsNull** function to determine whether an expression contains a **Null** value. Expressions that you might expect to evaluate to **True** under some circumstances, such as If Var = Null and If Var <> Null, are always **False**. This is because any expression containing a **Null** is itself **Null**, and therefore, **False**.

The following example uses the **IsNull** function to determine whether a variable contains a **Null**:

```
Dim MyVar, MyCheck
MyCheck = IsNull(MyVar) 'Returns False.
MyVar = Null 'Assign Null.
MyCheck = IsNull(MyVar) 'Returns True.
MyVar = Empty 'Assign Empty.
MyCheck = IsNull(MyVar) 'Returns False.
```

IsNumeric Function

Language Reference Version 1

See Also

Description

Returns a Boolean value indicating whether an expression can be evaluated as a number.

Syntax

IsNumeric(*expression*)

The *expression* argument can be any <u>expression</u>.

Remarks

IsNumeric returns **True** if the entire *expression* is recognized as a number; otherwise, it returns **False**. **IsNumeric** returns **False** if *expression* is a <u>date expression</u>.

The following example uses the **IsNumeric** function to determine whether a variable can be evaluated as a number:

IsObject Function

See Also

Description

Returns a Boolean value indicating whether an expression references a valid <u>Automation object</u>.

Syntax

IsObject(expression)

The *expression* argument can be any <u>expression</u>.

Remarks

IsObject returns **True** if *expression* is a variable of **Object** subtype or a user-defined object; otherwise, it returns **False**.

The following example uses the **IsObject** function to determine if an identifier represents an object variable:

```
Dim MyInt, MyCheck, MyObject
Set MyObject = Me
MyCheck = IsObject(MyObject) 'Returns True.
MyCheck = IsObject(MyInt) 'Returns False.
```



See Also

Description

Returns a string created by joining a number of substrings contained in an <u>array</u>.

Syntax

Join(list[, delimiter])

The **Join** function syntax has these parts:

Part	Description	
III 1 CT	Required. One-dimensional array containing substrings to be joined.	
delimiter	Optional. String character used to separate the substrings in the returned string. If omitted, the space character (" ") is used. If <i>delimiter</i> is a zero-length string, all items in the list are concatenated with no delimiters.	

Remarks

The following example uses the **Join** function to join the substrings of MyArray:

Dim MyString Dim MyArray(4) MyArray(0) = "Mr."

```
MyArray(1) = "John "
MyArray(2) = "Doe "
MyArray(3) = "III"
MyString = Join(MyArray) ' MyString contains "
```



See Also

Description

Returns the smallest available subscript for the indicated dimension of an <u>array</u>.

Syntax

LBound(*arrayname*[, *dimension*])

The **LBound** function syntax has these parts:

Part	Description		
arrayname	Name of the array variable; follows standard variable naming conventions.		
	<u>variable</u> naming conventions.		
dimansion	Whole number indicating which dimension's lower		
	bound is returned. Use 1 for the first dimension, 2		
	for the second, and so on. If <i>dimension</i> is omitted, 1		
	is assumed.		

Remarks

The **LBound** function is used with the **UBound** function to determine the size of an array. Use the **UBound** function to find the upper limit of an array dimension.

The lower bound for any dimension is always 0.



See Also

Description

Returns a string that has been converted to lowercase.

Syntax

LCase(string)

The *string* argument is any valid <u>string expression</u>. If *string* contains <u>Null</u>, **Null** is returned.

Remarks

Only uppercase letters are converted to lowercase; all lowercase letters and nonletter characters remain unchanged.

The following example uses the **LCase** function to convert uppercase letters to lowercase:

Dim MyString
Dim LCaseString
MyString = "VBSCript"
LCaseString = LCase(MyString) ' LCaseString contains "vbscript"



See Also

Description

Returns a specified number of characters from the left side of a string.

Syntax

Left(string, length)

The **Left** function syntax has these arguments:

Part	Description
string	String expression from which the leftmost characters are returned. If <i>string</i> contains Null , Null is returned.
length	Numeric expression indicating how many characters to return. If 0, a zero-length string("") is returned. If greater than or equal to the number of characters in <i>string</i> , the entire string is returned.

Remarks

To determine the number of characters in *string*, use the **Len** function.

The following example uses the **Left** function to return the first three characters of MyString:

Dim MyString, LeftString
MyString = "VBSCript"
LeftString = Left(MyString, 3) ' LeftString contain

Note The **LeftB** function is used with byte data contained in a string. Instead of specifying the number of characters to return, *length* specifies the number of bytes.

See Also

Description

Returns the number of characters in a string or the number of bytes required to store a variable.

Syntax

Len(string | varname)

The **Len** function syntax has these parts:

Part	Description	
uctrina i	Any valid <u>string expression</u> . If <i>string</i> contains <u>Null</u> , Null is returned.	
varname	Any valid <u>variable</u> name. If <i>varname</i> contains Null , Null is returned.	

Remarks

The following example uses the **Len** function to return the number of characters in a string:

Dim MyString
MyString = Len("VBSCRIPT") ' MyString contains 8.

Note The **LenB** function is used with byte data contained in a string. Instead of returning the number of characters in a string, **LenB** returns the number of bytes used to represent that string.

Length Property

See Also

Applies To

Description

Returns the length of a match found in a search string.

Syntax

object.Length

The *object* argument is always a **Match** object.

Function RegExpTest(patrn, strng)

RetStr = RetStr & Match.Length

RetStr = RetStr & " characters." & vbCRLF

Remarks

The following code illustrates the use of the **Length** property:

```
Dim regEx, Match, Matches

Set regEx = New RegExp

regEx.Pattern = patrn

regEx.IgnoreCase = True

'Set pattern.

regEx.Global = True

'Set global applicability.

Set Matches = regEx.Execute(strng)

'Execute search.

For Each Match in Matches

'Iterate Matches collection.

RetStr = RetStr & "Match " & I & " found at position "

RetStr = RetStr & Match.FirstIndex & ". Match Length is "
```

Next RegExpTest = RetStr End Function

MsgBox(RegExpTest("is.", "IS1 is2 IS3 is4"))

Language Reference Version 2

LoadPicture Function

Description

Returns a picture object. Available only on 32-bit platforms.

Syntax

LoadPicture(picturename)

The *picturename* argument is a <u>string expression</u> that indicates the name of the picture file to be loaded.

Remarks

Graphics formats recognized by **LoadPicture** include bitmap (.bmp) files, icon (.ico) files, run-length encoded (.rle) files, metafile (.wmf) files, enhanced metafiles (.emf), GIF (.gif) files, and JPEG (.jpg) files.

Function

See Also

Description

Returns the natural logarithm of a number.

Syntax

Log(number)

The *number* argument can be any valid <u>numeric expression</u> greater than 0.

Remarks

The natural logarithm is the logarithm to the base e. The constant e is approximately 2.718282.

You can calculate base-n logarithms for any number x by dividing the natural logarithm of x by the natural logarithm of n as follows:

$$Log n(x) = Log(x) / Log(n)$$

The following example illustrates a custom **Function** that calculates base- 10 logarithms:

Function Log10(X)

$$Log10 = Log(X) / Log(10)$$

End Function

Microsoft® Visual Basic® Scripting Edition LTrim, RTrim, and Trim

Language Reference Version 1

See Also

Description

Functions

Returns a copy of a string without leading spaces (**LTrim**), trailing spaces (**RTrim**), or both leading and trailing spaces (**Trim**).

Syntax

LTrim(string)

RTrim(string)

Trim(string)

The *string* argument is any valid <u>string expression</u>. If *string* contains <u>Null</u>, **Null** is returned.

Remarks

The following example uses the **LTrim**, **RTrim**, and **Trim** functions to trim leading spaces, trailing spaces, and both leading and trailing spaces, respectively:

Dim MyVar MyVar = LTrim(" vbscript ") ' MyVar contains "v

```
MyVar = RTrim(" vbscript ") ' MyVar contains "
MyVar = Trim(" vbscript ") ' MyVar contains "vb
```



Object

See Also

Properties

Description

Provides access to the read-only properties of a regular expression match.

Remarks

A **Match** object can be only created using the **Execute** method of the **RegExp** object, which actually returns a <u>collection</u> of **Match** objects. All **Match** object properties are read-only.

When a regular expression is executed, zero or more **Match** objects can result. Each **Match** object provides access to the string found by the regular expression, the length of the string, and an index to where the match was found.

The following code illustrates the use of the **Match** object:

Function RegExpTest(patrn, strng)

Dim regEx, Match, Matches 'Create variable.

Set regEx = New RegExp 'Create regular expression regEx.Pattern = patrn 'Set pattern.

regEx.IgnoreCase = True 'Set case insensitivity.

regEx.Global = True 'Set global applicability.

Set Matches = regEx.Execute(strng) 'Execute search.

For Each Match in Matches 'Iterate Matches collection.

```
RetStr = RetStr & "Match " & I & " found at position "
RetStr = RetStr & Match.FirstIndex & ". Match Value is "
RetStr = RetStr & Match.Value & ""." & vbCRLF
Next
RegExpTest = RetStr
End Function
```

MsgBox(RegExpTest("is.", "IS1 is2 IS3 is4"))

Microsoft® Visual Basic® Scripting Edition Matches

Collection

See Also

Properties

Description

<u>Collection</u> of regular expression **Match** objects.

Remarks

A **Matches** collection contains individual **Match** objects, and can be only created using the **Execute** method of the **RegExp** object. The **Matches** collection's one property is read-only, as are the individual **Match** object properties.

When a regular expression is executed, zero or more **Match** objects can result. Each **Match** object provides access to the string found by the regular expression, the length of the string, and an index to where the match was found.

The following code illustrates how to obtain a **Matches** collection from a regular expression search and how to iterate the collection:

Function RegExpTest(patrn, strng)
Dim regEx, Match, Matches
Set regEx = New RegExp
regEx.Pattern = patrn
regEx.IgnoreCase = True
regEx.Global = True
' Create variable.
' Create regular expression
' Set pattern.
' Set case insensitivity.
' Set global applicability.

```
Set Matches = regEx.Execute(strng) 'Execute search.

For Each Match in Matches 'Iterate Matches collection.

RetStr = RetStr & "Match found at position"

RetStr = RetStr & Match.FirstIndex & ". Match Value is ""

RetStr = RetStr & Match.Value & ""." & vbCRLF

Next

RegExpTest = RetStr

End Function

MsgBox(RegExpTest("is.", "IS1 is2 IS3 is4"))
```

Function

See Also

Description

Returns a specified number of characters from a string.

Syntax

Mid(string, start[, length])

The **Mid** function syntax has these arguments:

Part	Description
string	String expression from which characters are returned. If string contains Null, Null is returned.
start	Character position in <i>string</i> at which the part to be taken begins. If <i>start</i> is greater than the number of characters in <i>string</i> , Mid returns a zero-length string ("").
length	Number of characters to return. If omitted or if there are fewer than <i>length</i> characters in the text (including the character at <i>start</i>), all characters from the <i>start</i> position to the end of the string are returned.

Remarks

To determine the number of characters in *string*, use the **Len** function.

The following example uses the **Mid** function to return six characters, beginning with the fourth character, in a string:

Dim MyVar

MyVar = Mid("VB Script is fun!", 4, 6) ' MyVar cc

Note The **MidB** function is used with byte data contained in a string. Instead of specifying the number of characters, the arguments specify numbers of bytes.

Microsoft® Visual Basic® Scripting Edition Minute

Function

See Also

Description

Returns a whole number between 0 and 59, inclusive, representing the minute of the hour.

Syntax

Minute(time**)**

The *time* argument is any expression that can represent a time. If *time* contains <u>Null</u>, **Null** is returned.

Remarks

The following example uses the **Minute** function to return the minute of the hour:

```
Dim MyVar
MyVar = Minute(Now)
```

Language Reference Version 2

Miscellaneous Constants

See Also

Since this constant is built into VBScript, you don't have to define it before using it. Use it anywhere in your code to represent the values shown.

Constant Value		Description	
		User-defined error numbers should be greater the for example,	
vbObjectError	-2147221504	Err.Raise Number = vbObjectE	

See Also

Description

Divides two numbers and returns only the remainder.

Syntax

result = number1 **Mod** number2

The **Mod** operator syntax has these parts:

Part	Description
result	Any numeric variable.
number1	Any <u>numeric expression</u> .
number2	Any numeric expression.

Remarks

The modulus, or remainder, operator divides *number1* by *number2* (rounding floating-point numbers to integers) and returns only the remainder as *result*. For example, in the following expression, A (which is *result*) equals 5.

$$A = 19 \text{ Mod } 6.7$$

If any expression is **Null**, *result* is also **Null**. Any expression that is **Empty** is treated as 0.



Function

See Also

Description

Returns a whole number between 1 and 12, inclusive, representing the month of the year.

Syntax

Month(date)

The *date* argument is any expression that can represent a date. If *date* contains <u>Null</u>, **Null** is returned.

Remarks

The following example uses the **Month** function to return the current month:

Dim MyVar

MyVar = Month(Now) ' MyVar contains the number corresponding the current month.

Language Reference Version 2

MonthName Function

See Also

Description

Returns a string indicating the specified month.

Syntax

MonthName(month[, abbreviate])

The **MonthName** function syntax has these parts:

Part	Description		
month	Required. The numeric designation of the month. For		
monun	example, January is 1, February is 2, and so on.		
	Optional. Boolean value that indicates if the month		
ahhroviato	name is to be abbreviated. If omitted, the default is False , which means that the month name is not		
abbreviale	False , which means that the month name is not		
	abbreviated.		

Remarks

The following example uses the **MonthName** function to return an abbreviated month name for a date expression:

Dim MyVar MyVar = MonthName(10, True) ' MyVar contains "Oct".

Constants

See Also

The following constants are used with the **MsgBox** function to identify what buttons and icons appear on a message box and which button is the default. In addition, the modality of the **MsgBox** can be specified. Since these constants are built into VBScript, you don't have to define them before using them. Use them anywhere in your code to represent the values shown for each.

Constant	Value	Description
vbOKOnly	0	Display OK button only.
vbOKCancel	1	Display OK and Cancel buttons.
vbAbortRetryIgnore	2	Display Abort , Retry , and Ignore buttons.
vbYesNoCancel	3	Display Yes , No , and Cancel buttons.
vbYesNo	4	Display Yes and No buttons.
vbRetryCancel	5	Display Retry and Cancel buttons.
vbCritical	16	Display Critical Message icon.
vbQuestion	32	Display Warning Query icon.
vbExclamation	48	Display Warning Message icon.
vbInformation	64	Display Information Message icon.
vbDefaultButton1	0	First button is the default.
vbDefaultButton2	256	Second button is the default.
vbDefaultButton3	512	Third button is the default.
vbDefaultButton4	768	Fourth button is the default.
<u> </u>		

vbApplicationModal		Application modal. The user must respond to the message box before continuing work in the current application.
vbSystemModal	4096	System modal. On Win16 systems, all applications are suspended until the user responds to the message box. On Win32 systems, this constant provides an application modal message box that always remains on top of any other programs you may have running.

The following constants are used with the **MsgBox** function to identify which button a user has selected. These constants are only available when your project has an explicit reference to the appropriate type library containing these constant definitions. For VBScript, you must explicitly declare these constants in your code.

Constant Value		Description		
vbOK	1	OK button was clicked.		
vbCancel	2	Cancel button was clicked.		
vbAbort	3	Abort button was clicked.		
vbRetry	4	Retry button was clicked.		
vbIgnore	5	Ignore button was clicked.		
vbYes	6	Yes button was clicked.		
vbNo	7	No button was clicked.		

Function

See Also

Description

Displays a message in a dialog box, waits for the user to click a button, and returns a value indicating which button the user clicked.

Syntax

MsgBox(prompt[, buttons][, title][, helpfile, context])

The **MsgBox** function syntax has these arguments:

Part	Description
prompt	String expression displayed as the message in the dialog box. The maximum length of <i>prompt</i> is approximately 1024 characters, depending on the width of the characters used. If <i>prompt</i> consists of more than one line, you can separate the lines using a carriage return character (Chr(13)), a linefeed character (Chr(10)), or carriage return—linefeed character combination (Chr(13) & Chr(10)) between each line.
buttons	Numeric expression that is the sum of values specifying the number and type of buttons to display, the icon style to use, the identity of the default button, and the modality of the message box. See Settings section for values. If omitted, the default value for <i>buttons</i> is 0.
title	String expression displayed in the title bar of the dialog box. If you omit <i>title</i> , the application name is placed in the title bar.
	String expression that identifies the Help file to use to

helpfile	provide context-sensitive Help for the dialog box. If helpfile is provided, context must also be provided. Not				
	helpfile is provided, context must also be provided. Not				
	available on 16-bit platforms.				
	Numeric expression that identifies the Help context				
contout	number assigned by the Help author to the appropriate				
Context	Help topic. If <i>context</i> is provided, <i>helpfile</i> must also be				
	number assigned by the Help author to the appropriate Help topic. If <i>context</i> is provided, <i>helpfile</i> must also be provided. Not available on 16-bit platforms.				

Settings

The *buttons* argument settings are:

Constant	Value	Description
vbOKOnly	0	Display OK button only.
vbOKCancel	1	Display OK and Cancel buttons.
vbAbortRetryIgnore	2	Display Abort, Retry , and Ignore buttons.
vbYesNoCancel	3	Display Yes, No , and Cancel buttons.
vbYesNo	4	Display Yes and No buttons.
vbRetryCancel	5	Display Retry and Cancel buttons.
vbCritical	16	Display Critical Message icon.
vbQuestion	32	Display Warning Query icon.
vbExclamation	48	Display Warning Message icon.
vbInformation	64	Display Information Message icon.
vbDefaultButton1	0	First button is default.
vbDefaultButton2	256	Second button is default.
vbDefaultButton3	512	Third button is default.
vbDefaultButton4	768	Fourth button is default.
		Application modal; the user must respond to the message box before

vbApplicationModal		continuing work in the current application.
vbSystemModal	4096	System modal; all applications are suspended until the user responds to the message box.

The first group of values (0–5) describes the number and type of buttons displayed in the dialog box; the second group (16, 32, 48, 64) describes the icon style; the third group (0, 256, 512, 768) determines which button is the default; and the fourth group (0, 4096) determines the modality of the message box. When adding numbers to create a final value for the argument *buttons*, use only one number from each group.

Return Values

The **MsgBox** function has the following return values:

Constant	Value	Button
vbOK	1	OK
vbCancel	2	Cancel
vbAbort	3	Abort
vbRetry	4	Retry
vbIgnore	5	Ignore
vbYes	6	Yes
vbNo	7	No

Remarks

When both *helpfile* and *context* are provided, the user can press **F1** to view the Help topic corresponding to the context.

If the dialog box displays a **Cancel** button, pressing the **ESC** key has the same effect as clicking **Cancel**. If the dialog box contains a **Help** button, context-sensitive Help is provided for the dialog box. However, no value is returned until one of the other buttons is clicked.

When the **MsgBox** function is used with Microsoft Internet Explorer, the title of any dialog presented always contains "VBScript:" to differentiate it from standard system dialogs.

The following example uses the **MsgBox** function to display a message box and return a value describing which button was clicked:

Dim MyVar MyVar = MsgBox ("Hello World!", 65, "MsgBox Example") ' My ' depending on which button is ' clicked.



See Also

Description

Multiplies two numbers.

Syntax

result = number1*number2

The * operator syntax has these parts:

Part	Description			
result	Any numeric variable.			
number1	Any numeric expression.			
number2	Any numeric expression.			

Remarks

If one or both expressions are <u>Null</u> expressions, *result* is **Null**. If an expression is <u>Empty</u>, it is treated as if it were 0.



See Also

Description

Finds the difference between two numbers or indicates the negative value of a numeric expression.

Syntax 1

result = number1-number2

Syntax 2

-number

The - operator syntax has these parts:

Part	Description			
result	Any numeric variable.			
number	Any numeric expression.			
number1	Any numeric expression.			
number2	Any numeric expression.			

Remarks

In Syntax 1, the - operator is the arithmetic subtraction operator used to find the difference between two numbers. In Syntax 2, the - operator is used as the unary negation operator to indicate the negative value of an expression.

If one or both expressions are <u>Null</u> expressions, *result* is **Null**. If an expression is <u>Empty</u>, it is treated as if it were 0.

See Also

Description

Performs logical negation on an expression.

Syntax

result = **Not** expression

The **Not** operator syntax has these parts:

Part	Description	
result	Any numeric variable.	
expression	Any expression.	

Remarks

The following table illustrates how *result* is determined:

If expression is	Then result is	
True	False	
False	True	
Null	Null	

In addition, the **Not** operator inverts the bit values of any variable and sets the corresponding bit in *result* according to the following table:

Bit in expression	Bit in result	
0	1	
1	0	



Function

See Also

Description

Returns the current date and time according to the setting of your computer's system date and time.

Syntax

Now

Remarks

The following example uses the **Now** function to return the current date and time:

Dim MyVar MyVar contains the current date and time.

See Also

Description

The **Nothing** keyword in VBScript is used to disassociate an object variable from any actual object. Use the **Set** statement to assign **Nothing** to an object variable. For example:

Set MyObject = Nothing

Several object variables can refer to the same actual object. When **Nothing** is assigned to an object variable, that variable no longer refers to any actual object. When several object variables refer to the same object, memory and system resources associated with the object to which the variables refer are released only after all of them have been set to **Nothing**, either explicitly using **Set**, or implicitly after the last object variable set to **Nothing** goes out of scope.



See Also

Description

The **Null** keyword is used to indicate that a variable contains no valid data. This is not the same thing as **Empty**.

${\tt Microsoft \$\ Visual\ Basic \$\ Scripting\ Edition}\ Number$

Property

See Also

Applies to

Description

Returns or sets a numeric value specifying an error. **Number** is the **Err** object's default property.

Syntax

object.Number [= errornumber]

The **Number** property syntax has these parts:

Part	Description		
object	Always the Err object.		
errornumber	An integer representing a VBScript <u>error number</u> or an <u>SCODE</u> error value.		

Remarks

When returning a user-defined error from an <u>Automation object</u>, set **Err.Number** by adding the number you selected as an error code to the constant **vbObjectError**.

The following code illustrates the use of the **Number** property

On Error Resume Next

Err.Raise vbObjectError + 1, "SomeObject" 'Raise Object Error #

MsgBox ("Error # " & CStr(Err.Number) & " " & Err.Description)

Err.Clear 'Clear the error.



Function

See Also

Description

Returns a string representing the octal value of a number.

Syntax

Oct(number)

The *number* argument is any valid expression.

Remarks

If *number* is not already a whole number, it is rounded to the nearest whole number before being evaluated.

If number is	Oct returns	
Null	Null.	
Empty	Zero (0).	
Any other number	Up to 11 octal characters,	

You can represent octal numbers directly by preceding numbers in the proper range with &O. For example, &O10 is the octal notation for decimal 8.

The following example uses the **Oct** function to return the octal value of a number:

Dim MyOct
MyOct = Oct(4) 'Returns 4.
MyOct = Oct(8) 'Returns 10.
MyOct = Oct(459) 'Returns 713.

Microsoft® Visual Basic® Scripting Edition $\mathbf{0n}$

Error Statement

See Also

Description

Enables or disables error-handling.

Syntax

On Error Resume Next On Error GoTo 0

Remarks

If you don't use an **On Error Resume Next** statement anywhere in your code, any <u>run-time error</u> that occurs can cause an error message to be displayed and code execution stopped. However, the exact behavior is determined by the host running the code. The host can sometimes opt to handle such errors differently. In some cases, the script debugger may be invoked at the point of the error. In still other cases, there may be no apparent indication that any error occurred because the host does not to notify the user. Again, this is purely a function of how the host handles any errors that occur.

Within any particular procedure, an error is not necessarily fatal as long as error-handling is enabled somewhere along the call stack. If local error-handling is not enabled in a procedure and an error occurs, control is passed back through the call stack until a procedure with error-handling enabled is found and the error is handled at that point. If no procedure in the call stack is found to have error-handling enabled, an error message is displayed at that point and execution stops or the host handles the error as appropriate.

On Error Resume Next causes execution to continue with the statement immediately following the statement that caused the run-time error, or with the statement immediately following the most recent call out of the procedure containing the **On Error Resume Next** statement. This allows execution to continue despite a run-time error. You can then build the error-handling routine inline within the procedure.

An **On Error Resume Next** statement becomes inactive when another procedure is called, so you should execute an **On Error Resume Next** statement in each called routine if you want inline error handling within that routine. When a procedure is exited, the error-handling capability reverts to whatever error-handling was in place before entering the exited procedure.

Use **On Error GoTo 0** to disable error handling if you have previously enabled it using **On Error Resume Next**.

The following example illustrates use of the **On Error Resume Next** statement:

On Error Resume Next

Err.Raise 6 'Raise an overflow error.

MsgBox "Error # " & CStr(Err.Number) & " " & Err.Description

Err.Clear 'Clear the error.

Language Reference Version 1

Operator Precedence

See Also

Description

When several operations occur in an expression, each part is evaluated and resolved in a predetermined order called operator precedence. Parentheses can be used to override the order of precedence and force some parts of an expression to be evaluated before other parts. Operations within parentheses are always performed before those outside. Within parentheses, however, normal operator precedence is maintained.

When expressions contain operators from more than one category, arithmetic operators are evaluated first, comparison operators are evaluated next, and logical operators are evaluated last. Comparison operators all have equal precedence; that is, they are evaluated in the left-to-right order in which they appear. Arithmetic and logical operators are evaluated in the following order of precedence:

Arithmetic	Comparison	Logical
Exponentiation (^)	Equality (=)	Not
Negation (-)	Inequality (<>)	And
Multiplication and division (*, /)	Less than (<)	Or
Integer division (\)	Greater than (>)	Xor
Modulus arithmetic (Mod)	Less than or equal to (<=)	Eqv
Addition and subtraction (+, -)	Greater than or equal to (>=)	Imp
String concatenation (&)	Is	&

When multiplication and division occur together in an expression, each operation is evaluated as it occurs from left to right. Likewise, when addition and subtraction occur together in an expression, each operation is evaluated in order of appearance from left to right.

The string concatenation operator (&) is not an arithmetic operator, but in precedence it does fall

after all arithmetic operators and before all comparison operators. The **Is** operator is an object reference comparison operator. It does not compare objects or their values; it checks only to determine if two object references refer to the same object.

Microsoft® Visual Basic® Scripting Edition Option Explicit Statement

Description

Forces explicit declaration of all variables in a script.

Syntax

Option Explicit

Remarks

If used, the **Option Explicit** statement must appear in a script before any other statements.

When you use the **Option Explicit** statement, you must explicitly declare all variables using the **Dim**, **Private**, **Public**, or **ReDim** statements. If you attempt to use an undeclared variable name, an error occurs.

Tip Use **Option Explicit** to avoid incorrectly typing the name of an existing variable or to avoid confusion in code where the scope of the variable is not clear.

The following example illustrates use of the **Option Explicit** statement:

Option Explicit Dim MyVar

- Option Explicit 'Force explicit variable declarati
 - ' Declare variable.

MyInt = 10MyVar = 10

' Undeclared variable generates er ' Declared variable does not gene



Operator

See Also

Description

Performs a logical disjunction on two expressions.

Syntax

result = expression1 **Or** expression2

The **Or** operator syntax has these parts:

Part	Description
result	Any numeric variable.
expression1	Any <u>expression</u> .
expression2	Any expression.

Remarks

If either or both expressions evaluate to **True**, *result* is **True**. The following table illustrates how *result* is determined:

If expression1 is	And expression2 is	Then <i>result</i> is
True	True	True
True	False	True
True	Null	True
False	True	True
False	False	False
False	Null	Null
Null	True	True

Null	False	Null
Null	Null	Null

The **Or** operator also performs a <u>bitwise comparison</u> of identically positioned bits in two <u>numeric expressions</u> and sets the corresponding bit in *result* according to the following table:

If bit in <i>expression1</i> is	And bit in expression2 is	Then <i>result</i> is
0	0	0
0	1	1
1	0	1
1	1	1

Property

See Also

Applies to

Description

Sets or returns the regular expression pattern being searched for.

Syntax

object.Pattern [= "searchstring"]

The **Pattern** property syntax has these parts:

Part	Description	
object	Required. Always a RegExp object variable.	
searchstring	Optional. Regular <u>string expression</u> being searched for. May include any of the regular expression characters defined in the table in the Settings section.	

Settings

Special characters and sequences are used in writing patterns for regular expressions. The following table describes and gives an example of the characters and sequences that can be used.

Character	Description
\	Marks the next character as either a special character or a literal. For example, "n" matches the character "n". "\n" matches a newline character. The sequence "\\" matches "\" and "\(" matches "(".
٨	Matches the beginning of input.
\$	Matches the end of input.
11'4'	Matches the preceding character zero or more times. For example, "zo*" matches either "z" or "zoo".

+	Matches the preceding character one or more times. For example, "zo+" matches "zoo" but not "z".
?	Matches the preceding character zero or one time. For example, "a?ve?" matches the "ve" in "never".
•	Matches any single character except a newline character.
(pattern)	Matches <i>pattern</i> and remembers the match. The matched substring can be retrieved from the resulting Matches collection, using Item [0][n]. To match parentheses characters (), use "\(" or "\)".
x y	Matches either x or y . For example, "z food" matches "z" or "food". "(z f)oo" matches "zoo" or "food".
{n}	n is a nonnegative integer. Matches exactly n times. For example, "o{2}" does not match the "o" in "Bob," but matches the first two o's in "foooood".
{n , }	n is a nonnegative integer. Matches at least n times. For example, "o{2,}" does not match the "o" in "Bob" and matches all the o's in "foooood." "o{1,}" is equivalent to "o+". "o{0,}" is equivalent to "o*".
{n , m}	m and n are nonnegative integers. Matches at least n and at most m times. For example, "o{1,3}" matches the first three o's in "fooooood." "o{0,1}" is equivalent to "o?".
[xyz]	A character set. Matches any one of the enclosed characters. For example, "[abc]" matches the "a" in "plain".
[^ <i>xyz</i>]	A negative character set. Matches any character not enclosed. For example, "[^abc]" matches the "p" in "plain".
[a-z]	A range of characters. Matches any character in the specified range. For example, "[a-z]" matches any lowercase alphabetic character in the range "a" through "z".
[^m-z]	A negative range characters. Matches any character not in the specified range. For example, "[m-z]" matches any character not in the range "m" through "z".
\ b	Matches a word boundary, that is, the position between a word and a space. For example, "er\b" matches the "er" in "never" but not the "er" in "verb".
\ B	Matches a nonword boundary. "ea*r\B" matches the "ear" in "never early".
\ d	Matches a digit character. Equivalent to [0-9].
\D	Matches a nondigit character. Equivalent to [^0-9].
\ f	Matches a form-feed character.
\n	Matches a newline character.
\r	Matches a carriage return character.
\s	Matches any white space including space, tab, form-feed, etc. Equivalent to " [\f\n\r\t\v]".
\S	Matches any nonwhite space character. Equivalent to "[^ \f\n\r\t\v]".
\t	Matches a tab character.
\ v	Matches a vertical tab character.
\w	Matches any word character including underscore. Equivalent to "[A-Za-z0-9_]".
\ W	Matches any nonword character. Equivalent to "[^A-Za-z0-9_]".
\num	Matches <i>num</i> , where <i>num</i> is a positive integer. A reference back to remembered matches. For example, "(.)\1" matches two consecutive identical characters.
\n	Matches <i>n</i> , where <i>n</i> is an octal escape value. Octal escape values must be 1, 2, or 3 digits long. For example, "\11" and "\011" both match a tab character. "\0011" is the equivalent of "\001" & "1". Octal escape values must not exceed 256. If they do, only the first two digits comprise the expression. Allows ASCII codes to be used in regular expressions.
	Matches n , where n is a hexadecimal escape value. Hexadecimal escape values must

Remarks

The following code illustrates the use of the **Pattern** property:

```
Function RegExpTest(patrn, strng)
 Dim regEx, Match, Matches
                                  'Create variable.
 Set regEx = New RegExp
                                       'Create a regular expressi
 regEx.Pattern = patrn
                                  ' Set pattern.
                                      ' Set case insensitivity.
 regEx.IgnoreCase = True
 regEx.Global = True
                                 ' Set global applicability.
 Set Matches = regEx.Execute(strng) 'Execute search.
 For Each Match in Matches
                                  ' Iterate Matches collection.
  RetStr = RetStr & "Match found at position "
  RetStr = RetStr & Match.FirstIndex & ". Match Value is "
  RetStr = RetStr & Match.Value & ""." & vbCRLF
 Next
 RegExpTest = RetStr
End Function
MsgBox(RegExpTest("is.", "IS1 is2 IS3 is4"))
```



Statement

See Also

Description

Declares private variables and allocates storage space. Declares, in a **Class** block, a private variable.

Syntax

Private *varname*[([subscripts])][, *varname*[([subscripts])]]...

The **Private** statement syntax has these parts:

Part	Description	
varname	Name of the <u>variable</u> ; follows standard variable naming conventions.	
subscripts	Dimensions of an array variable; up to 60 multiple dimensions may be declared. The subscripts argument uses the following syntax: upper [, upper] The lower bound of an array is always zero.	

Remarks

Private statement variables are available only to the script in which they are declared.

A variable that refers to an object must be assigned an existing

object using the **Set** statement before it can be used. Until it is assigned an object, the declared object variable is initialized as **Empty**.

You can also use the **Private** statement with empty parentheses to declare a dynamic array. After declaring a dynamic array, use the **ReDim** statement within a <u>procedure</u> to define the number of dimensions and elements in the array. If you try to redeclare a dimension for an array variable whose size was explicitly specified in a **Private**, <u>Public</u>, or **Dim** statement, an error occurs.

Tip When you use the **Private** statement in a procedure, you generally put the **Private** statement at the beginning of the procedure.

The following example illustrates use of the **Private** statement:

Private MyNumber 'Private Variant variable.

Private MyArray(9)' Private array variable.

' Multiple Private declarations of Variant variables.

Private MyNumber, MyVar, YourNumber

<u>Language Reference</u> Version 5

Property Get Statement

See Also

Description

Declares, in a **Class** block, the name, <u>arguments</u>, and code that form the body of a **Property** procedure that gets (returns) the value of a <u>property</u>.

Syntax

```
[Public [Default] | Private] Property Get name [(arglist)]
[statements]
[[Set] name = expression]
[Exit Property]
[statements]
[[Set] name = expression]
```

End Property

The **Property Get** statement syntax has these parts:

Part	Description
HPNDNC	Indicates that the Property Get procedure is accessible to all other <u>procedures</u> in all scripts.
	Used only with the Public keyword to indicate that the property defined in the Property Get procedure is the default property for the <u>class</u> .
IIPRIVATA	Indicates that the Property Get procedure is accessible only to other procedures in the Class block where it's declared.
name	Name of the Property Get procedure; follows standard <u>variable</u> naming conventions, except that the name can be the same as a Property Let or Property Set procedure in the same Class block.
	List of variables representing arguments that are passed to the Property Get procedure

urgnst	when it is called. Multiple arguments are separated by commas. The name of each argument in a Property Get procedure must be the same as the corresponding argument in a Property Let procedure (if one exists).
statements	Any group of statements to be executed within the body of the Property Get procedure.
IISet I	Keyword used when assigning an object as the return value of a Property Get procedure.
expression	Return value of the Property Get procedure.

Remarks

If not explicitly specified using either **Public** or **Private**, **Property Get** procedures are public by default, that is, they are visible to all other procedures in your script. The value of local variables in a **Property Get** procedure is not preserved between calls to the procedure.

You can't define a **Property Get** procedure inside any other procedure (e.g. **Function** or **Property Let**).

The **Exit Property** statement causes an immediate exit from a **Property Get** procedure. Program execution continues with the statement that follows the statement that called the **Property Get** procedure. Any number of **Exit Property** statements can appear anywhere in a **Property Get** procedure.

Like a **Sub** and **Property Let** procedure, a **Property Get** procedure is a separate procedure that can take arguments, perform a series of statements, and change the value of its arguments. However, unlike a **Sub** and **Property Let**, you can use a **Property Get** procedure on the right side of an <u>expression</u> in the same way you use a **Function** or property name when you want to return the value of a property.

Language Reference Version 5

Property Let Statement

See Also

Description

Declares, in a **Class** block, the name, <u>arguments</u>, and code that form the body of a **Property** procedure that assigns (sets) the value of a <u>property</u>.

Syntax

[Public | Private] Property Let name ([arglist,] value)
[statements]
[Exit Property]
[statements]
End Property

The **Property Let** statement syntax has these parts:

Part	Description	
Public	Indicates that the Property Let procedure is accessible to all other procedures in all scripts.	
Private	Indicates that the Property Let procedure is accessible only to other procedures in the Class block where it's declared.	
name	Name of the Property Let procedure; follows standard <u>variable</u> naming conventions, except that the name can be the same as a Property Get or Property Set procedure in the same Class block.	
arglist	List of variables representing arguments that are passed to the Property Let procedure when it is called. Multiple arguments are separated by commas. The name of each argument in a Property Let procedure must be the same as the corresponding argument in a Property Get procedure. In addition, the Property Let procedure will always have one more argument than its corresponding Property Get procedure. That argument is the value being assigned to the property.	

	Variable to contain the value to be assigned to the property. When the <u>procedure</u> is called, this argument appears on the right side of the calling expression.
statements	Any group of statements to be executed within the body of the Property Let procedure.

NoteVersion Version Every **Property Let** statement must define at least one argument for the procedure it defines. That argument (or the last argument if there is more than one) contains the actual value to be assigned to the property when the procedure defined by the **Property Let** statement is invoked. That argument is referred to as *value* in the preceding syntax.

Remarks

If not explicitly specified using either <u>Public</u> or <u>Private</u>, **Property Let** procedures are public by default, that is, they are visible to all other procedures in your script. The value of local variables in a **Property Let** procedure is not preserved between calls to the procedure.

You can't define a **Property Let** procedure inside any other procedure (e.g. **Function** or **Property Get**).

The **Exit Property** statement causes an immediate exit from a **Property Let** procedure. Program execution continues with the statement that follows the statement that called the **Property Let** procedure. Any number of **Exit Property** statements can appear anywhere in a **Property Let** procedure.

Like a **Function** and **Property Get** procedure, a **Property Let** procedure is a separate procedure that can take arguments, perform a series of statements, and change the value of its arguments. However, unlike a **Function** and **Property Get** procedure, both of which return a value, you can only use a **Property Let** procedure on the left side of a property assignment expression.

Language Reference Version 5

Property Set Statement

See Also

Description

Declares, in a **Class** block, the name, arguments, and code that form the body of a **Property** procedure that sets a reference to an object.

Syntax

[Public | Private] Property Set name([arglist,] reference)
[statements]
[Exit Property]
[statements]
End Property

The **Property Set** statement syntax has these parts:

Part	Description
Public	Indicates that the Property Set procedure is accessible to all other procedures in all scripts.
Private	Indicates that the Property Set procedure is accessible only to other procedures in the Class block where it's declared.
name	Name of the Property Set procedure; follows standard <u>variable</u> naming conventions, except that the name can be the same as a Property Get or Property Let procedure in the same Class block.
arglist	List of variables representing arguments that are passed to the Property Set procedure when it is called. Multiple arguments are separated by commas. In addition, the Property Set procedure will always have one more <u>argument</u> than its corresponding Property Get procedure. That argument is the object being assigned to the <u>property</u> .
reference	Variable containing the object reference used on the right side of the object reference assignment.

statements	Any group of statements to be executed within the body of the Property Set procedure.

NoteVersion Version Every **Property Set** statement must define at least one argument for the <u>procedure</u> it defines. That argument (or the last argument if there is more than one) contains the actual object reference for the property when the procedure defined by the **Property Set** statement is invoked. That argument is referred to as *reference* in the preceding syntax.

Remarks

If not explicitly specified using either <u>Public</u> or <u>Private</u>, **Property Set** procedures are public by default, that is, they are visible to all other procedures in your script. The value of local variables in a **Property Set** procedure is not preserved between calls to the procedure.

You can't define a **Property Set** procedure inside any other procedure (e.g. **Function** or **Property Let**).

The **Exit Property** statement causes an immediate exit from a **Property Set** procedure. Program execution continues with the statement that follows the statement that called the **Property Set** procedure. Any number of **Exit Property** statements can appear anywhere in a **Property Set** procedure.

Like a **Function** and **Property Get** procedure, a **Property Set** procedure is a separate procedure that can take arguments, perform a series of statements, and change the value of its arguments. However, unlike a **Function** and **Property Get** procedure, both of which return a value, you can only use a **Property Set** procedure on the left side of an object reference assignment (**Set** statement).



Statement

See Also

Description

Declares public variables and allocates storage space. Declares, in a **Class** block, a private variable.

Syntax

Public varname[([subscripts])][, varname[([subscripts])]]...

The **Public** statement syntax has these parts:

Part	Description		
varname	Name of the <u>variable</u> ; follows standard variable naming conventions.		
subscripts	Dimensions of an array variable; up to 60 multiple dimensions may be declared. The subscripts argument uses the following syntax: upper [, upper] The lower bound of an array is always zero.		

Remarks

<u>Public</u> statement variables are available to all procedures in all scripts.

A variable that refers to an object must be assigned an existing

object using the **Set** statement before it can be used. Until it is assigned an object, the declared object variable is initialized as **Empty**.

You can also use the **Public** statement with empty parentheses to declare a dynamic array. After declaring a dynamic array, use the **ReDim** statement within a <u>procedure</u> to define the number of dimensions and elements in the array. If you try to redeclare a dimension for an array variable whose size was explicitly specified in a <u>Private</u>, **Public**, or **Dim** statement, an error occurs.

The following example illustrates the use of the **Public** statement:

Public MyNumber ' Public Variant variable.

Public MyArray(9) ' Public array variable.

' Multiple Public declarations of Variant variables.

Public MyNumber, MyVar, YourNumber



Method

See Also Applies to

Description

Generates a <u>run-time error</u>.

Syntax

object.Raise(number, source, description, helpfile, helpcontext)

The **Raise** method has these parts:

Part	Description
object	Always the Err object.
number	A Long integer subtype that identifies the nature of the error. VBScript errors (both VBScript-defined and user-defined errors) are in the range 0–65535.
source	A <u>string expression</u> naming the object or application that originally generated the error. When setting this property for an Automation object, use the form <i>project.class</i> . If nothing is specified, the programmatic ID of the current VBScript project is used.
description	A string expression describing the error. If unspecified, the value in <i>number</i> is examined. If it can be mapped to a VBScript run-time error code, a string provided by VBScript is used as <i>description</i> . If there is no VBScript error corresponding to <i>number</i> , a generic error message is used.
	The fully qualified path to the Help file in which help on this error can be found. If unspecified,

helpfile	VBScript uses the fully qualified drive, path, and file name of the VBScript Help file.
helpcontext	The context ID identifying a topic within <i>helpfile</i> that provides help for the error. If omitted, the VBScript Help file context ID for the error corresponding to the <i>number</i> property is used, if it exists.

Remarks

All the arguments are optional except *number*. If you use **Raise**, however, without specifying some arguments, and the property settings of the **Err** object contain values that have not been cleared, those values become the values for your error.

When setting the *number* property to your own error code in an <u>Automation object</u>, you add your error code number to the constant **vbObjectError**. For example, to generate the error number 1050, assign **vbObjectError** + 1050 to the *number* property.

The following example illustrates use of the **Raise** method:

On Error Resume Next

Err.Raise 6 'Raise an overflow error.

MsgBox ("Error # " & CStr(Err.Number) & " " & Err.Description)

Err.Clear ' Clear the error.

Randomize Statement

Language Reference Version 1

See Also

Description

Initializes the random-number generator.

Syntax

Randomize [number]

The *number* argument can be any valid <u>numeric expression</u>.

Remarks

Randomize uses *number* to initialize the **Rnd** function's random-number generator, giving it a new <u>seed</u> value. If you omit *number*, the value returned by the system timer is used as the new seed value.

If **Randomize** is not used, the **Rnd** function (with no arguments) uses the same number as a seed the first time it is called, and thereafter uses the last generated number as a seed value.

Note To repeat sequences of random numbers, call **Rnd** with a negative argument immediately before using **Randomize** with a numeric argument. Using **Randomize** with the same value for *number* does not repeat the previous sequence.

The following example illustrates use of the **Randomize** statement:

Dim MyValue, Response

Randomize 'Initialize random-numbe

```
Do Until Response = vbNo
    MyValue = Int((6 * Rnd) + 1) 'Generate rando
    MsgBox MyValue
    Response = MsgBox ("Roll again? ", vbYesNo)
Loop
```



Statement

See Also

Description

Declares dynamic-array variables, and allocates or reallocates storage space at procedure level.

Syntax

ReDim [**Preserve**] *varname*(*subscripts*) [, *varname*(*subscripts*)] . . .

The **ReDim** statement syntax has these parts:

Part	Description		
IIPPACATUA I	Preserves the data in an existing <u>array</u> when you change the size of the last dimension.		
lvarname	Name of the variable; follows standard <u>variable</u> naming conventions.		
subscripts	Dimensions of an array variable; up to 60 multiple dimensions may be declared. The <i>subscripts</i> argument uses the following syntax: *upper [,upper] The lower bound of an array is always zero.		

Remarks

The **ReDim** statement is used to size or resize a dynamic array that has already been formally declared using a **Private**, **Public**, or **Dim** statement with empty parentheses (without dimension subscripts). You can use the **ReDim** statement repeatedly to change the number of elements and

dimensions in an array.

If you use the **Preserve** keyword, you can resize only the last array dimension, and you can't change the number of dimensions at all. For example, if your array has only one dimension, you can resize that dimension because it is the last and only dimension. However, if your array has two or more dimensions, you can change the size of only the last dimension and still preserve the contents of the array.

The following example shows how you can increase the size of the last dimension of a dynamic array without erasing any existing data contained in the array.

ReDim X(10, 10, 10)

. . .

ReDim Preserve X(10, 10, 15)

Caution If you make an array smaller than it was originally, data in the eliminated elements is lost.

When variables are initialized, a numeric variable is initialized to 0 and a string variable is initialized to a zero-length string (""). A variable that refers to an object must be assigned an existing object using the **Set** statement before it can be used. Until it is assigned an object, the declared object variable has the special value **Nothing**.



Object

<u>See Also</u> <u>Methods</u> <u>Properties</u>

Description

Provides simple regular expression support.

Remarks

The following code illustrates the use of the **RegExp** object:

```
Function RegExpTest(patrn, strng)
                                  ' Create variable.
 Dim regEx, Match, Matches
 Set regEx = New RegExp
                                       ' Create a regular expressi
 regEx.Pattern = patrn
                                  ' Set pattern.
 regEx.IgnoreCase = True
                                       ' Set case insensitivity.
 regEx.Global = True
                                  ' Set global applicability.
 Set Matches = regEx.Execute(strng)
                                       'Execute search.
 For Each Match in Matches
                                  ' Iterate Matches collection.
  RetStr = RetStr & "Match found at position "
  RetStr = RetStr & Match.FirstIndex & ". Match Value is "
  RetStr = RetStr & Match. Value & ""." & vbCRLF
 Next
 RegExpTest = RetStr
End Function
MsgBox(RegExpTest("is.", "IS1 is2 IS3 is4"))
```

Statement

Description

Includes explanatory remarks in a program.

Syntax

Rem comment

or

' comment

The *comment* argument is the text of any comment you want to include. After the **Rem** keyword, a space is required before *comment*.

Remarks

As shown in the syntax section, you can use an apostrophe (') instead of the **Rem** keyword. If the **Rem** keyword follows other statements on a line, it must be separated from the statements by a colon. However, when you use an apostrophe, the colon is not required after other statements.

The following example illustrates the use of the **Rem** statement:

Dim MyStr1, MyStr2

Function

See Also

Description

Returns a string in which a specified substring has been replaced with another substring a specified number of times.

Syntax

Replace(*expression*, *find*, *replacewith*[, *start*[, *count*[, *compare*]]])

The **Replace** function syntax has these parts:

Part	Description		
IIPXNrPSSIAN I	Required. String expression containing substring to replace.		
find	Required. Substring being searched for.		
replacewith	Required. Replacement substring.		
start	Optional. Position within <i>expression</i> where substring search is to begin. If omitted, 1 is assumed. Must be used in conjunction with <i>count</i> .		
count	Optional. Number of substring substitutions to perform. If omitted, the default value is -1, which means make all possible substitutions. Must be used in conjunction with <i>start</i> .		
compare	Optional. Numeric value indicating the kind of comparison to use when evaluating substrings. See Settings section for values. If omitted, the default value is 0, which means perform a binary comparison.		

Settings

The *compare* argument can have the following values:

Constant	Value	Description	
vbBinaryCompare	0	Perform a binary comparison.	
vbTextCompare	1	Perform a textual comparison.	

Return Values

Replace returns the following values:

If	Replace returns
expression is zero- length	Zero-length string ('''').
expression is Null	An error.
find is zero-length	Copy of expression.
<i>replacewith</i> is zero-length	Copy of <i>expression</i> with all occurences of <i>find</i> removed.
start > Len(expression)	Zero-length string.
count is 0	Copy of expression.

Remarks

The return value of the **Replace** function is a string, with substitutions made, that begins at the position specified by *start* and and concludes at the end of the *expression* string. It is not a copy of the original string from start to finish.

The following example uses the **Replace** function to return a string:

MyString = Replace("XXpXXPXXp", "p", "Y", 'Returns "YXX

Replace Method

See Also

Applies to

Description

Replaces text found in a regular expression search.

Syntax

object.Replace(string1, string2)

The **Replace** method syntax has these parts:

Part	Description
object	Required. Always the name of a RegExp object.
string1	Required. String1 is the text string in which the text replacement is to occur.
string2	Required. String2 is the replacement text string.

Remarks

The actual pattern for the text being replaced is set using the **Pattern** property of the **RegExp** object.

The **Replace** method returns a copy of *string1* with the text of **RegExp.Pattern** replaced with *string2*. If no match is found, a copy of *string1* is returned unchanged.

The following code illustrates use of the **Replace** method:

Function ReplaceTest(patrn, replStr)

```
Dim regEx, str1 'Create variables.

str1 = "The quick brown fox jumped over the lazy dog."

Set regEx = New RegExp 'Create regular expression regEx.Pattern = patrn 'Set pattern.

regEx.IgnoreCase = True 'Make case insensiting ReplaceTest = regEx.Replace(str1, replStr) 'Make replacement.

End Function
```

' Replace 'fox' with 'c

In addition, the **Replace** method can replace subexpressions in

the pattern. The following call to the function shown in the previous example swaps each pair of words in the original string:

MsgBox(ReplaceTest("fox", "cat"))

 $MsgBox(ReplaceText("(\S+)(\S+)(\S+)", "$3$2$1"))$ 'Swap pair

Function

Description

Returns a whole number representing an RGB color value.

Syntax

RGB(red, green, blue)

The **RGB** function has these parts:

Part	Description
$\Pi r \nu r r r$	Required. Number in the range 0-255 representing the red component of the color.
green	Required. Number in the range 0-255 representing the green component of the color.
	Required. Number in the range 0-255 representing the blue component of the color.

Remarks

Application methods and properties that accept a color specification expect that specification to be a number representing an RGB color value. An RGB color value specifies the relative intensity of red, green, and blue to cause a specific color to be displayed.

The low-order byte contains the value for red, the middle byte contains the value for green, and the high-order byte contains the value for blue.

For applications that require the byte order to be reversed, the following function will provide the same information with the bytes reversed:

Function RevRGB(red, green, blue)
RevRGB= CLng(blue + (green * 256) + (red * 6
End Function

The value for any argument to RGB that exceeds 255 is assumed to be 255.

Function

See Also

Description

Returns a specified number of characters from the right side of a string.

Syntax

Right(string, length)

The **Right** function syntax has these arguments:

Part	Description
string	String expression from which the rightmost characters are returned. If string contains Null, Null is returned.
length	Numeric expression indicating how many characters to return. If 0, a zero-length string is returned. If greater than or equal to the number of characters in <i>string</i> , the entire string is returned.

Remarks

To determine the number of characters in *string*, use the **Len** function.

The following example uses the **Right** function to return a specified number of characters from the right side of a string:

```
Dim AnyString, MyStr
AnyString = "Hello World" 'Define string.

MyStr = Right(AnyString, 1) 'Returns "d".

MyStr = Right(AnyString, 6) 'Returns "World".
```

MyStr = Right(AnyString, 20) 'Returns "Hello W

Note The **RightB** function is used with byte data contained in a string. Instead of specifying the number of characters to return, *length* specifies the number of bytes.



See Also

Description

Returns a random number.

Syntax

Rnd[(number)]

The *number* argument can be any valid <u>numeric expression</u>.

Remarks

The **Rnd** function returns a value less than 1 but greater than or equal to 0. The value of *number* determines how **Rnd** generates a random number:

If number is	Rnd generates			
III ACC THAN 7ATA I	The same number every time, using <i>number</i> as the <u>seed</u> .			
Greater than zero	The next random number in the sequence.			
Equal to zero	The most recently generated number.			
Not supplied	The next random number in the sequence.			

For any given initial seed, the same number sequence is generated because each successive call to the **Rnd** function uses the previous number as a seed for the next number in the sequence.

Before calling **Rnd**, use the **Randomize** statement without an argument to initialize the randomnumber generator with a seed based on the system timer.

To produce random integers in a given range, use this formula:

Int((upperbound - lowerbound + 1) * Rnd + lowerl

Here, *upperbound* is the highest number in the range, and *lowerbound* is the lowest number in the range.

Note To repeat sequences of random numbers, call **Rnd** with a negative argument immediately before using **Randomize** with a numeric argument. Using **Randomize** with the same value for *number* does not repeat the previous sequence.



See Also

Description

Returns a number rounded to a specified number of decimal places.

Syntax

Round(*expression*[, *numdecimalplaces*])

The **Round** function syntax has these parts:

Part	Description		
II <i>PYNrP</i> CCIAN	Required. <u>Numeric expression</u> being rounded.		
numdecimalplaces	Optional. Number indicating how many places to the right of the decimal are included in the rounding. If omitted, integers are returned by the Round function.		

Remarks

The following example uses the **Round** function to round a number to two decimal places:

```
Dim MyVar, pi
pi = 3.14159
MyVar = Round(pi, 2) ' MyVar contains 3.14.
```

Language Reference Version 2

ScriptEngine Function

See Also

Description

Returns a string representing the scripting language in use.

Syntax

ScriptEngine

Return Values

The **ScriptEngine** function can return any of the following strings:

String	Description		
VBScript	Indicates that Microsoft® Visual Basic® Scripting Edition is the current scripting engine.		
IScript	Indicates that Microsoft JScript® is the current scripting engine.		
	Indicates that Microsoft Visual Basic for Applications is the current scripting engine.		

Remarks

The following example uses the **ScriptEngine** function to return a string describing the scripting language in use:

Function GetScriptEngineInfo
Dim s
s = "" Build string with necessary info.

```
s = ScriptEngine & " Version "
s = s & ScriptEngineMajorVersion & "."
s = s & ScriptEngineMinorVersion & "."
s = s & ScriptEngineBuildVersion
GetScriptEngineInfo = s ' Return the results.
End Function
```

ScriptEngineBuildVersion Language Referen Version Version

See Also

Description

Returns the build version number of the scripting engine in use.

Syntax

ScriptEngineBuildVersion

End Function

Remarks

The return value corresponds directly to the version information contained in the DLL for the scripting language in use.

The following example uses the **ScriptEngineBuildVersion** function to return the build version number of the scripting engine:

```
Function GetScriptEngineInfo

Dim s
s = "" 'Build string with necessary info.
s = ScriptEngine & "Version"
s = s & ScriptEngineMajorVersion & "."
s = s & ScriptEngineMinorVersion & "."
s = s & ScriptEngineBuildVersion
GetScriptEngineInfo = s 'Return the results.
```

ScriptEngineMajorVersion Language Refer Versi Function

See Also

Description

Returns the major version number of the scripting engine in use.

Syntax

ScriptEngineMajorVersion

Remarks

The return value corresponds directly to the version information contained in the DLL for the scripting language in use.

The following example uses the **ScriptEngineMajorVersion** function to return the version number of the scripting engine:

```
Function GetScriptEngineInfo
```

```
Dim s
s = "" 'Build string with necessary info.
s = ScriptEngine & "Version "
s = s & ScriptEngineMajorVersion & "."
s = s & ScriptEngineMinorVersion & "."
s = s & ScriptEngineBuildVersion
GetScriptEngineInfo = s 'Return the results.
End Function
```

ScriptEngineMinorVersion Language Refer Versi Function

See Also

Description

Returns the minor version number of the scripting engine in use.

Syntax

ScriptEngineMinorVersion

Remarks

The return value corresponds directly to the version information contained in the DLL for the scripting language in use.

The following example uses the **ScriptEngineMinorVersion** function to return the minor version number of the scripting engine:

```
Function GetScriptEngineInfo
```

```
Dim s
s = "" 'Build string with necessary info.
s = ScriptEngine & "Version "
s = s & ScriptEngineMajorVersion & "."
s = s & ScriptEngineMinorVersion & "."
s = s & ScriptEngineBuildVersion
GetScriptEngineInfo = s 'Return the results.
End Function
```

See Also

Description

Returns a whole number between 0 and 59, inclusive, representing the second of the minute.

Syntax

Second(time)

The *time* argument is any expression that can represent a time. If *time* contains <u>Null</u>, **Null** is returned.

Remarks

The following example uses the **Second** function to return the current second:

Dim MySec

MySec = Second(Now) 'MySec contains the number representing the current second.

${\tt Microsoft \& Visual \ Basic \& \ Scripting \ Edition} \ {\tt Select}$

Case Statement

See Also

Description

Executes one of several groups of statements, depending on the value of an expression.

Syntax

Select Case testexpression

[Case expressionlist-n

[statements-n]]...

[Case Else expressionlist-n

[elsestatements-n]]

End Select

The **Select Case** statement syntax has these parts:

Part	Description		
testexpression	Any <u>numeric</u> or <u>string expression</u> .		
expressionlist-	Required if Case appears. Delimited list of one		
n	or more expressions.		
	One or more statements executed if testexpression matches any part of expressionlist-n.		
elsestatements- n	One or more statements executed if testexpression doesn't match any of the Case clauses.		

Remarks

If *testexpression* matches any **Case** *expressionlist* expression, the statements following that **Case** clause are executed up to the next **Case** clause, or for the last clause, up to **End Select**. Control then passes to the statement following **End Select**. If *testexpression* matches an *expressionlist* expression in more than one **Case** clause, only the statements following the first match are executed.

The **Case Else** clause is used to indicate the *elsestatements* to be executed if no match is found between the *testexpression* and an *expressionlist* in any of the other **Case** selections. Although not required, it is a good idea to have a **Case Else** statement in your **Select Case** block to handle unforeseen *testexpression* values. If no **Case** *expressionlist* matches *testexpression* and there is no **Case Else** statement, execution continues at the statement following **End Select**.

Select Case statements can be nested. Each nested **Select Case** statement must have a matching **End Select** statement.

The following example illustrates the use of the **Select Case** statement:

```
Dim Color, MyVar

Sub ChangeBackground (Color)

MyVar = lcase (Color)

Select Case MyVar

Case "red" document.bgColor = "red"

Case "green" document.bgColor = "green"

Case "blue" document.bgColor = "blue"

Case Else MsgBox "pick another color"

End Select

End Sub
```

Statement

See Also

Description

Assigns an object reference to a <u>variable</u> or <u>property</u>, or associates a procedure reference with an event.

Syntax 1

Set *objectvar* = {*objectexpression* | **New** *classname* | **Nothing**}

Syntax 2

Set *object.eventname* = **GetRef(***procname***)**

The **Set** statement syntax has these parts:

Part	Description			
objectvar	Required. Name of the variable or property; follows standard variable naming conventions.			
	Optional. Expression consisting of the name of an object, another declared variable of the same object type, or a function or method that returns an object of the same object type.			
New	Keyword used to create a new instance of a class. If <i>objectvar</i> contained a reference to an object, that reference is released when the new one is assigned. The New keyword can only be used to create an instance of a <u>class</u> .			
classname	Optional. Name of the class being created. A class and its members are defined using the Class statement.			
Nothing	Optional. Discontinues association of <i>objectvar</i> with any specific object or class. Assigning <i>objectvar</i> to Nothing releases all the system and memory resources associated with the previously referenced object when no other variable refers to it.			
object	Required. Name of the object with which <i>event</i> is associated.			

event	Required. Name of the event to which the function is to be bound.		
unrocname i	Required. String containing the name of the Sub or Function being associated with the <i>event</i> .		

Remarks

To be valid, *objectvar* must be an object type consistent with the object being assigned to it.

The **Dim**, **Private**, **Public**, or **ReDim** statements only declare a variable that refers to an object. No actual object is referred to until you use the **Set** statement to assign a specific object.

Generally, when you use **Set** to assign an object reference to a variable, no copy of the object is created for that variable. Instead, a reference to the object is created. More than one object variable can refer to the same object. Because these variables are references to (rather than copies of) the object, any change in the object is reflected in all variables that refer to it.

```
Function ShowFreeSpace(drvPath)

Dim fso, d, s

Set fso = CreateObject("Scripting.FileSystemObject")

Set d = fso.GetDrive(fso.GetDriveName(drvPath))

s = "Drive " & UCase(drvPath) & " - "

s = s & d.VolumeName & "<BR>"

s = s & "Free Space: " & FormatNumber(d.FreeSpace/1024, 0)

s = s & " Kbytes"

ShowFreeSpace = s

End Function
```

Using the **New** keyword allows you to concurrently create an instance of a class and assign it to an object reference variable. The variable to which the instance of the class is being assigned

must already have been declared with the **Dim** (or equivalent) statement.

Refer to the documentation for the **GetRef** function for information on using **Set** to associate a procedure with an event.



See Also

Description

Returns an integer indicating the sign of a number.

Syntax

Sgn(number)

The *number* argument can be any valid <u>numeric expression</u>.

Return Values

The **Sgn** function has the following return values:

If number is	Sgn returns
Greater than zero	1
Equal to zero	0
Less than zero	-1

Remarks

The sign of the *number* argument determines the return value of the **Sgn** function.

The following example uses the **Sgn** function to determine the sign of a number:

```
MySign = Sgn(MyVar2) 'Returns -1.
MySign = Sgn(MyVar3) 'Returns 0.
```



See Also

Description

Returns the sine of an angle.

Syntax

Sin(number)

The *number* argument can be any valid <u>numeric expression</u> that expresses an angle in radians.

Remarks

The **Sin** function takes an angle and returns the ratio of two sides of a right triangle. The ratio is the length of the side opposite the angle divided by the length of the hypotenuse. The result lies in the range -1 to 1.

To convert degrees to radians, multiply degrees by <u>pi</u>/180. To convert radians to degrees, multiply radians by 180/pi.

The following example uses the **Sin** function to return the sine of an angle:

Dim MyAngle, MyCosecant

MyAngle = 1.3 'Define angle in radians

MyCosecant = 1 / Sin(MyAngle) 'Calculate coses



Property

See Also Applies to

Description

Returns or sets the name of the object or application that originally generated the error.

Syntax

object.Source [= stringexpression]

The **Source** property syntax has these parts:

Part	Description	
object	Always the Err object.	
stringexpression	A <u>string expression</u> representing the application	
	that generated the error.	

Remarks

The **Source** property specifies a string expression that is usually the <u>class</u> name or programmatic ID of the object that caused the error. Use **Source** to provide your users with information when your code is unable to handle an error generated in an accessed object. For example, if you access Microsoft Excel and it generates a *Division by zero* error, Microsoft Excel sets **Err.Number** to its error code for that error and sets **Source** to Excel.Application. Note that if the error is generated in another object called by Microsoft Excel, Excel intercepts the error and sets **Err.Number** to its own code for *Division by zero*. However, it leaves the other **Err** object (including **Source**) as set by the object that generated the error.

Source always contains the name of the object that originally generated the error — your code can try to handle the error according to the error documentation of the object you accessed. If your error

handler fails, you can use the **Err** object information to describe the error to your user, using **Source** and the other **Err** to inform the user which object originally caused the error, its description of the error, and so forth.

When generating an error from code, **Source** is your application's programmatic ID.

The following code illustrates use of the **Source** property:

On Error Resume Next
Err.Raise 6 'Raise an overflow error.
MsgBox ("Error # " & CStr(Err.Number) & " " & Err.Description
Err.Clear 'Clear the error.



See Also

Description

Returns a string consisting of the specified number of spaces.

Syntax

Space(number)

The *number* argument is the number of spaces you want in the string.

Remarks

The following example uses the **Space** function to return a string consisting of a specified number of spaces:

```
Dim MyString

MyString = Space(10) 'Returns a string with 10 space

MyString = "Hello" & Space(10) & "World" 'Insert 10 spaces between the space of the space of
```



See Also

Description

Returns a zero-based, one-dimensional <u>array</u> containing a specified number of substrings.

Syntax

Split(expression[, delimiter[, count[, compare]]])

The **Split** function syntax has these parts:

Part	Description
	Required. String expression containing substrings
evnression	and delimiters. If <i>expression</i> is a zero-length string,
ελριεσσιστί	Split returns an empty array, that is, an array with no
	elements and no data.
	Optional. String character used to identify substring
	limits. If omitted, the space character (" ") is assumed
delimiter	to be the delimiter. If <i>delimiter</i> is a zero-length
	string, a single-element array containing the entire
	expression string is returned.
count	Optional. Number of substrings to be returned; -1
count	indicates that all substrings are returned.
	Optional. Numeric value indicating the kind of
compare	comparison to use when evaluating substrings. See
	Settings section for values.

Settings

The *compare* argument can have the following values:

Constant	Value	Description
vbBinaryCompare	0	Perform a binary comparison.
vbTextCompare	1	Perform a textual comparison.

Remarks

The following example uses the **Split** function to return an array from a string. The function performs a textual comparison of the delimiter, and returns all of the substrings.

```
Dim MyString, MyArray, Msg
MyString = "VBScriptXisXfun!"
MyArray = Split(MyString, "x", -1, 1)
' MyArray(0) contains "VBScript".
' MyArray(1) contains "is".
' MyArray(2) contains "fun!".
Msg = MyArray(0) & " " & MyArray(1)
Msg = Msg & " " & MyArray(2)
MsgBox Msg
```

Description

Returns the square root of a number.

Syntax

Sqr(number)

The *number* argument can be any valid <u>numeric expression</u> greater than or equal to 0.

Remarks

The following example uses the **Sqr** function to calculate the square root of a number:

```
Dim MySqr

MySqr = Sqr(4) 'Returns 2.

MySqr = Sqr(23) 'Returns 4.79583152331272.

MySqr = Sqr(0) 'Returns 0.

MySqr = Sqr(-4) 'Generates a run-time error.
```

Microsoft® Visual Basic® Scripting Edition Sqr

Language Reference Version 1

Function

StrComp Function

Description

Returns a value indicating the result of a <u>string comparison</u>.

Syntax

StrComp(string1, string2[, compare])

The **StrComp** function syntax has these arguments:

Part	Description
string1	Required. Any valid <u>string expression</u> .
string2	Required. Any valid string expression.
compare	Optional. Numeric value indicating the kind of comparison to use when evaluating strings. If omitted, a binary comparison is performed. See Settings section for values.

Settings

The *compare* argument can have the following values:

Constant	Value	Description
vbBinaryCompare	0	Perform a binary comparison.
vbTextCompare	1	Perform a textual comparison.

Return Values

The **StrComp** function has the following return values:

If	StrComp returns
string1 is less than string2	-1
string1 is equal to string2	0
string1 is greater than string2	1
string1 or string2 is Null	Null

Remarks

The following example uses the **StrComp** function to return the results of a string comparison. If the third argument is 1, a textual comparison is performed; if the third argument is 0 or omitted, a binary comparison is performed.

```
Dim MyStr1, MyStr2, MyComp

MyStr1 = "ABCD": MyStr2 = "abcd" 'Define'

MyComp = StrComp(MyStr1, MyStr2, 1) 'Retur

MyComp = StrComp(MyStr1, MyStr2, 0) 'Retur

MyComp = StrComp(MyStr2, MyStr1) 'Retur
```

Constants

See Also

Since these constants are built into VBScript, you don't have to define them before using them. Use them anywhere in your code to represent the values shown for each.

Constant	Value	Description
vbCr	Chr(13)	Carriage return.
vbCrLf	Chr(13) & Chr(10)	Carriage return–linefeed combination.
vbFormFeed	Chr(12)	Form feed; not useful in Microsoft Windows.
vbLf	Chr(10)	Line feed.
vbNewLine	Chr(13) & Chr(10) or Chr(10)	Platform-specific newline character; whatever is appropriate for the platform.
vbNullChar	Chr(0)	Character having the value 0.
vbNullString	String having value 0	Not the same as a zero-length string (""); used for calling external procedures.
vbTab	Chr(9)	Horizontal tab.
vbVerticalTab	Chr(11)	Vertical tab; not useful in Microsoft Windows.

See Also

Description

Returns a repeating character string of the length specified.

Syntax

String(number, character)

The **String** function syntax has these arguments:

Part	Description	
llnumhor l	Length of the returned string. If <i>number</i> contains Null , Null is returned.	
character	Character code specifying the character or string expression whose first character is used to build the return string. If character contains Null , Null is returned.	

Remarks

If you specify a number for *character* greater than 255, **String** converts the number to a valid character code using the formula:

character Mod 256

The following example uses the **String** function to return repeating character strings of the length specified:

Dim MyString

```
MyString = String(5, "*") 'Returns "*****".

MyString = String(5, 42) 'Returns "*****".

MyString = String(10, "ABC") 'Returns "AAAA
```

StrReverse Function

Description

Returns a string in which the character order of a specified string is reversed.

Syntax

StrReverse(string1)

The *string1* argument is the string whose characters are to be reversed. If *string1* is a zero-length string (""), a zero-length string is returned. If *string1* is **Null**, an error occurs.

Remarks

The following example uses the **StrReverse** function to return a string in reverse order:

Dim MyStr
MyStr = StrReverse("VBScript") ' MyStr contains "tpircSBV".



Statement

See Also

Description

Declares the name, arguments, and code that form the body of a **Sub** procedure.

Syntax

```
[Public [Default] | Private] Sub name [(arglist)]
[statements]
[Exit Sub]
[statements]
```

End Sub

The **Sub** statement syntax has these parts:

Part	Description	
Public	Indicates that the Sub procedure is accessible to all other procedures in all scripts.	
Default	Used only with the Public keyword in a Class block to indicate that the Sub procedure is the default method for the <u>class</u> . An error occurs if more than one Default procedure is specified in a class.	
nerivale i	Indicates that the Sub procedure is accessible only to other procedures in the script where it is declared.	
name	Name of the Sub ; follows standard <u>variable</u> naming conventions.	
	List of variables representing arguments that are passed to the Sub procedure when it is called. Multiple variables are separated by commas.	
statements	Any group of statements to be executed within the body of the Sub procedure.	

The *arglist* argument has the following syntax and parts:

[ByVal | ByRef] varname[()]

Part	Description
ByVal	Indicates that the <u>argument</u> is passed <u>by value</u> .
ByRef	Indicates that the argument is passed by reference.
varname	Name of the variable representing the argument; follows standard variable naming conventions.

Remarks

If not explicitly specified using either <u>Public</u> or <u>Private</u>, **Sub** procedures are public by default, that is, they are visible to all other procedures in your script. The value of local variables in a **Sub** procedure is not preserved between calls to the <u>procedure</u>.

You can't define a **Sub** procedure inside any other procedure (e.g. **Function** or **Property Get**).

The **Exit Sub** statement causes an immediate exit from a **Sub** procedure. Program execution continues with the statement that follows the statement that called the **Sub** procedure. Any number of **Exit Sub** statements can appear anywhere in a **Sub** procedure.

Like a **Function** procedure, a **Sub** procedure is a separate procedure that can take arguments, perform a series of statements, and change the value of its arguments. However, unlike a **Function** procedure, which returns a value, a **Sub** procedure can't be used in an <u>expression</u>.

You call a **Sub** procedure using the procedure name followed by the argument list. See the **Call** statement for specific information on how to call **Sub** procedures.

Variables used in **Sub** procedures fall into two categories: those that are explicitly declared within the procedure and those that are not. Variables that are explicitly declared in a procedure (using **Dim** or the equivalent) are always local to the procedure. Variables that are used but not explicitly declared in a procedure are also local, unless they are explicitly declared at some higher level outside the procedure.

Caution A procedure can use a variable that is not explicitly declared in the procedure, but a naming conflict can occur if anything you have defined at the <u>script level</u> has the same name. If your procedure refers to an undeclared variable that has the same name as another procedure, <u>constant</u> or variable, it is assumed that your procedure is referring to that script-level name. To avoid this kind of conflict, use an **Option Explicit** statement to force explicit declaration of variables.



See Also

Description

Returns the tangent of an angle.

Syntax

Tan(number)

The *number* argument can be any valid <u>numeric expression</u> that expresses an angle in radians.

Remarks

Tan takes an angle and returns the ratio of two sides of a right triangle. The ratio is the length of the side opposite the angle divided by the length of the side adjacent to the angle.

To convert degrees to radians, multiply degrees by <u>pi</u>/180. To convert radians to degrees, multiply radians by 180/pi.

The following example uses the **Tan** function to return the tangent of an angle:

Dim MyAngle, MyCotangent

MyAngle = 1.3 'Define angle in radia

MyCotangent = 1 / Tan(MyAngle) 'Calculate co

Terminate Event

See Also

Applies To

Description

Occurs when an instance of the associated <u>class</u> is terminated.

Syntax

Private Sub Class_Terminate()statements **End Sub**

The *statements* part consists of zero or more code statements to be run when the class is initialized.

Remarks

The following example illustrates the use of the **Terminate** event:

```
Class TestClass
Private Sub Class_Initialize ' Setup Initialize event.

MsgBox("TestClass started")
End Sub
Private Sub Class_Terminate ' Setup Terminate event.

MsgBox("TestClass terminated")
End Sub
End Class
```

Set X = New TestClass 'Create an instance of TestClass.

Set X = Nothing 'Destroy the instance.

Test Method

See Also

Applies to

Description

Executes a regular expression search against a specified string and returns a **Boolean** value that indicates if a pattern match was found.

Syntax

object.Test(string)

The **Execute** method syntax has these parts:

Part	Description
object	Required. Always the name of a RegExp object.
string	Required. The text string upon which the regular expression is executed.

Remarks

The actual pattern for the regular expression search is set using the **Pattern** property of the **RegExp** object. The **RegExp.Global** property has no effect on the **Test** method.

The **Test** method returns **True** if a pattern match is found; **False** if no match is found.

The following code illustrates the use of the **Test** method:

```
Function RegExpTest(patrn, strng)
 Dim regEx, retVal
                                  ' Create variable.
                                       ' Create regular expression
 Set regEx = New RegExp
 regEx.Pattern = patrn
                                  ' Set pattern.
                                  ' Set case sensitivity.
 regEx.IgnoreCase = False
                                  ' Execute the search test.
 retVal = regEx.Test(strng)
 If retVal Then
  RegExpTest = "One or more matches were found."
 Else
  RegExpTest = "No match was found."
 End If
End Function
MsgBox(RegExpTest("is.", "IS1 is2 IS3 is4"))
```



Function

See Also

Description

Returns a **Variant** of subtype **Date** indicating the current system time.

Syntax

Time

Remarks

The following example uses the **Time** function to return the current system time:

Dim MyTime
MyTime = Time 'Return current system time.



Function

See Also

Description

Returns the number of seconds that have elapsed since 12:00 AM (midnight).

Syntax

Timer

Remarks

The following example uses the **Timer** function to determine the time it takes to iterate a **For...Next** loop *N* times:

```
Function TimeIt(N)
Dim StartTime, EndTime
StartTime = Timer
For I = 1 To N
Next
EndTime = Timer
TimeIt = EndTime - StartTime
End Function
```

Language Reference Version 1

TimeSerial Function

See Also

Description

Returns a **Variant** of subtype **Date** containing the time for a specific hour, minute, and second.

Syntax

TimeSerial(hour, minute, second)

The **TimeSerial** function syntax has these arguments:

Part	Description
∥n∩iir i	Number between 0 (12:00 A.M.) and 23 (11:00 P.M.), inclusive, or a <u>numeric expression</u> .
minute	Any numeric expression.
second	Any numeric expression.

Remarks

To specify a time, such as 11:59:59, the range of numbers for each **TimeSerial** argument should be in the accepted range for the unit; that is, 0–23 for hours and 0–59 for minutes and seconds. However, you can also specify relative times for each argument using any numeric expression that represents some number of hours, minutes, or seconds before or after a certain time.

The following example uses expressions instead of absolute time numbers. The **TimeSerial** function returns a time for 15 minutes before (-15) six hours before noon (12 - 6), or 5:45:00 A.M.

Dim MyTime1

MyTime1 = TimeSerial(12 - 6, -15, 0) ' Returns 5:4

When any argument exceeds the accepted range for that argument, it increments to the next larger unit as appropriate. For example, if you specify 75 minutes, it is evaluated as one hour and 15 minutes. However, if any single argument is outside the range -32,768 to 32,767, or if the time specified by the three arguments, either directly or by expression, causes the date to fall outside the acceptable range of dates, an error occurs.

<u>Language Reference</u> Version 1

TimeValue Function

See Also

Description

Returns a **Variant** of subtype **Date** containing the time.

Syntax

TimeValue(time)

The *time* argument is usually a <u>string expression</u> representing a time from 0:00:00 (12:00:00 A.M.) to 23:59:59 (11:59:59 P.M.), inclusive. However, *time* can also be any expression that represents a time in that range. If *time* contains <u>Null</u>, **Null** is returned.

Remarks

You can enter valid times using a 12-hour or 24-hour clock. For example, "2:24PM" and "14:24" are both valid *time* arguments. If the *time* argument contains date information, **TimeValue** doesn't return the date information. However, if *time* includes invalid date information, an error occurs.

The following example uses the **TimeValue** function to convert a string to a time. You can also use <u>date literals</u> to directly assign a time to a **Variant** (for example, MyTime = #4:35:17 PM#).

Dim MyTime MyTime = TimeValue("4:35:17 PM") ' MyTime



See Also

Description

The **True** keyword has a value equal to -1.

TypeName Function

See Also

Description

Returns a string that provides **Variant** subtype information about a variable.

Syntax

TypeName(varname)

The required *varname* argument can be any variable.

Return Values

The **TypeName** function has the following return values:

Value	Description
Byte	Byte value
Integer	Integer value
Long	Long integer value
Single	Single-precision floating-point value
Double	Double-precision floating-point value
Currency	Currency value
Decimal	Decimal value
Date	Date or time value
String	Character string value
Boolean	Boolean value; True or False
Empty	Unitialized
Null	No valid data
i	

<object; type></object; 	Actual type name of an object
	Generic object
Unknown	Unknown object type
Nothing	Object variable that doesn't yet refer to an object instance
Error	Error

Remarks

The following example uses the **TypeName** function to return information about a variable:

```
Dim ArrayVar(4), MyType
NullVar = Null 'Assign Null value.

MyType = TypeName("VBScript") 'Returns "String".

MyType = TypeName(4) 'Returns "Integer".

MyType = TypeName(37.50) 'Returns "Double".

MyType = TypeName(NullVar) 'Returns "Null".

MyType = TypeName(ArrayVar) 'Returns "Variant()".
```

Function

See Also

Description

Returns the largest available subscript for the indicated dimension of an <u>array</u>.

Syntax

UBound(*arrayname*[, *dimension*])

The **UBound** function syntax has these parts:

Part	Description		
arrayname	Required. Name of the array variable; follows standard <u>variable</u> naming conventions.		
	standard <u>variable</u> naming conventions.		
dimension	Optional. Whole number indicating which		
	dimension's upper bound is returned. Use 1 for the first dimension, 2 for the second, and so on. If		
	first dimension, 2 for the second, and so on. If		
	dimension is omitted, 1 is assumed.		

Remarks

The **UBound** function is used with the **LBound** function to determine the size of an array. Use the **LBound** function to find the lower limit of an array dimension.

The lower bound for any dimension is always 0. As a result, **UBound** returns the following values for an array with these dimensions:

Dim A(100,3,4)

Statement	Return Value
UBound(A, 1)	100
UBound(A, 2)	3
UBound(A, 3)	4

Function

See Also

Description

Returns a string that has been converted to uppercase.

Syntax

UCase(string**)**

The *string* argument is any valid <u>string expression</u>. If *string* contains <u>Null</u>, **Null** is returned.

Remarks

Only lowercase letters are converted to uppercase; all uppercase letters and nonletter characters remain unchanged.

The following example uses the **UCase** function to return an uppercase version of a string:

Dim MyWord

MyWord = UCase("Hello World") ' Returns "HE



Property

See Also

Applies To

Description

Returns the value or text of a match found in a search string.

Syntax

object.Value

The *object* argument is always a **Match** object.

Remarks

The following code illustrates the use of the **Value** property:

```
Function RegExpTest(patrn, strng)
```

Dim regEx, Match, Matches 'Create variable.

Set regEx = New RegExp 'Create regular expression

regEx.Pattern = patrn 'Set pattern.

regEx.Global = True 'Set global applicability.

Set Matches = regEx.Execute(strng) 'Execute search.

For Each Match in Matches 'Iterate Matches collection.

RetStr = RetStr & "Match " & I & " found at position "

RetStr = RetStr & Match.FirstIndex & ". Match Value is "

RetStr = RetStr & Match. Value & ""." & vbCRLF

Next RegExpTest = RetStr End Function

MsgBox(RegExpTest("is.", "IS1 is2 IS3 is4"))

VarType Constants

See Also

These constants are only available when your project has an explicit reference to the appropriate <u>type library</u> containing these constant definitions. For VBScript, you must explicitly declare these constants in your code.

Constant	Value	Description
vbEmpty	0	Uninitialized (default)
vbNull	1	Contains no valid data
vbInteger	2	Integer subtype
vbLong	3	Long subtype
vbSingle	4	Single subtype
vbSingle	5	Double subtype
vbCurrency	6	Currency subtype
vbDate	7	Date subtype
vbString	8	String subtype
vbObject	9	Object
vbError	10	Error subtype
vbBoolean	11	Boolean subtype
vbVariant	12	Variant (used only for arrays of variants)
vbDataObject	13	Data access object
vbDecimal	14	Decimal subtype
vbByte	17	Byte subtype
vbArray	8192	Array

VarType Function

See Also

Description

Returns a value indicating the subtype of a variable.

Syntax

VarType(varname)

The *varname* argument can be any <u>variable</u>.

Return Values

The **VarType** function returns the following values:

Constant	Value	Description
vbEmpty	0	Empty (uninitialized)
vbNull	1	Null (no valid data)
vbInteger	2	Integer
vbLong	3	Long integer
vbSingle	4	Single-precision floating-point number
vbDouble	5	Double-precision floating-point number
vbCurrency	6	Currency
vbDate	7	Date
vbString	8	String
vbObject	9	Automation object
vbError	10	Error
vbBoolean	11	Boolean
vbVariant	12	Variant (used only with arrays of Variants)

vbDataObject	13	A data-access object
vbByte	17	Byte
vbArray	8192	Array

Note These <u>constants</u> are specified by VBScript. As a result, the names can be used anywhere in your code in place of the actual values.

Remarks

The **VarType** function never returns the value for Array by itself. It is always added to some other value to indicate an array of a particular type. The value for Variant is only returned when it has been added to the value for Array to indicate that the argument to the **VarType** function is an array. For example, the value returned for an array of integers is calculated as 2 + 8192, or 8194. If an object has a default property, **VarType** (*object*) returns the type of its default property.

The following example uses the **VarType** function to determine the subtype of a variable.

```
Dim MyCheck
MyCheck = VarType(300)
```

' Returns 2.

MyCheck = VarType(#10/19/62#) 'Returns 7.

MyCheck = VarType("VBScript") 'Returns 8.

<u>Language Reference</u> Version 2

VBScript Constants

See Also

A number of useful constants you can use in your code are built into VBScript. Constants provide a convenient way to use specific values without actually having to remember the value itself. Using constants also makes your code more maintainable should the value of any constant ever change. Because these constants are already defined in VBScript, you don't need to explicitly declare them in your code. Simply use them in place of the values they represent.

Here are the various categories of constants provided in VBScript and a brief description of each:

Color Constants

Defines eight basic colors that can be used in scripting.

Date and Time Constants

Defines date and time constants used by various date and time functions.

Date Format Constants

Defines constants used to format dates and times.

Miscellaneous Constants

Defines constants that don't conveniently fit into any other category.

MsgBox Constants

Defines constants used in the **MsgBox** function to describe button visibility, labeling, behavior, and return values.

String Constants

Defines a variety of non-printable characters used in string manipulation.

Tristate Constants

Defines constants used with functions that format numbers.

VarType Constants

Defines the various Variant subtypes.

Weekday Function

See Also

Description

Returns a whole number representing the day of the week.

Syntax

Weekday(date, [firstdayofweek])

The **Weekday** function syntax has these arguments:

Part	Description	
	Any expression that can represent a date. If date contains Null, Null is returned.	
firstdayofweek	A constant that specifies the first day of the week. If omitted, vbSunday is assumed.	

Settings

The *firstdayofweek* argument has these settings:

Constant	Value	Description
vbUseSystem	0	Use National Language Support (NLS) API setting.
vbSunday	1	Sunday
vbMonday	2	Monday
vbTuesday	3	Tuesday
vbWednesday	4	Wednesday
vbThursday	5	Thursday
vbFriday	6	Friday
vbSaturday	7	Saturday

Return Values

The **Weekday** function can return any of these values:

Constant	Value	Description
vbSunday	1	Sunday
vbMonday	2	Monday
vbTuesday	3	Tuesday
vbWednesday	4	Wednesday
vbThursday	5	Thursday
vbFriday	6	Friday
vbSaturday	7	Saturday

Remarks

The following example uses the **Weekday** function to obtain the day of the week from a specified date:

Dim MyDate, MyWeekDay
MyDate = #October 19, 1962# 'Assign a date.
MyWeekDay = Weekday(MyDate) 'MyWeekDay contains 6 bec
'MyDate represents a Friday.

While...Wend Statement

Language Reference Version 1

See Also

Description

Executes a series of statements as long as a given condition is **True**.

Syntax

While *condition* Version [*statements*]

Wend

The **While...Wend** statement syntax has these parts:

Part	Description		
condition	Numeric or string expression that evaluates to True or False . If condition is Null , condition is treated as False .		
statements	One or more statements executed while condition is True .		

Remarks

If *condition* is **True**, all statements in *statements* are executed until the **Wend** statement is encountered. Control then returns to the **While** statement and *condition* is again checked. If *condition* is still **True**, the process is repeated. If it is not **True**, execution resumes with the statement following the **Wend** statement.

While...Wend loops can be nested to any level. Each Wend matches the most recent While.

Tip The **Do...Loop** statement provides a more structured and flexible way to perform looping.

The following example illustrates use of the **While...Wend** statement:

Dim Counter

Counter = 0 'Initialize variable.

While Counter < 20 'Test value of Counter.

Counter = Counter + 1 'Increment Counter.

Alert Counter

Wend 'End While loop when Counte



Statement

See Also

Description

Executes a series of statements on a single object.

Syntax

With object statements End With

The **With** statement syntax has these parts:

Part	Description	
object	Required. Name of an object or a function that returns an object.	
statements Required. One or more statements to be executed on object.		

Remarks

The **With** statement allows you to perform a series of statements on a specified object without requalifying the name of the object. For example, to change a number of different properties on a single object, place the property assignment statements within the **With** control structure, referring to the object once instead of referring to it with each property assignment. The following example illustrates use of the **With** statement to assign values to several properties of the same object.

```
With MyLabel
.Height = 2000
.Width = 2000
.Caption = "This is MyLabel"
End With
```

While property manipulation is an important aspect of **With** functionality, it is not the only use. Any legal code can be used within a **With** block.

Note Once a **With** block is entered, *object* can't be changed. As a result, you can't use a single **With** statement to affect a number of different objects.

You can nest **With** statements by placing one **With** block within another. However, because members of outer **With** blocks are masked within the inner **With** blocks, you must provide a fully qualified object reference in an inner **With** block to any member of an object in an outer **With** block.

Important Do not jump into or out of **With** blocks. If statements in a **With** block are executed, but either the **With** or **End With** statement is not executed, you may get errors or unpredictable behavior.



Operator

See Also

Description

Performs a logical exclusion on two expressions.

Syntax

result = expression1 **Xor** expression2

The **Xor** operator syntax has these parts:

Part	Description	
result	Any numeric variable.	
expression1	Any <u>expression</u> .	
expression2	Any expression.	

Remarks

If one, and only one, of the expressions evaluates to **True**, *result* is **True**. However, if either expression is **Null**, *result* is also **Null**. When neither expression is **Null**, *result* is determined according to the following table:

If expression1 is	And expression2 is	Then result is
True	True	False
True	False	True
False	True	True
False	False	False

The **Xor** operator also performs a <u>bitwise comparison</u> of identically

positioned bits in two <u>numeric expressions</u> and sets the corresponding bit in *result* according to the following table:

If bit in <i>expression1</i> is	And bit in expression2 is	Then result is
0	0	0
0	1	1
1	0	1
1	1	0



Function

See Also

Description

Returns a whole number representing the year.

Syntax

Year(date)

The *date* argument is any expression that can represent a date. If *date* contains <u>Null</u>, **Null** is returned.

Remarks

The following example uses the **Year** function to obtain the year from a specified date:

```
Dim MyDate, MyYear
MyDate = #October 19, 1962# 'Assign a date.
MyYear = Year(MyDate) 'MyYear contains 1962.
```



Constants

See Also

Since these constants are built into VBScript, you don't have to define them before using them. Use them anywhere in your code to represent the values shown for each.

Constant	Value	Description
vbBlack	&h00	Black
vbRed	&hFF	Red
vbGreen	&hFF00	Green
vbYellow	&hFFFF	Yellow
vbBlue	&hFF0000	Blue
vbMagenta	&hFF00FF	Magenta
vbCyan	&hFFFF00	Cyan
vbWhite	&hFFFFFF	White



Constants

See Also

Since these constants are built into VBScript, you don't have to define them before using them. Use them anywhere in your code to represent the values shown for each.

Constant	Value	Description		
Vht/sel)etaillt -/		Use default from computer's regional settings.		
vbTrue	-1	True		
vbFalse	0	False		

Language Reference Version 1

VBScript Runtime Errors

VBScript Syntax Errors

5			
J	Invalid procedure call or argument		
6	Overflow		
7	Out of memory		
9	Subscript out of range		
10	This array is fixed or temporarily locked		
11	Division by zero		
13	Type mismatch		
14	Out of string space		
17	Can't perform requested operation		
28	Out of stack space		
35	Sub or Function not defined		
48	Error in loading DLL		
51	Internal error		
52	Bad file name or number		
53	File not found		
54	Bad file mode		
55	File already open		
57	Device I/O error		
58	File already exists		
61	Disk full		
62	Input past end of file		
67	Too many files		
68	Device unavailable		
70	Permission denied		
71	Disk not ready		
74	Can't rename with different drive		
75	Path/File access error		
76	Path not found		
91	Object variable not set		

92	For loop not initialized		
94	Invalid use of Null		
322	Can't create necessary temporary file		
424	Object required		
429	ActiveX component can't create object		
430	Class doesn't support Automation		
432	File name or class name not found during Automation operation		
438	Object doesn't support this property or method		
440	Automation error		
445	Object doesn't support this action		
446	Object doesn't support named arguments		
447	Object doesn't support current locale setting		
448	Named argument not found		
449	Argument not optional		
450	Wrong number of arguments or invalid property assignment		
451	Object not a collection		
453	Specified DLL function not found		
455	Code resource lock error		
458	Variable uses an Automation type not supported in VBScript		
462	The remote server machine does not exist or is unavailable		
481	Invalid picture		
500	Variable is undefined		
501	Illegal assignment		
502	Object not safe for scripting		
503	Object not safe for initializing		
504	Object not safe for creating		
505	Invalid or unqualified reference		
506	Class not defined		
507	An exception occurred		
5016	Regular Expression object expected		
5017	Syntax error in regular expression		
5018	Unexpected quantifier		
5019	Expected ']' in regular expression		
5020	Expected ')' in regular expression		
5021	Invalid range in character set		
32811	Element not found		

Language Reference Version 1

VBScript Syntax Errors

VBScript Run-time Errors

Error Number	Description		
1001	Out of memory		
1002	Syntax error		
1003	Expected ':'		
1005	Expected '('		
1006	Expected ')'		
1007	Expected ']'		
1010	Expected identifier		
1011	Expected '='		
1012	Expected 'If'		
1013	Expected 'To'		
1014	Expected 'End'		
1015	Expected 'Function'		
1016	Expected 'Sub'		
1017	Expected 'Then'		
1018	Expected 'Wend'		
1019	Expected 'Loop'		
1020	Expected 'Next'		
1021	Expected 'Case'		
1022	Expected 'Select'		
1023	Expected expression		
1024	Expected statement		
1025	Expected end of statement		
1026	Expected integer constant		
1027	Expected 'While' or 'Until'		
1028	Expected 'While', 'Until' or end of statement		
1029	Expected 'With'		
1030	Identifier too long		
1031	Invalid number		
1032	Invalid character		

1033	Unterminated string constant		
1034	Unterminated comment		
1037	Invalid use of 'Me' keyword		
1038	'loop' without 'do'		
1039	Invalid 'exit' statement		
1040	Invalid 'for' loop control variable		
1041	Name redefined		
1042	Must be first statement on the line		
1043	Cannot assign to non-ByVal argument		
1044	Cannot use parentheses when calling a Sub		
1045	Expected literal constant		
1046	Expected 'In'		
1047	Expected 'Class'		
1048	Must be defined inside a Class		
1049	Expected Let or Set or Get in property declaration		
1050	Expected 'Property'		
1051	Number of arguments must be consistent across properties specification		
1052	Cannot have multiple default property/method in a Class		
1053	Class initialize or terminate do not have arguments		
1054	Property set or let must have at least one argument		
1055	Unexpected 'Next'		
1056	'Default' can be specified only on 'Property' or 'Function' or 'Sub'		
1057	'Default' specification must also specify 'Public''')		
1058	'Default' specification can only be on Property Get		

< operator"> operator"> <= operator"> = operator"> operator"> < operator; less
than operator; > operator; greater than operator; <= operator; less than or equal
to operator; >= operator; greater than or equal to operator; = operator; equal
operator; operator; not equal operator; string comparison; Empty">
Microsoft® Visual Basic® Scripting Edition

Comparison Operators

Language Reference Version 1

See Also

Description

Used to compare expressions.

Syntax

result = expression1 comparisonoperator expression2

result = object1 **Is** object2

Comparison operators have these parts:

Part	Description	
result	Any numeric variable.	
expression	Any expression.	
comparisonoperator	Any <u>comparison operator</u> .	
object	Any object name.	

Remarks

The **Is** operator has specific comparison functionality that differs from the operators in the following table. The following table contains a list of the comparison operators and the conditions that determine whether *result* is **True**, **False**, or **Null**:

Operator Description	True if	False if	Null if
-			

<	Less than	expression1	expression1	expression1 or
		<pre></pre>	>-	expression2 =
		expression2	expression2	Null
<=	Less than or equal to	expression1	expression1	expression1 or
		<=	>	expression2 =
		expression2	expression2	
>	Greater than	expression1	expression1	expression1 or
		>	_	expression2 =
		expression2	expression2	*
>=	Greater	expression1	expression1	expression1 or
	than or	>=	_	expression2 =
	equal to	expression2	expression2	Null
=	Equal to	expression1	expression1	expression1 or
		=	<>	expression2 =
		expression2	expression2	Null
<>	Not equal to	expression1	expression1	expression1 or
		<>	=	expression2 =
		expression2	expression2	Null

When comparing two expressions, you may not be able to easily determine whether the expressions are being compared as numbers or as strings.

The following table shows how expressions are compared or what results from the comparison, depending on the underlying subtype:

If	Then
Both expressions are numeric	Perform a numeric comparison.
Both expressions are strings	Perform a <u>string comparison</u> .
One expression is numeric and the other is a string	The numeric expression is less than the string expression.
One expression is Empty and the other is numeric	Perform a numeric comparison, using 0 as the Empty expression.
numeric	

One expression is	Perform a string comparison, using a		
Empty and the other is	zero-length string ("") as the Empty		
a string	expression.		
Both expressions are Empty	The expressions are equal.		

VBScript Language Reference

VBScript Tutorial
Version Information

- Feature Information
- Alphabetic Keyword List
- Constants
- Errors
- Events
- Functions
- Methods
- Objects
- Operators

Welcome to the VBScript Language Reference

These handy blocks of information will help you explore the many different parts of the Visual Basic Scripting language.

You'll find *all* the parts of the VBScript language listed alphabetically under the Alphabetic Keyword List. But if you want to examine just one category, say, objects, each language category has its own, more compact section.

How's it work? Click on one of the headings to the left to display a list of items contained in that category. From this list, select the topic that you want to view. Once you've opened that topic, you can easily link to other related sections.

So, go ahead and take a look! Study some statements, mull over the methods, or figure out



a few functions. You'll see just how versatile the VBScript language can be!

Statements

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Scripting Run-Time Reference Version 2

Method (Dictionary)

See Also

Applies to

Description

Adds a key and item pair to a **Dictionary** object.

Syntax

object.Add key, item

The **Add** method has the following parts:

Part	Description
object	Required. Always the name of a Dictionary object.
key	Required. The <i>key</i> associated with the <i>item</i> being added.
item	Required. The <i>item</i> associated with the <i>key</i> being added.

Remarks

An error occurs if the *key* already exists.

The following example illustrates the use of the **Add** method:

Dim d 'Create a variable.

Set d = CreateObject("Scripting.Dictionary")

d.Add "a", "Athens" 'Add some keys and items.

d.Add "b", "Belgrade"

d.Add "c", "Cairo"



Method (Folders)

See Also

Applies To

Description

Adds a new **Folder** to a **Folders** collection.

Syntax

object.Add(folderName)

The **Add** method has the following parts:

Part	Description		
object	Required. Always the name of a Folders collection.		
folderName	Required. The name of the new Folder being added.		

Remarks

The following example illustrates the use of the **Add** method to add a new folder:

```
Sub AddNewFolder(path, folderName)
Dim fso, f, fc, nf
Set fso = CreateObject("Scripting.FileSystemObject")
Set f = fso.GetFolder(path)
Set fc = f.SubFolders
If folderName <> "" Then
Set nf = fc.Add(folderName)
Else
Set nf = fc.Add("New Folder")
```

End If End Sub

An error occurs if *folderName* already exists.

AtEndOfLine Property

Scripting Run-Time Reference Version 2

See Also

Applies to

Description

Returns **True** if the file pointer immediately precedes the end-of-line marker in a **TextStream** file; **False** if it is not. Read-only.

Syntax

object.AtEndOfLine

The *object* is always the name of a **TextStream** object.

Remarks

The **AtEndOfLine** property applies only to **TextStream** files that are open for reading; otherwise, an error occurs.

The following code illustrates the use of the **AtEndOfLine** property:

```
Function ReadEntireFile(filespec)

Const ForReading = 1

Dim fso, theFile, retstring

Set fso = CreateObject("Scripting.FileSystemObject theFile = fso.OpenTextFile(filespec, ForReading Do While theFile.AtEndOfLine <> True retstring = theFile.Read(1)

Loop
```

theFile.Close ReadEntireFile = retstring End Function

AtEndOfStream Property

Scripting Run-Time Reference Version 2

See Also

Applies to

Description

Returns **True** if the file pointer is at the end of a **TextStream** file; **False** if it is not. Read-only.

Syntax

object.AtEndOfStream

The *object* is always the name of a **TextStream** object.

Remarks

The **AtEndOfStream** property applies only to **TextStream** files that are open for reading, otherwise, an error occurs.

The following code illustrates the use of the **AtEndOfStream** property:

Function ReadEntireFile(filespec) Const ForReading = 1 Dim fso, theFile, retstring Set fso = CreateObject("Scripting.FileSystemObject theFile = fso.OpenTextFile(filespec, ForReading Do While theFile.AtEndOfStream <> True retstring = theFile.ReadLine Loop

theFile.Close ReadEntireFile = retstring End Function

Scripting Run-Time Reference Version 3

Attributes Property

See Also

Applies To

Description

Sets or returns the attributes of files or folders. Read/write or read-only, depending on the attribute.

Syntax

object.Attributes [= newattributes]

The **Attributes** property has these parts:

Part Description		
IIANI <i>PC</i> T I	Required. Always the name of a File or Folder object.	
newattributes	Optional. If provided, <i>newattributes</i> is the new value for the attributes of the specified <i>object</i> .	

Settings

The *newattributes* argument can have any of the following values or any logical combination of the following values:

Constant	Value	Description		
Normal	0	Normal file. No attributes are set.		
ReadOnly	1	Read-only file. Attribute is read/write.		
Hidden	2	Hidden file. Attribute is read/write.		
System	4	System file. Attribute is read/write.		
Directory	16	Folder or directory. Attribute is read-only.		

Archive	02	File has changed since last backup. Attribute is read/write.		
Alias	1024	Link or shortcut. Attribute is read-only.		
Compressed	2048	Compressed file. Attribute is read-only.		

Remarks

Attempts to change any of the read-only attributes (Alias, Compressed, or Directory) are ignored.

When setting attributes, it is generally a good idea to first read the current attributes, then change the individual attributes as desired, and finally write the attributes back.

The following code illustrates the use of the **Attributes** property with a file:

```
Function ToggleArchiveBit(filespec)
Dim fso, f
Set fso = CreateObject("Scripting.FileSystemObject f = fso.GetFile(filespec)
If f.attributes and 32 Then
f.attributes = f.attributes - 32
ToggleArchiveBit = "Archive bit is cleared."
Else
f.attributes = f.attributes + 32
ToggleArchiveBit = "Archive bit is set."
End If
End Function
```

AvailableSpace Property

Scripting Run-Time Reference Version 3

See Also

Applies To

Description

Returns the amount of space available to a user on the specified drive or network share.

Syntax

object.AvailableSpace

The *object* is always a **Drive** object.

Remarks

The value returned by the **AvailableSpace** property is typically the same as that returned by the **FreeSpace** property. Differences may occur between the two for computer systems that support quotas.

The following code illustrates the use of the **AvailableSpace** property:

```
Function ShowAvailableSpace(drvPath)

Dim fso, d, s

Set fso = CreateObject("Scripting.FileSystemObject")

Set d = fso.GetDrive(fso.GetDriveName(drvPath))

s = "Drive " & UCase(drvPath) & " - "

s = s & d.VolumeName & "<BR>"

s = s & "Available Space: " & FormatNumber(d.AvailableSpace/s = s & " Kbytes"

ShowAvailableSpace = s

End Function
```

BuildPath Method

See Also

Applies To

Description

Appends a name to an existing path.

Syntax

object.BuildPath(path, name)

The **BuildPath** method syntax has these parts:

Part	Description		
object	Required. Always the name of a FileSystemObject .		
path	Required. Existing path to which <i>name</i> is appended. Path can be absolute or relative and need not specify an existing folder.		
name	Required. Name being appended to the existing <i>path</i> .		

Remarks

The **BuildPath** method inserts an additional path separator between the existing path and the name, only if necessary.

The following example illustrates use of the **BuildPath** method:

Function GetBuildPath(path)
Dim fso, newpath

Set fso = CreateObject("Scripting.FileSystemObjenewpath = fso.BuildPath(path, "Sub Folder")

GetBuildPath = newpath

End Function



Method

See Also

Applies to

Description

Closes an open **TextStream** file.

Syntax

object.Close

The *object* is always the name of a **TextStream** object.

Remarks

The following example illustrates use of the **Close** method to close an open **TextStream** file:

```
Sub CreateAFile
Dim fso, MyFile
Set fso = CreateObject("Scripting.FileSystemObject")
Set MyFile = fso.CreateTextFile("c:\testfile.txt", True)
MyFile.WriteLine("This is a test.")
MyFile.Close
End Sub
```



Property

See Also

Applies to

Description

Read-only property that returns the column number of the current character position in a **TextStream** file.

Syntax

object.Column

The *object* is always the name of a **TextStream** object.

Remarks

After a newline character has been written, but before any other character is written, **Column** is equal to 1.

The following example illustrates use of the **Column** property:

Function GetColumn

Const ForReading = 1, ForWriting = 2

Dim fso, f, m

Set fso = CreateObject("Scripting.FileSystemObject("Script

Set f = fso.OpenTextFile("c:\testfile.txt", ForWriti

f.Write "Hello world!"

f.Close

Set f = fso.OpenTextFile("c:\testfile.txt", ForReac

m = f.ReadLine

GetColumn = f.Column End Function

CompareMode Property

Scripting Run-Time Reference Version 2

See Also

Applies to

Description

Sets and returns the comparison mode for comparing string keys in a **Dictionary** object.

Syntax

object.CompareMode[= compare]

The **CompareMode** property has the following parts:

Part	Description
object	Required. Always the name of a Dictionary object.
compare	Optional. If provided, <i>compare</i> is a value representing the comparison mode used by functions such as StrComp .

Settings

The *compare* argument has the following settings:

Constant	Value	Description			
vbBinaryCompare	0	Perform a binary comparison.	vbTextCompare	1	Perform a textual comparison.

Remarks

Values greater than 2 can be used to refer to comparisons using specific

Locale IDs (LCID). An error occurs if you try to change the comparison mode of a **Dictionary** object that already contains data.

The **CompareMode** property uses the same values as the *compare* argument for the **StrComp** function.

The following example illustrates use of the **CompareMode** property:

```
Dim d
```

Set d = CreateObject("Scripting.Dictionary")

d.CompareMode = vbTextCompare

d.Add "a", "Athens" 'Add some keys and items

d.Add "b", "Belgrade"

d.Add "c", "Cairo"

d.Add "B", "Baltimore" 'Add method fails on this 'letter b already exists in the Dictio



Method

See Also

Applies To

Description

Copies a specified file or folder from one location to another.

Syntax

object.Copy destination[, overwrite]

The **Copy** method syntax has these parts:

Part	Description
IIANI <i>PCT</i> I	Required. Always the name of a File or Folder object.
destination	Required. Destination where the file or folder is to be copied. Wildcard characters are not allowed.
overwrite	Optional. Boolean value that is True (default) if existing files or folders are to be overwritten; False if they are not.

Remarks

The results of the **Copy** method on a **File** or **Folder** are identical to operations performed using **FileSystemObject.CopyFile** or **FileSystemObject.CopyFolder** where the file or folder referred to by *object* is passed as an argument. You should note, however, that the alternative methods are capable of copying multiple files or folders.

The following example illustrates use of the **Copy** method:

Dim fso, MyFile

Set fso = CreateObject("Scripting.FileSystemObjection Set MyFile = fso.CreateTextFile("c:\testfile.txt", Times Tile.WriteLine("This is a test.")

MyFile.Close

Set MyFile = fso.GetFile("c:\testfile.txt")

MyFile.Copy ("c:\windows\desktop\test2.txt")

CopyFile Method

See Also

Applies To

Description

Copies one or more files from one location to another.

Syntax

object. **CopyFile** source, destination[, overwrite]

The **CopyFile** method syntax has these parts:

Part	Description
object	Required. The <i>object</i> is always the name of a FileSystemObject .
source	Required. Character string file specification, which can include wildcard characters, for one or more files to be copied.
destination	Required. Character string destination where the file or files from <i>source</i> are to be copied. Wildcard characters are not allowed.
overwrite	Optional. Boolean value that indicates if existing files are to be overwritten. If True , files are overwritten; if False , they are not. The default is True . Note that CopyFile will fail if <i>destination</i> has the read-only attribute set, regardless of the value of <i>overwrite</i> .

Remarks

Wildcard characters can only be used in the last path component of the *source* argument. For example, you can use:

FileSystemObject.CopyFile "c:\mydocuments\letters*.doc", "c:\te
But you can't use:

FileSystemObject.CopyFile "c:\mydocuments*\R1???97.xls", "c:\

If *source* contains wildcard characters or *destination* ends with a path separator (\), it is assumed that *destination* is an existing folder in which to copy matching files. Otherwise, *destination* is assumed to be the name of a file to create. In either case, three things can happen when an individual file is copied.

- If *destination* does not exist, *source* gets copied. This is the usual case.
- If *destination* is an existing file, an error occurs if *overwrite* is **False**. Otherwise, an attempt is made to copy *source* over the existing file.
- If *destination* is a directory, an error occurs.

An error also occurs if a *source* using wildcard characters doesn't match any files. The **CopyFile** method stops on the first error it encounters. No attempt is made to roll back or undo any changes made before an error occurs.

CopyFolder Method

Scripting Run-Time Reference Version 3

See Also Applies To

Description

Recursively copies a folder from one location to another.

Syntax

object. **CopyFolder** source, destination[, overwrite]

The **CopyFolder** method syntax has these parts:

Part	Description		
object	Required. Always the name of a FileSystemObject .		
ll I	Required. Character string folder specification, which can include wildcard characters, for one or more folders to be copied.		
destination	Required. Character string destination where the folder and subfolders from <i>source</i> are to be copied. Wildcard characters are not allowed.		
ll I	Optional. Boolean value that indicates if existing folders are to be overwritten. If True , files are overwritten; if False , they are not. The default is True .		

Remarks

Wildcard characters can only be used in the last path component of the *source* argument. For example, you can use:

FileSystemObject.CopyFolder "c:\mydocuments\letters*", "c:\ten

But you can't use:

FileSystemObject.CopyFolder "c:\mydocuments**", "c:\tempfole

If *source* contains wildcard characters or *destination* ends with a path separator (\), it is assumed that *destination* is an existing folder in which to copy matching folders and subfolders. Otherwise, *destination* is assumed to be the name of a folder to create. In either case, four things can happen when an individual folder is copied.

- If *destination* does not exist, the *source* folder and all its contents gets copied. This is the usual case.
- If *destination* is an existing file, an error occurs.
- If *destination* is a directory, an attempt is made to copy the folder and all its contents. If a file contained in *source* already exists in *destination*, an error occurs if *overwrite* is **False**. Otherwise, it will attempt to copy the file over the existing file.
- If *destination* is a read-only directory, an error occurs if an attempt is made to copy an existing read-only file into that directory and *overwrite* is **False**.

An error also occurs if a *source* using wildcard characters doesn't match any folders.

The **CopyFolder** method stops on the first error it encounters. No attempt is made to roll back any changes made before an error occurs.



Property

See Also

Applies To

Description

Returns the number of items in a collection or **Dictionary** object. Readonly.

Syntax

object.Count

The *object* is always the name of one of the items in the Applies To list.

Remarks

The following code illustrates use of the **Count** property:

```
Function ShowKeys

Dim a, d, i, s 'Create some variables.

Set d = CreateObject("Scripting.Dictionary")
d.Add "a", "Athens" 'Add some keys and items.
d.Add "b", "Belgrade"
d.Add "c", "Cairo"
a = d.Keys 'Get the keys.

For i = 0 To d.Count -1 'Iterate the array.
s = s & a(i) & "<BR>" 'Create return string.

Next

ShowKeys = s

End Function
```

CreateFolder Method

Scripting Run-Time Reference Version 3

See Also

Applies To

Description

Creates a folder.

Syntax

object.CreateFolder(foldername)

The **CreateFolder** method has these parts:

Part	Description
object	Required. Always the name of a FileSystemObject .
foldername	Required. String expression that identifies the folder
	to create.

Remarks

An error occurs if the specified folder already exists.

The following example illustrates use of the **CreateFolder** method:

Function CreateFolderDemo

Dim fso, f

Set fso = CreateObject("Scripting.FileSystemObject("Script

Set f = fso.CreateFolder("c:\New Folder")

CreateFolderDemo = f.Path

End Function

CreateTextFile Method

Scripting Run-Time Reference Version 2

See Also

Applies to

Description

Creates a specified file name and returns a **TextStream** object that can be used to read from or write to the file.

Syntax

object.CreateTextFile(filename[, overwrite[, unicode]])

The **CreateTextFile** method has these parts:

Part	Description			
object	Required. Always the name of a FileSystemObject or Folder object.			
filename	Required. String expression that identifies the file to create.			
overwrite	Optional. Boolean value that indicates if an existing file can be overwritten. The value is True if the file can be overwritten; False if it can't be overwritten. If omitted, existing files are not overwritten.			
	Optional. Boolean value that indicates whether the file is created as a Unicode or ASCII file. The value is True if the file is created as a Unicode file; False if it's created as an ASCII file. If omitted, an ASCII file is assumed.			

Remarks

The following code illustrates how to use the **CreateTextFile** method to

create and open a text file:

```
Sub CreateAfile
Dim fso, MyFile
Set fso = CreateObject("Scripting.FileSystemObject")
Set MyFile = fso.CreateTextFile("c:\testfile.txt", True)
MyFile.WriteLine("This is a test.")
MyFile.Close
End Sub
```

If the *overwrite* argument is **False**, or is not provided, for a *filename* that already exists, an error occurs.

DateCreated Property

Scripting Run-Time Reference Version 3

See Also

Applies To

Description

Returns the date and time that the specified file or folder was created. Readonly.

Syntax

object.DateCreated

The *object* is always a **File** or **Folder** object.

Remarks

The following code illustrates the use of the **DateCreated** property with a file:

```
Function ShowFileInfo(filespec)
Dim fso, f
Set fso = CreateObject("Scripting.FileSystemObject")
Set f = fso.GetFile(filespec)
ShowFileInfo = "Created: " & f.DateCreated
End Function
```

DateLastAccessed Property

Scripting Run-Time Reference Version 3

See Also

Applies To

Description

Returns the date and time that the specified file or folder was last accessed. Read-only.

Syntax

object.DateLastAccessed

The *object* is always a **File** or **Folder** object.

Remarks

The following code illustrates the use of the **DateLastAccessed** property with a file:

```
Function ShowFileAccessInfo(filespec)
Dim fso, f, s
Set fso = CreateObject("Scripting.FileSystemObject")
Set f = fso.GetFile(filespec)
s = UCase(filespec) & "<BR>"
s = s & "Created: " & f.DateCreated & "<BR>"
s = s & "Last Accessed: " & f.DateLastAccessed & "<BR>"
s = s & "Last Modified: " & f.DateLastModified
ShowFileAccessInfo = s
End Function
```

Important This method depends on the underlying operating system for its behavior.

If the operating system does not support providing time information, none will be
returned.

DateLastModified Property

Scripting Run-Time Reference Version 3

See Also

Applies To

Description

Returns the date and time that the specified file or folder was last modified. Read-only.

Syntax

object.DateLastModified

The *object* is always a **File** or **Folder** object.

Remarks

The following code illustrates the use of the **DateLastModified** property with a file:

```
Function ShowFileAccessInfo(filespec)
Dim fso, f, s
Set fso = CreateObject("Scripting.FileSystemObject")
Set f = fso.GetFile(filespec)
s = UCase(filespec) & "<BR>"
s = s & "Created: " & f.DateCreated & "<BR>"
s = s & "Last Accessed: " & f.DateLastAccessed & "<BR>"
s = s & "Last Modified: " & f.DateLastModified
ShowFileAccessInfo = s
End Function
```



Method

See Also

Applies To

Description

Deletes a specified file or folder.

Syntax

object.Delete force

The **Delete** method syntax has these parts:

Part	Description
object	Required. Always the name of a File or Folder object.
force	Optional. Boolean value that is True if files or folders with the read-only attribute set are to be deleted; False (default) if they are not.

Remarks

An error occurs if the specified file or folder does not exist. The **Delete** method does not distinguish between folders that have contents and those that do not. The specified folder is deleted regardless of whether or not it has contents.

The results of the **Delete** method on a **File** or **Folder** are identical to operations performed using **FileSystemObject.DeleteFile** or **FileSystemObject.DeleteFolder**.

The following example illustrates use of the **Delete** method:

Dim fso, MyFile
Set fso = CreateObject("Scripting.FileSystemObject")

Set MyFile = fso.CreateTextFile("c:\testfile.txt", Ti MyFile.WriteLine("This is a test.") MyFile.Close Set MyFile = fso.GetFile("c:\testfile.txt") MyFile.Delete

DeleteFile Method

See Also

Applies To

Description

Deletes a specified file.

Syntax

object.DeleteFile filespec[, force]

The **DeleteFile** method syntax has these parts:

Part	Description
object	Required. Always the name of a FileSystemObject .
	Required. The name of the file to delete. The <i>filespec</i> can contain wildcard characters in the last path component.
	Optional. Boolean value that is True if files with the read-only attribute set are to be deleted; False (default) if they are not.

Remarks

An error occurs if no matching files are found. The **DeleteFile** method stops on the first error it encounters. No attempt is made to roll back or undo any changes that were made before an error occurred.

The following example illustrates use of the **DeleteFile** method:

Sub DeleteAFile(filespec)
Dim fso
Set fso = CreateObject("Scripting.FileSystemObject("

fso.DeleteFile(filespec)

End Sub

DeleteFolder Method

Scripting Run-Time Reference Version 3

See Also

Applies To

Description

Deletes a specified folder and its contents.

Syntax

object.DeleteFolder folderspec[, force]

The **DeleteFolder** method syntax has these parts:

Part	Description		
object	Required. Always the name of a FileSystemObject .		
	Required. The name of the folder to delete. The <i>folderspec</i> can contain wildcard characters in the last path component.		
force	Optional. Boolean value that is True if folders with the read-only attribute set are to be deleted; False (default) if they are not.		

Remarks

The **DeleteFolder** method does not distinguish between folders that have contents and those that do not. The specified folder is deleted regardless of whether or not it has contents.

An error occurs if no matching folders are found. The **DeleteFolder** method stops on the first error it encounters. No attempt is made to roll back or undo any changes that were made before an error occurred.

The following example illustrates use of the **DeleteFolder** method:

```
Sub DeleteAFolder(filespec)
Dim fso
Set fso = CreateObject("Scripting.FileSystemObjetso.DeleteFolder(filespec)
End Sub
```

Dictionary Object

See Also Properties Methods

Description

Object that stores data key, item pairs.

Remarks

A **Dictionary** object is the equivalent of a PERL associative array. Items, which can be any form of data, are stored in the array. Each item is associated with a unique key. The key is used to retrieve an individual item and is usually a integer or a string, but can be anything except an array.

The following code illustrates how to create a **Dictionary** object:

Dim d 'Create a variable.

Set d = CreateObject("Scripting.Dictionary")
d.Add "a", "Athens" 'Add some keys and items.
d.Add "b", "Belgrade"
d.Add "c", "Cairo"

...



Object

See Also Properties Methods

Description

Provides access to the properties of a particular disk drive or network share.

Remarks

The following code illustrates the use of the **Drive** object to access drive properties:

```
Function ShowFreeSpace(drvPath)

Dim fso, d, s

Set fso = CreateObject("Scripting.FileSystemObject")

Set d = fso.GetDrive(fso.GetDriveName(drvPath))

s = "Drive " & UCase(drvPath) & " - "

s = s & d.VolumeName & "<BR>"

s = s & "Free Space: " & FormatNumber(d.FreeSpace/1024, 0)

s = s & " Kbytes"

ShowFreeSpace = s

End Function
```



Property

See Also

Applies To

Description

Returns the drive letter of the drive on which the specified file or folder resides. Read-only.

Syntax

object.Drive

The *object* is always a **File** or **Folder** object.

Remarks

The following code illustrates the use of the **Drive** property:

```
Function ShowFileAccessInfo(filespec)
Dim fso, f, s
Set fso = CreateObject("Scripting.FileSystemObject")
Set f = fso.GetFile(filespec)
s = f.Name & " on Drive " & UCase(f.Drive) & "<BR>"
s = s & "Created: " & f.DateCreated & "<BR>"
s = s & "Last Accessed: " & f.DateLastAccessed & "<BR>"
s = s & "Last Modified: " & f.DateLastModified
ShowFileAccessInfo = s
End Function
```

Scripting Run-Time Reference Version 3

DriveExists Method

See Also

Applies To

Description

Returns **True** if the specified drive exists; **False** if it does not.

Syntax

object.DriveExists(drivespec)

The **DriveExists** method syntax has these parts:

Part	Description		
object	Required. Always the name of a FileSystemObject .		
drivespec	Required. A drive letter or a complete path specification.		

Remarks

For drives with removable media, the **DriveExists** method returns **True** even if there are no media present. Use the **IsReady** property of the **Drive** object to determine if a drive is ready.

The following example illustrates use of the **DriveExists** method:

```
Function ReportDriveStatus(drv)
Dim fso, msg
Set fso = CreateObject("Scripting.FileSystemObject")
If fso.DriveExists(drv) Then
msg = ("Drive " & UCase(drv) & " exists.")
Else
```

```
msg = ("Drive " & UCase(drv) & " doesn't exist.")
End If
ReportDriveStatus = msg
End Function
```

DriveLetter Property

Scripting Run-Time Reference Version 3

See Also

Applies To

Description

Returns the drive letter of a physical local drive or a network share. Readonly.

Syntax

object.DriveLetter

The *object* is always a **Drive** object.

Remarks

The **DriveLetter** property returns a zero-length string ("") if the specified drive is not associated with a drive letter, for example, a network share that has not been mapped to a drive letter.

The following code illustrates the use of the **DriveLetter** property:

```
Function ShowDriveLetter(drvPath)

Dim fso, d, s

Set fso = CreateObject("Scripting.FileSystemObject")

Set d = fso.GetDrive(fso.GetDriveName(drvPath))

s = "Drive " & d.DriveLetter & ": - "

s = s & d.VolumeName & "<BR>"

s = s & "Free Space: " & FormatNumber(d.FreeSpace/1024, 0)

s = s & " Kbytes"

ShowDriveLetter = s

End Function
```

Drives Collection

See Also Properties Methods

Description

Read-only <u>collection</u> of all available drives.

Remarks

Removable-media drives need not have media inserted for them to appear in the **Drives** collection.

The following code illustrates how to get the **Drives** collection and iterate the collection using the **For Each...Next** statement:

```
Function ShowDriveList
 Dim fso, d, dc, s, n
 Set fso = CreateObject("Scripting.FileSystemObject")
 Set dc = fso.Drives
 For Each d in dc
  n = ""
  s = s \& d.DriveLetter \& " - "
  If d.DriveType = Remote Then
   n = d.ShareName
  ElseIf d.IsReady Then
   n = d.VolumeName
  End If
  s = s \& n \& "<BR>"
 Next
 ShowDriveList = s
End Function
```



Property

See Also

Applies To

Description

Returns a **Drives** collection consisting of all **Drive** objects available on the local machine.

Syntax

object.Drives

The *object* is always a **FileSystemObject**.

Remarks

Removable-media drives need not have media inserted for them to appear in the **Drives** collection.

You can iterate the members of the **Drives** collection using a **For Each...Next** construct as illustrated in the following code:

```
Function ShowDriveList
Dim fso, d, dc, s, n
Set fso = CreateObject("Scripting.FileSystemObject")
Set dc = fso.Drives
For Each d in dc
n = ""
s = s & d.DriveLetter & " - "
If d.DriveType = 3 Then
n = d.ShareName
ElseIf d.IsReady Then
n = d.VolumeName
```

```
End If

s = s & n & "<BR>"

Next

ShowDriveList = s

End Function
```

Scripting Run-Time Reference Version 3

DriveType Constants

See Also

These constants are only available when your project has an explicit reference to the appropriate <u>type library</u> containing these constant definitions. For VBScript, you must explicitly declare these constants in your code.

Constant	Value	Description		
Unknown	0	Drive type can't be determined.		
Removable	1	Drive has removable media. This includes all floppy drives and many other varieties of storage devices.		
Fixed	2	Drive has fixed (nonremovable) media. This includes all hard drives, including hard drives that are removable.		
Remote	3	Network drives. This includes drives shared anywhere on a network.		
CDROM	4	Drive is a CD-ROM. No distinction is made between read-only and read/write CD-ROM drives.		
RAMDisk	5	Drive is a block of Random Access Memory (RAM) on the local computer that behaves like a disk drive.		

Scripting Run-Time Reference Version 3

DriveType Property

See Also

Applies To

Description

Returns a value indicating the type of a specified drive.

Syntax

object.DriveType

The *object* is always a **Drive** object.

Remarks

The following code illustrates the use of the **DriveType** property:

```
Function ShowDriveType(drvpath)
Dim fso, d, t
Set fso = CreateObject("Scripting.FileSystemObject")
Set d = fso.GetDrive(drvpath)
Select Case d.DriveType
Case 0: t = "Unknown"
Case 1: t = "Removable"
Case 2: t = "Fixed"
Case 3: t = "Network"
Case 4: t = "CD-ROM"
Case 5: t = "RAM Disk"
End Select
ShowDriveType = "Drive " & d.DriveLetter & ": - " & t
End Function
```



Method

See Also

Applies to

Description

Returns **True** if a specified key exists in the **Dictionary** object, **False** if it does not.

Syntax

object.Exists(key)

The **Exists** method syntax has these parts:

Part	Description
object	Required. Always the name of a Dictionary object.
$ k \rho v $	Required. <i>Key</i> value being searched for in the Dictionary object.

Remarks

The following example illustrates use of the **Exists** method:

```
Function KeyExistsDemo

Dim d, msg 'Create some variables.

Set d = CreateObject("Scripting.Dictionary")

d.Add "a", "Athens" 'Add some keys and items.

d.Add "b", "Belgrade"

d.Add "c", "Cairo"

If d.Exists("c") Then

msg = "Specified key exists."

Else
```

msg = "Specified key doesn't exist." End If KeyExistsDemo = msg End Function



Attribute Constants

See Also

These constants are only available when your project has an explicit reference to the appropriate <u>type library</u> containing these constant definitions. For VBScript, you must explicitly declare these constants in your code.

Constant	Value	Description
Normal	0	Normal file. No attributes are set.
ReadOnly	1	Read-only file.
Hidden	2	Hidden file.
System	4	System file.
Directory	16	Folder or directory.
Archive	32	File has changed since last backup.
Alias	1024	Link or shortcut.
Compressed	2048	Compressed file.

Microsoft® Visual Basic® Scripting Edition File

Input/Output Constants

See Also

These constants are only available when your project has an explicit reference to the appropriate <u>type library</u> containing these constant definitions. For VBScript, you must explicitly declare these constants in your code.

Constant	Value	Description
ForReading		Open a file for reading only. You can't write to this file.
ForWriting 2 san		Open a file for writing. If a file with the same name exists, its previous contents are overwritten.
ForAppending	8	Open a file and write to the end of the file.

FileExists Method

See Also Applies To

Description

Returns **True** if a specified file exists; **False** if it does not.

Syntax

object.FileExists(filespec)

The **FileExists** method syntax has these parts:

Part	Description
object	Required. Always the name of a FileSystemObject .
filespec	Required. The name of the file whose existence is to be determined. A complete path specification (either absolute or relative) must be provided if the file isn't expected to exist in the current folder.

Remarks

The following example illustrates use of the **FileExists** method:

```
Function ReportFileStatus(filespec)
Dim fso, msg
Set fso = CreateObject("Scripting.FileSystemObject")
If (fso.FileExists(filespec)) Then
msg = filespec & " exists."
Else
msg = filespec & " doesn't exist."
End If
ReportFileStatus = msg
```

End Function



Object

See Also Properties Methods

Description

Provides access to all the properties of a file.

Remarks

The following code illustrates how to obtain a **File** object and how to view one of its properties.

```
Function ShowDateCreated(filespec)
Dim fso, f
Set fso = CreateObject("Scripting.FileSystemObject")
Set f = fso.GetFile(filespec)
ShowDateCreated = f.DateCreated
End Function
```



Collection

See Also Properties Methods

Description

<u>Collection</u> of all **File** objects within a folder.

Remarks

The following code illustrates how to get a **Files** collection and iterate the collection using the **For Each...Next** statement:

```
Function ShowFolderList(folderspec)
Dim fso, f, f1, fc, s
Set fso = CreateObject("Scripting.FileSystemObject")
Set f = fso.GetFolder(folderspec)
Set fc = f.Files
For Each f1 in fc
s = s & f1.name
s = s & "<BR>"
Next
ShowFolderList = s
End Function
```



Property

See Also

Applies To

Description

Returns a **Files** collection consisting of all **File** objects contained in the specified folder, including those with hidden and system file attributes set.

Syntax

object.Files

The *object* is always a **Folder** object.

Remarks

The following code illustrates the use of the **Files** property:

```
Function ShowFileList(folderspec)
Dim fso, f, f1, fc, s
Set fso = CreateObject("Scripting.FileSystemObject")
Set f = fso.GetFolder(folderspec)
Set fc = f.Files
For Each f1 in fc
s = s & f1.name
s = s & "<BR>"
Next
ShowFileList = s
End Function
```

FileSystemObject Object

Scripting Run-Time Reference Version 2

See Also Properties Methods

Description

Provides access to a computer's file system.

Remarks

The following code illustrates how the **FileSystemObject** is used to return a **TextStream** object that can be read from or written to:

Dim fso, MyFile
Set fso = CreateObject("Scripting.FileSystemObject")
Set MyFile = fso.CreateTextFile("c:\testfile.txt", True)
MyFile.WriteLine("This is a test.")
MyFile.Close

In the preceding code, the **CreateObject** function returns the **FileSystemObject** (fso). The **CreateTextFile** method then creates the file as a **TextStream** object (a) and the **WriteLine** method writes a line of text to the created text file. The **Close** method flushes the buffer and closes the file.

FileSystemObject Constants

Scripting Run-Time Reference Version 2

See Also

FileSystemObject has a number of useful constants that you can use in your code. Constants provide a convenient way to use specific values without actually having to remember the value itself. They also makes your code more maintainable, should the value of any constant ever change.

Depending on your scripting host, these constants may be already defined. If so, simply use the constants anywhere in your code in place of the values they represent. In cases where SCRRUN.DLL is not explicitly referenced by your scripting host, you'll have to define these constants in your code before you can use them. Examples of this case include Microsoft Internet Explorer and Microsoft Internet Information Services (IIS).

The following list describes the various categories of constants provided for the **FileSystemObject**, along with a brief description:

DriveType Constants

Defines the various drive types available on the host computer, such as Fixed, Removable, CD-ROM, etc.

File Attribute Constants

Defines various file attributes such as Hidden, Read-Only, etc.

File Input/Output Constants

Defines constants used with file input and output.

SpecialFolder Constants

Defines special folders available in your operating system.

FileSystem Property

<u>Scripting Run-Time Reference</u> Version 3

See Also

Applies To

Description

Returns the type of file system in use for the specified drive.

Syntax

object.FileSystem

The *object* is always a **Drive** object.

Remarks

Available return types include FAT, NTFS, and CDFS.

The following code illustrates the use of the **FileSystem** property:

Function ShowFileSystemType(drvspec)

Dim fso,d

Set fso = CreateObject("Scripting.FileSystemObject("Script

Set d = fso.GetDrive(drvspec)

ShowFileSystemType = d.FileSystem

End Function



Object

See Also Properties Methods

Description

Provides access to all the properties of a folder.

Remarks

The following code illustrates how to obtain a **Folder** object and how to return one of its properties:

```
Function ShowDateCreated(folderspec)
Dim fso, f
Set fso = CreateObject("Scripting.FileSystemObject")
Set f = fso.GetFolder(folderspec)
ShowDateCreated = f.DateCreated
End Function
```

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Collection

<u>See Also</u> <u>Properties</u> <u>Methods</u>

Description

<u>Collection</u> of all **Folder** objects contained within a **Folder** object.

Remarks

The following code illustrates how to get a **Folders** collection and how to iterate the collection using the **For Each...Next** statement:

```
Function ShowFolderList(folderspec)
Dim fso, f, f1, fc, s
Set fso = CreateObject("Scripting.FileSystemObject")
Set f = fso.GetFolder(folderspec)
Set fc = f.SubFolders
For Each f1 in fc
s = s & f1.name
s = s & "<BR>"
Next
ShowFolderList = s
End Function
```

Scripting Run-Time Reference Version 3

FolderExists Method

See Also

Applies To

Description

Returns **True** if a specified folder exists; **False** if it does not.

Syntax

object.FolderExists(folderspec)

The **FolderExists** method syntax has these parts:

Part	Description		
object	Required. Always the name of a FileSystemObject .		
folderspec	Required. The name of the folder whose existence is to be determined. A complete path specification (either absolute or relative) must be provided if the folder isn't expected to exist in the current folder.		

Remarks

The following example illustrates use of the **FolderExists** method:

```
Function ReportFolderStatus(fldr)
Dim fso, msg
Set fso = CreateObject("Scripting.FileSystemObject")
If (fso.FolderExists(fldr)) Then
msg = fldr & " exists."
Else
msg = fldr & " doesn't exist."
```

End If
ReportFolderStatus = msg
End Function

<u>Scripting Run-Time Reference</u> Version 3

FreeSpace Property

See Also

Applies To

Description

Returns the amount of free space available to a user on the specified drive or network share. Read-only.

Syntax

object.FreeSpace

The *object* is always a **Drive** object.

Remarks

The value returned by the **FreeSpace** property is typically the same as that returned by the **AvailableSpace** property. Differences may occur between the two for computer systems that support quotas.

The following code illustrates the use of the **FreeSpace** property:

```
Function ShowFreeSpace(drvPath)

Dim fso, d, s

Set fso = CreateObject("Scripting.FileSystemObject")

Set d = fso.GetDrive(fso.GetDriveName(drvPath))

s = "Drive " & UCase(drvPath) & " - "

s = s & d.VolumeName & "<BR>"

s = s & "Free Space: " & FormatNumber(d.FreeSpace/1024, 0)

s = s & " Kbytes"

ShowFreeSpace = s

End Function
```

GetAbsolutePathName Method

Scripting Run-Time Reference Version 3

See Also

Applies To

Description

Returns a complete and unambiguous path from a provided path specification.

Syntax

object.GetAbsolutePathName(pathspec)

The **GetAbsolutePathName** method syntax has these parts:

Part	Description	
object	Required. Always the name of a FileSystemObject .	
pathspec	Required. Path specification to change to a complete and unambiguous path.	

Remarks

A path is complete and unambiguous if it provides a complete reference from the root of the specified drive. A complete path can only end with a path separator character (\) if it specifies the root folder of a mapped drive.

Assuming the current directory is c:\mydocuments\reports, the following table illustrates the behavior of the **GetAbsolutePathName** method.

pathspec	Returned path
"c:"	"c:\mydocuments\reports"
"c:"	"c:\mydocuments"
"c:\\\"	"c:\"

"c:*.*\may97"	"c:\mydocuments\reports*.*\may97"
"region1"	"c:\mydocuments\reports\region1"
"c:\\mydocuments"	"c:\mydocuments"

GetBaseName Method

Scripting Run-Time Reference Version 3

See Also

Applies To

Description

Returns a string containing the base name of the file (less any file extension), or folder in a provided path specification.

Syntax

object.GetBaseName(path)

The **GetBaseName** method syntax has these parts:

Part	Description
object	Required. Always the name of a FileSystemObject .
แทกรท	Required. The path specification for the file or folder whose base name is to be returned.

Remarks

The **GetBaseName** method returns a zero-length string ("") if no file or folder matches the *path* argument.

The following example illustrates use of the **GetBaseName** method:

Function GetTheBase(filespec)
Dim fso
Set fso = CreateObject("Scripting.FileSystemObjectTheBase = fso.GetBaseName(filespec)
End Function

Note The **GetBaseName** method works only on the provided *path* string. It does not attempt to resolve the path, nor does it check for the existence of the specified path.

GetDrive Method

See Also Applies To

Description

Returns a **Drive** object corresponding to the drive in a specified path.

Syntax

object. GetDrive drivespec

The **GetDrive** method syntax has these parts:

Part	Description
object	Required. Always the name of a FileSystemObject .
drivespec	Required. The <i>drivespec</i> argument can be a drive letter (c), a drive letter with a colon appended (c:), a drive letter with a colon and path separator appended (c:\), or any network share specification (\\computer2\share1).

Remarks

For network shares, a check is made to ensure that the share exists.

An error occurs if *drivespec* does not conform to one of the accepted forms or does not exist. To call the **GetDrive** method on a normal path string, use the following sequence to get a string that is suitable for use as *drivespec*:

DriveSpec = GetDriveName(GetAbsolutePathName(Path))

The following example illustrates use of the **GetDrive** method:

Function ShowFreeSpace(drvPath)
Dim fso, d, s
Set fso = CreateObject("Scripting.FileSystemObject")

```
Set d = fso.GetDrive(fso.GetDriveName(drvPath))
s = "Drive " & UCase(drvPath) & " - "
s = s & d.VolumeName & "<BR>"
s = s & "Free Space: " & FormatNumber(d.FreeSpace/1024, 0)
s = s & " Kbytes"
ShowFreeSpace = s
End Function
```

GetDriveName Method

Scripting Run-Time Reference Version 3

See Also

Applies To

Description

Returns a string containing the name of the drive for a specified path.

Syntax

object.GetDriveName(path)

The **GetDriveName** method syntax has these parts:

Part	Description
object	Required. Always the name of a FileSystemObject .
	Required. The path specification for the component whose drive name is to be returned.

Remarks

The **GetDriveName** method returns a zero-length string ("") if the drive can't be determined.

The following example illustrates use of the **GetDriveName** method:

Function GetAName(DriveSpec)
Dim fso
Set fso = CreateObject("Scripting.FileSystemObjectAName = fso.GetDriveName(Drivespec)
End Function

Note The **GetDriveName** method works only on the provided *path* string. It does not attempt to resolve the path, nor does it check for the existence of the specified path.

GetExtensionName Method

Scripting Run-Time Reference Version 3

See Also

Applies To

Description

Returns a string containing the extension name for the last component in a path.

Syntax

object.GetExtensionName(path)

The **GetExtensionName** method syntax has these parts:

Part	Description
object	Required. Always the name of a FileSystemObject .
IInath I	Required. The path specification for the component whose extension name is to be returned.

Remarks

For network drives, the root directory (\) is considered to be a component.

The **GetExtensionName** method returns a zero-length string ("") if no component matches the *path* argument.

The following example illustrates use of the **GetExtensionName** method:

Function GetAnExtension(DriveSpec) Dim fso Set fso = CreateObject("Scripting.FileSystemObjectAnExtension = fso.GetExtensionName(Drives

End Function



Method

See Also

Applies To

Description

Returns a **File** object corresponding to the file in a specified path.

Syntax

object.GetFile(filespec)

The **GetFile** method syntax has these parts:

Part	Description	
object	Required. Always the name of a FileSystemObject .	
filespec	Required. The <i>filespec</i> is the path (absolute or relative) to a specific file.	

Remarks

An error occurs if the specified file does not exist.

The following example illustrates use of the **GetFile** method:

```
Function ShowFileAccessInfo(filespec)
```

Dim fso, f, s

Set fso = CreateObject("Scripting.FileSystemObject")

Set f = fso.GetFile(filespec)

s = f.Path & "
"

s = s & "Created: " & f.DateCreated & "
"

s = s & "Last Accessed: " & f.DateLastAccessed & " < br > "

s = s & "Last Modified: " & f.DateLastModified

ShowFileAccessInfo = s

End Function

GetFileName Method

Scripting Run-Time Reference Version 3

See Also

Applies To

Description

Returns the last file name or folder of a specified path that is not part of the drive specification.

Syntax

object.GetFileName(pathspec)

The **GetFileName** method syntax has these parts:

Part	Description	
object	Required. Always the name of a FileSystemObject .	
pathspec	Required. The path (absolute or relative) to a specific file.	

Remarks

The **GetFileName** method returns a zero-length string ("") if *pathspec* does not end with the named file or folder.

The following example illustrates use of the **GetFileName** method:

Function GetAName(DriveSpec) Dim fso Set fso = CreateObject("Scripting.FileSystemObjectAName = fso.GetFileName(DriveSpec) End Function

Note The **GetFileName** method works only on the provided path string. It does not attempt to resolve the path, nor does it check for the existence of the specified path.

GetFileVersion Scripting Run-Time Reference Version 5 Method

See Also

Applies To

Description

Returns the version number of a specified file.

Syntax

object.GetFileVersion(pathspec)

The **GetVersion** method syntax has these parts:

Part	Description	
object	Required. Always the name of a FileSystemObject .	
pathspec	Required. Always the name of a FileSystemObject . Required. The path (absolute or relative) to a specific file.	

Remarks

The **GetFileVersion** method returns a zero-length string ("") if *pathspec* does not end with the named file or if the file does not contain version information.

The following example illustrates use of the **GetFileVersion** method:

Function GetVersion(PathSpec) Dim fso, temp Set fso = CreateObject("Scripting.FileSystemObjetemp = fso.GetFileVersion(PathSpec) If Len(temp) Then

GetVersion = temp
Else
GetVersion = "No version information available.
End If
End Function

Note The **GetFileVersion** method works only on the provided path string. It does not attempt to resolve the path, nor does it check for the existence of the specified path.

GetFolder Method

See Also

Applies To

Description

Returns a **Folder** object corresponding to the folder in a specified path.

Syntax

object.GetFolder(folderspec)

The **GetFolder** method syntax has these parts:

Part	Description	
object	Required. Always the name of a FileSystemObject .	
folderspec	Required. The <i>folderspec</i> is the path (absolute or relative) to a specific folder.	

Remarks

An error occurs if the specified folder does not exist.

The following example illustrates the use of the **GetFolder** method to return a folder object:

Sub AddNewFolder(path, folderName)

Dim fso, f, fc, nf

Set fso = CreateObject("Scripting.FileSystemObject("Script

Set f = fso.GetFolder(path)

Set fc = f.SubFolders

If folderName <> "" Then

Set nf = fc.Add(folderName)

```
Else
Set nf = fc.Add("New Folder")
End If
End Sub
```

GetParentFolderName Method

Scripting Run-Time Reference Version 3

See Also

Applies To

Description

Returns a string containing the name of the parent folder of the last file or folder in a specified path.

Syntax

object.GetParentFolderName(path)

The **GetParentFolderName** method syntax has these parts:

Part	Description
object	Required. Always the name of a FileSystemObject .
	Required. The path specification for the file or folder whose parent folder name is to be returned.

Remarks

The **GetParentFolderName** method returns a zero-length string ("") if there is no parent folder for the file or folder specified in the *path* argument.

The following example illustrates use of the **GetParentFolderName** method:

Function GetTheParent(DriveSpec)
Dim fso
Set fso = CreateObject("Scripting.FileSystemObje
GetTheParent = fso.GetParentFolderName(Drives
End Function

Note The **GetParentFolderName** method works only on the provided *path* string. It does not attempt to resolve the path, nor does it check for the existence of the specified path.

GetSpecialFolder Method

Scripting Run-Time Reference Version 3

See Also Applies To

Description

Returns the special folder specified.

Syntax

object.GetSpecialFolder(folderspec)

The **GetSpecialFolder** method syntax has these parts:

Part Description		
object	Required. Always the name of a FileSystemObject .	
folderspec	Required. The name of the special folder to be returned. Can be any of the constants shown in the Settings section.	

Settings

The *folderspec* argument can have any of the following values:

Constant	Value	Description
WindowsFolder		The Windows folder contains files installed by the Windows operating system.
SystemFolder 1		The System folder contains libraries, fonts, and device drivers.
TemporaryFolder	2	The Temp folder is used to store temporary files. Its path is found in the TMP environment variable.

Remarks

tempfile.Close

The following example illustrates use of the **GetSpecialFolder** method:

```
Dim fso, tempfile
Set fso = CreateObject("Scripting.FileSystemObject")

Function CreateTempFile
Dim tfolder, tname, tfile
Const TemporaryFolder = 2
Set tfolder = fso.GetSpecialFolder(TemporaryFolder)
tname = fso.GetTempName
Set tfile = tfolder.CreateTextFile(tname)
Set CreateTempFile = tfile
End Function

Set tempfile = CreateTempFile
tempfile.WriteLine "Hello World"
```

GetTempName Method

Scripting Run-Time Reference Version 3

See Also

Applies To

Description

Returns a randomly generated temporary file or folder name that is useful for performing operations that require a temporary file or folder.

Syntax

object.GetTempName

The optional *object* is always the name of a **FileSystemObject**.

Remarks

The **GetTempName** method does not create a file. It provides only a temporary file name that can be used with **CreateTextFile** to create a file.

The following example illustrates use of the **GetTempName** method:

Dim fso, tempfile
Set fso = CreateObject("Scripting.FileSystemObject")

Function CreateTempFile
Dim tfolder, tname, tfile
Const TemporaryFolder = 2
Set tfolder = fso.GetSpecialFolder(TemporaryFoltname = fso.GetTempName

Set tfile = tfolder.CreateTextFile(tname)
Set CreateTempFile = tfile
End Function

Set tempfile = CreateTempFile tempfile.WriteLine "Hello World" tempfile.Close

Microsoft® Visual Basic® Scripting Edition IsReady

Property

See Also

Applies To

Description

Returns **True** if the specified drive is ready; **False** if it is not.

Syntax

object.IsReady

The *object* is always a **Drive** object.

Remarks

For removable-media drives and CD-ROM drives, **IsReady** returns **True** only when the appropriate media is inserted and ready for access.

The following code illustrates the use of the **IsReady** property:

```
Function ShowDriveInfo(drvpath)
Dim fso, d, s, t
Set fso = CreateObject("Scripting.FileSystemObject")
Set d = fso.GetDrive(drvpath)
Select Case d.DriveType
Case 0: t = "Unknown"
Case 1: t = "Removable"
Case 2: t = "Fixed"
Case 3: t = "Network"
Case 4: t = "CD-ROM"
Case 5: t = "RAM Disk"
End Select
s = "Drive " & d.DriveLetter & ": - " & t
```

```
If d.IsReady Then
  s = s & "<BR>" & "Drive is Ready."
Else
  s = s & "<BR>" & "Drive is not Ready."
End If
ShowDriveInfo = s
End Function
```

Scripting Run-Time Reference Version 3

IsRootFolder Property

See Also

Applies To

Description

Returns **True** if the specified folder is the root folder; **False** if it is not.

Syntax

object.IsRootFolder

The *object* is always a **Folder** object.

Remarks

The following code illustrates the use of the **IsRootFolder** property:

```
Function DisplayLevelDepth(pathspec)
Dim fso, f, n
Set fso = CreateObject("Scripting.FileSystemObject")
Set f = fso.GetFolder(pathspec)
If f.IsRootFolder Then
DisplayLevelDepth = "The specified folder is the root folder."
Else
Do Until f.IsRootFolder
Set f = f.ParentFolder
n = n + 1
Loop
DisplayLevelDepth = "The specified folder is nested " & n & " End If
End Function
```



Property

See Also

Applies To

Description

Sets or returns an *item* for a specified *key* in a **Dictionary** object. For collections, returns an *item* based on the specified *key*. Read/write.

Syntax

object.Item(key) [= newitem]

The **Item** property has the following parts:

Part	Description
llani <i>ec</i> t l	Required. Always the name of a collection or Dictionary object.
11 <i>12011</i> 1	Required. <i>Key</i> associated with the <i>item</i> being retrieved or added.
newitem	Optional. Used for Dictionary object only; no application for collections. If provided, <i>newitem</i> is the new value associated with the specified <i>key</i> .

Remarks

If *key* is not found when changing an *item*, a new *key* is created with the specified *newitem*. If *key* is not found when attempting to return an existing item, a new *key* is created and its corresponding item is left empty.

The following example illustrates the use of the **Item** property:

Function ItemDemo

```
Dim d 'Create some variables.

Set d = CreateObject("Scripting.Dictionary")
d.Add "a", "Athens" 'Add some keys and items
d.Add "b", "Belgrade"
d.Add "c", "Cairo"

ItemDemo = d.Item("c") 'Get the item.

End Function
```



Method

See Also

Applies to

Description

Returns an <u>array</u> containing all the items in a **Dictionary** object.

Syntax

object.Items

The *object* is always the name of a **Dictionary** object.

Remarks

The following code illustrates use of the **Items** method:

```
Function DicDemo

Dim a, d, i, s 'Create some variables.

Set d = CreateObject("Scripting.Dictionary")
d.Add "a", "Athens" 'Add some keys and items.
d.Add "b", "Belgrade"
d.Add "c", "Cairo"
a = d.Items 'Get the items.

For i = 0 To d.Count -1 'Iterate the array.
s = s & a(i) & "<BR>"' Create return string.

Next

DicDemo = s

End Function
```



Property

See Also

Applies to

Description

Sets a *key* in a **Dictionary** object.

Syntax

object.**Key(**key**)** = newkey

The **Key** property has the following parts:

Part	Description
object	Required. Always the name of a Dictionary object.
key	Required. <i>Key</i> value being changed.
newkey	Required. New value that replaces the specified <i>key</i> .

Remarks

If key is not found when changing a key, a <u>run-time error</u> will occur.

The following example illustrates the use of the **Key** property:

Function DicDemo

Dim d 'Create some variables.

Set d = CreateObject("Scripting.Dictionary")

d.Add "a", "Athens" 'Add some keys and items

d.Add "b", "Belgrade"

d.Add "c", "Cairo"



Method

See Also

Applies to

Description

Returns an array containing all existing keys in a **Dictionary** object.

Syntax

object.Keys

The *object* is always the name of a **Dictionary** object.

Remarks

The following code illustrates use of the **Keys** method:

```
Function DicDemo

Dim a, d, i 'Create some variables.

Set d = CreateObject("Scripting.Dictionary")
d.Add "a", "Athens" 'Add some keys and items.
d.Add "b", "Belgrade"
d.Add "c", "Cairo"
a = d.Keys 'Get the keys.

For i = 0 To d.Count -1 'Iterate the array.
s = s & a(i) & "<BR>"' Return results.

Next

DicDemo = s

End Function
```



Property

See Also

Applies to

Description

Read-only property that returns the current line number in a **TextStream** file.

Syntax

object.Line

The *object* is always the name of a **TextStream** object.

Remarks

After a file is initially opened and before anything is written, **Line** is equal to 1.

The following example illustrates use of the **Line** property:

```
Function GetLine
Const ForReading = 1, ForWriting = 2
Dim fso, f, ra
Set fso = CreateObject("Scripting.FileSystemObject")
Set f = fso.OpenTextFile("c:\testfile.txt", ForWriting, True)
f.Write "Hello world!" & vbCrLf & "VB Script is fun!" & vbCrL
Set f = fso.OpenTextFile("c:\testfile.txt", ForReading)
ra = f.ReadAll
GetLine = f.Line
End Function
```



Method

See Also

Applies To

Description

Moves a specified file or folder from one location to another.

Syntax

object. Move destination

The **Move** method syntax has these parts:

Part	Description		
MODIPCI I	Required. Always the name of a File or Folder object.		
Required. Destination where the file or folder is be moved. Wildcard characters are not allowed			

Remarks

The results of the **Move** method on a **File** or **Folder** are identical to operations performed using **FileSystemObject.MoveFile** or **FileSystemObject.MoveFolder**. You should note, however, that the alternative methods are capable of moving multiple files or folders.

The following example illustrates use of the **Move** method:

Dim fso, MyFile
Set fso = CreateObject("Scripting.FileSystemObjectory Set MyFile = fso.CreateTextFile("c:\testfile.txt", TileMyFile.WriteLine("This is a test.")

MyFile.Close
Set MyFile = fso.GetFile("c:\testfile.txt")
MyFile.Move "c:\windows\desktop\"

MoveFile Method

See Also Applies To

Description

Moves one or more files from one location to another.

Syntax

object. Move File source, destination

The **MoveFile** method syntax has these parts:

Part	Description			
object	Required. Always the name of a FileSystemObject .			
source	Required. The path to the file or files to be moved. The source argument string can contain wildcard characters in the last path component only.			
	Required. The path where the file or files are to be moved. The <i>destination</i> argument can't contain wildcard characters.			

Remarks

If *source* contains wildcards or *destination* ends with a path separator (\), it is assumed that *destination* specifies an existing folder in which to move the matching files. Otherwise, *destination* is assumed to be the name of a destination file to create. In either case, three things can happen when an individual file is moved:

- If *destination* does not exist, the file gets moved. This is the usual case.
- If *destination* is an existing file, an error occurs.
- If *destination* is a directory, an error occurs.

An error also occurs if a wildcard character that is used in *source* doesn't match any files. The **MoveFile** method stops on the first error it encounters. No attempt is made to roll back any changes made before the error occurs.

The following example illustrates use of the **MoveFile** method:

Sub MoveAFile(Drivespec)
Dim fso
Set fso = CreateObject("Scripting.FileSystemObjetso.MoveFile Drivespec, "c:\windows\desktop\"
End Sub

Important This method allows moving files between volumes only if supported by the operating system.

Scripting Run-Time Reference Version 3

MoveFolder Method

See Also Applies To

Description

Moves one or more folders from one location to another.

Syntax

object. MoveFolder source, destination

The **MoveFolder** method syntax has these parts:

Part	Description			
object	Required. Always the name of a FileSystemObject .			
source	Required. The path to the folder or folders to be moved. The <i>source</i> argument string can contain wildcard characters in the last path component only.			
	Required. The path where the folder or folders are be moved. The <i>destination</i> argument can't contain wildcard characters.			

Remarks

If *source* contains wildcards or *destination* ends with a path separator (\), it is assumed that *destination* specifies an existing folder in which to move the matching files. Otherwise, *destination* is assumed to be the name of a destination folder to create. In either case, three things can happen when an individual folder is moved:

• If *destination* does not exist, the folder gets moved. This is the usual case.

- If *destination* is an existing file, an error occurs.
- If *destination* is a directory, an error occurs.

An error also occurs if a wildcard character that is used in *source* doesn't match any folders. The **MoveFolder** method stops on the first error it encounters. No attempt is made to roll back any changes made before the error occurs.

The following example illustrates use of the **MoveFolder** method:

Sub MoveAFolder(Drivespec)
Dim fso
Set fso = CreateObject("Scripting.FileSystemObjetso.MoveFolder Drivespec, "c:\windows\desktop\End Sub

Important This method allows moving folders between volumes only if supported by the operating system.



Property

See Also

Applies To

Description

Sets or returns the name of a specified file or folder. Read/write.

Syntax

object.**Name** [= *newname*]

The **Name** property has these parts:

End Function

Part	Description
object	Required. Always the name of a File or Folder object.
newname	Optional. If provided, <i>newname</i> is the new name of the specified <i>object</i> .

Remarks

The following code illustrates the use of the **Name** property:

```
Function ShowFileAccessInfo(filespec)
Dim fso, f, s
Set fso = CreateObject("Scripting.FileSystemObject")
Set f = fso.GetFile(filespec)
s = f.Name & " on Drive " & UCase(f.Drive) & "<BR>"
s = s & "Created: " & f.DateCreated & "<BR>"
s = s & "Last Accessed: " & f.DateLastAccessed & "<BR>"
s = s & "Last Modified: " & f.DateLastModified
ShowFileAccessInfo = s
```

OpenAsTextStream Scripting Run-Time Reference Varsion 3 **Method**

Version 3

See Also

Applies To

Description

Opens a specified file and returns a **TextStream** object that can be used to read from, write to, or append to the file.

Syntax

object.OpenAsTextStream([iomode, [format]])

The **OpenAsTextStream** method syntax has these parts:

Part	Description	
object	Required. Always the name of a File object.	
iomode	Optional. Indicates input/output mode. Can be one of three constants: ForReading , ForWriting , or ForAppending .	
format	Optional. One of three Tristate values used to indicate the format of the opened file. If omitted, the file is opened as ASCII.	

Settings

The *iomode* argument can have any of the following settings:

Constant	Value	Description	
ForReading		Open a file for reading only. You can't write to this file.	
ForWriting		Open a file for writing. If a file with the same name exists, its previous contents	

		are overwritten.		
ForAppending	8	Open a file and write to the end of the file.		

The *format* argument can have any of the following settings:

Constant	Value	Description
TristateUseDefault	I -/	Opens the file using the system default.
TristateTrue	-1	Opens the file as Unicode.
TristateFalse	0	Opens the file as ASCII.

Remarks

The **OpenAsTextStream** method provides the same functionality as the **OpenTextFile** method of the **FileSystemObject**. In addition, the **OpenAsTextStream** method can be used to write to a file.

The following code illustrates the use of the **OpenAsTextStream** method:

Function TextStreamTest

Const ForReading = 1, ForWriting = 2, ForAppen Const TristateUseDefault = -2, TristateTrue = -1, Dim fso, f, ts

Set fso = CreateObject("Scripting.FileSystemObjetso.CreateTextFile "test1.txt" 'Create a fileSet f = fso.GetFile("test1.txt")

Set ts = f.OpenAsTextStream(ForWriting, Tristate ts.Write "Hello World"

ts.Close

Set ts = f.OpenAsTextStream(ForReading, Tristat

TextStreamTest = ts.ReadLine ts.Close End Function

OpenTextFile Method

Scripting Run-Time Reference Version 2

See Also

Applies To

Description

Opens a specified file and returns a **TextStream** object that can be used to read from, write to, or append to the file.

Syntax

object.OpenTextFile(filename[, iomode[, create[, format]]])

The **OpenTextFile** method has these parts:

Part	Description		
object	Required. Always the name of a FileSystemObject .		
filename	Required. String expression that identifies the file to open.		
iomode	Optional. Indicates input/output mode. Can be one of three constants: ForReading, ForWriting, or ForAppending.		
create	Optional. Boolean value that indicates whether a new file can be created if the specified <i>filename</i> doesn't exist. The value is True if a new file is created; False if it isn't created. The default is False .		
format	Optional. One of three Tristate values used to indicate the format of the opened file. If omitted, the file is opened as ASCII.		

Settings

The *iomode* argument can have either of the following settings:

Constant	Value	Description		
ForReading		Open a file for reading only. You can't write to this file.		
ForWriting		Open a file for writing only. You can't read from this file.		
ForAppending	8	Open a file and write to the end of the file.		

The *format* argument can have any of the following settings:

Constant	Value	Description	
TristateUseDefault	I -/ I	Opens the file using the system default.	
TristateTrue	-1	Opens the file as Unicode.	
TristateFalse	0	Opens the file as ASCII.	

Remarks

The following code illustrates the use of the **OpenTextFile** method to open a file for writing text:

```
Sub OpenTextFileTest
Const ForReading = 1, ForWriting = 2, ForAppending = 8
Dim fso, f
Set fso = CreateObject("Scripting.FileSystemObject")
Set f = fso.OpenTextFile("c:\testfile.txt", ForWriting, True)
f.Write "Hello world!"
f.Close
End Sub
```

ParentFolder Property

Scripting Run-Time Reference Version 3

See Also

Applies To

Description

Returns the folder object for the parent of the specified file or folder. Readonly.

Syntax

object.ParentFolder

The *object* is always a **File** or **Folder** object.

Remarks

The following code illustrates the use of the **ParentFolder** property with a file:

```
Function ShowFileAccessInfo(filespec)
Dim fso, f, s
Set fso = CreateObject("Scripting.FileSystemObject")
Set f = fso.GetFile(filespec)
s = UCase(f.Name) & " in " & UCase(f.ParentFolder) & "<BR>"
s = s & "Created: " & f.DateCreated & "<BR>"
s = s & "Last Accessed: " & f.DateLastAccessed & "<BR>"
s = s & "Last Modified: " & f.DateLastModified
ShowFileAccessInfo = s
End Function
```



Property

See Also

Applies To

Description

Returns the path for a specified file, folder, or drive.

Syntax

object.Path

The *object* is always a **File**, **Folder**, or **Drive** object.

Remarks

For drive letters, the root drive is not included. For example, the path for the C drive is C:, not C:\.

The following code illustrates the use of the **Path** property with a **File** object:

```
Function ShowFileAccessInfo(filespec)
Dim fso, d, f, s
Set fso = CreateObject("Scripting.FileSystemObject")
Set f = fso.GetFile(filespec)
s = UCase(f.Path) & "<BR>"
s = s & "Created: " & f.DateCreated & "<BR>"
s = s & "Last Accessed: " & f.DateLastAccessed & "<BR>"
s = s & "Last Modified: " & f.DateLastModified
ShowFileAccessInfo = s
End Function
```



Method

See Also

Applies to

Description

Reads a specified number of characters from a **TextStream** file and returns the resulting string.

Syntax

object.Read(characters)

The **Read** method syntax has these parts:

Part	Description	
object	Required. Always the name of a TextStream object.	
characters	Required. Number of characters you want to read from the file.	

Remarks

The following example illustrates how to use the **Read** method to read five characters from a file and return the resulting string:

Function ReadTextFileTest

Const ForReading = 1, ForWriting = 2, ForAppen Dim fso, f, Msg

Set fso = CreateObject("Scripting.FileSystemObject f = fso.OpenTextFile("c:\testfile.txt", ForWriting.FileSystemObject("by the file of the

f.Write "Hello world!"
Set f = fso.OpenTextFile("c:\testfile.txt", ForReac
ReadTextFileTest = f.Read(5)
End Function



Method

See Also

Applies to

Description

Reads an entire **TextStream** file and returns the resulting string.

Syntax

object.ReadAll

The *object* is always the name of a **TextStream** object.

Remarks

For large files, using the **ReadAll** method wastes memory resources. Other techniques should be used to input a file, such as reading a file line by line.

```
Function ReadAllTextFile

Const ForReading = 1, ForWriting = 2

Dim fso, f

Set fso = CreateObject("Scripting.FileSystemObject")

Set f = fso.OpenTextFile("c:\testfile.txt", ForWriting, True)
f.Write "Hello world!"

Set f = fso.OpenTextFile("c:\testfile.txt", ForReading)

ReadAllTextFile = f.ReadAll

End Function
```

ReadLine Method

See Also

Applies to

Description

Reads an entire line (up to, but not including, the newline character) from a **TextStream** file and returns the resulting string.

Syntax

object.ReadLine

The *object* argument is always the name of a **TextStream** object.

Remarks

The following example shows how to use the **ReadLine** method to read a line from a **TextStream** file and return the string:

Function ReadLineTextFile

Const ForReading = 1, ForWriting = 2

Dim fso, MyFile

Set fso = CreateObject("Scripting.FileSystemObject")

Set MyFile = fso.OpenTextFile("c:\testfile.txt", ForWriting, True

MyFile.WriteLine "Hello world!"

MyFile.WriteLine "The quick brown fox"

MyFile.Close

Set MyFile = fso.OpenTextFile("c:\testfile.txt", ForReading)

ReadLineTextFile = MyFile.ReadLine 'Returns "Hello world!"

End Function



Method

See Also

Applies to

Description

Removes a key, item pair from a **Dictionary** object.

Syntax

object.Remove(key)

The **Remove** method syntax has these parts:

Part	Description	
object	Required. Always the name of a Dictionary object.	
	Required. <i>Key</i> associated with the key, item pair you want to remove from the Dictionary object.	

Remarks

An error occurs if the specified key, item pair does not exist.

The following code illustrates use of the **Remove** method:

Dim a, d 'Create some variables.

Set d = CreateObject("Scripting.Dictionary")
d.Add "a", "Athens" 'Add some keys and items.
d.Add "b", "Belgrade"
d.Add "c", "Cairo"

. . .

d.Remove("b") 'Remove second pair.

Scripting Run-Time Reference Version 2

RemoveAll Method

See Also

Applies to

Description

The **RemoveAll** method removes all key, item pairs from a **Dictionary** object.

Syntax

object.RemoveAll

The *object* is always the name of a **Dictionary** object.

Remarks

The following code illustrates use of the **RemoveAll** method:

```
Dim a, d, i 'Create some variables.

Set d = CreateObject("Scripting.Dictionary")
d.Add "a", "Athens" 'Add some keys and items.
d.Add "b", "Belgrade"
d.Add "c", "Cairo"
...
a = d.RemoveAll 'Clear the dictionary.
```

RootFolder Property

Scripting Run-Time Reference Version 3

See Also

Applies To

Description

Returns a **Folder** object representing the root folder of a specified drive. Read-only.

Syntax

object.RootFolder

The *object* is always a **Drive** object.

Remarks

All the files and folders contained on the drive can be accessed using the returned **Folder** object.

The following example illustrates the use of the **RootFolder** property:

Function ShowRootFolder(drvspec)

Dim fso, f

Set fso = CreateObject("Scripting.FileSystemObject("Script

Set f = fso.GetDrive(drvspec)

ShowRootFolder = f.RootFolder

End Function

SerialNumber Property

Scripting Run-Time Reference Version 3

See Also

Applies To

Description

Returns the decimal serial number used to uniquely identify a disk volume.

Syntax

object.SerialNumber

The *object* is always a **Drive** object.

Remarks

You can use the **SerialNumber** property to ensure that the correct disk is inserted in a drive with removable media.

The following code illustrates the use of the **SerialNumber** property:

```
Function ShowDriveInfo(drvpath)
```

Dim fso, d, s, t

Set fso = CreateObject("Scripting.FileSystemObject")

Set d = fso.GetDrive(fso.GetDriveName(fso.GetAbsolutePathNa

Select Case d.DriveType

Case 0: t = "Unknown"

Case 1: t = "Removable"

Case 2: t = "Fixed"

Case 3: t = "Network"

Case 4: t = "CD-ROM"

Case 5: t = "RAM Disk"

End Select

```
s = "Drive " & d.DriveLetter & ": - " & t
s = s & "<BR>" & "SN: " & d.SerialNumber
ShowDriveInfo = s
End Function
```

Scripting Run-Time Reference Version 3

ShareName Property

See Also

Applies To

Description

Returns the network share name for a specified drive.

Syntax

object.ShareName

The *object* is always a **Drive** object.

Remarks

If *object* is not a network drive, the **ShareName** property returns a zero-length string ("").

The following code illustrates the use of the **ShareName** property:

Function ShowDriveInfo(drvpath)

Dim fso, d

Set fso = CreateObject("Scripting.FileSystemObject")

Set d = fso.GetDrive(fso.GetDriveName(fso.GetAbsolutePathNa

ShowDriveInfo = "Drive " & d.DriveLetter & ": - " & d.ShareNa

End Function

ShortName Property

Scripting Run-Time Reference Version 3

See Also

Applies To

Description

Returns the short name used by programs that require the earlier 8.3 naming convention.

Syntax

object.ShortName

The *object* is always a **File** or **Folder** object.

Remarks

The following code illustrates the use of the **ShortName** property with a **File** object:

```
Function ShowShortName(filespec)
Dim fso, f, s
Set fso = CreateObject("Scripting.FileSystemObject")
Set f = fso.GetFile(filespec)
s = "The short name for " & UCase(f.Name) & "<BR>"
s = s & "is: " & f.ShortName
ShowShortName = s
End Function
```

<u>Scripting Run-Time Reference</u> Version 3

ShortPath Property

See Also

Applies To

Description

Returns the short path used by programs that require the earlier 8.3 file naming convention.

Syntax

object.ShortPath

The *object* is always a **File** or **Folder** object.

Remarks

The following code illustrates the use of the **ShortName** property with a **File** object:

```
Function ShowShortPath(filespec)
Dim fso, f, s
Set fso = CreateObject("Scripting.FileSystemObject")
Set f = fso.GetFile(filespec)
s = "The short path for " & UCase(f.Name) & "<BR>"
s = s & "is: " & f.ShortPath
ShowShortPath = s
End Function
```



Property

See Also

Applies To

Description

For files, returns the size, in bytes, of the specified file. For folders, returns the size, in bytes, of all files and subfolders contained in the folder.

Syntax

object.Size

The *object* is always a **File** or **Folder** object.

Remarks

The following code illustrates the use of the **Size** property with a **Folder** object:

```
Function ShowFolderSize(filespec)
Dim fso, f, s
Set fso = CreateObject("Scripting.FileSystemObject")
Set f = fso.GetFolder(filespec)
s = UCase(f.Name) & " uses " & f.size & " bytes."
ShowFolderSize = s
End Function
```



Method

See Also

Applies To

Description

Skips a specified number of characters when reading a **TextStream** file.

Syntax

object.Skip(characters)

The **Skip** method syntax has these parts:

Part	Description	
object	Required. Always the name of a TextStream object.	
characters	Required. Number of characters to skip when reading a file.	
	reading a file.	

Remarks

Skipped characters are discarded.

The following example uses the **Skip** method to skip the first six characters before reading from a text file:

Function SkipTextFile

Const ForReading = 1, ForWriting = 2

Dim fso, f

Set fso = CreateObject("Scripting.FileSystemObject("Script

Set f = fso.OpenTextFile("c:\testfile.txt", ForWriti

f.Write "Hello world!"

Set f = fso.OpenTextFile("c:\testfile.txt", ForReac
f.Skip(6)
SkipTextFile = f.ReadLine
End Function

SkipLine Method

See Also

Applies to

Description

Skips the next line when reading a **TextStream** file.

Syntax

object.SkipLine

The *object* is always the name of a **TextStream** object.

Remarks

Skipping a line means reading and discarding all characters in a line up to and including the next newline character. An error occurs if the file is not open for reading.

The following example illustrates use of the **SkipLine** method:

```
Function SkipLineInFile

Const ForReading = 1, ForWriting = 2

Dim fso, f

Set fso = CreateObject("Scripting.FileSystemObject")

Set f = fso.OpenTextFile("c:\testfile.txt", ForWriting, True)

f.Write "Hello world!" & vbCrLf & "VB Script is fun!"

Set f = fso.OpenTextFile("c:\testfile.txt", ForReading)

f.SkipLine

SkipLineInFile = f.ReadLine

End Function
```

Scripting Run-Time Reference Version 3

SpecialFolder Constants

See Also

These constants are only available when your project has an explicit reference to the appropriate <u>type library</u> containing these constant definitions. For VBScript, you must explicitly declare these constants in your code.

Constant	Value	Description
WindowsFolder		The Windows folder contains files installed by the Windows operating system.
SystemFolder		The System folder contains libraries, fonts, and device drivers.
TemporaryFolder		The Temp folder is used to store temporary files. Its path is found in the TMP environment variable.

Scripting Run-Time Reference Version 3

SubFolders Property

See Also

Applies To

Description

Returns a **Folders** collection consisting of all folders contained in a specified folder, including those with Hidden and System file attributes set.

Syntax

object.SubFolders

The *object* is always a **Folder** object.

Remarks

The following code illustrates the use of the **SubFolders** property:

```
Function ShowFolderList(folderspec)
Dim fso, f, f1, s, sf
Set fso = CreateObject("Scripting.FileSystemObject")
Set f = fso.GetFolder(folderspec)
Set sf = f.SubFolders
For Each f1 in sf
s = s & f1.name
s = s & "<BR>"
Next
ShowFolderList = s
End Function
```

TextStream Object

<u>See Also</u> <u>Properties</u> <u>Methods</u>

Description

Facilitates sequential access to a file.

Remarks

In the following code, **a** is the **TextStream** object returned by the **CreateTextFile** method on the **FileSystemObject**:

Dim fso, MyFile
Set fso = CreateObject("Scripting.FileSystemObject")
Set MyFile= fso.CreateTextFile("c:\testfile.txt", True)
MyFile.WriteLine("This is a test.")
MyFile.Close

WriteLine and Close are two methods of the TextStream Object.

TotalSize Property

See Also Applies To

Description

Returns the total space, in bytes, of a drive or network share.

Syntax

object.TotalSize

The *object* is always a **Drive** object.

Remarks

The following code illustrates the use of the **TotalSize** property:

```
Function ShowSpaceInfo(drvpath)
Dim fso, d, s
Set fso = CreateObject("Scripting.FileSystemObject")
Set d = fso.GetDrive(fso.GetDriveName(fso.GetAbsolutePathNa s = "Drive " & d.DriveLetter & ":"
s = s & vbCrLf
s = s & "Total Size: " & FormatNumber(d.TotalSize/1024, 0) & "
s = s & vbCrLf
s = s & "Available: " & FormatNumber(d.AvailableSpace/1024, 0)
ShowSpaceInfo = s
End Function
```



Property

See Also

Applies To

Description

Returns information about the type of a file or folder. For example, for files ending in .TXT, "Text Document" is returned.

Syntax

object. Type

The *object* is always a **File** or **Folder** object.

Remarks

The following code illustrates the use of the **Type** property to return a folder type. In this example, try providing the path of the Recycle Bin or other unique folder to the procedure.

```
Function ShowFolderType(filespec)
Dim fso, f, s
Set fso = CreateObject("Scripting.FileSystemObject")
Set f = fso.GetFolder(filespec)
s = UCase(f.Name) & " is a " & f.Type
ShowFolderType = s
End Function
```

VolumeName Property

Scripting Run-Time Reference Version 3

See Also

Applies To

Description

Sets or returns the volume name of the specified drive. Read/write.

Syntax

object.**VolumeName** [= *newname*]

The **VolumeName** property has these parts:

Part	Description
object	Required. Always the name of a Drive object.
nownamo	Optional. If provided, <i>newname</i> is the new name of
newname	Optional. If provided, <i>newname</i> is the new name of the specified <i>object</i> .

Remarks

The following code illustrates the use of the **VolumeName** property:

```
Function ShowVolumeInfo(drvpath)
Dim fso, d, s
Set fso = CreateObject("Scripting.FileSystemObject")
Set d = fso.GetDrive(fso.GetDriveName(fso.GetAbsolutePathNass = "Drive" & d.DriveLetter & ": - " & d.VolumeName
ShowVolumeInfo = s
End Function
```



Method

See Also

Applies to

Description

Writes a specified string to a **TextStream** file.

Syntax

object.Write(string)

The **Write** method syntax has these parts:

Part	Description
object	Required. Always the name of a TextStream object.
string	Required. The text you want to write to the file.

Remarks

Specified strings are written to the file with no intervening spaces or characters between each string. Use the **WriteLine** method to write a newline character or a string that ends with a newline character.

The following example illustrates use of the **Write** method:

Function WriteToFile Const ForReading = 1, ForWriting = 2 Dim fso, f Set fso = CreateObject("Scripting.FileSystemObject f = fso.OpenTextFile("c:\testfile.txt", ForWriting.Write "Hello world!"

Set f = fso.OpenTextFile("c:\testfile.txt", ForReac WriteToFile = f.ReadLine End Function

WriteBlankLines Method

Scripting Run-Time Reference Version 2

See Also

Applies to

Description

Writes a specified number of newline characters to a **TextStream** file.

Syntax

object.WriteBlankLines(lines)

The WriteBlankLines method syntax has these parts:

Part	Description
object	Required. Always the name of a TextStream object.
lllinoc	Required. Number of newline characters you want to write to the file.

Remarks

The following example illustrates use of the WriteBlankLines method:

```
Function WriteBlankLinesToFile

Const ForReading = 1, ForWriting = 2

Dim fso, f

Set fso = CreateObject("Scripting.FileSystemObject")

Set f = fso.OpenTextFile("c:\testfile.txt", ForWriting, True)

f.WriteBlankLines 2

f.WriteLine "Hello World!"

Set f = fso.OpenTextFile("c:\testfile.txt", ForReading)

WriteBlankLinesToFile = f.ReadAll
```

End Function

WriteLine Method

See Also

Applies to

Description

Writes a specified string and newline character to a **TextStream** file.

Syntax

object.WriteLine([string])

The **WriteLine** method syntax has these parts:

Part	Description
object	Required. Always the name of a TextStream object.
string	Optional. The text you want to write to the file. If omitted, a newline character is written to the file.

Remarks

The following example illustrates use of the WriteLine method:

```
Function WriteLineToFile

Const ForReading = 1, ForWriting = 2

Dim fso, f

Set fso = CreateObject("Scripting.FileSystemObject")

Set f = fso.OpenTextFile("c:\testfile.txt", ForWriting, True)

f.WriteLine "Hello world!"

f.WriteLine "VBScript is fun!"

Set f = fso.OpenTextFile("c:\testfile.txt", ForReading)

WriteLineToFile = f.ReadAll

End Function
```

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InStrRev Function

See Also

Description

Returns the position of an occurrence of one string within another, from the end of string.

Syntax

InStrRev(string1, string2[, start[, compare]])

The **InStrRev** function syntax has these parts:

Part	Description
string1	Required. String expression being searched.
string2	Required. String expression being searched for.
start	Optional. Numeric expression that sets the starting position for each search. If omitted, -1 is used, which means that the search begins at the last character position. If <i>start</i> contains Null, an error occurs.
compara	Optional. Numeric value indicating the kind of comparison to use when evaluating substrings. If omitted, a binary comparison is performed. See Settings section for values.

Settings

The *compare* argument can have the following values:

Constant	Value	Description
vbBinaryCompare	0	Perform a binary comparison.
vbTextCompare	1	Perform a textual comparison.

Return Values

InStrRev returns the following values:

If	InStrRev returns
string1 is zero-length	0
string1 is Null	Null
string2 is zero-length	start
string2 is Null	Null
string2 is not found	0
string2 is found within string1	Position at which match is found
start > Len(string2)	0

Remarks

The following examples use the **InStrRev** function to search a string:

Dim SearchString, SearchChar, MyPos
SearchString ="XXpXXpXXPXXP" 'String to s
SearchChar = "P" 'Search for "P".

MyPos = InstrRev(SearchString, SearchChar, 10, 0) 'A binary c
'position 10. Returns 9.

MyPos = InstrRev(SearchString, SearchChar, -1, 1) 'A textual c
'the last position. Returns

MyPos = InstrRev(SearchString, SearchChar, 8) 'Comparison is
'argument is omitted). Ret

Note The syntax for the **InStrRev** function is not the same as the syntax for the **InStr** function.



Function

See Also

Sgn Function

VBScript Glossary

ActiveX control

An object that you place on a form to enable or enhance a user's interaction with an application. ActiveX controls have events and can be incorporated into other controls. The controls have an .ocx file name extension.

ActiveX object

An object that is exposed to other applications or programming tools through Automation interfaces.

argument

A constant, variable, or expression passed to a procedure.

array

A set of sequentially indexed elements having the same type of data. Each element of an array has a unique identifying index number. Changes made to one element of an array do not affect the other elements.

ASCII Character Set

American Standard Code for Information Interchange (ASCII) 7-bit character set widely used to represent letters and symbols found on a standard U.S. keyboard. The ASCII character set is the same as the first 128 characters (0–127) in the ANSI character set.

Automation object

An object that is exposed to other applications or programming tools through Automation interfaces.

bitwise comparison

A bit-by-bit comparison of identically positioned bits in two numeric expressions.

Boolean expression

An expression that evaluates to either **True** or **False**.

by reference

A way of passing the address, rather than the value, of an argument to a procedure. This allows the procedure to access the actual variable. As a result, the variable's actual value can be changed by the procedure to which it is passed.

by value

A way of passing the value, rather than the address, of an argument to a procedure. This allows the procedure to access a copy of the variable. As a result, the variable's actual value can't be changed by the procedure to which it is passed.

character code

A number that represents a particular character in a set, such as the ASCII character set.

class

The formal definition of an object. The class acts as the template from which an instance of an object is created at run time. The class defines the properties of the object and the methods used to control the object's behavior.

class module

A module containing the definition of a class (its property and method definitions).

collection

An object that contains a set of related objects. An object's position in the collection can change whenever a change occurs in the collection; therefore, the position of any specific object in the collection may vary.

comment

Text added to code by a programmer that explains how the code works. In Visual Basic Scripting Edition, a comment line generally starts with an apostrophe ('), or you can use the keyword **Rem** followed by a space.

comparison operator

A character or symbol indicating a relationship between two or more values or expressions. These operators include less than (<), less than or equal to (<=), greater than (>), greater than or equal to (>=), not equal (<>), and equal (=).

Is is also a comparison operator, but it is used exclusively for determining if one object reference is the same as another.

constant

A named item that retains a constant value throughout the execution of a program. Constants can be used anywhere in your code in place of actual values. A constant can be a string or numeric literal, another constant, or any combination that includes arithmetic or logical operators except **Is** and exponentiation. For example:

data ranges

Each Variant subtype has a specific range of allowed values:

Subtype	Range
Byte	0 to 255.
Boolean	True or False.
Integer	-32,768 to 32,767.
Long	-2,147,483,648 to 2,147,483,647.
Single	-3.402823E38 to -1.401298E-45 for negative values; 1.401298E-45 to 3.402823E38 for positive values.
Double	-1.79769313486232E308 to -4.94065645841247E- 324 for negative values; 4.94065645841247E-324 to 1.79769313486232E308 for positive values.
Currency	-922,337,203,685,477.5808 to 922,337,203,685,477.5807.
Date	January 1, 100 to December 31, 9999, inclusive.
Object	Any Object reference.

String

Variable-length strings may range in length from 0 to approximately 2 billion characters.

date expression

Any expression that can be interpreted as a date. This includes any combination of date literals, numbers that look like dates, strings that look like dates, and dates returned from functions. A date expression is limited to numbers or strings, in any combination, that can represent a date from January 1, 100 through December 31, 9999.

Dates are stored as part of a real number. Values to the left of the decimal represent the date; values to the right of the decimal represent the time. Negative numbers represent dates prior to December 30, 1899.

date literal

Any sequence of characters with a valid format that is surrounded by number signs (#). Valid formats include the date format specified by the locale settings for your code or the universal date format. For example, #12/31/99# is the date literal that represents December 31, 1999, where English-U.S. is the locale setting for your application.

VBScript always interprets a date literal as US-ENGLISH if it is possible to do so. If a date literal cannot be interpreted as a date, an error occurs.

date separators

Characters used to separate the day, month, and year when date values are formatted.

Empty

A value that indicates that no beginning value has been assigned to a variable. **Empty** variables are 0 in a numeric context, or zero-length in a string context.

error number

A whole number in the range 0 to 65,535, inclusive, that corresponds to the **Number** property of the **Err** object. When combined with the **Name** property of the **Err** object, this number represents a particular error message.

expression

A combination of keywords, operators, variables, and constants that yield a string, number, or object. An expression can perform a calculation, manipulate characters, or test data.

intrinsic constant

A constant provided by an application. Because you can't disable intrinsic constants, you can't create a user-defined constant with the same name.

keyword

A word or symbol recognized as part of the VBScript language; for example, a statement, function name, or operator.

locale

The set of information that corresponds to a given language and country/region. A locale affects the language of predefined programming terms and locale-specific settings. There are two contexts where locale information is important:

- The code locale affects the language of terms such as keywords and defines locale-specific settings such as the decimal and list separators, date formats, and character sorting order.
- The system locale affects the way locale-aware functionality behaves, for example, when you display numbers or convert strings to dates. You set the system locale using the Control Panel utilities provided by the operating system.

Nothing

The special value that indicates that an object variable is no longer associated with any actual object.

Null

A value indicating that a variable contains no valid data. **Null** is the result of:

- An explicit assignment of **Null** to a variable.
- Any operation between expressions that contain **Null**.

numeric expression

Any expression that can be evaluated as a number. Elements of the expression can include any combination of keywords, variables, constants, and operators that result in a number.

object type

A type of object exposed by an application, for example, Application, File, Range, and Sheet. Refer to the application's documentation (Microsoft Excel, Microsoft Project, Microsoft Word, and so on) for a complete listing of available objects.

рi

Pi is a mathematical constant equal to approximately 3.1415926535897932.

Private

Variables that are visible only to the script in which they are declared.

procedure

A named sequence of statements executed as a unit. For example, **Function** and **Sub** are types of procedures.

procedure level

Describes statements located within a **Function** or **Sub** procedure. Declarations are usually listed first, followed by assignments and other executable code. For example:

Sub MySub() 'This statement declares a sub procedure block.

Dim A ' This statement starts the procedure block.

A = "My variable" ' Procedure-level code.

Debug.Print A ' Procedure-level code.

End Sub 'This statement ends a sub procedure block.

Note that script-level code resides outside any procedure blocks.

property

A named attribute of an object. Properties define object characteristics such as size, color, and screen location, or the state of an object, such as enabled or disabled.

Public

Variables declared using the **Public** Statement are visible to all procedures in all modules in all applications.

run time

The time when code is running. During run time, you can't edit the code.

run-time error

An error that occurs when code is running. A run-time error results when a statement attempts an invalid operation.

scope

Defines the visibility of a variable, procedure, or object. For example, a variable declared as **Public** is visible to all procedures in all modules. Variables declared in procedures are visible only within the procedure and lose their value between calls.

SCODE

A long integer value that is used to pass detailed information to the caller of an interface member or API function. The status codes for OLE interfaces and APIs are defined in FACILITY_ITF.

script level

Any code outside a procedure is referred to as script-level code.

seed

An initial value used to generate pseudorandom numbers. For example, the **Randomize** statement creates a seed number used by the **Rnd** function to create unique pseudorandom number sequences.

string comparison

A comparison of two sequences of characters. Unless specified in the function making the comparison, all string comparisons are binary. In English, binary comparisons are case-sensitive; text comparisons are not.

string expression

Any expression that evaluates to a sequence of contiguous characters. Elements of a string expression can include a function that returns a string, a string literal, a string constant, or a string variable.

type library

A file or component within another file that contains standard descriptions of exposed objects, properties, and methods.

variable

A named storage location that can contain data that can be modified during program execution. Each variable has a name that uniquely identifies it within its level of scope.

Variable names:

- Must begin with an alphabetic character.
- Can't contain an embedded period or type-declaration character.
- Must be unique within the same scope.
- Must be no longer than 255 characters.



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Information

The following table lists the version of Microsoft Visual Basic Scripting Edition implemented by host applications.

Host Application		VBScript Version					
		2.0	3.0	4.0	5.0		
Microsoft Internet Explorer 3.0	X						
Microsoft Internet Information Server 3.0		X					
Microsoft Internet Explorer 4.0			X				
Microsoft Internet Information Server 4.0			X				
Microsoft Windows Scripting Host 1.0			X				
Microsoft Outlook 98			X				
Microsoft Visual Studio 6.0				X			
Microsoft Internet Explorer 5.0					X		
Microsoft Internet Information Services 5.0					\mathbf{x}		

The following table lists VBScript language features and the version when first introduced.

Language Element	Version First Introduced						
Language Element	1.0	2.0	3.0	4.0	5.0		
Abs Function	X						
Addition Operator (+)	X						
And Operator	X						
Array Function		X					
Asc Function	X						

Assignment Operator (=)	x			
Atn Function	X			
Call Statement	X			
CBool Function	X			
CByte Function	X			
CCur Function	Х			
CDate Function	X			
CDbl Function	X			
Chr Function	X			
CInt Function	X			
Class Object				X
Class Statement				X
Clear Method	X			
CLng Function	X			
Color Constants		X		
Comparison Constants		X		
Concatenation Operator (&)	X			
Const Statement		X		
Cos Function	X			
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CSng Function	X			
CStr Function	X			
Date and Time Constants		X		
Date Format Constants		X		
Date Function	X			
DateAdd Function		Х		
DateDiff Function		X		
DatePart Function		X		
DateSerial Function	X			
DateValue Function	X			

Day Function	x			
Description Property	X			
Dim Statement	X			
Division Operator (/)	X			
DoLoop Statement	X			
Empty	X			
Eqv Operator	X			
Erase Statement	X			
Err Object	X			
Eval Function				X
Execute Method				X
Execute Statement				X
ExecuteGlobal Statement				X
Exit Statement	X			
Exp Function	X			
Exponentiation Operator (^)	X			
<u>False</u>	X			
Filter Function		Х		
FirstIndex Property				X
Fix Function	X			
ForNext Statement	X			
For EachNext Statement		X		
FormatCurrency Function		Х		
FormatDateTime Function		х		
FormatNumber Function		х		
FormatPercent Function		х		
Function Statement	X			
GetLocale Function				X
GetObject Function		X		

GetRef Function				x
Global Property				X
Hex Function	Х			
HelpContext Property		Х		
HelpFile Property		Х		
Hour Function	X			
IfThenElse Statement	X			
IgnoreCase Property				X
Imp Operator	X			
Initialize Event				X
InputBox Function	X			
InStr Function	X			
InStrRev Function		Х		
Int Function	X			
Integer Division Operator (\)	X			
<u>Is Operator</u>	X			
IsArray Function	X			
IsDate Function	X			
IsEmpty Function	X			
IsNull Function	X			
IsNumeric Function	X			
IsObject Function	X			
Join Function		X		
LBound Function	X			
LCase Function	X			
Left Function	X			
Len Function	X			
Length Property				X
LoadPicture Function		X		

Log Function	x			
LTrim Function	X			
Match Object				X
Matches Collection				X
Mid Function	X			
Minute Function	х			
Miscellaneous Constants		X		
Mod Operator	X			
Month Function	X			
MonthName Function		X		
MsgBox Constants		X		
MsgBox Function	X			
Multiplication Operator (*)	X			
Negation Operator (-)	X			
Not Operator	X			
Now Function	X			
Nothing	X			
<u>Null</u>	X			
Number Property	X			
Oct Function	X			
On Error Statement	X			
Option Explicit Statement	X			
<u>Or Operator</u>	X			
Pattern Property				X
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PropertyGet Statement				X
PropertyLet Statement				X
PropertySet Statement				X
Public Statement		Х		

Raise Method	x			
Randomize Statement	X			
ReDim Statement	X			
RegExp Object				X
Rem Statement	X			
Replace Function		X		
Replace Method				X
RGB Function		X		
Right Function	X			
Rnd Function	X			
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RTrim Function	X			
ScriptEngine Function		Х		
ScriptEngineBuildVersion Function		x		
ScriptEngineMajorVersion Function		X		
ScriptEngineMinorVersion Function		X		
Second Function	X			
Select Case Statement	X			
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Sgn Function	X			
Sin Function	X			
Source Property	X			
Space Function	X			
Split Function		х		
<u>Sqr Function</u>	X			
StrComp Function	X			
	1	1		

String Constants		X		
String Function	X			
StrReverse Function		Х		
<u>Sub Statement</u>	х			
Subtraction Operator (-)	X			
Tan Function	X			
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Operator Precedence

Operator Summary

Or Operator



Function

See Also

Date Function

Day Function

Month Function

Now Function

Weekday Function

Constants

See Also

Comparison Constants

Date and Time Constants

Date Format Constants

Miscellaneous Constants

MsgBox Constants

String Constants

Tristate Constants

VarType Constants

Microsoft® Visual Basic® Scripting Edition **Tristate**

Constants

Language Reference

See Also

Color Constants

Comparison Constants

Date and Time Constants

Date Format Constants

Miscellaneous Constants

MsgBox Constants

String Constants

VarType Constants

Microsoft® Visual Basic® Scripting Edition

Comparison Operators

Language Reference

See Also

<u>= Operator</u>

Is Operator

Operator Precedence

Operator Summary

ExecuteGlobal Statement

<u>Language Reference</u> Version 5

See Also

Description

Executes one or more specified statements in the global namespace of a script.

Syntax

ExecuteGlobal statement

The required *statement* argument is a <u>string expression</u> containing one or more statements for execution. Include multiple statements in the *statement* argument, using colons or embedded line breaks to separate them.

Remarks

In VBScript, x = y can be interpreted two ways. The first is as an assignment statement, where the value of y is assigned to x. The second interpretation is as an <u>expression</u> that tests if x and y have the same value. If they do, *result* is **True**; if they are not, *result* is **False**. The **ExecuteGlobal** statement always uses the first interpretation, whereas the **Eval** method always uses the second.

Note In Microsoft® JScript�, no confusion exists between assignment and comparison, because the assignment operator (=) is different from the <u>comparison operator(==)</u>.

All statements used with **ExecuteGlobal** are executed in the script's global namespace. This allows code to be added to the program so that any <u>procedure</u> can access it. For example, a VBScript **Class** statement can be executed at run time and functions can subsequently create new instances of the class.

Adding procedures and classes at runtime can be useful, but also introduces the possibility of overwriting existing global <u>variables</u> and functions at runtime. Because this can cause significant programming problems, care should be exercised when using the **ExecuteGlobal** statement. If you don t need access to a variable or function outside of a procedure, use the **Execute** statement which

will only affect the namespace of the calling function.

The following example illustrates the use of the **ExecuteGlobal** statement:

' Declare X in global scope. Dim X X = "Global"

' Assign global X a value.

Sub Proc1 ' Declare procedure.

' Declare X in local scope. Dim X X = "Local" 'Assign local X a value.

> 'The Execute statement here creates a ' procedure that, when invoked, prints X.

' It print the global X because Proc2 ' inherits everything in global scope.

ExecuteGlobal "Sub Proc2: Print X: End Sub"

Print Eval("X") ' Print local X.

Proc2 'Invoke Proc2 in Global scope resulting

' in "Global" being printed.

End Sub

Proc2 'This line causes an error since

' Proc2 is unavailable outside Proc1.

' Invoke Proc1. Proc1

Execute "Sub Proc2: Print X: End Sub"

'This invocation succeeds because Proc2 Proc2

' is now available globally.

The following example shows how the **ExecuteGlobal** statement can be rewritten so you don't have to enclose the entire procedure in the quotation marks:

S = "Sub Proc2" & vbCrLf

S = S & " Print X" & vbCrLf

S = S & "End Sub"

ExecuteGlobal S

<u>Language Reference</u> Version 5

GetLocale Function

See Also

Description

Returns the current locale ID value.

Syntax

GetLocale()

Remarks

A *locale* is a set of user preference information related to the user's language, country/region, and cultural conventions. The *locale* determines such things as keyboard layout, alphabetic sort order, as well as date, time, number, and currency formats.

The return value can be any of the 32-bit values shown in the Locale ID chart:

The following example illustrates the use of the **GetLocale** function. To use this code, paste the entire example between the <BODY>l; tags of a standard HTML page.

Enter Date in UK format: <input type="text" id="UKDate" size="!
Here's the US equivalent: <input type="text" id="USdate" size="2
<input type="button" value="Convert" id="button1">
Enter a price in German: <input type="text" id="GermanN</p>

Here's the UK equivalent: <input type="text" id="USNumber" size <input type="button" value="Convert" id="button2">
input type="button" value="Convert" id="button2">

<script language="vbscript">

```
Dim currentLocale
' Get the current locale
currentLocale = GetLocale
Sub Button1_onclick
 Dim original
 original = SetLocale("en-gb")
 mydate = CDate(UKDate.value)
 ' IE always sets the locale to US English so use the
 ' currentLocale variable to set the locale to US English
 original = SetLocale(currentLocale)
 USDate.value = FormatDateTime(mydate,vbShortDate)
End Sub
Sub button2_onclick
 Dim original
 original = SetLocale("de")
 myvalue = CCur(GermanNumber.value)
 original = SetLocale("en-gb")
 USNumber.value = FormatCurrency(myvalue)
End Sub
</script>
```

Microsoft® Visual Basic® Scripting

Locale ID (LCID)

Chart

Language Reference
Version 5

See Also

| Locale Description | Short
String | Hex Value | Decimal
Value | Locale Description | Short
String | Hex Value | Decimal
Value |
|--------------------|-----------------|-----------|------------------|--------------------|-----------------|-----------|------------------|
| Afrikaans | af | 0x0436 | 1078 | Hebrew | he | 0x040D | 1037 |
| Albanian | sq | 0x041C | 1052 | Hindi | hi | 0x0439 | 1081 |
| Arabic - U.A.E. | ar-
ae | 0x3801 | 14337 | Hungarian | hu | 0x040E | 1038 |
| Arabic - Bahrain | ar-
bh | 0x3C01 | 15361 | Icelandic | is | 0x040F | 1039 |
| | | | | | | | |

| Arabic - Algeria | ar-
dz | 0x1401 | 5121 | Indonesian | in | 0x0421 | 1057 |
|------------------|-----------|--------|-------|--------------------------|-----------|--------|------|
| Arabic - Egypt | ar-
eg | 0x0C01 | 3073 | Italian - Standard | it | 0x0410 | 1040 |
| Arabic - Iraq | ar-
iq | 0x0801 | 2049 | Italian -
Switzerland | it-
ch | 0x0810 | 2064 |
| Arabic - Jordan | ar-
jo | 0x2C01 | 11265 | Japanese | ja | 0x0411 | 1041 |
| Arabic - Kuwait | ar-
kw | 0x3401 | 13313 | Korean | ko | 0x0412 | 1042 |
| Arabic - Lebanon | ar-
lb | 0x3001 | 12289 | Latvian | lv | 0x0426 | 1062 |
| Arabic - Libya | ar-
ly | 0x1001 | 4097 | Lithuanian | lt | 0x0427 | 1063 |
| Arabic - Morocco | ar-
ma | 0x1801 | 6145 | Macedonian | mk | 0x042F | 1071 |
| Arabic - Oman | ar-
om | 0x2001 | 8193 | Malay - Malaysia | ms | 0x043E | 1086 |
| Arabic - Qatar | ar-
qa | 0x4001 | 16385 | Maltese | mt | 0x043A | 1082 |

| Arabic - Saudia
Arabia | ar-
sa | 0x0401 | 1025 | Norwegian -
Bokmål | no | 0x0414 | 1044 |
|---------------------------|-----------|--------|-------|--------------------------|-----------|--------|------|
| Arabic - Syria | ar-
sy | 0x2801 | 10241 | Polish | pl | 0x0415 | 1045 |
| Arabic - Tunisia | ar-
tn | 0x1C01 | 7169 | Portuguese -
Standard | pt | 0x0816 | 2070 |
| Arabic - Yemen | ar-
ye | 0x2401 | 9217 | Portuguese -
Brazil | pt-
br | 0x0416 | 1046 |
| Basque | eu | 0x042D | 1069 | Raeto-Romance | rm | 0x0417 | 1047 |
| Belarusian | be | 0x0423 | 1059 | Romanian | ro | 0x0418 | 1048 |
| Bulgarian | bg | 0x0402 | 1026 | Romanian -
Moldova | ro-
mo | 0x0818 | 2072 |
| Catalan | ca | 0x0403 | 1027 | Russian | ru | 0x0419 | 1049 |
| Chinese | zh | 0x0004 | 4 | Russian -
Moldova | ru-
mo | 0x0819 | 2073 |
| Chinese - PRC | zh-
cn | 0x0804 | 2052 | Serbian - Cyrillic | sr | 0x0C1A | 3098 |
| | | | | | | | |

| Chinese - Hong
Kong | zh-
hk | 0x0C04 | 3076 | Setsuana | tn | 0x0432 | 1074 |
|------------------------|-----------|--------|------|-------------------------|-----------|--------|-------|
| Chinese -
Singapore | zh-
sg | 0x1004 | 4100 | Slovenian | sl | 0x0424 | 1060 |
| Chinese - Taiwan | zh-
tw | 0x0404 | 1028 | Slovak | sk | 0x041B | 1051 |
| Croatian | hr | 0x041A | 1050 | Sorbian | sb | 0x042E | 1070 |
| Czech | CS | 0x0405 | 1029 | Spanish -
Standard | es | 0x040A | 1034 |
| Danish | da | 0x0406 | 1030 | Spanish -
Argentina | es-
ar | 0x2C0A | 11274 |
| Dutch | nl | 0x0413 | 1043 | Spanish - Bolivia | es-
bo | 0x400A | 16394 |
| Dutch - Belgium | nl-
be | 0x0813 | 2067 | Spanish - Chile | es-
cl | 0x340A | 13322 |
| English | en | 0x0009 | 9 | Spanish -
Columbia | es-
co | 0x240A | 9226 |
| English -
Australia | en-
au | 0x0C09 | 3081 | Spanish - Costa
Rica | es-
cr | 0x140A | 5130 |
| | | | | | | | |

| | en-
bz | 0x2809 | 10249 | Spanish -
Dominican
Republic | es-
do | 0x1C0A | 7178 |
|-----------------------------|-----------|--------|-------|------------------------------------|-----------|--------|-------|
| English - Canada | en-
ca | 0x1009 | 4105 | Spanish -
Ecuador | es-
ec | 0x300A | 12298 |
| English - Ireland | en-
ie | 0x1809 | 6153 | Spanish -
Guatemala | es-
gt | 0x100A | 4106 |
| English - Jamaica | en-
jm | 0x2009 | 8201 | Spanish -
Honduras | es-
hn | 0x480A | 18442 |
| English - New
Zealand | en-
nz | 0x1409 | 5129 | Spanish - Mexico | es-
mx | 0x080A | 2058 |
| English - South
Africa | en-
za | 0x1C09 | 7177 | Spanish -
Nicaragua | es-
ni | 0x4C0A | 19466 |
| English - Trinidad | en-
tt | 0x2C09 | 11273 | Spanish - Panama | es-
pa | 0x180A | 6154 |
| English - United
Kingdom | en-
gb | 0x0809 | 2057 | Spanish - Peru | es-
pe | 0x280A | 10250 |
| English - United
States | en-
us | 0x0409 | 1033 | Spanish - Puerto
Rico | es-
pr | 0x500A | 20490 |
| | | | | Spanish - | es- | | |

| Estonian | et | 0x0425 | 1061 | Paraguay | ру | 0x3C0A | 15370 |
|-------------------------|-----------|--------|------|--------------------------|-----------|--------|-------|
| Farsi | fa | 0x0429 | 1065 | Spanish - El
Salvador | es-
sv | 0x440A | 17418 |
| Finnish | fi | 0x040B | 1035 | Spanish -
Uruguay | es-
uy | 0x380A | 14346 |
| Faeroese | fo | 0x0438 | 1080 | Spanish -
Venezuela | es-
ve | 0x200A | 8202 |
| French - Standard | fr | 0x040C | 1036 | Sutu | SX | 0x0430 | 1072 |
| French - Belgium | fr-
be | 0x080C | 2060 | Swedish | sv | 0x041D | 1053 |
| French - Canada | fr-
ca | 0x0C0C | 3084 | Swedish - Finland | sv-
fi | 0x081D | 2077 |
| French -
Luxembourg | fr-
lu | 0x140C | 5132 | Thai | th | 0x041E | 1054 |
| French -
Switzerland | fr-
ch | 0x100C | 4108 | Turkish | tr | 0x041F | 1055 |
| Gaelic - Scotland | gd | 0x043C | 1084 | Tsonga | ts | 0x0431 | 1073 |
| German - | | | | | | | |

| Standard | de | 0x0407 | 1031 | Ukranian | uk | 0x0422 | 1058 |
|--------------------------|-----------|--------|------|-----------------|----|--------|------|
| German -
Austrian | de-
at | 0x0C07 | 3079 | Urdu - Pakistan | ur | 0x0420 | 1056 |
| German -
Lichtenstein | de-
li | 0x1407 | 5127 | Vietnamese | vi | 0x042A | 1066 |
| German -
Luxembourg | de-
lu | 0x1007 | 4103 | Xhosa | xh | 0x0434 | 1076 |
| German -
Switzerland | de-
ch | 0x0807 | 2055 | Yiddish | ji | 0x043D | 1085 |
| Greek | el | 0x0408 | 1032 | Zulu | zu | 0x0435 | 1077 |

<u>Language Reference</u> <u>Version 5</u>

SetLocale Function

See Also

Description

Sets the global locale and returns the previous locale.

Syntax

SetLocale(lcid)

The *lcid* argument can be any valid 32-bit value or short string that uniquely identifies a geographical locale. Recognized values can be found in the Locale ID chart.

Remarks

If *lcid* is zero, the locale is set to match the current system setting.

A locale is a set of user preference information related to the user's language, country/region, and cultural conventions. The locale determines such things as keyboard layout, alphabetic sort order, as well as date, time, number, and currency formats.

The following example illustrates the use of the **SetLocale** function. To use this code, paste the entire example between the <BODY> tags of a standard HTML page.

```
Enter Date in UK format: <input type="text" id="\lambda
Here's the US equivalent: <input type="text" id="\lambda
<input type="button" value="Convert" id="button1</pre>
Enter a price in German:   <input type="text
>
Here's the UK equivalent: <input type="text" id="\text"
<input type="button" value="Convert" id="button;</pre>
<script language="vbscript">
Dim currentLocale
' Get the current locale
currentLocale = GetLocale
Sub Button1 onclick
 Dim original
 original = SetLocale("en-gb")
 mydate = CDate(UKDate.value)
 ' IE always sets the locale to US English so use th
 ' currentLocale variable to set the locale to US En
 original = SetLocale(currentLocale)
 USDate.value = FormatDateTime(mydate,vbShor
End Sub
Sub button2_onclick
```

Dim original

```
original = SetLocale("de")
myvalue = CCur(GermanNumber.value)
original = SetLocale("en-gb")
USNumber.value = FormatCurrency(myvalue)
End Sub
</script>
```

Method (Dictionary)

Scripting Run-Time Reference

See Also

Add Method (Folders)

Exists Method

Items Method

Keys Method

Remove Method

RemoveAll Method

 ${\tt Microsoft \& Visual \ Basic \& \ Scripting \ Edition} \ Add$

Method (Dictionary)

Scripting Run-Time Reference

Applies To

Dictionary Object

Microsoft® Visual Basic® Scripting Edition Add Method (Folders)

Scripting Run-Time Reference

See Also

Add Method (Dictionary)

${\tt Microsoft @ Visual Basic @ Scripting Edition} \, Add}$

Method (Folders)

Scripting Run-Time Reference

Applies To

Folders Collection

AtEndOfLine Property

Scripting Run-Time Reference

See Also

AtEndOfStream Property
Column Property
Line Property

AtEndOfLine Property

Scripting Run-Time Reference

Applies To

TextStream Object

AtEndOfStream Property

Scripting Run-Time Reference

See Also

AtEndOfLine Property
Column Property
Line Property

AtEndOfStream Property

Scripting Run-Time Reference Version

Applies To

TextStream Object

Attributes Property See Also

Scripting Run-Time Reference

DateCreated Property

DateLastAccessed Property

DateLastModified Property

Drive Property

Files Property

IsRootFolder Property

Name Property

ParentFolder Property

Path Property

ShortName Property

ShortPath Property

Size Property

SubFolders Property

Type Property

Attributes Property Applies To

Scripting Run-Time Reference

File Object Folder Object

AvailableSpace Property See Also

Scripting Run-Time Reference

DriveLetter Property

DriveType Property

FileSystem Property

FreeSpace Property

IsReady Property

Path Property

RootFolder Property

SerialNumber Property

ShareName Property

TotalSize Property

VolumeName Property

AvailableSpace Property Applies To

Scripting Run-Time Reference

Drive Object

BuildPath Method

Scripting Run-Time Reference

See Also

GetAbsolutePathName Method

GetBaseName Method

GetDriveName Method

GetExtensionName Method

GetFileName Method

GetParentFolderName Method

GetTempName Method

BuildPath MethodApplies To

Scripting Run-Time Reference

FileSystemObject Object



Method

Scripting Run-Time Reference

See Also

Read Method

ReadAll Method

ReadLine Method

Skip Method

SkipLine Method

Write Method

WriteLine Method

WriteBlankLines Method



MethodApplies To

Scripting Run-Time Reference

TextStream Object



Scripting Run-Time Reference

Property

See Also

AtEndOfLine Property
AtEndOfStream Property
Line Property



Property

Applies To

Scripting Run-Time Reference

TextStream Object

CompareMode Property

Scripting Run-Time Reference

See Also

Count Property
Item Property
Key Property

CompareMode Property

Scripting Run-Time Reference

Applies To

Dictionary Object



MethodSee Also

Scripting Run-Time Reference

CopyFile Method
CopyFolder Method
Delete Method
Move Method
OpenAsTextStream Method



Method Applies To

Scripting Run-Time Reference

<u>File Object</u> <u>Folder Object</u>

CopyFile Method

Scripting Run-Time Reference

See Also

Copy Method
CopyFolder Method
CreateTextFile Method
DeleteFile Method
MoveFile Method

CopyFile Method Applies To

Scripting Run-Time Reference

FileSystemObject Object

CopyFolder Method

Scripting Run-Time Reference

See Also

CopyFile Method

Copy Method

CreateFolder Method

DeleteFolder Method

MoveFolder Method

CopyFolder Method

Scripting Run-Time Reference

Applies To

FileSystemObject Object



Scripting Run-Time Reference

Property

See Also

CompareMode Property
Item Property
Key Property



Scripting Run-Time Reference

Property

Applies To

Dictionary Object

Drives Collection

Files Collection

Folders Collection

Matches Collection

CreateFolder Method

Scripting Run-Time Reference

See Also

CopyFolder Method DeleteFolder Method MoveFolder Method

CreateFolder Method

Scripting Run-Time Reference

Applies To

FileSystemObject Object

CreateTextFile Method

Scripting Run-Time Reference

See Also

<u>CreateFolder Method</u> <u>OpenAsTextStream Method</u> <u>OpenTextFile Method</u>

CreateTextFile Method

Scripting Run-Time Reference

Applies To

FileSystemObject Object
Folder Object

DateCreated Property See Also

Scripting Run-Time Reference

Attributes Property

DateLastAccessed Property

DateLastModified Property

Drive Property

Files Property

IsRootFolder Property

Name Property

ParentFolder Property

Path Property

ShortName Property

ShortPath Property

Size Property

SubFolders Property

Type Property

DateCreated Property Applies To

Scripting Run-Time Reference

File Object
Folder Object

DateLastAccessed Property

Scripting Run-Time Reference

See Also

Attributes Property

DateCreated Property

DateLastModified Property

Drive Property

Files Property

IsRootFolder Property

Name Property

ParentFolder Property

Path Property

ShortName Property

ShortPath Property

Size Property

SubFolders Property

Type Property

DateLastAccessed Property

Scripting Run-Time Reference

Applies To

File Object Folder Object

DateLastModified Property

Scripting Run-Time Reference

See Also

Attributes Property

DateCreated Property

DateLastAccessed Property

Drive Property

Files Property

IsRootFolder Property

Name Property

ParentFolder Property

Path Property

ShortName Property

ShortPath Property

Size Property

SubFolders Property

Type Property

DateLastModified Property

Scripting Run-Time Reference

Applies To

File Object Folder Object

$\underline{\textbf{Microsoft} \$ \text{ Visual Basic} \$ \text{ Scripting Edition } \textbf{Delete}}$

MethodSee Also

Scripting Run-Time Reference

Copy Method
DeleteFile Method
DeleteFolder Method
Move Method
OpenAsTextStream Method

\underline{Delete} Microsoft® Visual Basic® Scripting Edition

Method Applies To

Scripting Run-Time Reference

File Object Folder Object

DeleteFile Method

Scripting Run-Time Reference

See Also

CopyFile Method
CreateTextFile Method
Delete Method
DeleteFolder Method
MoveFile Method

DeleteFile Method Applies To

Scripting Run-Time Reference

FileSystemObject Object

DeleteFolder Method

Scripting Run-Time Reference

See Also

CopyFolder Method CreateFolder Method

Delete Method

DeleteFile Method

MoveFolder Method

DeleteFolder Method

Scripting Run-Time Reference

Applies To

FileSystemObject Object

Dictionary Object

Scripting Run-Time Reference

See Also

FileSystemObject Object
TextStream Object

Dictionary Object

Scripting Run-Time Reference

Properties

CompareMode Property
Count Property
Item Property
Key Property

Dictionary Object

Scripting Run-Time Reference

Methods

Add Method (Dictionary)

Exists Method

Items Method

Keys Method

Remove Method

RemoveAll Method



ObjectSee Also

Drives Collection

File Object

Files Collection

Folder Object

Folders Collection

GetDrive Method

Object Properties

AvailableSpace Property

DriveLetter Property

DriveType Property

FileSystem Property

FreeSpace Property

IsReady Property

Path Property

RootFolder Property

SerialNumber Property

ShareName Property

TotalSize Property

VolumeName Property



ObjectMethods

The **Drive** object has no methods.



PropertySee Also

Attributes Property

DateCreated Property

DateLastAccessed Property

DateLastModified Property

Files Property

IsRootFolder Property

Name Property

ParentFolder Property

Path Property

ShortName Property

ShortPath Property

Size Property

SubFolders Property

Type Property



Property Applies To

File Object Folder Object

DriveExists Method

Scripting Run-Time Reference

See Also

Drive Object

Drives Collection

FileExists Method

FolderExists Method

GetDrive Method

GetDriveName Method

IsReady Property

DriveExists Method Applies To

Scripting Run-Time Reference

FileSystemObject Object

DriveLetter Property See Also

Scripting Run-Time Reference

AvailableSpace Property

DriveType Property

FileSystem Property

FreeSpace Property

IsReady Property

Path Property

RootFolder Property

SerialNumber Property

ShareName Property

TotalSize Property

VolumeName Property

DriveLetter Property Applies To

Scripting Run-Time Reference

Drive Object



Collection

Scripting Run-Time Reference

See Also

Drive Object

Drives Property

File Object

Files Collection

Folder Object

Folders Collection



Collection

Scripting Run-Time Reference

Properties

Count Property
Item Property



Collection Methods

Scripting Run-Time Reference

The **Drives** collection has no methods.



PropertySee Also

Drives Collection
Files Property
SubFolders Property



Property Applies To

FileSystemObject Object

DriveType Constants

Scripting Run-Time Reference

See Also

Comparison Constants
File Attribute Constants
File Input/Output Constants
SpecialFolder Constants
Tristate Constants

DriveType Property See Also

Scripting Run-Time Reference

AvailableSpace Property

DriveLetter Property

FileSystem Property

FreeSpace Property

IsReady Property

Path Property

RootFolder Property

SerialNumber Property

ShareName Property

TotalSize Property

VolumeName Property

DriveType Property Applies To

Scripting Run-Time Reference

Drive Object



Method

Language Reference

See Also

Add Method (Dictionary)

Items Method

Keys Method

Remove Method

RemoveAll Method



Method

Language Reference

Applies To

Dictionary Object

FileAttribute Constants

Scripting Run-Time Reference

See Also

Comparison Constants
DriveType Constants
File Input/Output Constants
SpecialFolder Constants
Tristate Constants

$\textbf{Microsoft® Visual Basic® Scripting Edition} \ \textbf{File}$

Input/Output Constants

Scripting Run-Time Reference

See Also

Comparison Constants

DriveType Constants

File Attribute Constants

SpecialFolder Constants

Tristate Constants

FileExists Method

Scripting Run-Time Reference

See Also

DriveExists Method
FolderExists Method
GetFile Method
GetFileName Method

FileExists Method Applies To

Scripting Run-Time Reference

FileSystemObject Object



ObjectSee Also

Drive Object
Drives Collection
Files Collection
Folder Object
Folders Collection



Object Properties

Attributes Property

DateCreated Property

DateLastAccessed Property

DateLastModified Property

Drive Property

Name Property

ParentFolder Property

Path Property

ShortName Property

ShortPath Property

Size Property

Type Property



ObjectMethods

Copy Method
Delete Method
Move Method
OpenAsTextStream Method



Collection See Also

Scripting Run-Time Reference

Drive Object
Drives Collection

File Object

Folder Object

Folders Collection



Collection

Scripting Run-Time Reference

Properties

Count Property
Item Property



CollectionScripting Run-Time Reference

Methods

The **Files** collection has no methods.



PropertySee Also

Attributes Property

DateCreated Property

DateLastAccessed Property

DateLastModified Property

Drives Property

IsRootFolder Property

Name Property

ParentFolder Property

Path Property

ShortName Property

ShortPath Property

Size Property

SubFolders Property

Type Property



Property Applies To

Folder Object

FileSystemObject Object

Scripting Run-Time Reference

See Also

CreateObject Function

Dictionary Object

Drive Object

Drives Collection

File Object

FileSystem Property

Files Collection

Folder Object

Folders Collection

TextStream Object

FileSystemObject Object

Scripting Run-Time Reference

Properties

Drives Property

FileSystemObject Object

Scripting Run-Time Reference

Methods

BuildPath Method

CopyFile Method

CopyFolder Method

CreateFolder Method

CreateTextFile Method

DeleteFile Method

DeleteFolder Method

DriveExists Method

FileExists Method

FolderExists Method

GetAbsolutePathName Method

GetBaseName Method

GetDrive Method

GetDriveName Method

GetExtensionName Method

GetFile Method

GetFileName Method

GetFolder Method

GetParentFolderName Method

GetSpecialFolder Method

GetTempName Method

MoveFile Method

MoveFolder Method

OpenTextFile Method

FileSystemObject Constants

Scripting Run-Time Reference

See Also

VBScript Constants

FileSystem Property See Also

Scripting Run-Time Reference

AvailableSpace Property

DriveLetter Property

DriveType Property

FileSystemObject Object

FreeSpace Property

IsReady Property

Path Property

RootFolder Property

SerialNumber Property

ShareName Property

TotalSize Property

VolumeName Property

FileSystem Property Applies To

Scripting Run-Time Reference

Drive Object



ObjectSee Also

Drive Object
Drives Collection
File Object
Files Collection
Folders Collection

Object Properties

Attributes Property

DateCreated Property

DateLastAccessed Property

DateLastModified Property

Drive Property

Files Property

IsRootFolder Property

Name Property

ParentFolder Property

Path Property

ShortName Property

ShortPath Property

Size Property

SubFolders Property

Type Property



ObjectMethods

Scripting Run-Time Reference

Copy Method
Delete Method
Move Method
CreateTextFile Method

${\bf Microsoft \& \ Visual \ Basic \& \ Scripting \ Edition} \ {\bf Folders}$

Collection

Scripting Run-Time Reference

See Also

Drive Object

Drives Collection

File Object

Files Collection

Folder Object

SubFolders Property

${\bf Microsoft \& \ Visual \ Basic \& \ Scripting \ Edition} \ {\bf Folders}$

Collection

Scripting Run-Time Reference

Properties

Count Property
Item Property



Collection

Scripting Run-Time Reference

Methods

Add Method

FolderExists Method

Scripting Run-Time Reference

See Also

DriveExists Method
FileExists Method
GetFolder Method
GetParentFolderName Method

FolderExists Method

Scripting Run-Time Reference

Applies To

FileSystemObject Object

FreeSpace Property See Also

Scripting Run-Time Reference

AvailableSpace Property

DriveLetter Property

DriveType Property

FileSystem Property

IsReady Property

Path Property

RootFolder Property

SerialNumber Property

ShareName Property

TotalSize Property

VolumeName Property

FreeSpace Property Applies To

Scripting Run-Time Reference

Drive Object

GetAbsolutePathName Method

Scripting Run-Time Reference

See Also

GetBaseName Method

GetDrive Method

GetDriveName Method

GetExtensionName Method

GetFile Method

GetFileName Method

GetFileVersion Method

GetFolder Method

GetParentFolderName Method

GetSpecialFolder Method

GetTempName Method

GetAbsolutePathName Method

Scripting Run-Time Reference

Applies To

FileSystemObject Object

GetBaseName Method

Scripting Run-Time Reference

See Also

GetAbsolutePathName Method

GetDrive Method

GetDriveName Method

GetExtensionName Method

GetFile Method

GetFileName Method

GetFileVersion Method

GetFolder Method

GetParentFolderName Method

GetSpecialFolder Method

GetTempName Method

GetBaseName Method

Scripting Run-Time Reference

Applies To

FileSystemObject Object

GetDrive Method

See Also

GetAbsolutePathName Method

GetBaseName Method

GetDriveName Method

GetExtensionName Method

GetFile Method

GetFileName Method

GetFileVersion Method

GetFolder Method

GetParentFolderName Method

GetSpecialFolder Method

GetTempName Method

GetDrive Method Applies To

Scripting Run-Time Reference

FileSystemObject Object

GetDriveName Method

Scripting Run-Time Reference

See Also

GetAbsolutePathName Method

GetBaseName Method

GetDrive Method

GetExtensionName Method

GetFile Method

GetFileName Method

GetFileVersion Method

GetFolder Method

GetParentFolderName Method

GetSpecialFolder Method

GetTempName Method

GetDriveName Method

Scripting Run-Time Reference

Applies To

FileSystemObject Object

GetExtensionName Method

Scripting Run-Time Reference

See Also

GetAbsolutePathName Method

GetBaseName Method

GetDrive Method

GetDriveName Method

GetFile Method

GetFileName Method

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GetParentFolderName Method

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GetTempName Method

GetExtensionName Method

Scripting Run-Time Reference

Applies To

FileSystemObject Object



Method See Also

GetAbsolutePathName Method

GetBaseName Method

GetDrive Method

GetDriveName Method

GetExtensionName Method

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GetSpecialFolder Method

GetTempName Method

Scripting Run-Time Reference

Applies To

Scripting Run-Time Reference

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AvailableSpace Property

DriveLetter Property

DriveType Property

FileSystem Property

FreeSpace Property

Path Property

RootFolder Property

SerialNumber Property

ShareName Property

TotalSize Property

VolumeName Property

${\tt Microsoft \& Visual \ Basic \& \ Scripting \ Edition} \ {\color{blue} Is Ready}$

Scripting Run-Time Reference

Property Applies To

Drive Object

IsRootFolder Property See Also

Scripting Run-Time Reference

Attributes Property

DateCreated Property

DateLastAccessed Property

DateLastModified Property

Drive Property

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ParentFolder Property

Path Property

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ShortPath Property

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SubFolders Property

Type Property

IsRootFolder Property

Scripting Run-Time Reference

Applies To

Folder Object



Property

See Also

CompareMode Property
Count Property
Key Property



Property

Applies To

Dictionary Object

Drives Collection

Files Collection

Folders Collection

Matches Collection

${\tt Microsoft \& Visual \ Basic \& \ Scripting \ Edition} \ {\color{blue} Items}$

Method

Scripting Run-Time Reference

See Also

Add Method (Dictionary)

Exists Method

Keys Method

Remove Method

RemoveAll Method



Method

Scripting Run-Time Reference

Applies To

Dictionary Object



Property

See Also

Scripting Run-Time Reference

CompareMode Property
Count Property
Item Property



Property

Applies To

Dictionary Object

FileSystemObject Glossary

Scripting Run-Time Reference

array

A set of sequentially indexed elements having the same type of data. Each element of an array has a unique identifying index number. Changes made to one element of an array do not affect the other elements.

collection

An object that contains a set of related objects. An object's position in the collection can change whenever a change occurs in the collection; therefore, the position of any specific object in the collection may vary.

run-time error

An error that occurs when code is running. A run-time error results when a statement attempts an invalid operation.

string expression

Any expression that evaluates to a sequence of contiguous characters. Elements of a string expression can include a function that returns a string, a string literal, a string constant, or a string variable.

type library

A file or component within another file that contains standard descriptions of exposed objects, properties, and methods.



Method

See Also

Add Method (Dictionary)

Exists Method

Items Method

Remove Method

RemoveAll Method



Method

Scripting Run-Time Reference

Applies To

Dictionary Object



Property

See Also

AtEndOfStream Property
AtEndOfLine Property
Column Property



Scripting Run-Time Reference
Version

Property

Applies To

TextStream Object



MethodSee Also

Copy Method
Delete Method
MoveFile Method
MoveFolder Method
OpenAsTextStream Method



Method Applies To

File Object Folder Object

MoveFile Method

Scripting Run-Time Reference

See Also

CopyFile Method

DeleteFile Method

GetFile Method

GetFileName Method

Move Method

MoveFolder Method

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Type Property



Property Applies To

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OpenAsTextStream Method

Scripting Run-Time Reference

See Also

Copy Method
CreateTextFile Method
Delete Method
Move Method

OpenTextFile Method

OpenAsTextStream Scripting Run-Time Reference **Method**

Applies To

File Object

OpenTextFile Method

Scripting Run-Time Reference

See Also

OpenAsTextStream Method CreateTextFile Method

OpenTextFile Method

Scripting Run-Time Reference

Applies To

FileSystemObject Object

ParentFolder Property See Also

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Applies To

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PropertySee Also

Attributes Property

AvailableSpace Property

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DateLastModified Property

Drive Property

DriveLetter Property

DriveType Property

Files Property

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IsReady Property

IsRootFolder Property

Name Property

ParentFolder Property

RootFolder Property

SerialNumber Property

ShareName Property

ShortName Property

ShortPath Property

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VolumeName Property



Property Applies To

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Method

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See Also

Close Method

ReadAll Method

ReadLine Method

Skip Method

SkipLine Method

Write Method

WriteLine Method

WriteBlankLines Method



Method

Scripting Run-Time Reference

Applies To

TextStream Object

${\tt Microsoft \& Visual \ Basic \& \ Scripting \ Edition} \ Read All$

Method

Scripting Run-Time Reference

See Also

Close Method

Read Method

ReadLine Method

Skip Method

SkipLine Method

Write Method

WriteLine Method

WriteBlankLines Method

Method

Scripting Run-Time Reference

Applies To

TextStream Object

ReadLine Method

Scripting Run-Time Reference

See Also

Close Method

Read Method

ReadAll Method

Skip Method

SkipLine Method

Write Method

WriteLine Method

WriteBlankLines Method

ReadLine Method

Scripting Run-Time Reference

Applies To

TextStream Object

${\tt Microsoft \& Visual \ Basic \& \ Scripting \ Edition} \ {\color{blue} Remove}$

Method

Scripting Run-Time Reference

See Also

Add Method (Dictionary)

Exists Method

Items Method

Keys Method

RemoveAll Method

${\tt Microsoft \& Visual \ Basic \& \ Scripting \ Edition} \ \overline{Remove}$

Method

Scripting Run-Time Reference

Applies To

Dictionary Object

RemoveAll Method

Scripting Run-Time Reference

See Also

Add Method (Dictionary)

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AvailableSpace Property

DriveLetter Property

DriveType Property

FileSystem Property

FreeSpace Property

IsReady Property

Path Property

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VolumeName Property

RootFolder Property Applies To

Scripting Run-Time Reference

Drive Object

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DriveType Property

FileSystem Property

FreeSpace Property

IsReady Property

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DateLastModified Property

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DateLastAccessed Property

DateLastModified Property

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See Also

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Read Method

ReadAll Method

ReadLine Method

SkipLine Method

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WriteLine Method

WriteBlankLines Method



Method

Applies To

TextStream Object

SkipLine Method

Scripting Run-Time Reference

See Also

Close Method

Read Method

ReadAll Method

ReadLine Method

Skip Method

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Scripting Run-Time Reference

Applies To

TextStream Object

SpecialFolder Constants

Scripting Run-Time Reference

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<u>DriveType Constants</u>

FileAttribute Constants

File Input/Output Constants

Tristate Constants

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Scripting Run-Time Reference

Folder Object

TextStream Object

Scripting Run-Time Reference

See Also

<u>Dictionary Object</u> <u>FileSystemObject Object</u>

TextStream Object

Scripting Run-Time Reference

Properties

AtEndOfLine Property
AtEndOfStream Property
Column Property
Line Property

TextStream Object

Scripting Run-Time Reference

Methods

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Scripting Run-Time Reference

Applies To

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Applies To

TextStream Object

InStrRev Function

Language Reference

See Also

InStr Function

Arithmetic Operators

Language Reference Version 1

- ^ Operator
- * Operator
- / Operator
- \ Operator
- **Mod Operator**
- + Operator
- Operator

Concatenation Operators

Concatenation Operators

Language Reference Version 1

& Operator+ Operator

Language Reference Version 1

Operator Summary

See Also

Arithmetic Operators

Operators used to perform mathematical calculations.

Assignment Operator

Operator used to assign a value to a property or variable.

Comparison Operators

Operators used to perform comparisons.

Concatenation Operators

Operators used to combine strings.

Logical Operators

Operators used to perform logical operations.

Language Reference
Version 1

Operators

And Operator

Not Operator

Or Operator

Xor Operator

Microsoft® Visual Basic® Scripting Edition Derived Math Functions

See Also

Description

The following nonintrinsic math functions can be derived from the intrinsic math functions:

| Function | Derived equivalents |
|------------------------|---|
| Secant | Sec(X) = 1 / Cos(X) |
| Cosecant | Cosec(X) = 1 / Sin(X) |
| Cotangent | Cotan(X) = 1 / Tan(X) |
| Inverse Sine | Arcsin(X) = Atn(X / Sqr(-X * X + 1)) |
| Inverse Cosine | Arccos(X) = Atn(-X / Sqr(-X * X + 1)) + 2
* $Atn(1)$ |
| Inverse Secant | Arcsec(X) = Atn(X / Sqr(X * X - 1)) + Sgn((X) -1) * (2 * Atn(1)) |
| Inverse Cosecant | Arccosec(X) = Atn(X / Sqr(X * X - 1)) + $(Sgn(X) - 1) * (2 * Atn(1))$ |
| Inverse Cotangent | Arccotan(X) = Atn(X) + 2 * Atn(1) |
| Hyperbolic Sine | HSin(X) = (Exp(X) - Exp(-X)) / 2 |
| Hyperbolic Cosine | HCos(X) = (Exp(X) + Exp(-X)) / 2 |
| Hyperbolic
Tangent | HTan(X) = (Exp(X) - Exp(-X)) / (Exp(X) + Exp(-X)) |
| Hyperbolic Secant | HSec(X) = 2 / (Exp(X) + Exp(-X)) |
| Hyperbolic
Cosecant | HCosec(X) = 2 / (Exp(X) - Exp(-X)) |
| Hyperbolic | HCotan(X) = (Exp(X) + Exp(-X)) / (Exp(X)) |

| | - Exp(-X)) |
|---------------------------------|---|
| Inverse Hyperbolic
Sine | HArcsin(X) = Log(X + Sqr(X * X + 1)) |
| Inverse Hyperbolic
Cosine | HArccos(X) = Log(X + Sqr(X * X - 1)) |
| Inverse Hyperbolic
Tangent | HArctan(X) = Log((1 + X) / (1 - X)) / 2 |
| Inverse Hyperbolic
Secant | HArcsec(X) = Log((Sqr(-X * X + 1) + 1) /
X) |
| Inverse Hyperbolic
Cosecant | $\begin{aligned} & \text{HArccosec}(X) = \text{Log}((\text{Sgn}(X) * \text{Sqr}(X * X \\ &+ 1) + 1) / X) \end{aligned}$ |
| Inverse Hyperbolic
Cotangent | HArccotan(X) = Log((X + 1) / (X - 1)) / 2 |
| Logarithm to base
N | LogN(X) = Log(X) / Log(N) |

Language Reference

VBScript Error Messages

| Error
Code | Message |
|---------------|---|
| 5 | Invalid procedure call or argument |
| 6 | Overflow |
| 7 | Out of memory |
| 9 | Subscript out of range |
| 10 | Array fixed or temporarily locked |
| 11 | Division by zero |
| 13 | Type mismatch |
| 14 | Out of string space |
| 28 | Out of stack space |
| 35 | Sub or Function not defined |
| 48 | Error in loading DLL |
| 51 | Internal error |
| 53 | File not found |
| 57 | Device I/O error |
| 58 | File already exists |
| 61 | Disk full |
| 67 | Too many files |
| 70 | Permission denied |
| 75 | Path/File access error |
| 76 | Path not found |
| 91 | Object variable or With block variable not set |
| | |

| 92 | For loop not initialized |
|------|--|
| 94 | Invalid use of Null |
| 322 | Can't create necessary temporary file |
| 424 | Object required |
| 429 | ActiveX component can't create object |
| 430 | Class doesn't support Automation |
| 432 | File name or class name not found during Automation operation |
| 438 | Object doesn't support this property or method |
| 440 | Automation error |
| 445 | Object doesn't support this action |
| 446 | Object doesn't support named arguments |
| 447 | Object doesn't support current locale setting |
| 448 | Named argument not found |
| 449 | Argument not optional |
| 450 | Wrong number of arguments or invalid property assignment |
| 451 | Object not a collection |
| 453 | Specified DLL function not found |
| 455 | Code resource lock error |
| 457 | This key already associated with an element of this collection |
| 458 | Variable uses an Automation type not supported in VBScript |
| 500 | Variable is undefined |
| 501 | Illegal assignment |
| 502 | Object not safe for scripting |
| 503 | Object not safe for initializing |
| 1001 | Out of memory |
| 1002 | Syntax error |
| 1003 | Expected ':' |

| i | |
|----------|--|
| 1004 | Expected ';' |
| 1005 | Expected '(' |
| 1006 | Expected ')' |
| 1007 | Expected ']' |
| 1008 | Expected '{' |
| 1009 | Expected '}' |
| 1010 | Expected identifier |
| 1011 | Expected '=' |
| 1012 | Expected 'If' |
| 1013 | Expected 'To' |
| 1014 | Expected 'End' |
| 1015 | Expected 'Function' |
| 1016 | Expected 'Sub' |
| 1017 | Expected 'Then' |
| 1018 | Expected 'Wend' |
| 1019 | Expected 'Loop' |
| 1020 | Expected 'Next' |
| 1021 | Expected 'Case' |
| 1022 | Expected 'Select' |
| 1023 | Expected expression |
| 1024 | Expected statement |
| 1025 | Expected end of statement |
| 1026 | Expected integer constant |
| 1027 | Expected 'While' or 'Until' |
| 1028 | Expected 'While', 'Until', or end of statement |
| 1029 | Too many locals or arguments |
| 1030 | Identifier too long |
| 1031 | Invalid number |
| 1032 | Invalid character |
| | |

| 1033 | Unterminated string constant |
|-------|-------------------------------------|
| 1034 | Unterminated comment |
| 1035 | Nested comment |
| 1037 | Invalid use of 'Me' keyword |
| 1038 | 'Loop' without 'Do' |
| 1039 | Invalid 'Exit' statement |
| 1040 | Invalid 'For' loop control variable |
| 1041 | Name redefined |
| 1042 | Must be first statement on the line |
| 1043 | Can't assign to non-ByVal argument |
| 1044 | Can't use parens when calling a Sub |
| 1045 | Expected literal constant |
| 1046 | Expected 'In' |
| 32766 | True |
| 32767 | False |
| 32811 | Element not found |

Language Reference Version 2

WeekdayName Function

See Also

Description

Returns a string indicating the specified day of the week.

Syntax

WeekdayName(weekday, abbreviate, firstdayofweek)

The **WeekdayName** function syntax has these parts:

| Part | Description | |
|----------------|--|--|
| weekday | Required. The numeric designation for the day of the week. Numeric value of each day depends on setting of the <i>firstdayofweek</i> setting. | |
| abbreviate | Optional. Boolean value that indicates if the weekday name is to be abbreviated. If omitted, the default is False , which means that the weekday name is not abbreviated. | |
| firstdayofweek | Optional. Numeric value indicating the first date of the week. See Settings section for values. | |

Settings

The *firstdayofweek* argument can have the following values:

| Constant | Value | Description |
|-------------|-------|---|
| vbUseSystem | 1 () | Use National Language Support (NLS)
API setting. |
| vbSunday | 1 | Sunday (default) |

| vbMonday | 2 | Monday |
|-------------|---|-----------|
| vbTuesday | 3 | Tuesday |
| vbWednesday | 4 | Wednesday |
| vbThursday | 5 | Thursday |
| vbFriday | 6 | Friday |
| vbSaturday | 7 | Saturday |

Remarks

The following example uses the **WeekDayName** function to return the specified day:

Dim MyDate
MyDate = WeekDayName(6, True) ' MyDate contains Fri.

ExecuteGlobal Statement

Language Reference

See Also

Eval Function
Execute Statement

GetLocale Function

Language Reference

See Also

SetLocale Function
Locale ID (LCID) Chart

Microsoft® Visual Basic® Scripting Edition Locale ID (LCID) Chart

Language Reference

See Also

GetLocale Function
SetLocale Function

SetLocale Function

Language Reference

See Also

GetLocale Function
Locale ID (LCID) Chart

Operator Summary

Language Reference

See Also

Operator Precedence

Assignment Operator

Language Reference Version 1

<u>= Operator</u>

${\tt Microsoft \& Visual \ Basic \& \ Scripting \ Edition} \ Derived$

Math Functions

Language Reference

See Also

Atn Function

Cos Function

Exp Function

Log Function

Sin Function

Sqr Function

Tan Function

WeekdayName Function

Language Reference

See Also

MonthName Function