

5. The Document and Window Objects

document Object

The document object represents the HTML document currently displayed in the browser. We can also call it as browser's document object. We reference to document object by:

- window.document, or
- document

The document object contains methods or functions:

```
document.close()    // Close an output stream
document.open(mimetype) // Begin a new document
write(value, ...)    // Append data to a document
writeln(value, ...)  // Append data and a new line to a document
```

It has attributes or properties:

```
document.bgColor // The document background color
document.alinkColor // The color of active links
document.vlinkColor // The color of visited links
document.linkColor // The color of unfollowed links
document.lastModified // The modification date of a document
document.URL // The URL of the current document
document.referrer // The URL of the linked-from document
document.title // The title of the current document
document.cookie
document.fgColor // the default text color
document.form[ ]
document.images[ ]
```

document.write()

- write() method
- No new line character is issued
- Examples:
 - document.write("font color = 'red'><h1>ECET ")
 - document.write("string for display")

document.writeln()

- writeln() method for writing text
- A new line character is added
- Examples
 - document.writeln(" Department Welcomes You!</h1>")

The document object definition is shown below:

Synopsis

window.document
document

Properties

alinkColor
The color of activated links.

bgColor
The document background color

fgColor
The default text color.

linkColor
The color of unfollowed links.

vlinkColor
The color of visited links.

lastModifies
The modification date of a document.

location

The URL of the current document.

title

The title of the document.

URL

The Uniform Resource Locator of the current document.

referrer

The URL of the linked-from document.

cookie

The cookie(s) of the document.

domain

The security domain of the document

form[]

The forms in a document

images[]

The images embedded in a document.

link[]

The link objects in a document

anchors[]

The Anchors array in a document.

applets[]

The applet array in a document.

plugins[]

The object embed in a document.

embeds[]

The objects embedded in a document.

classes

Define style classes.

height

The height of a document.

width

The width of a document.

ids

Define styles for individual tags.

layers

The layers contained in a document

tags

Define styles for HTML tags

Internet Explorer 4 and above Properties

activeElement

The input element that has the focus.

charset

The character set in use.

defaultCharset

The default character set of a document

expando

Disallow new property creation.

parentWindow

The window of a document

readyState

The loading status of a document.

all[]

All HTML elements in a document.

Methods

`close()`
Close an output stream.

`open(mimitype)`
Create a new document

`write(datavalue,..)`
Append data to a document.

`writeln(datavalue)`
Append a document and a new line to a document.

Methods for Netscape 4 and above

`captureEvents(eventmask)`
Specify the event types to be captures

`releaseEvents(eventmask)`
Stop capturing events

`routeEvents(event)`
Pass a captured event to the next handler

`getSelection()`
Return selected text

Methods for IE 4 and above

`elementFromPoint(x, y)`
Determine which HTML element is at a given point.

Examples:

```
document.write("<b>Hello World! </b><br>")
```

```
document.write("<b>Hello World! </b>\r")
```

```
document.writeln("<b>Hello World!</b>")
```

window

- The window object allows creating another new window outside the browser
- Referencing to a window
 - self
 - window
 - window.frame[n]
- window properties
 - self // the window itself
 - window // the window itself
 - window.document // document of the window
 - window.name // name of the window
 - window.location // URL of the window
 - window.status // specify a line of status message
 - window.history // the history of the window
 - window.length // the number of frames in the window
 - window.screen // information about the screen
 - window.frames[] // List of frames within a window

- window methods
 - `alert(message)` // Display message through dialog box
 - `prompt(message, defaultValue)` // Receive input through dialog box
 - `confirm(question)` // Ask to confirm a yes-no question
 - `close()` // close a browser window
 - `open(url, name, features, replace)` // open a new window
 - `setInterval(code, interval)` // Repeatedly execute the code at a specific time interval
 - `setTimeout(code, delay)` // Defer execution of code
- window event handlers
 - `onblur` // invoked when the window loses keyboard focus
 - `ondragdrop` // invoked when the user drops items in the window
 - `onerror` // invoked when JavaScript
 - `onfocus` // invoked when window is given a focus
 - `onload` // invoked when browser completed the loading
 - `onmove` // invoked when window is moved
 - `onresize` // invoked when window is resized
 - `onunload` // invoked when the browser leaves a page

`window.alert()`

- Dialog box for display a warning message
- User must click OK button to exit
- `alert("message")` method for creating a dialog box
- Example:
`window.alert("Thank you!\nTry Again!")`

`window.prompt()`

- Dialog box for prompting user input
- User must click OK button to return value
- `prompt("message", defaultValue)`

- Examples:
 - `firstNum = window.prompt("Enter the first integer number", "0");`
 - `secondNum = window.prompt("Enter the second integer number", "0");`

`window.confirm()`

- Display a message in a dialog box
- Click "OK" button to return a true value
- Click "Cancel" button to return a false value
- `confirm("message")`

`window.open()`

- open a new window
- Examples:
`newWindow1 = window.open(url, "nameOfWindow", "toolbar=no, width=350, height=400, status=no, scrollbar=yes, resize=no, menubar=no");`

`newWindow2 = window.open('bulbon.gif', 'bulbWin', 'width=330, height=250, scrollbars=yes')`

`newWindow3 = window.open('book.html', 'bookWin', 'width=330, height=250, scrollbars=yes')`

Some Basic Window Operations

- Opening a window
- Scrolling a window
- Loading a content into a window
- Updating one window from another
- Creating new pages with JavaScript
- Closing a window
- Creating a control panel
- Positioning a window on the screen
- Displaying an alert when a window is loaded

A basic window creation example

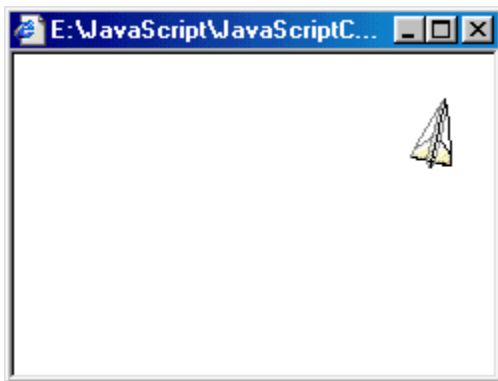
```
<html>
<!-- newwin1.htm -->
<head>
<title>Open a New Window </title>
</head>

<body>
<script language="Javascript">
window.open(url, "thisWindow", "toolbar=no, width=350, height=400,
status=n0, scrollbras=yes, resize=no, menubar=no")
</script>
</body>
</html>
```

Example 5-1: Create a new window for displaying an animated airplane.gif graphics file.

```
<html>
<!-- newplane.htm -->
<head>
<title>Open a New Window </title>
<script language="Javascript">
window.open("airplane.gif", "SUNWindow", "toolbar=no, width=240,
height=160, status=n0, scrollbras=yes, resize=no, menubar=no")
</script>
</head>

<body>
</body>
</html>
```



Example 5-2: Create a new window for showing a live web camera. The newly opened window will stay open even if the browser is closed. Note that no real live cam is currently connected.

```
<html>
<!-- newlivecam.htm -->
<head>
<title>Open a New Window </title>
<script language="Javascript">
window.open("http://149.164.36.204/livecam.htm", "LiveCam", "width=480,
height=330")
</script>
</head>
<body>
</body>
</html>
```



Example 5-3: Create a new window for Web camera, and close the newly created window. JavaScript functions are considered in the program. Note that no real live cam is currently connected.

```
<html>
<!-- Webcam.html -->
<head>
<title>Open a New Window </title>
<script language="Javascript">
function webCamera(URL){
    newWindow = window.open(URL, "LiveCam", "toolbar=no, width=780,
height=600, status=no, scrollbar=yes, resize=no, menubar=no")
}

function closeWindow() {
    if(newWindow && !newWindow.closed) newWindow.close();
}
</script>
</head>

<body>
<h3> <a
href="javascript:webCamera('http://149.164.36.204/livecam.htm')"> Click
Here To See WebCam <a>
    &nbsp; &nbsp; &nbsp; <br> <br>
    <a href="javascript:closeWindow()"> Close the Window <a>
</h3>

</body>
</html>
```

