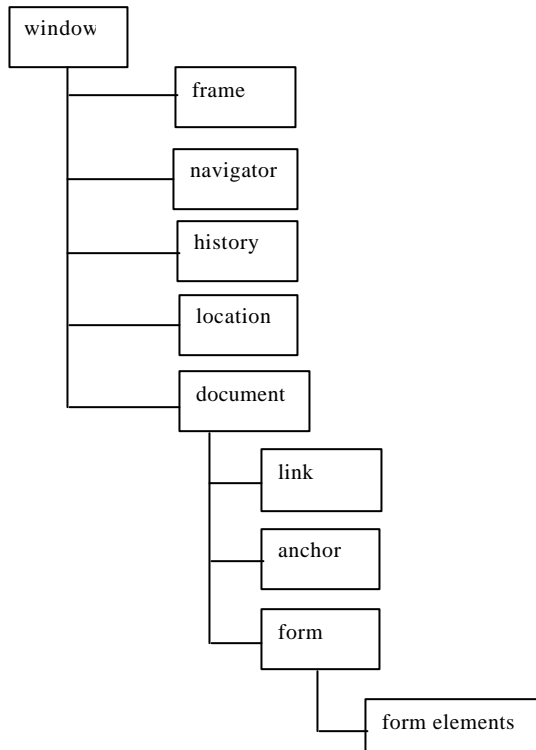


Javascript objects

When we design online forms, we can validate the form element entry data in two ways. The first method called *server-side validation* would send the data to the web server via the network for checking with a CGI script. Another method is *client-side validation*, in which the form is checked as the user enters the information, and immediate feedback is provided if the user makes a mistake. Javascript supports client-side validation.

Object	Javascript object name
The browser window	window
A frame within the browser window	frame
The history list containing the web pages the user has already visited in the current session	history
The web browser being run by the user	navigator
The URL of the current web page	location
The web page currently displayed in the browser window	document
A hyperlink on the current web page	link
A target or anchor on the current web page	anchor
A form on the current web page	form

For example, to refer to a form named “Register” on the current web page, Javascript uses the reference document.Register. The complete reference would be window.document.Register but in most cases you can omit the window object name.



Object Properties

Recall that properties are **characteristics** or **features** of an object.

Some examples of Javascript object properties

Object name	Property Name	Description
window	DefaultStatus	The default message displayed in the window's status bar
	status	A priority or temporary message in the window's status bar
	name	The target name of the window
document	bgColor	The page's background colour
	fgColor	The colour of text of the page
	title	The title of the page

To change the value of a property, use the syntax

```
object.property = expression;
```

for example: document.fgColor = "red";
 window.defaultStatus = "Press OK to continue";

Some properties cannot be changed; these are read-only properties such as the appVersion and appName properties of the navigator object.

You can assign to a variable the value of any property, even the read-only properties.

```
var PageColour = document.bgColor;  
var browser_type = navigator.appName;
```

Object Methods

Recall that methods are **activities** that the object can perform.

Some examples of object methods in Javascript

Object Name	Method Name	Description
window	alert(message)	Displays a dialog box with a message in the window
	prompt(message, default_text)	Displays a dialog box prompting the user for information
	close()	Close the window
document	write()	Writes text and HTML tags to the current document
	writeln()	Writes text and HTML tags to the current document on a new line

To apply a method to an object, use the syntax:

```
object.method();  
  
document.write("Thanks");  
window.close();
```

Object Events

An event is a specific action that triggers the browser to run a block of Javascript commands. With events you can tell the browser to do something the instant something happens on the browser.

Some examples of Javascript events (most are related to form elements):

Event	Description
abort	Occurs when the user cancels the loading of an image
blur	Occurs when the user leaves a form field (either by clicking outside of the field or pressing the Tab key)
click	Occurs when the user clicks a field or a hyperlink with the mouse
focus	Occurs when a window or form field is made active (usually by moving the cursor into the field or by clicking the object with the mouse)
error	Occurs when the browser encounters an error in running a Javascript program
change	Occurs when the value of a form field is changed by the user

Events can take place in rapid succession.

- | | |
|---|----------------|
| 1. User tabs into an input field | event = Focus |
| 2. User changes field value, then tabs out | event = Change |
| 3. User has left the field, and the change has been noted | event = Blur |

Event handlers

An event handler is code added to an HTML tag that is run whenever a particular event occurs. The syntax is

`<HTML_TAG Properties event_handler="Javascript commands;">`

Different HTML tags have different event handlers associated with them. For example

```
<form>
<p>Change background colour to:</p>
<input type="radio" name="colours" onClick="document.bgColor='red';">Red<br>
<input type="radio" name="colours" onClick="document.bgColor='blue';">Blue<br>
<input type="radio" name="colours"
onClick="document.bgColor='green';">Green<br>
</form>
```

Object	Names of event handlers
button	onClick
form	onSubmit, onReset
hyperlink	onClick, onMouseOver, onMouseOut
image	onLoad, onError, onAbort
input box	onBlur, onChange, onFocus, onSelect