

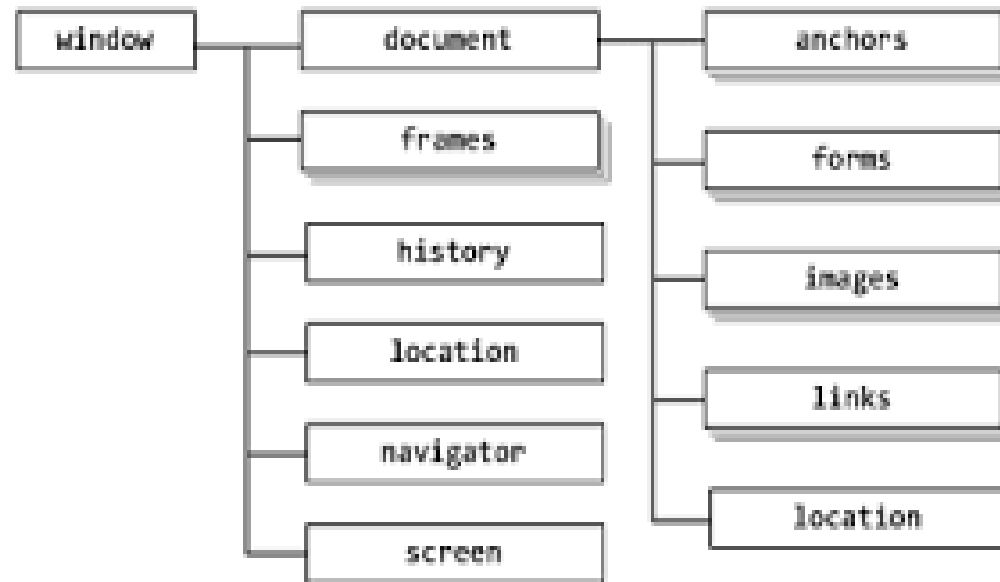
Javascript

PART 6- BOM

BOM

- The Browser Object Model (BOM) allows access and manipulation of the browser window.
- Using the BOM, developers can:
 - Open, close, move, resize or scroll the window
 - Change text in the status bar
 - Return the screen width, height and color properties
 - Return current URL, load a new document, replace the current document
 - Load a specific URL from the history list
 - Return information about the visitor's browser
 - Set and stop a timer
 - Work with cookies
 - ...
- There are no standards for the BOM, each browser has its own implementation.

BOM



BOM Window Object

- The Window Object represents a window in browser.
 - An object of window is created automatically by the browser
- Some methods:

Method	Description
alert()	displays the alert box containing message with ok button.
confirm()	displays the confirm dialog box containing message with ok and cancel button.
prompt()	displays a dialog box to get input from the user.
open()	opens the new window.
close()	closes the current window.
setTimeout()	performs action after specified time like calling function, evaluating expressions etc.

- Complete list of Window Object Properties and Methods:

https://www.w3schools.com/jsref/obj_window.asp

BOM

- Example:

```
let myWindow;  
function openWin() {  
    myWindow = window.open("http://www.google.com",  
        "mywindow", "menubar=1,resizable=1,width=300,height=300");  
}  
  
function focusWin() {  
    //myWindow.resizeBy(200, 200);  
    myWindow.focus();  
}
```

- Example for all browsers:

```
<script>  
var w = window.innerWidth  
|| document.documentElement.clientWidth  
|| document.body.clientWidth;  
  
var h = window.innerHeight  
|| document.documentElement.clientHeight  
|| document.body.clientHeight;  
  
var x = document.getElementById("demo");  
x.innerHTML = "Browser inner window width: " + w + ", height: " + h +  
".";  
</script>
```

BOM Screen Object

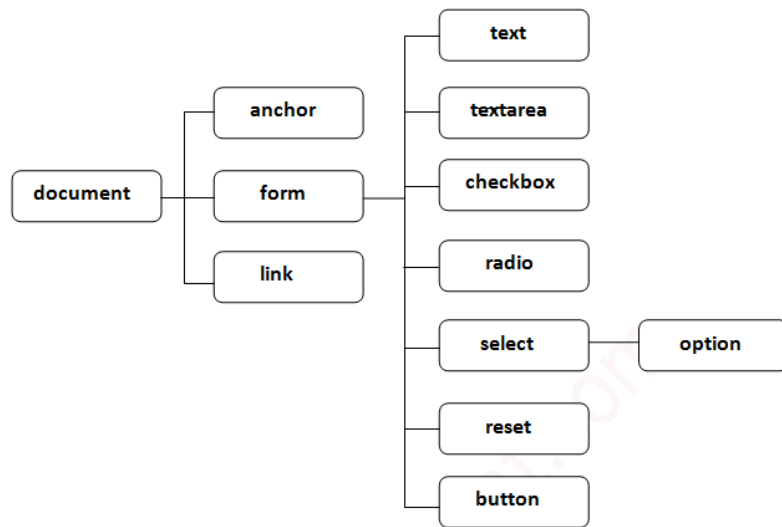
- The BOM Screen Object holds information of browser screen.

No.	Property	Description
1	width	returns the width of the screen
2	height	returns the height of the screen
3	availWidth	returns the available width
4	availHeight	returns the available height
5	colorDepth	returns the color depth
6	pixelDepth	returns the pixel depth.

```
console.log("Screen width: "+screen.width);  
console.log("Screen height: "+screen.height);  
console.log("Screen available width: "+screen.availWidth);  
console.log("Screen available height: "+screen.availHeight);
```

BOM document object

- The document object represents the whole html document.



Method	Description
write("string")	writes the given string on the document.
writeln("string")	writes the given string on the document with newline character at the end.
getElementById()	returns the element having the given id value.
getElementsByName()	returns all the elements having the given name value.
getElementsByTagName()	returns all the elements having the given tag name.
getElementsByClassName()	returns all the elements having the given class name.

BOM Window Object timing events

The window object allows execution of code at specified time intervals. These time intervals are called timing events.

The two key methods to use with JavaScript are:

`setTimeout(function, milliseconds)`

Executes a function, after waiting a specified number of milliseconds.

```
let myVar;

function startF() {
    myVar = setTimeout(myFunction, 3000);
}

function stopF() {
    clearTimeout(myVar);
}

function myFunction() {
    alert("Hello");
}
```


BOM Window Object timing events

`setInterval(function, milliseconds)`

Same as `setTimeout()`, but repeats the execution of the function continuously.

```
function startSI() {  
    myVar=setInterval(myTimer,1000);  
}  
function stopSI() {  
    clearInterval(myVar);  
}  
function myTimer() {  
    let d=new Date();  
    document.getElementById("demo").innerHTML=d.toLocaleTimeString();  
}
```