

JavaScript Browser Objects [BOM]

JavaScript browser object allow to handle browser and page related manipulations. It include both DOM and BOM.

- window
- location
- navigator
- history
- document

window object

- It provides a set of properties and methods that are used to handle browser window, like open, close, print etc.
 - open() – It opens a window
 - close() – It closes the current window
 - print() – It invokes the printer properties to print the window content

Ex:

```
<!DOCTYPE html>
```

```
<html>
```

```
  <head>
```

```
    <title>Window Object</title>
```

```
    <script>
```

```
function ShowAds(){  
  
    window.open("../Images/shoe.jpg","Nike","width=400  
height=300");  
  
        window.open("../layout.html", "Layout",  
"width=300 height=200");  
  
    }  
    </script>  
</head>  
<body>  
    <h2>JavaScript window Object</h2>  
    <button onclick="ShowAds()">Open</button>  
    <button onclick="window.close()">Close</button>  
    <button onclick="window.print()">Print</button>  
</body>  
</html>
```

location object

- It provides a set of properties and methods that are used to access the client location details
 - host : return the server name or IP address
 - href : return the complete URL.

- protocol: return the current protocol.
- port : return the current port number.
- search : return the query string.
- hash : return the hash location [URI]
- reload() : It reloads the current request.

Ex:

```
<!DOCTYPE html>
```

```
<html>
```

```
  <head>
```

```
    <title>Location</title>
```

```
    <style>
```

```
      dt{
```

```
        margin-top: 20px;
```

```
        background-color: lightgreen;
```

```
        font-weight: bold;
```

```
      }
```

```
    </style>
```

```
    <script>
```

```
      function GetLocation(){
```

```
document.getElementById("lblServer").innerHTML=
location.host;

    var protocol = location.protocol;
    var msg = document.getElementById("msg");
    if(protocol=="http:") {
        msg.innerHTML = "You are accessing from
Un-secured Web Server";
    }
    if(protocol=="https:"){
        msg.innerHTML = "You are accessing from
Secured Web server";
    }
    if(protocol=="file:") {
        msg.innerHTML = "You are accessing from
file server - please use a web server";
    }

document.getElementById("lblProtocol").innerHTML =
location.protocol;
```

```
document.getElementById("lblPort").innerHTML =  
location.port;
```

```
document.getElementById("lblUrl").innerHTML =  
location.href;
```

```
}
```

```
</script>
```

```
</head>
```

```
<body>
```

```
<fieldset>
```

```
<legend><button onclick="GetLocation()">Get  
Location Details</button></legend>
```

```
<dl>
```

```
<dt>Server Name / IP Address</dt>
```

```
<dd id="lblServer"></dd>
```

```
<dt>Protocol</dt>
```

```
<dd id="lblProtocol"></dd>
```

```
<dd id="msg"></dd>
```

```
<dt>Port</dt>
```

```
<dd id="lblPort"></dd>
```

```
        <dt>URL</dt>
        <dd id="lblUrl"></dd>
    </dl>
</fieldset>
</body>
</html>
```

Ex: location.search [It is used to get the query string]

Search.html

```
<!DOCTYPE html>
<html>
    <head>
        <title>Search</title>
    </head>
    <body>
        <form method="GET" action="results.html">
            <div align="center">
                <h2>Google</h2>
                <input name="str" type="text" id="txtSearch"
size="40">
                <br><br>
```

```
        <button>Search</button>
    </div>
</form>
</body>
</html>
```

Results.html

```
<!DOCTYPE html>
<html>
    <head>
        <title>Results</title>
        <script>
            var data = [
                {Name: "TV", Category: "Electronics"},
                {Name: "Mobile", Category: "Electronics"},
                {Name: "Shirt", Category: "Fashion"},
                {Name: "Nike Casuals", Category: "Footwear"}
            ]
            function bodyload(){
                var str = location.search;
                var term = str.substring(str.indexOf("=")+1);
```

```
        var products =
data.filter(function(product){return
product.Category==term});

        var lstProducts =
document.getElementById("lstProducts");

        for(var item of products) {

                var li = document.createElement("li");
                li.innerHTML = item.Name;
                lstProducts.appendChild(li);
        }
    }
</script>
</head>
<body onload="bodyload()">
    <h2>Search Results</h2>
    <ol id="lstProducts">

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


Ex: location.hash

```
<!DOCTYPE html>
```

```
<html>
```

```
  <head>
```

```
    <title>Intra Document Links</title>
```

```
    <style>
```

```
      button{
```

```
        position: fixed;
```

```
        right: 100px;
```

```
        top:30px;
```

```
      }
```

```
    </style>
```

```
    <script>
```

```
      function GetDetails(){
```

```
        var loc = location.hash;
```

```
        switch(loc){
```

```
          case "#html":
```

```
            alert("You Viewed HTML Tutorial");
```

```
        break;
        case "#js":
            alert("You searched form JavaScript");
            break;
        case "#css":
            alert("How do you rate your recent CSS
tutorial experience");
            break;
    }
}
</script>
</head>
<body>
    <h1 id="toc">Table of Contents</h1>
    <ol>
        <li><a href="#html">HTML Tutorial</a></li>
        <li><a href="#css">CSS Examples</a></li>
        <li><a href="#js">JavaScript Language</a></li>
    </ol>
    <button onclick="GetDetails()">Recently
Viewed</button>
```

`<h4 id="html">HTML Tutorial </h4>`

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<div align="center">Back to HTML |Back to Topics</div>

<h4 id="css">CSS Examples </h4>

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<figure>

<figcaption id="fig1">JBL Speaker</figcaption>

</figure>

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<div align="center">

Back to CSS

|Back to Topics

</div>

<h4 id="js">JavaScript Language </h4>

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```
<div align="center">
    <a href="#js">Back to JavaScript</a>
<span>|</span><a href="#toc">Back to Topics</a>
</div>
</body>
</html>
```

JavaScript Navigator Object

- Navigator object gets the details about client browser.
- Browser Version, Family, Plugins, MIME Types, Language, Cookies enabled?
- Navigator properties
 - appName : Browser Family Name
[Netscape]
 - language : Returns the browser language

- platform : Returns the current platform [OS]
- cookieEnabled : Returns boolean true if cookies enabled.
- plugins[] : Returns the collection of plugins installed.
- mimeTypees[] : Returns all the mime types supported by browser.

Ex:

```
<script>
```

```
function f1(){  
    var status = navigator.cookieEnabled;  
    if(status==true){  
        document.write("Cookies Enabled - You can  
Login");  
    } else {  
        document.write("<h2>Please Enable Cookies on  
your browser</h2>");  
    }  
}  
f1();
```


</script>

Ex: Get plugins list

<script>

```
function f1(){
    for(var i=0; i<navigator.plugins.length; i++){
        document.write(navigator.plugins[i].name +
            "<br>");
    }
}
f1();
```

</script>

Ex: To Verify the Plugin

<script>

```
function f1(){
    if(navigator.plugins['Chrome PDF
Viewer']==undefined){
        alert("Please Install PDF Plugin");
```

```
location.href="http://www.adobe.com/downloads";
```

```
    } else {
```

```
        document.write("You can View PDF documents");
    }
}
f1();
</script>
```

Ex: MIME Types

```
<script>
    function f1(){
        for(var i=0; i<navigator.mimeTypes.length;i++){
            document.write(navigator.mimeTypes[i].type +
"<br>");
        }
    }
    f1();
</script>
```

FAQ: How to verify JavaScript enabled or not?

A. By using HTML <noscript> element.

Ex:

<noscript>

Please Enable JavaScript on your Browser

</noscript>

<h1>Test JavaScript</h1>

Ex:

<script>

function f1(){

 alert(navigator.appName + "\n" +
navigator.appVersion + "\n" + navigator.language);

}

f1();

</script>

History object

- It gets browser history details like
 - length : returns the total count of pages in history.
 - back() : moves to previous page in browsing history.
 - forward(): moves to next page in browsing history.

- goto('pagename') : moves to specific page in browsing history.

```
<script>
```

```
function f1(){
```

```
    alert("Total Count of Pages in History:" +  
history.length);
```

```
}
```

```
f1();
```

```
</script>
```