JavaScript Object Model

Working with images and forms

images

- **`images[]`** is a property of **`document`** object representing array of **`window`** objects
- Each array element represents an object of type **`Image`**
- Properties:
  - **`align, alt, border, height, width, hspace,vspace, name, src`**
- Events
  - **`Onabort`**
  - **`Onerror`**
  - **`Onload`**

  + HTMLElement Object Events

Example- Image rollover

```
<html><head>
<title>Status</title>
<script>
function change(src)
{
document.images[0].src=src;
}
</script>
</head>
<body>
<img src="close.bmp" name="eye"
  onMouseOver="change('open.bmp')"
  onMouseOut="change('close.bmp')">
</body>
</html>
```

Since there is only one image in the document
Or **document.eye.src**

forms

- **`document`** object contains an array of form objects called forms.
- Form object corresponding to the **`<form>`** tag.

Properties:
`action, method, name, elements[], target`
`+ all the form elements listed in the hierarchy like button, checkbox etc.`
Events:
`onSubmit, onReset`

Methods:
`reset()` - Used to reset the form elements to their default values.
`submit()` - Submits the form as though the submit button were pressed by the user.

Form elements

- Properties:
  - For all form elements → **`name, type, value (except select)`**
  - **`radio, checkbox: checked, defaultChecked`**
  - **`select: length, options[], selectedIndex`**
  - **`text, password, textarea:defaultValue`**
- Methods:
  - All form elements: **`focus(), blur()`**
  - For **`button, submit, reset: click()`**
- Events
  - For all form elements→ **`onBlur, onFocus`**
  - For **`select, text, textarea→ onChange`**
  - For **`text, textarea→ onSelect`**
  - For **`button,submit,reset,radio,checkbox: onClick`**
  - For **`button: onMouseDown, onMouseUp,`**
  - For **`textArea: onKeyDown, onKeyUp,onKeyPress`**

Example : text fields , radio button and checkbox

```
<html><head><title>Validate</title>
<script>
function check(){
 with(document.forms[0]){
 if ((name.value=="") || (address.value=="")){
  alert("Please ensure that all fields are
  filled up"); return false;
  }
s=like[0].checked?like[0].value:like[1].value;
s="Thankyou,"+name.value+". You "+ s +" our
  site.\n";
s=s+"Your suggesstion (";
for(i=0;i<better.length;i++)
 if (better[i].checked)  s=s+
     better[i].value+";"
```

```
s=s+" ) are recorded ";
 }
alert(s);
return true;
}
</script>
</head>
<body>
<form action="thank.html" onSubmit="return
check()">
Name: <input type=text name="name"><br><br>
Address: <input type=text
name="address"><br><br>
Do you like our site
<input type=radio name="like" value="like"
checked>Yes
<input type=radio name="like" value="don't
like">No<br><br>
```

When check() returns false the form does not get submitted→ the page does not go to thank.html

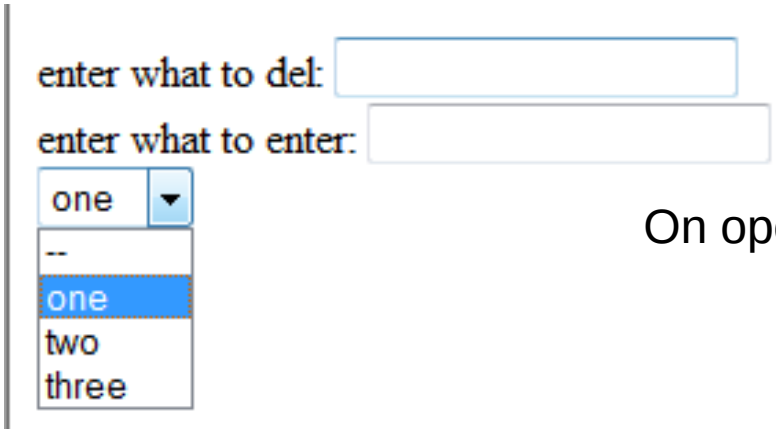
```
Tell us how we can make this site better for
you:<br>
<input type=checkbox name="better"
value="Change the bg color">Change the bg
color
<br>
<input type=checkbox name="better"
value="Change the fg color">Change the fg
color
<br>
<input type=checkbox name="better"
value="Change the layout">Change the layout
<br>
<input type=checkbox name="better"
value="Include more services">Include more
services
<br><br><input type=submit></form> </body>
</html>
```

Example : working with select

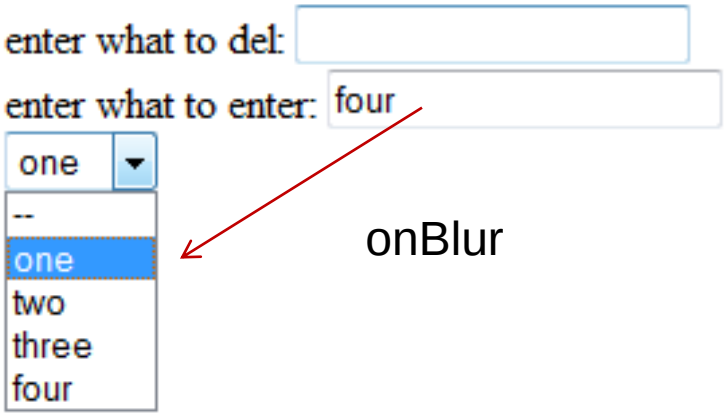
```
<html><head>
<title>Validate</title>
<script>
function check(){
 i=document.f1.choose.options.selectedIndex;
 if(i==0)
  alert("Correct");
else
  alert("Your choice, "+
  document.f1.choose.options[i].text +"- is
  incorrect");
}
</script>
</head>
<body>
```

```
<form name=f1>
Which of the following is not true about
  JavaScript?
<select name="choose" onChange="check()">
<option>JavaScript is object-oriented
  language</option>
<option>JavaScript is loosely typed
  language</option>
<option>JavaScript is used for client side
  validations</option>
<option>JavaScript is platform
  independent</option>
</select></form>
</body></html>
```

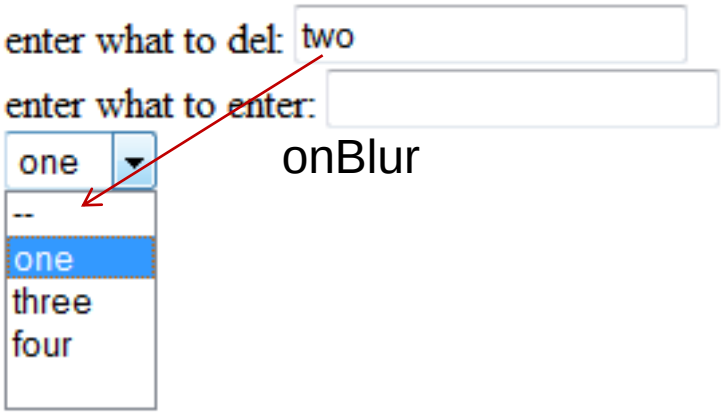
Another way to work add and remove Option element



On opening the document



onBlur



onBlur

```
<html><head>
<script type="text/javascript">
function remSelOpt(inp1, sel1) {
 len1 = sel1.options.length;
 for (i=0;i<len1 ;i++ )  {
  if (sel1.options[i].value == inp1.value)   {
   sel1.options[i] = null;
    break;
  }
 }
}
function addSelOpt(inp1, sel1)  {
len1 = sel1.options.length;
option0 = new Option(inp1.value,inp1.value);
sel1.options[len1]=option0;
}
</script>
</head>
```

```
<body><form>
enter what to del:
<input type=text name="removeOption"
onblur="remSelOpt(this,this.form.selectList)">
  <br>
enter what to enter:
<input type=text name="removeOption"
onblur="addSelOpt(this,this.form.selectList)">
<br>
<select id="selectList" name="selectList">
 <option value="--">--</option>
 <option value="one"
selected="selected">one</option>
 <option value="two">two</option>
 <option value="three">three</option>
</select>
</form>
</body></html>
```

links

- Corresponds to the **<a href="url">** tag of the document
- Document object contains an array of **link** objects→ **links**
- Properties
  - **hash** - The URL anchor part including the leading hash mark if one exists.
  - **host** - The URL hostname and port.
  - **hostname** - The URL hostname section.
  - **href** - The URL.
  - **pathname** - The URL pathname section.
  - **port** - The URL port section.
  - **protocol** - The URL protocol section including the colon after the protocol name.
  - **search** - The URL query string section. This is the section after and including the question mark.
  - **target** - The URL link's target name.
- Events: **onClick ,onMouseOut , onMouseOver**

Example

```
<html><head>
<title>links</title>
<script>
function change(){
i=document.forms[0].choice.options.selectedIn
  dex;
document.links[0].href="http://www." +
  document.forms[0].choice.options[i].text
  +".com";
document.links[1].href= "http://"
  +document.forms[0].choice.options[i].value;
}
</script>
</head>
```

```
<body>
<form><select name="choice"
OnChange="change()">
<option value="#">--select--</option>
<option
value="www.mail.yahoo.com">yahoo</option>
<option
value="www.rediffmail.com">rediff</option>
</select>
</form>
<a href="">Home page</a><br>
<a href="">Mail Page</a>
</body></html>
```

history

- The JavaScript **history** object is property of the **window** object.
- It maintains list of url/links visited during the current session.
- Properties
  - **current** - The current document URL.
  - **length** - The number of entries in the history object.
  - **next** - The URL of the next document in the history object.
  - **previous** - The URL of the last document in the **history** object.
- Methods
  - **back()**
  - **forward()**
  - **go(x)** (→**<INPUT TYPE="button" VALUE="Go Back" onClick="history.go(-1)">**)

navigator

- The JavaScript **navigator** object is property of the **window** object.
- It has the information about the client browser window.
- Properties:
  - **appCodeName:** the code name of the browser
  - **appName:** version of the browser
  - **cookieEnabled:** Boolean that indicates whether the browser has cookies enabled
  - **mimeTypes:** array of mimeTypes supported by the browser (NS and Firefox only)
  - **platform:** OS(operating system)
  - **userAgent:** user agent string(the information that is added in the HTTP protocol for data transfer from browser to the server.

```
<html>
 <body>
  <pre>

<script type="text/javascript">

   document.writeln("Browser CodeName: " +
   navigator.appCodeName);
   document.writeln("Browser Name: " +
   navigator.appName);
   document.writeln("Platform: " +
   navigator.platform);
   document.writeln("User-agent header: " +
   navigator.userAgent);
   document.writeln("<hr/>");
   browsername=navigator.appName;
```

```
if (browsername.indexOf("Netscape")!=-1)
 {browsername="NS"}
else
{if (browsername.indexOf("Microsoft")!=-1)
{browsername="MSIE"}
else {browsername="N/A"}};

if (browsername!="MSIE"){
if(navigator.mimeTypes){
  for(var p in navigator.mimeTypes){

document.writeln(navigator.mimeTypes[p].type);
}
}
}
</script></pre></body></html>
```

file:///F:/CorporateTraining/JavaScriptIFlex/Slide%20Examples/javascriptObjs/navigatorppty.html

a http://www.kanchik... Lekho : A unicod... The RGB Color Calc... Sign in to Yahoo! Java 2 Platform SE 5.0 Other b

```
Browser CodeName: Mozilla
Browser Name: Netscape
Platform: Win32
User-agent header: Mozilla/5.0 (Windows; U; Windows NT 6.0; en-US) AppleWebKit/534.7 (KHTML, like Gecko) Chrome/7.0.517
```

```
application/x-googlegears
application/x-shockwave-flash
application/futuresplash
application/pdf
application/vnd.fdf
application/vnd.adobe.xfdf
application/vnd.adobe.xdp+xml
application/vnd.adobe.xfd+xml
application/sdp
application/x-sdp
application/x-rtsp
video/quicktime
video/flc
audio/x-wav
audio/wav
audio/aiff
audio/x-aiff
```

F:\CorporateTraining\JavaScriptIFlex\Slide Examp... Page

```
Browser CodeName: Mozilla
Browser Name: Microsoft Internet Explorer
Platform: Win32
User-agent header: Mozilla/4.0 (compatible; MSIE 7.0; Windows NT 6.0; SLCC1; .NET CLR 2.0.50727; .NET CLR 3.5.30729;
```