

Lecture 16

Working with background,
images and date object

Mr. Mubashir Ali

Lecturer (Dept. of Computer Science)

dr.mubashirali1@gmail.com

Summary of the previous lecture

- **Dialog boxes in JavaScript**
- **HTML DOM**
- **Retrieving HTML elements**
- **Setting HTML elements**

Outline

- **Controlling the background dynamically**
- **Working with images**
- **Date Object**

1. Controlling the background

- The **body tag** has the following attributes
 - bgcolor
 - Background
 - text

1.1 Setting the bgcolor

- We can **access** the bgcolor as
 - **document.body.bgColor**
 - Or
 - **document.getElementById(“id of the body tag”).bgColor**

1.1 Setting the bgcolor

```
bgcolor - Notepad
File Edit Format View Help
<html>
<head>
<title>BGcolor setting</title>
<script>
function setBgcolor()
{
var bg = prompt("Enter bgcolor")
document.getElementById("body").bgColor = bg
}
</script>
</head>
<body id="body" onload="setBgcolor()">
<h1>Hello Dear!</h1>
```

Starting the function

User input

Setting the bgcolor

Calling the function

1.2 Setting the text color

- We can **access** the body text as
 - `document.body.style.color`
 - Or
 - `document.getElementById("id of the body tag").style.color`

1.2 Setting the text color

```
text - Notepad
File Edit Format View Help
<head>
<title>BGcolor setting</title>
<script>
function setText(txtcolor)
{
document.body.style.color = txtcolor
}
</script>
</head>
<body>
<p onClick="setText('blue')">blue</p>
<p onClick="setText('red')">Red</p>
<p onClick="setText('orange')">orange</p>
</body>
</html>
```

Set text function

Setting the color

Calling the function

Passing color as parameter

1.3 Setting the background

- We can **access** the background as
 - **document.body.background**
 - **Or**
 - **document.getElementById(“id of the body tag”).background**

1.3 Setting background

```
back - Notepad
File Edit Format View Help
<script>
function setBackground(bgSrc)
{
document.body.background=bgSrc
}
</script>
</head>
<body>


</body>
```

Function received the src

Background is set

Image is added

Function is called

Src is passed

2. Working with images

- JavaScript has a **built-in** object called **Image**
- The Image object **allows** you to create **objects** that represent images created using the **** element
- **Properties:** name, border, height, width, hspace, vspace, src

2. Working with images...

- An image object can be created as
 - `var objname= new image()`
- The most important property of an image object is **src**
- This **designates** the actual image file you will use as a source for your Image object
 - `objname.src= "abc.jpg"`
- This property can be used to **dynamically change** an image on the webpage

2. Working with images....

- The **primary use** for an Image object is to **download** an image into the **cache** before it is actually needed for **display**
 - **Instance** of image object is created
 - **Src** property is set to the name of the image to be downloaded

2.1 Image Rollover

```
rollover - Notepad
File Edit Format View Help
<script language="javascript">
function changePic(imgSrc)
{
document.getElementById("pic").src=imgSrc
}
</script>
</head>
<body bgcolor="#6666FF">
<h1>Image Rollover</h1>

</body>
</html>
```

Function starts

Setting the Src

Calling the function

Again calling the function

Img tag

2.2 Image Preview

```
preview - Notepad
File Edit Format View Help
<body bgcolor="#666699">
<h1>Image Preview</h1>
<table width="711" border="0" align="center">
<tr>
<td height="297">

</td>
</tr>
<tr>
<td>



```

Main image

Small images

Image src

Call to the function

Src is passed

2.2 Image Preview...

```
preview - Notepad
File Edit Format View Help
<script language="javascript">
function changePic(imgSrc)
{
document.getElementById("pic").src=imgSrc
}
</script>
</head>

<body bgcolor="#666699">
<h1>Image Preview</h1>
<table width="711" border="0" align="center">
  <tr>
    <td height="297">
      
    </td>
  </tr>
</table>
</body>
</html>
```

Function gets the src

Src of main image is changed

2.3 Slide Show

- **Array of images**
- **Main image**
- **Next and previous image buttons**
- **Next image and previous image functions**

2.3 Slide Show...

```
slideshow - Notepad
File Edit Format View Help
<script language="javascript">
pics=new Array("img1.jpg", "img2.jpg", "img3.jpg",
"img4.jpg", "img5.jpg")
count=0; pcount=pics.length
function npic()
{
    count++;
    if(count<pcount)
    document.pic.src=pics[count]
    else
    {
        count=0;
        document.pic.src=pics[count]
    }
}
}
}
```

Array of images

Length of pics array

Increase the index of pics

Checks for last image

Changes the image

Set count incase of last image

Next Pic

2.3 Slide Show...

```
slideshow - Notepad
File Edit Format View Help
function ppic()
{
count--
if(count>-1)
document.pic.src=pics[count]
else
{
count=pcount-1
document.pic.src=pics[count]
}
}
}
</script>
</head>

<body bgcolor="#0099FF">
```

Decrements the count

Checks for the first image

Changes the picture

Sets the count incase of first image

2.3 Slide Show

```
slideshow - Notepad
File Edit Format View Help
<table width="200" border="0" align="center">
  <tr>
    <td>
      
    </td>
  </tr>
  <tr>
    <td align="center">
      
      
    </td>
  </tr>
</table>
```

Main image

Call to the previous functions

Call to the next function

Back image

Next image

3. Working with date object

- The **Date object** is used to work with dates and times
- It can be used to find the **current time** and **date**
- Many time based tasks can be performed
- Date objects are created as
var today=new Date()

3. Working with date object...

- **Date object methods:**
- **getDate():**
 - Returns the day of the month (from 1-31)
- **getDay():**
 - Returns the day of the week (from 0-6)
- **getFullYear():**
 - Returns the year (four digits)
- **getMonth():**
 - Returns the month (from 0-11)

3. Working with date object...

- **getHours():**
 - Returns the hour (from 0-23)
- **getMilliseconds():**
 - Returns the milliseconds (from 0-999)
- **getMinutes():**
 - Returns the minutes (from 0-59)
- **getSeconds():**
 - Returns the seconds (from 0-59)

3.1 Digital clock

The image shows a Notepad window titled "date - Notepad" containing the following HTML and JavaScript code:

```
<html>
<head>
<title>Digital clock</title>
<script>
function startTime() {
  var today=new Date();
  var h=today.getHours();
  var m=today.getMinutes();
  var s=today.getSeconds();
  m = checkTime(m);
  s = checkTime(s);
  document.getElementById('txt').innerHTML =
  h+":"+m+":"+s;
  var t = setTimeout(function(){startTime()},500);
}
```

Annotations with red arrows point to specific parts of the code:

- Date object is created** points to `var today=new Date();`
- Gets hours** points to `var h=today.getHours();`
- Gets minutes** points to `var m=today.getMinutes();`
- Gets seconds** points to `var s=today.getSeconds();`
- Calls check-time function** points to `m = checkTime(m);`
- Function calls itself** points to the recursive call `var t = setTimeout(function(){startTime()},500);`
- Writes time on txt div** points to the assignment `document.getElementById('txt').innerHTML = h+":"+m+":"+s;`

3. Working with date object...

```
date - Notepad
File Edit Format View Help
var t = setTimeout(function(){startTime()},500);
}
function checkTime(i) {
  if (i<10) {i = "0" + i};
  return i;
}
</script>
</head>
<body onload="startTime()">
<div id="txt"></div>
</body>
</html>
```

Concatenate '0' if time is less than 10

First call to the function

Empty div to display time

Summary

- **Controlling the background dynamically**
 - **Bgcolor**
 - **Text**
 - **background**
- **Working with images**
 - **Image rollover**
 - **Image preview**
 - **Image slide show**
- **Date object**
 - **Digital clock**

References

- **Chapter 11.** Beginning HTML, XHTML, CSS, and JavaScript, by Jon Duckett, Wiley Publishing; 2009, ISBN: 978-0-470-54070-1.
- **Chapter 4,5,7.** Learn JavaScript, by Chuck Easttom, Wordware Publishing; 2002, ISBN 1-55622-856-2