

Changing Style

So far we have only done a little with changing the style of a web page. JavaScript lets us do that as well. We can call a function that allows us to change the style of one or many elements on the web page. We can do that as we've been doing it, but instead, let's use a form's submit button.

First, create a web page with a submit button on it (remember from creating forms in html?):

```
<input type = "submit" id = "redbtn" value = "red" onclick = "ChangeStyle('red')" />
```

Next we create a function that changes the style of a particular element. For now, I am going to just change the background color of the entire body of the web page. So my function will look like this:

```
function ChangeStyle(colorholder)
{
    document.body.style.backgroundColor = "#FF0000"
}
```

Put it all together, and you get:

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html lang="en-US" xml:lang="en-US" xmlns="http://www.w3.org/1999/xhtml">
    <head>
        <title>Our first javascript!</title>
        <meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1" />

        <script type = "text/javascript">

            function ChangeStyle(colorholder)
            {
                document.body.style.backgroundColor = "#FF0000"
            }
        </script>

    </head>
    <body>

        <input type = "submit" id = "redbtn" value = "red" onclick = "ChangeStyle('red')" />

    </body>
</html>
```

Different Colors:

Let's expand this. Let's create a bunch of buttons that allow us to change the background color to different colors.

First, let's create some more buttons:

```
<input type = "submit" id = "redbtn" value = "red" onclick = "ChangeStyle('red')" />
<input type = "submit" id = "yellowbtn" value = "yellow" onclick = "ChangeStyle('yellow')"/>
<input type = "submit" id = "greenbtn" value = "green" onclick = "ChangeStyle('green')"/>
<input type = "submit" id = "cyanbtn" value = "cyan" onclick = "ChangeStyle('cyan')"/>
<input type = "submit" id = "bluebtn" value = "blue" onclick = "ChangeStyle('blue')"/>
<input type = "submit" id = "purplebtn" value = "purple" onclick = "ChangeStyle('purple')"/>
```

Then let's modify the ChangeStyle() function so that when it is called with a particular variable, the body's background color changes to the appropriate color:

```
function ChangeStyle(colorholder)
{
    if (colorholder == "red")
    {
        document.body.style.backgroundColor = "#FF3322"
    }
    else if (colorholder == "yellow")
    {
        document.body.style.backgroundColor = "#FCEF04"
    }
    else if (colorholder == "green")
    {
        document.body.style.backgroundColor = "#22DE43"
    }
    else if (colorholder == "cyan")
    {
        document.body.style.backgroundColor = "#10FAE4"
    }
    else if (colorholder == "blue")
    {
        document.body.style.backgroundColor = "#4201D3"
    }
    else if (colorholder == "purple")
    {
        document.body.style.backgroundColor = "#B900CD"
    }
}
```

Changing Style of other elements:

We have changed the background color of the web page. We can change the style of other elements on the page as well. Of course, we'll need other elements on the page.

First, create another element on the page. I'm going to add a header:

```
<body>
<input type = "submit" id = "redbtn" value = "red" onclick = "ChangeStyle('red')"/>
<input type = "submit" id = "yellowbtn" value = "yellow" onclick = "ChangeStyle('yellow')"/>
<input type = "submit" id = "greenbtn" value = "green" onclick = "ChangeStyle('green')"/>
<input type = "submit" id = "cyanbtn" value = "cyan" onclick = "ChangeStyle('cyan')"/>
<input type = "submit" id = "bluebtn" value = "blue" onclick = "ChangeStyle('blue')"/>
<input type = "submit" id = "purplebtn" value = "purple" onclick = "ChangeStyle('purple')"/>

<h1 id = "firstheader"> Our Dynamic Style Page </h1>

</body>
```

Now, when a button is clicked, I'm going to alter the background color of the firstheader element as well as the background color of the entire page:

```
function ChangeStyle(colorholder)
{
    if (colorholder == "red")
    {
        document.body.style.backgroundColor = "#FF3322"
        document.getElementById('firstheader').style.backgroundColor = "#57AF33"
    }
    else if (colorholder == "yellow")
    {
        document.body.style.backgroundColor = "#FCEF04"
        document.getElementById('firstheader').style.backgroundColor = "#7788CC"
    }
}
```

```

else if (colorholder == "green")
{
    document.body.style.backgroundColor = "#22DE43"
    document.getElementById('firstheader').style.backgroundColor = "#0055FF"
}
else if (colorholder == "cyan")
{
    document.body.style.backgroundColor = "#10FAE4"
    document.getElementById('firstheader').style.backgroundColor = "#E410FA"
}
else if (colorholder == "blue")
{
    document.body.style.backgroundColor = "#4201D3"
    document.getElementById('firstheader').style.backgroundColor = "#F3F300"
}
else if (colorholder == "purple")
{
    document.body.style.backgroundColor = "#B900CD"
    document.getElementById('firstheader').style.backgroundColor = "#BBAADD"
}
}

```

I'm going to modify some other style properties of the firstheader element by adding:

```

document.getElementById('firstheader').style.fontSize = "45px"
document.getElementById('firstheader').style.fontFamily = "arial"
document.getElementById('firstheader').style.padding = "20px"
document.getElementById('firstheader').style.fontStyle = "italic"
document.getElementById('firstheader').style.textAlign = "right"
document.getElementById('firstheader').style.borderStyle = "solid"
document.getElementById('firstheader').style.borderWidth = "4px"

```

My function will now look like:

```

function ChangeStyle(colorholder)
{
    if (colorholder == "red")
    {
        document.body.style.backgroundColor = "#FF3322"
        document.getElementById('firstheader').style.backgroundColor = "#57AF33"
    }
    else if (colorholder == "yellow")
    {
        document.body.style.backgroundColor = "#FCEF04"
        document.getElementById('firstheader').style.backgroundColor = "#7788CC"
    }
    else if (colorholder == "green")
    {
        document.body.style.backgroundColor = "#22DE43"
        document.getElementById('firstheader').style.backgroundColor = "#0055FF"
    }
    else if (colorholder == "cyan")
    {
        document.body.style.backgroundColor = "#10FAE4"
        document.getElementById('firstheader').style.backgroundColor = "#E410FA"
    }
    else if (colorholder == "blue")
    {
        document.body.style.backgroundColor = "#4201D3"
        document.getElementById('firstheader').style.backgroundColor = "#F3F300"
    }
    else if (colorholder == "purple")
    {
        document.body.style.backgroundColor = "#B900CD"
        document.getElementById('firstheader').style.backgroundColor = "#BBAADD"
    }
    document.getElementById('firstheader').style.fontSize = "45px"
    document.getElementById('firstheader').style.fontFamily = "arial"
}

```

```
document.getElementById('firstheader').style.padding = "20px"
document.getElementById('firstheader').style.fontStyle = "italic"
document.getElementById('firstheader').style.textAlign = "right"
document.getElementById('firstheader').style.borderStyle = "solid"
document.getElementById('firstheader').style.borderWidth = "4px"
}
```

Now that you know how to style using javascript, think about your average web page. How would you add a button that would adapt the page for those with red-green or blue-yellow color blindness? What about those with low vision who need a web page with high contrast? Try running a few web pages through <http://colorfilter.wickline.org/> to see what they'd look like to people with various forms of colorblindness.

Optional Assignment (Extra: 10 pts): Take one of your web pages from your web site (or another web page you've designed). Add a button that will change its style. Now create a function that either gives the page a holiday theme (holiday is of your choice) or adjusts the page for someone with low vision and color blindness difficulties (normally, you'd have 2 separate buttons to accommodate people with low vision versus those with a particular type of color blindness. If you want 2 buttons, go for it. If you want just one button with both styles wrapped into one function, go for that.

Design for Low Vision

(From: <http://www.alistapart.com/articles/lowvision/>)

Design basics

Your low-vision design should do the following:

Switch to a big font

You can let the visitor enter a point size by keyboard, or you can give a reasonable set of predetermined options. Unless you're using something truly weird (Zapf Chancery, anyone?), you don't have to worry about font selection. Keep your `line-height` proportional.

Invert the screen

Many visitors will want light-on-dark text rather than the dark-on-light text we've gotten used to since the first Macintosh.

Customize colors

However, bright white on flat black will not work for everyone; it's *too* bright. You can provide a few options, many of them reminiscent of 1980s-era terminals (e.g., green, yellow, or blue on black or dark brown, or the old WordPerfect 5.1 [default](#) of white on blue).

Rearrange content

This is the biggie: You have to judiciously prune your multicolumn site into one column.

More Information:

http://webdesign.about.com/od/accessibility/Web_Accessibility.htm

<http://otal.umd.edu/uupractice/vision/>

Extra: a javascript that cycles through potential background images, allowing the user to pick their background image:

```
<script type = "text/javascript">
  ls = new Array()
  ls[0] = "bg1.jpg"
  ls[1] = "bg7.jpg"
  ls[2] = "bg3.jpg"
  ls[3] = "bg4.jpg"
  count = -1
  function loopforbackground(par1, par2)
  {
    document.getElementById(par2).innerHTML = " "
    continuevar = true
    while (continuevar == true)
    {
      count = count + 1
      if (count >= ls.length)
      {
        count = 0
      }
      document.images[par1].src = ls[count]
      continuevar = confirm("Do you want to see another picture?")
    }
    setStyle(par2)
  }
  function setStyle(par2)
  {
    document.body.style.backgroundImage = "url(\" + ls[count] + \")"
    document.getElementById(par2).innerHTML = "click here for other background options"
    document.getElementById(par2).style.color = "#FF0000"
    document.getElementById(par2).style.borderColor = "#000000"
    document.getElementById(par2).style.borderWidth = "4px"
    document.getElementById(par2).style.borderStyle = "solid"
    document.getElementById(par2).style.backgroundColor = "#FFFF00"
    document.getElementById(par2).style.width = "400px"
    document.getElementById(par2).style.padding = "5px"
    document.getElementById(par2).style.textAlign = "center"
  }
</script>
</head>
<body>
  <img width = "500" height = "374" alt = "area in which pics will be displayed" id = "display" />
  <h3 id = "firsttext" onClick = "loopforbackground('display','firsttext')"> Click here to see potential pics... </h3>
```