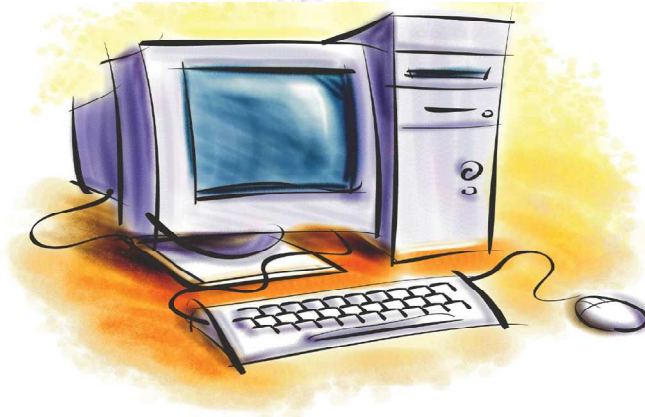




UNESCO-NIGERIA TECHNICAL &  
VOCATIONAL EDUCATION  
REVITALISATION PROJECT-PHASE II



# NATIONAL DIPLOMA IN COMPUTER TECHNOLOGY



**Web Technology**  
(COM225)

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# WEEK One (practical)


---

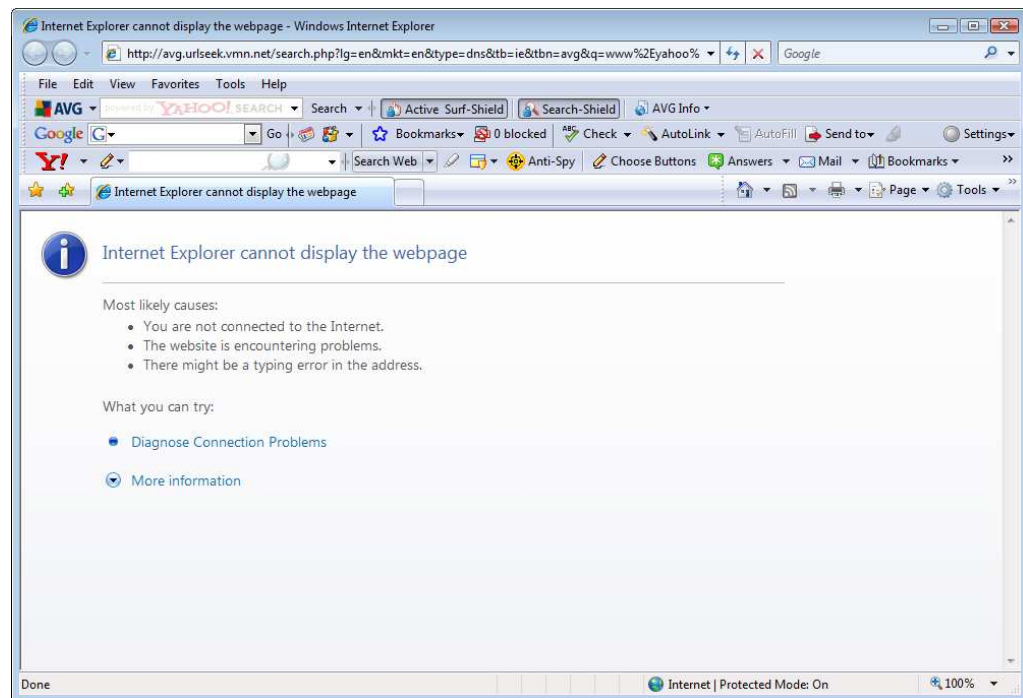
## Learning Outcome

Student should be able to use at least two browsers to connect to the internet, browse the internet and explore basic internet applications especially the World Wide Web.

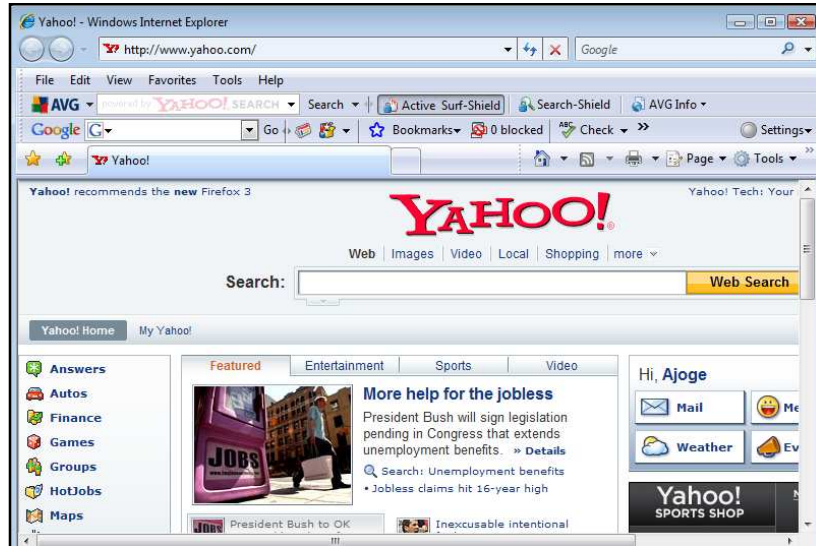
## Lab1: Use the Internet Explorer (IE) to log on to the net.

### Steps:

1. Make sure your system has internet connection.
2. Double-Click internet explorer if the icon is found on the desktop  or locate it from the program on the start button and click.
3. If No internet connection, a page like below would be displayed



4. If there is connection, the default web page will be displayed like the yahoo page below. (to set default page, Click tools from the web page tool bar, click internet option, then type in the address of he your choice internet web page)



# WEEK Two (practical)

---

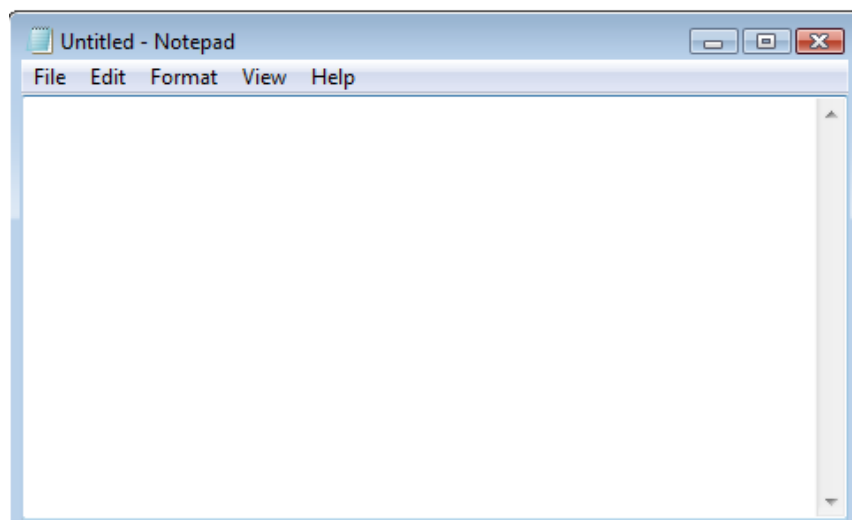
## Learning Outcome

Student should be able to load a text editor, enter some html tags, save and use a browser to execute

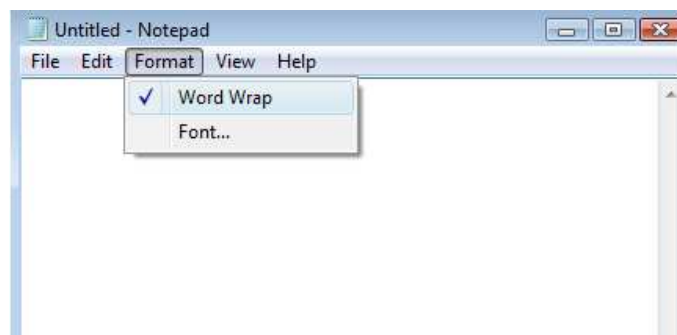
## Lab1: :Load Note and enters html tags to demonstrate your first web page tags.

### Steps

5. To load Notepad, open all programs and click accessories
6. Click note pad and the pad editor will be displayed as below

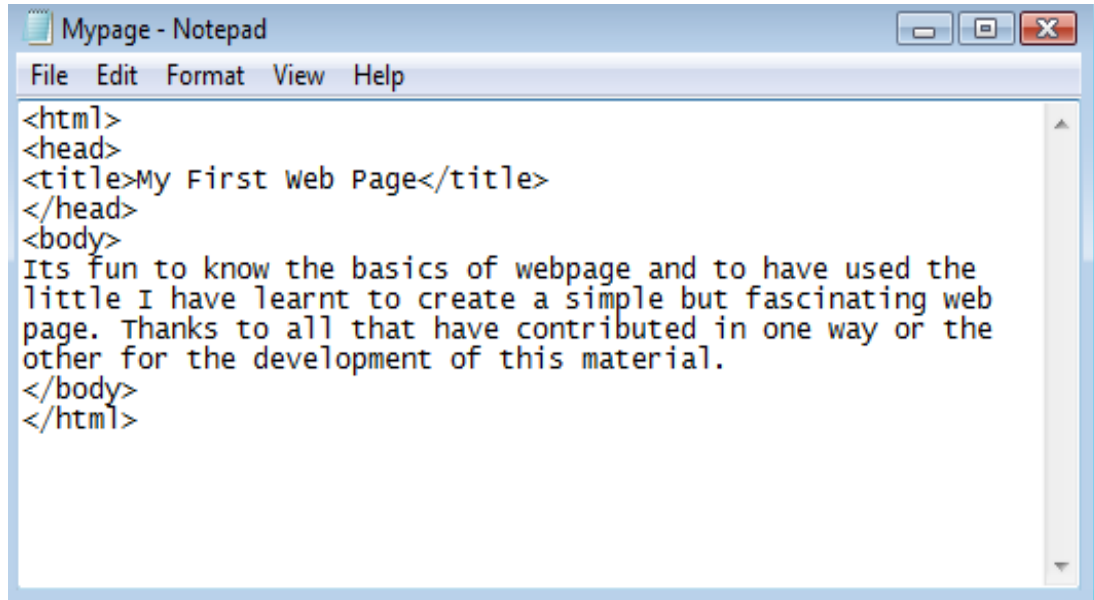


7. To allow for text wrapping, go to *Format* menu and put a check mark by *Word Wrap*. This keeps your text from appearing as one long line that you'd have to scroll sideways to see as below





8. Enter the relevant tags and save it "Mypage.html" to appear as below. (Note that it is a wise idea to create a folder for all your html and sample web design files. Call it WEBfolder and place it on the Desktop for this practical purpose.)

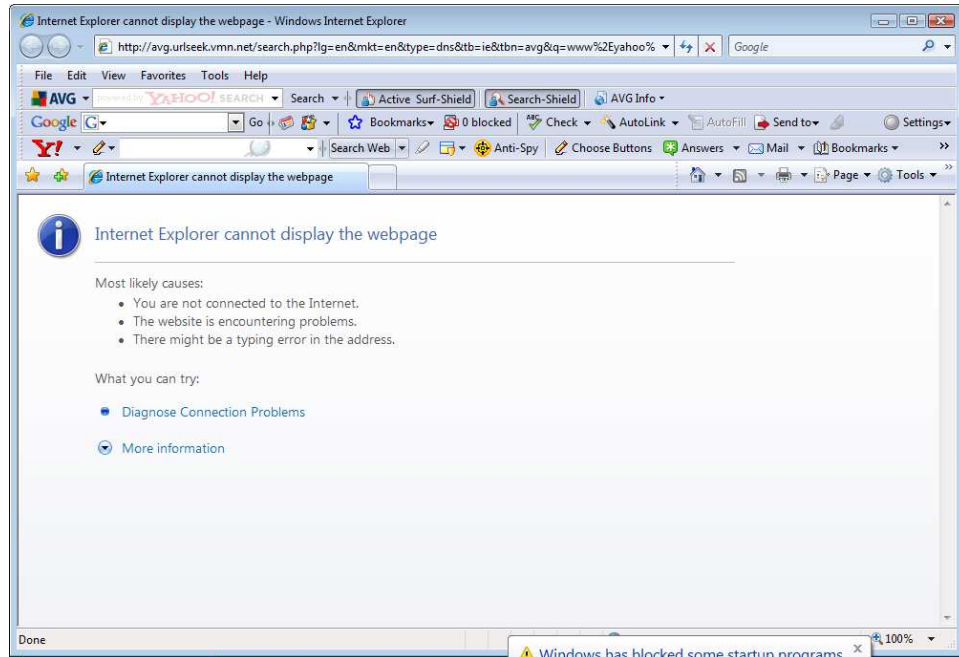


```
<html>
<head>
<title>My First web Page</title>
</head>
<body>
Its fun to know the basics of webpage and to have used the
little I have learnt to create a simple but fascinating web
page. Thanks to all that have contributed in one way or the
other for the development of this material.
</body>
</html>
```

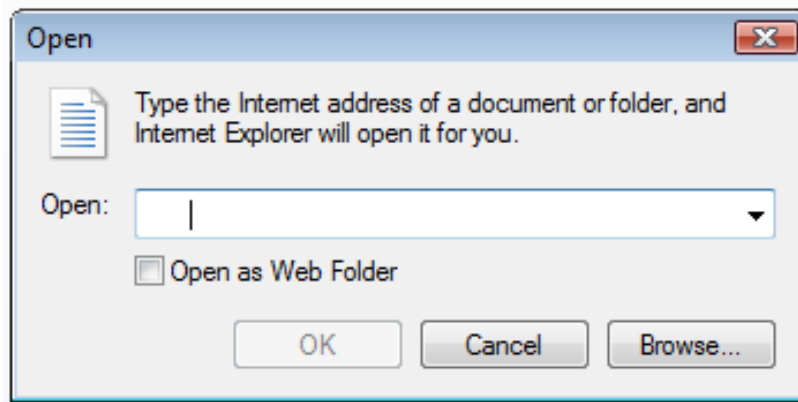
**Lab2:** Use internet explorer to execute the codes.

**Steps:**

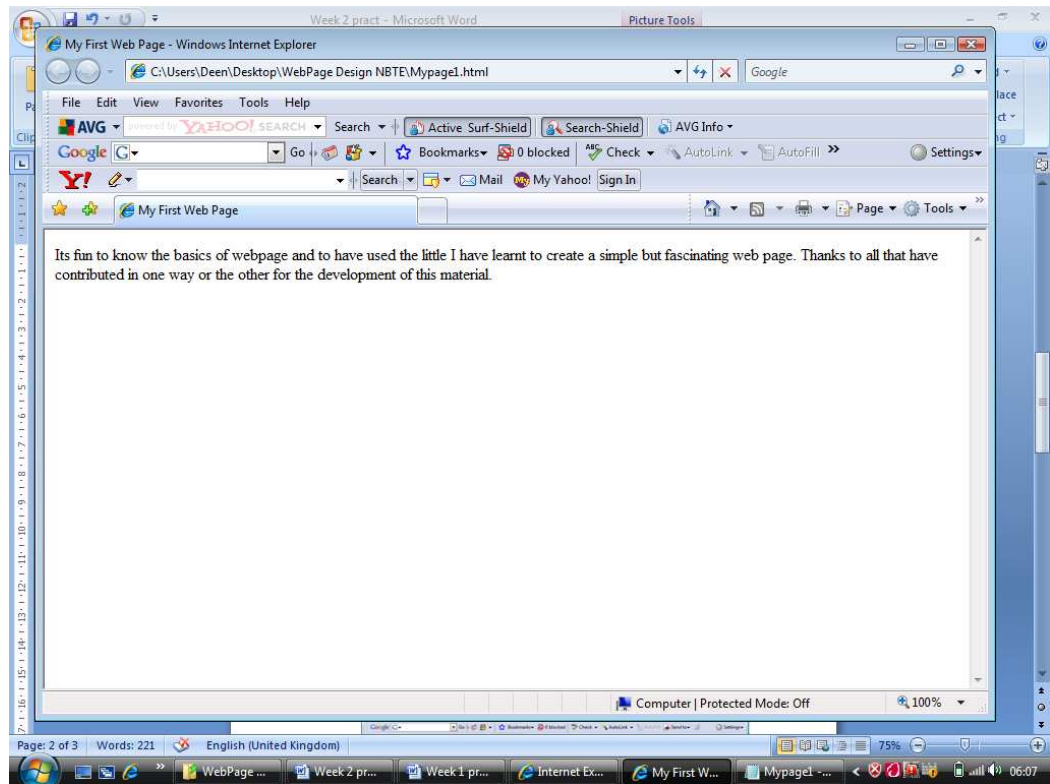
1. Start internet explorer



2. Click file menu and click Open or from the explorer page click CTRL+O.
3. An open dialog box will appear as below, browse to locate your html file "My page" from our created WEB folder on the desktop.



4. Click Ok and Ok again in case of any other notification message after.
5. The web page will be displayed as below



6. To edit a page just go back to notepad and open your html file edit and re-save  
How?
  - On your Notepad Click Open
  - Locate your folder on the file open dialog
  - Change Document type to **All files** from **Text Document (.txt)** displayed on the dialog
  - Your html file **mypage** appears, select and click OK
  - The document is loaded to make all changes and save back
7. To view the changes, right click your displayed webpage and click refresh.

# WEEK Three (practical)

---

## Learning Outcome

Students should know and implement Text formatting, text alignment, fonts and html elements such as header paragraphs, breaking etc.

**Lab1:** : *Demonstrate the Heading and Paragraph tags by including them in "Mypage" that we designed in Week two.*

## Practice

Let us add the followings to the body tag

```
<h1>This is the Main heading</h1>
```

```
<h2>This is the Sub heading</h2>
```

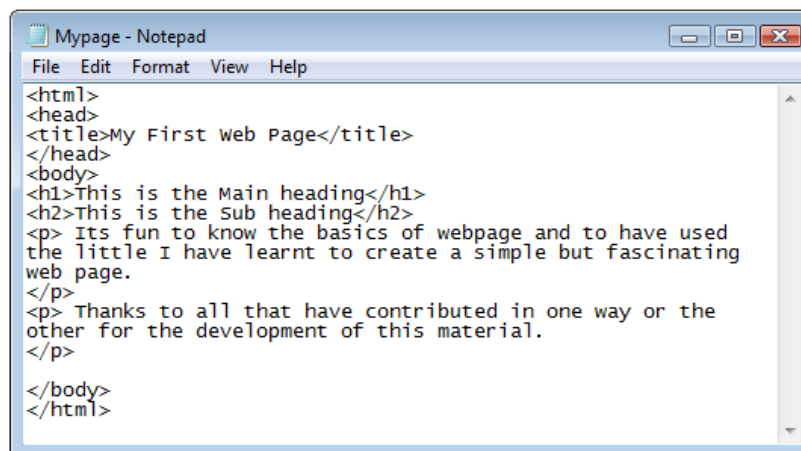
```
<p> Its fun to know the basics of webpage and to have used the little I have learnt to create a simple but fascinating web page.
```

```
</p>
```

```
<p> Thanks to all that have contributed in one way or the other for the development of this material.
```

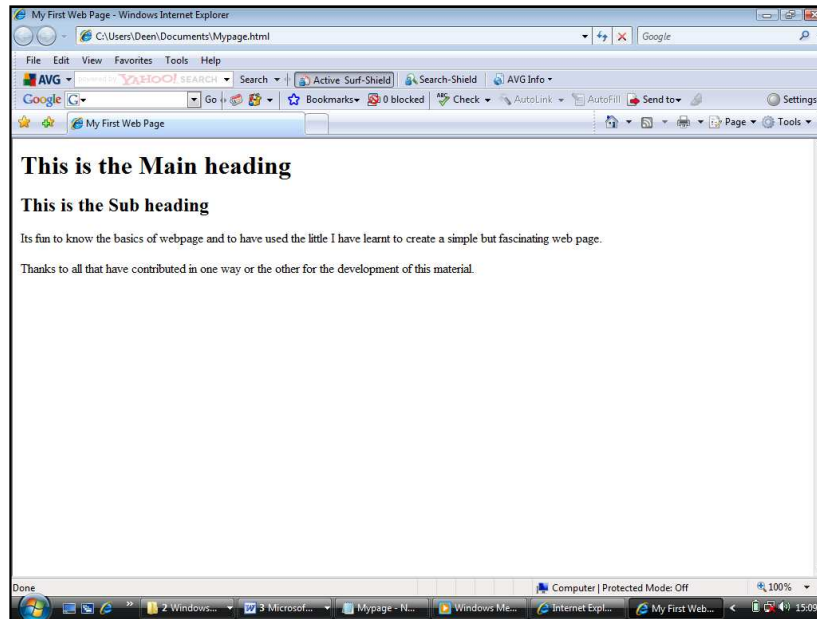
```
</p>
```

It should look as below in the editor



```
File Edit Format View Help
<html>
<head>
<title>My First web Page</title>
</head>
<body>
<h1>This is the Main heading</h1>
<h2>This is the sub heading</h2>
<p> Its fun to know the basics of webpage and to have used
the little I have learnt to create a simple but fascinating
web page.
</p>
<p> Thanks to all that have contributed in one way or the
other for the development of this material.
</p>
</body>
</html>
```

*When run on the browser it appear as below*



## Lab2: : Demonstrate the Attribute Values

### Practice

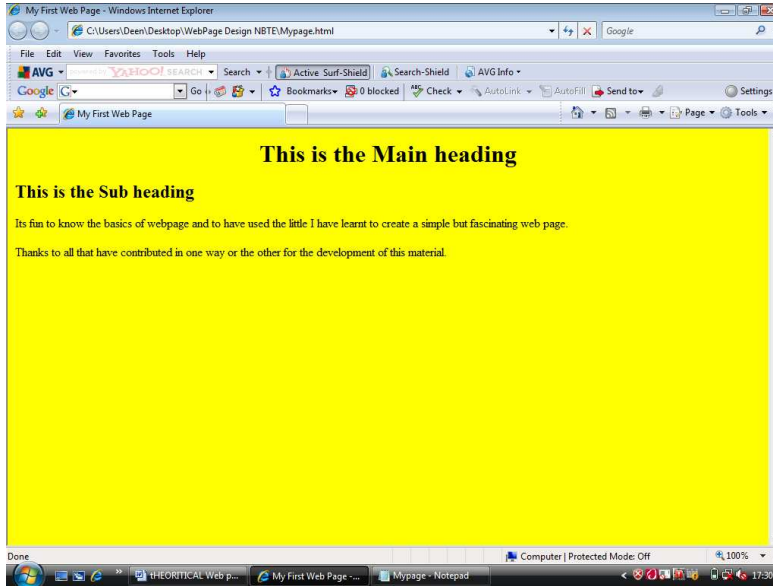
We may demonstrate the Attribute Values by reformatting our project i.e. "MyPage" as follows.

```
<h1 Align = "Center" >This is the Main heading</h1>
<h2>This is the Sub heading</h2>
<p bgcolor="yellow"> Its fun to know the basics of webpage and to have used
the little I have learnt to create a simple but fascinating web page.
</p>
<p> Thanks to all that have contributed in one way or the other for the
development of this material.
</p>
```

It should look as below in the editor

```
MyPage - Notepad
File Edit Format View Help
<html>
<head>
<title>My First web Page</title>
</head>
<body bgcolor="yellow">
<h1 Align="Center">This is the Main heading</h1>
<h2>This is the Sub heading</h2>
<p> Its fun to know the basics of webpage and to have used
the little I have learnt to create a simple but fascinating
web page.
</p>
<p> Thanks to all that have contributed in one way or the
other for the development of this material.
</p>
```

***When run on the browser it appear as below***



# WEEK Four(practical)

---

## Learning Outcome

Students should know how to create link to a web page or another html file, understands the basics of listing.

**Lab1:** : *Adding a Link to yahoo page to our "Mypage" page.*

## Practice

Let us add the followings to the body tag

```
<a href="http://www.yahoo.com/">Visit Yahoo Site!</a>
```

*When our webpage is refreshed it should look like this*



**Lab1:** : Adding a the following numbered list to the body tag of "Mypage" page.

## Practice

<body>

.....

.....

```
<ol type="A">
<li>List Item 1
<li>List Item 2
<li>List Item 3
```



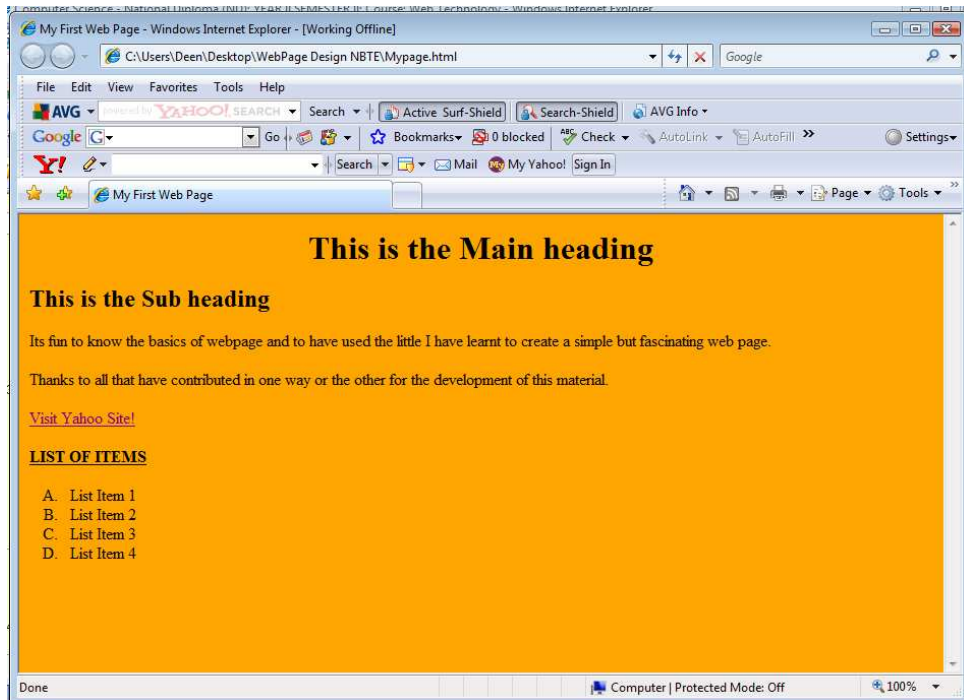
<li>List Item 4

</ol>

</body>

</html>

*When our webpage is refreshed it should look like this*



Note that the background has been changed to "orange" color.

The entire html code is as below

<html>

<head>

<title>My First Web Page</title>

</head>

<body bgcolor="orange">

<h1 Align="Center">This is the Main heading</h1>

<h2>This is the Sub heading</h2>

<p> Its fun to know the basics of webpage and to have

used the little I have learnt to create a simple but

fascinating web page.

</p>

```
<p> Thanks to all that have contributed in one way or
```

```
the other for the development of this material.
```

```
</p>
```

```
<a href="http://www.yahoo.com/">Visit Yahoo Site!</a>
```

```
<br><br>
```

```
<b><u> LIST OF ITEMS </U></b>
```

```
<ol type="A">
```

```
<li>List Item 1
```

```
<li>List Item 2
```

```
<li>List Item 3
```

```
<li>List Item 4
```

```
</ol>
```

```
</body>
```

```
</html>
```

# WEEK Five(practical)

---

## Learning Outcome

Students should know how to add images to web pages and change either background or text colors using the available colors schemes.

**Lab1:** : Adding an image (NBTE) logo to "Mypage" page.

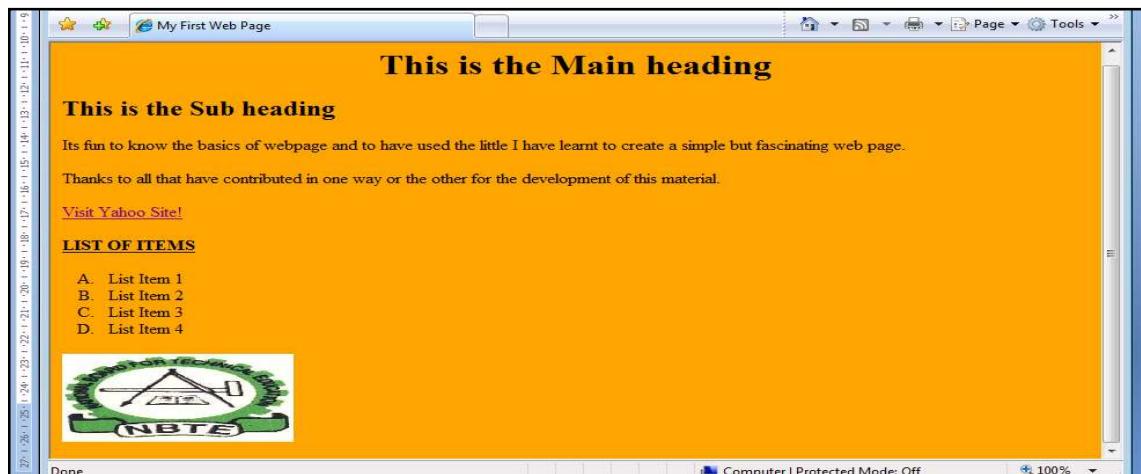
## Practice

You have to be sure that the NBTE logo is scanned and saved into the appropriate folder where it can be loaded from such as the WEBfolder and then add the following code to the body tag

```

```

***When our webpage is refreshed it should look like this***



**The Code is as below**

```
<html>
<head>
```

```

<title>My First Web Page</title>
</head>
<body bgcolor="orange">
<h1 Align="Center">This is the Main heading</h1>
<h2>This is the Sub heading</h2>
<p> Its fun to know the basics of webpage and to have
used the little I have learnt to create a simple but
fascinating web page.
</p>
<p> Thanks to all that have contributed in one way or
the other for the development of this material.
</p>
<a href="http://www.yahoo.com/">Visit Yahoo Site! </a>
<br><br>
<b><u> LIST OF ITEMS </u></b>
<ol type="A">
<li>List Item 1
<li>List Item 2
<li>List Item 3
<li>List Item 4
</ol>



</body>
</html>

```

**Lab2:** : Adding an image (UNESCO) as a Background image to a new webpage called "Mypage2" page.

### Practice

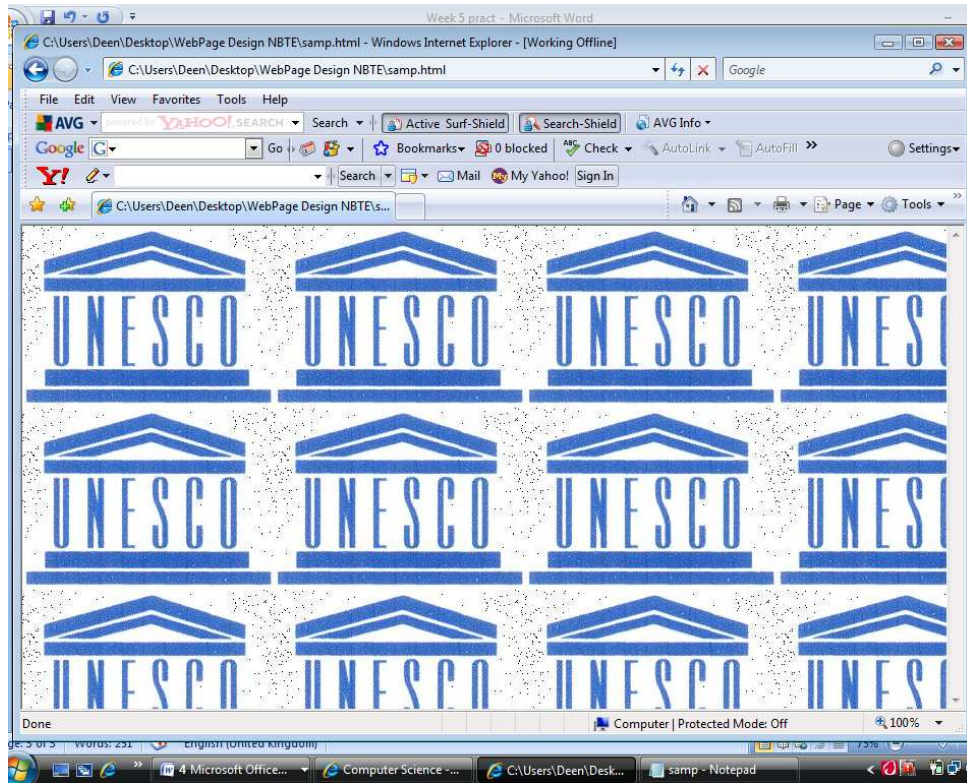
To display the Background in the sample, create fresh file named "Mypage2.html" containing the following codes.

```

<html>
<body background="C:\Users\Deen\Desktop\WebPageFolder\unesco.jpg">
</body>
</html>

```

**When webpage1 is loaded it should look like this**



*The Main page after "unesco" background is inserted*

## WEEK Six (practical)

---

### Learning Outcome

Students should know how to create form and add fields as well as buttons.

**Lab1:** : Create an Input form collecting some input fields, radio button, check box, command button and reset button.

### Practice

Create a sample page called "MypageForm" and include the following code.

```
<html>
<head>
<title>My Input Form</title>
</head>
<body bgcolor="orange">

<p>
<font size="12pt" face="arial" color="Blue">
<b><u> Data Collection </U></b>
</font>

<form>
<b> Enter Names </b>
<br>
First name:
<input type="text" name="firstname">
<br>
Last name:
<input type="text" name="lastname">
<br>
<b>
Sex:
</b>
<input type="radio" name="sex" value="male"> Male

<input type="radio" name="sex" value="female"> Female

<br>
```

```

<b>
Schools Attended:
</b>
<br>
Primary School:
<input type="checkbox" name="School" value="Primary">
<br>
Secondary school:
<input type="checkbox" name="school" value="secondary">
<br>
Higher Institution:
<input type="checkbox" name="school" value="Tartinary">
</p>

<b>
Favorite Polytechnic:
</b>

<select name="favorite Poly">
<option selected value="kpt">Kaduna Polytechnic
<option value="aupoly">Auchi Poly
<option value="baupoly">Bauchi Poly
<option value="yaba">Yaba Tech
</select>
<br>

<b>
Write little comments about yourself:
</b><br>
<textarea name="words" cols="20" rows="5">
Start here...
</textarea>
<br>

<input type="reset" value="Reset">
<input type="submit" value="Submit">
</select>

</form>

</body>
</html>

```

**When our Mypageform is loaded it should look like this**

The screenshot shows a web browser window with the title "My Input Form". The page has a tan background and features the NBTE logo in the top left corner. The main heading is "Data Collection" in large blue text. Below the heading, the form is organized into several sections:

- Enter Names:** Two yellow input fields for "First name:" and "Last name:".
- Sex:** Radio buttons for "Male" and "Female".
- Schools Attended:** Three checkboxes for "Primary School", "Secondary school", and "Higher Institution".
- Favorite Polytechnic:** A dropdown menu currently showing "Kaduna Polytechnic".
- Write little comments about yourself:** A text area with the placeholder text "Start here...".

At the bottom of the form are two buttons: "Reset" and "Submit". The browser's status bar at the bottom shows "Done" and several open tabs, including "Week 6 pr...", "Week 6 - ...", and "Week 5 pr".



# WEEK Seven (practical)

---

## **Learning Outcome**

Students should know how to create form and add fields as well as buttons.

**Lab1:** : *Create a webpage that divide into two main page frames of unequal size. Each of the frame is an already developed paged saved in our common folder*

## **Practice**

We may demonstrate frame tag by creating an additional page named "Mypageframe.html" that serves as the main web page. It should be divided into two columns of 25% and 75% respectively. The first frame should connect the "Mypage.html" and the second should connect to "MypageForm.html".

The "mypageframe.html" should contain the following code

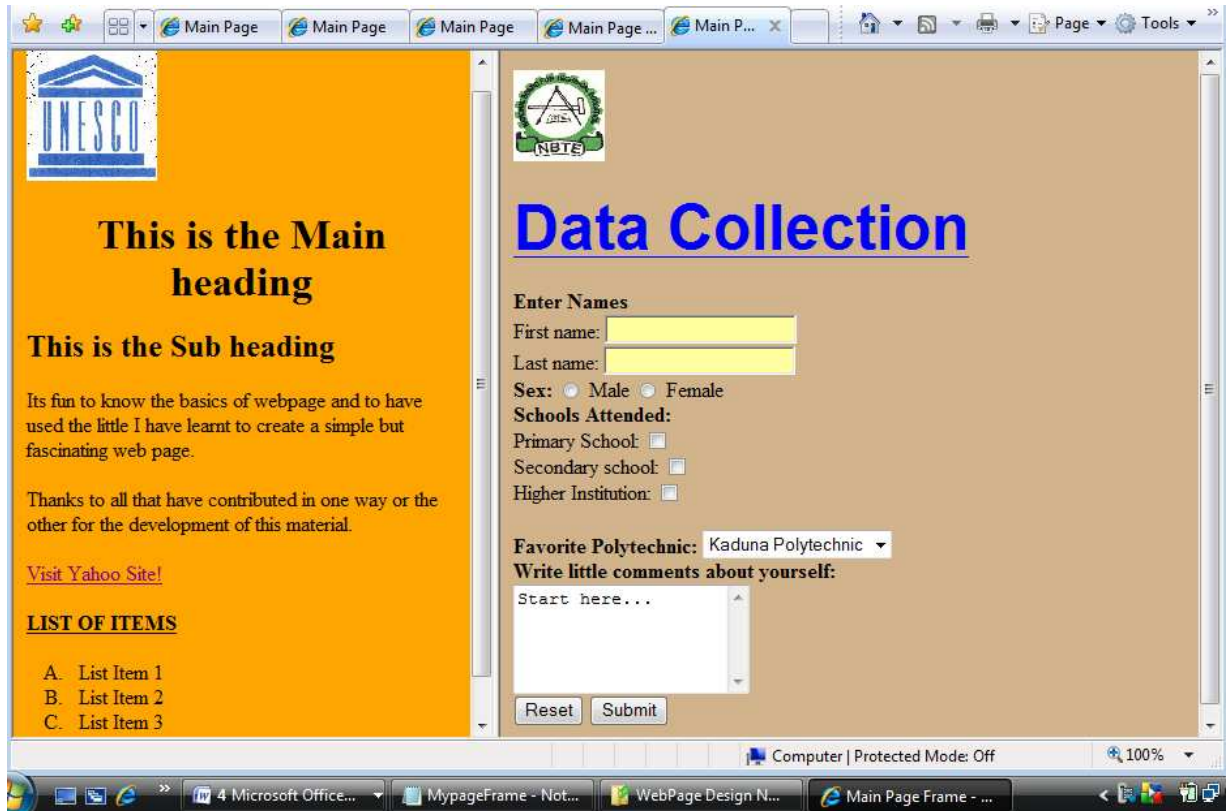
```
<html>
<head>
<title>Main Page</title>
</head>

<frameset cols="25%,75%">
  <frame src="C:\Users\Deen\Desktop\WebPageFolder\Mypage.html">
  <frame src="C:\Users\Deen\Desktop\WebPageFolder\Mypageform.html">

</frameset>

</html>
```

**When the MypageFrame is loaded it should look like this**



**Lab2:** : Remove the Paragraph element from Mypage and add a table of rows and columns.

### Practice

The MyPage.html code should now look like this after the paragraphs are modified.

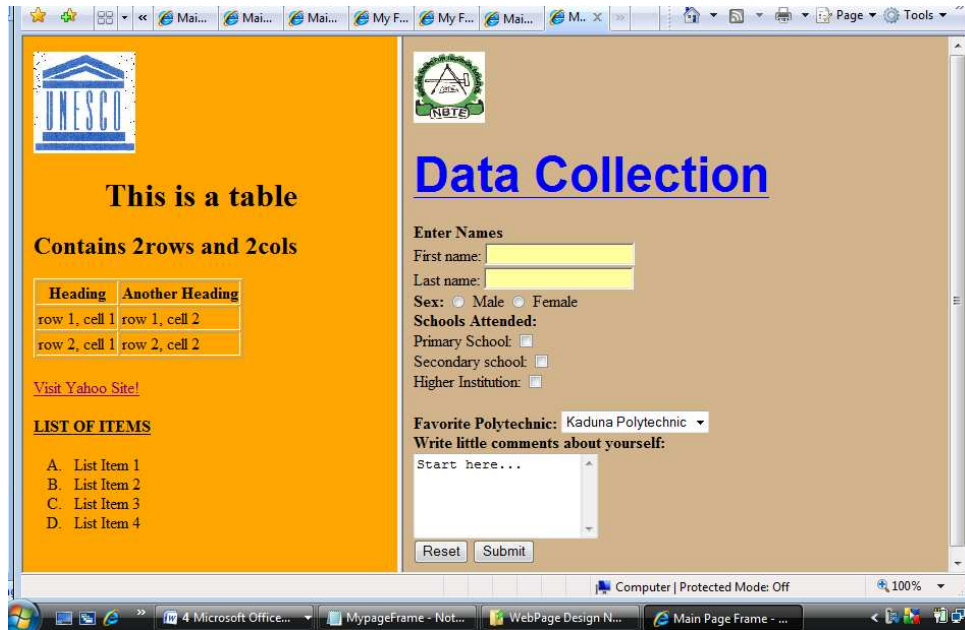
```
<html>
<head>
<title>My First Web Page</title>
</head>
<body bgcolor="orange">


<h1 Align="Center">This is a table</h1>
<h2>Contains 2rows and 2cols</h2>
<p> <table border="1">
<tr>
<th>Heading</th>
<th>Another Heading</th>
</tr>
<tr>
<td>row 1, cell 1</td>
<td>row 1, cell 2</td>
</tr>
<tr>
<td>row 2, cell 1</td>
<td>row 2, cell 2</td>
</tr>
</table>

</p>
<a href="http://www.yahoo.com/">Visit Yahoo Site!</a>
<br><br>
<b><u> LIST OF ITEMS </U></b>
<ol type="A">
<li>List Item 1
<li>List Item 2
<li>List Item 3
<li>List Item 4
</ol>

</body>
</html>
```

**When the MypageFrame is loaded it should look like this**



# WEEK Eight (practical)

---

## Learning Outcome

Students should know how to create CSS and insert to their web documents either externally or internally.

**Lab1:** : *Create an internal style sheet and add to document internally*

## Practice

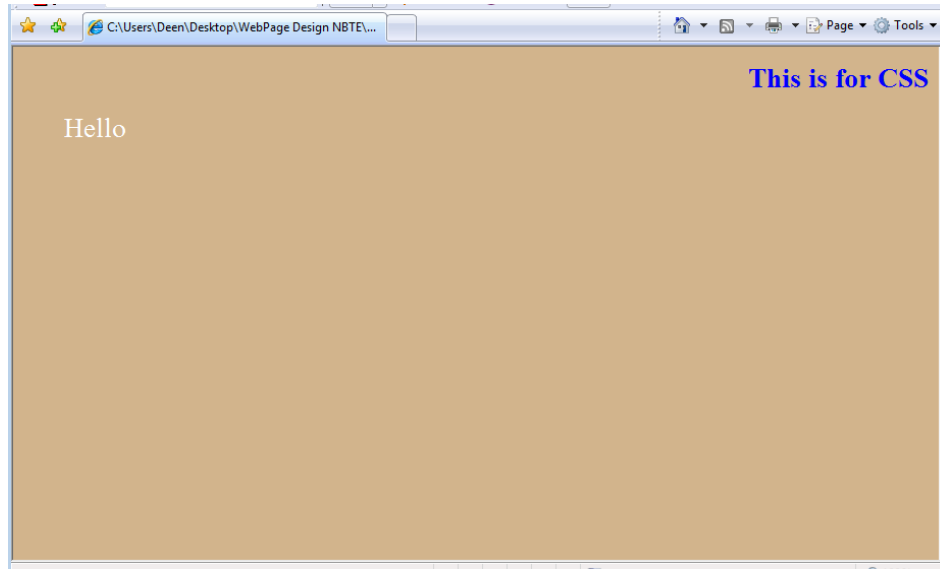
An internal style sheet should be used when a single document has a unique style. You define internal styles in the head section by using the <style> tag, like this: Save the file as MypageCSS.html.

```
<html>
<head>
<style type="text/css">
hr {color: sienna}
h1
{
text-align: right;
font-size: 20pt;
color: blue
}

p {margin-left: 40px}
body
{color: white;
Font-size:20pt
}
</style>
</head>

<body bgcolor="tan">
<h1>
This is for CSS
</h1>
<p>
Hello
</p>
</body>
</html>
```

***When the MypageCss is loaded it should look like this***



**Lab2:** : Create an external style sheet and embed it to your web file and run

# WEEK Nine (practical)

---

## **Learning Outcome**

Students should know how to modify CSS files; changing fonts, padding, listing, merging, tables, borders etc.

**Lab1:** : *Create an image gallery using CSS*

## **Practice**

**CSS can be used to create an image gallery.**

The following image gallery is created with CSS:

The source code looks like this:

```
<html>
<head>
<style type="text/css">
div.img
{
margin: 2px;
border: 1px solid #0000ff;
height: auto;
width: auto;
float: left;
text-align: center;
}
div.img img
{
display: inline;
margin: 3px;
border: 1px solid #ffffff;
}
div.img a:hover img
{
border: 1px solid #0000ff;
}
div.desc
{
text-align: center;
```

```
font-weight: normal;
width: 120px;
margin: 2px;
}
</style>
</head>
<body>
<div class="img">
  <a target="_blank" href="klematis_big.htm">
    
  </a>
  <div class="desc">Add a description of the image here</div>
</div>
<div class="img">
  <a target="_blank" href="klematis2_big.htm">
    
  </a>
  <div class="desc">Add a description of the image here</div>
</div>
<div class="img">
  <a target="_blank" href="klematis3_big.htm">
    
  </a>
  <div class="desc">Add a description of the image here</div>
</div>
<div class="img">
  <a target="_blank" href="klematis4_big.htm">
    
  </a>
  <div class="desc">Add a description of the image here</div>
</div>
</body>
</html>
```

**Execute the code and try creating one.**



# WEEK Ten (practical)

---

## **Learning Outcome**

Students should know what script represent in html and how to use scripting

Scripts offer authors a means to extend HTML documents in highly active and interactive ways. For example:

- Scripts may be evaluated as a document loads to modify the contents of the document dynamically.
- Scripts may accompany a form to process input as it is entered. Designers may dynamically fill out parts of a form based on the values of other fields. They may also ensure that input data conforms to predetermined ranges of values, that fields are mutually consistent, etc.
- Scripts may be triggered by events that affect the document, such as loading, unloading, element focus, mouse movement, etc.
- Scripts may be linked to form controls (e.g., buttons) to produce graphical user interface elements.

**Lab1:** Write an UML code that opens a JavaScript alert as soon as the page loads.

## **Practice**

**The code is as below**

```
<script type="text/javascript">  
alert("I am a script. I ran first!")  
</script>
```

**Lab2:** Write an UML code that opens a JavaScript alert as soon as page loads.

# WEEK Eleven (practical)

---

## **Learning Outcome**

Students should know how to develop and insert java scrip into an HTML page

## **Lab1:** *Uses of JavaScript*

- **JavaScript gives HTML designers a programming tool** - HTML authors are normally not programmers, but JavaScript is a scripting language with a very simple syntax! Almost anyone can put small "snippets" of code into their HTML pages
- **JavaScript can put dynamic text into an HTML page** - A JavaScript statement like this: `document.write("<h1>" + name + "</h1>")` can write a variable text into an HTML page
- **JavaScript can react to events** - A JavaScript can be set to execute when something happens, like when a page has finished loading or when a user clicks on an HTML element
- **JavaScript can read and write HTML elements** - A JavaScript can read and change the content of an HTML element
- **JavaScript can be used to validate data** - A JavaScript can be used to validate form data before it is submitted to a server. This saves the server from extra processing
- **JavaScript can be used to detect the visitor's browser** - A JavaScript can be used to detect the visitor's browser, and - depending on the browser - load another page specifically designed for that browser
- **JavaScript can be used to create cookies** - A JavaScript can be used to store and retrieve information on the visitor's computer

## **JavaScript Designs**

**The HTML <script> tag is used to insert a JavaScript into an HTML page.**

## **Lab2:** *Demonstrate JavaScript code in an HTML Page*

## Practice

```
<html>
<body>
<script type="text/javascript">
document.write("Hello World!");
</script>
</body>
</html>
```

The code above will produce this output on an HTML page:

```
Hello World!
```

## Example Explained

To insert a JavaScript into an HTML page, we use the `<script>` tag. Inside the `<script>` tag we use the `type` attribute to define the scripting language.

So, the `<script type="text/javascript">` and `</script>` tells where the JavaScript starts and ends:

```
<html>
<body>
<script type="text/javascript">
...
</script>
</body>
</html>
```

## Adding Strings and Numbers

Look at these examples:

```
x=5+5;
document.write(x);

x="5"+"5";
document.write(x);

x=5+"5";
document.write(x);

x="5"+5;
document.write(x);
```

# WEEK Twelve (practical)

---

## **Learning Outcome**

Students should know what DHTML is and its application to web features

### **DHTML in Short:**

DHTML is all about the ability of the browser to change look and style even after the document has loaded.

### **The style object of IE 4**

HTML elements in IE 4 now all support a style object, which is essentially the "dynamic" object used to manipulate the look and "feel" of that element. Like the <layer> tag, elements can also be assigned an "id" attribute, which can then be used to identify it during scripting. For example:

```
<div id="adiv"></div>
```

In your script, the syntax required to access the style object of "adiv" would look like this: `adiv.style`

### **Dynamic content in IE 4**

In IE 4, dynamic content is realized through a special property called `innerHTML` that exists on the <span> and <div> tag. Just set this property to a new HTML value, and the contents inside that span or div is instantly updated to the new value! I'll illustrate how it's done by modifying the above example to create dynamic content for IE 4 users:

```
<div id="mydiv"></div>

<script language="JavaScript1.2">
var thecontents=new Array()
thecontents[0]="How are you today?"
thecontents[1]="I am fine, thank you."
thecontents[2]="Well, nice talking to you!"
var current=0

function changecontent() {
```

```

mydiv.innerHTML=thecontents[current]
if (current==2) current=0
else current++
setTimeout("changecontent()",3000)
}

window.onload=changecontent
//-->lt;/script>

```

How are you today?

### Moving elements in IE 4

By the way, the day when NS and IE agree upon one implementation of DHTML is the day I can stop writing two versions of everything (just letting out a little frustration). Moving an element in IE 4 involves basically first wrapping that element either inside a positioned span or div, then changing the span or div's pixelLeft and pixelTop properties. It sounds complicated, but is actually very simple:



```

<div id="spaceship" style="position:relative">

</div>

<script><!--
function moving2() {
  if (spaceship.style.pixelLeft<1000)
    spaceship.style.pixelLeft+=5
  moveid2=setTimeout("moving2()",50)
}

function come_back2() {
  clearTimeout(moveid2)
  spaceship.style.pixelLeft=0
}
//--></script>

<form>
<input type="button" value="Move" onClick="moving2()">
<input type="button" value="Come back" onClick="come_back2()">
</form>

```

# WEEK Thirteen (practical)

---

## **Learning Outcome**

Students should know how to insert multimedia element in web pages.

### **Multimedia Formats**

Multimedia elements (like sounds or videos) are stored in media files.

The most common way to discover the media type is to look at the file extension.

When a browser sees the file extensions .htm or .html, it will assume that the file is an HTML page. The .xml extension indicates an XML file, and the .css extension indicates a style sheet.

Picture formats are recognized by extensions like .gif and .jpg.

Multimedia elements also have their own file formats with different extensions.

### **Flash in HTML**

#### **Lab1:** *Demonstrate Flash Embedding in HTML*

After creating a Flash movie you choose File > Save As from the top menu to save your movie. Save the file as "Somefilename fla".

To embed the Flash movie you just made into an HTML page, you should go back to your Flash program and do the following steps:

#### **Step 1**

Choose File > Open. Open a Flash movie you have created.

#### **Step 2**

Choose File > Export Movie.

#### **Step 3**

Name the file "somefilename.swf". Choose the location where the file is to be stored (in your Web folder). Click OK.

**Step 4**

Open the HTML page where you want to insert your Flash movie. Insert this code:

```
<object width="550" height="400">  
<param name="movie" value="somefilename.swf">  
<embed src="somefilename.swf" width="550" height="400">  
</embed>  
</object>
```

**Note:** This is the minimum code you need to embed a Flash movie in a browser. A broken icon will appear on the Web page if the user does not have the Flash plug-in installed.

**Note:** In the code above there is both an `<embed>` tag and an `<object>` tag. This is because the `<object>` tag is recognized by Internet Explorer, and Netscape recognizes the `<embed>` tag and ignores the `<object>` tag.

**Step 5**

Type in the address of the HTML file in your browser and look at your first Flash movie.

---

**Let the Flash Program do the Work**

The code above is the absolute minimum code to embed Flash movies in HTML pages. It is not recommended to use the minimum code. There should be a few more attributes added:

- `classid` is an attribute to the `<object>` tag. It tells Internet Explorer to load the ActiveX plug-in if it is not installed
- `pluginspage` is an attribute to the `<embed>` tag. It displays a link to the Shockwave download page if Netscape does not have it

The Flash program can add these attributes for you:

**Step 1**

Choose File > Publish. Flash will now create the `<object>`, `<param>`, and `<embed>` tags for you. It will also create the `classid` and `pluginspage` attributes.

**Step 2**

Open the HTML document that Flash created, view the HTML source and copy the code into your HTML page where you want your Flash movie.

**Step 3**

Be sure that you have the "somefilename.swf" in your Web folder.

**Step 4**

Type in the address of the HTML file in your browser and look at your first Flash movie.

***Flash Tweening***

---

**Tweening comes from the words "in between".**

**With Tweening you can go from one keyframe to another and specify changes in the animation and let the Flash program create the frames in between.**

---

***Example***

In this example you will learn how to make an object move across the screen.

**Step 1**

Create a small circle to the left in the Stage area. Do this by selecting the circle tool from the left toolbar. Draw the circle in the Stage area.

**Step 2**

Select the Arrow tool from the left toolbar. Double-click on the circle to select it.

**Step 3**

Now we have to convert the circle to a symbol. When the circle is converted to a symbol we can create instances of the circle. From the top menu choose Modify > Convert to Symbol. Name the symbol "Ball", and select OK.

**Step 4**

Go to Frame 10 in the Timeline. Do this by clicking the gray field below 10. Then right click in this field. Choose Insert Keyframe. Keyframes appear as circles in a frame. This operation duplicates the image.

**Note:** A keyframe specifies changes in an animation. You create keyframes at important points in the Timeline and let Flash create the frames in between.



**Step 5**

Select the circle and move it to the right a couple of inches.

**Step 6**

Click on the Timeline any place between Frame 1 and Frame 10. Then right click and choose Create Motion Tween.

**Step 7**

Choose Control > Test Movie from the top menu to test your Flash movie.

**Flash Guide Tweening**

---

**With Motion Guide Tweening you can move an object from one location to another along a specified path.**

---

**Example**

In this example you will learn how to draw a path an object should follow.

**Step 1**

Choose Window > Common Libraries > Graphics. Select the image you want to use. In this example we have used a blue mouse.

**Step 2**

Click on the image and drag it outside the left edge of the Stage.

**Step 3**

Go to Frame 40 in the Timeline. Do this by clicking the gray field below 40. Then right click in this field. Choose Insert Keyframe. Keyframes appear as circles in a frame. This operation duplicates the image.

**Step 4**

Click on the Timeline any place between Frame 1 and Frame 40. Then right click and choose Create Motion Tween.

**Step 5**

Right click on Layer 1 (Click on the layer name, where it says "Layer 1"). Choose Add Motion Guide in the pop-up menu. The Flash program will now insert a motion guide layer on top of layer 1. Motion guide layers are used to draw lines an animated symbol should follow.

**Step 6**

Click on the Motion Guide Layer to make sure it is the active layer (Click on the layer name, where it says "Guide: Layer 1").

**Step 7**

Click on the Pencil tool in the left toolbox. Set the Pencil Mode to Smooth (in the Options section of the left toolbox).

**Step 8**

Draw a line. Begin on the image and draw a line to the other side of the Stage.

**Step 9**

Go back to Frame 1 in the Timeline. Click on the Arrow tool in the left toolbox. Select the "Snap to Objects" button in the Options section of the left toolbox.

**Step 10**

Place the image with its center on the beginning of the motion guide (the black line you have drawn with the Pencil). The center of the image shows as a +. A black circle appears when the image is snapped to the motion guide. Release the mouse button when the image is snapped to the guide.

**Step 11**

Go to Frame 40. Place the image with its center on the end of the motion guide.

**Step 12**

Choose Control > Test Movie from the top menu to test your Flash movie.

---

**Is your Flash Movie Playing too Fast?**

You can control this by selecting Modify > Movie from the top menu. A Movie Properties box will show. The Frame Rate field sets how many frames to display per second. Adjust the number to a lower number, and test your movie again.

**Flash Tint Tweening**

---

**With Tint Tweening you can change the color of an object.**

---

**Example**

In this example you will learn how to change the color of an object.

**Step 1**

Choose Insert > New Symbol.

**Note:** To add Tint effects the object must be a symbol.

**Step 2**

Name the symbol "changecolor" and select the Graphic option in Behavior. Click OK.

**Note:** You will now be taken to the symbol generator in the Flash program. Here you create symbols. Symbols can be dragged to the stage of your movie after you have created them.

**Step 3**

Choose the Text tool in the left toolbox. Choose Text > Size > 36 from the top menu to make the text big. Choose Text > Style > Bold to make the text thick.

**Step 4**

Click in the work area and write "Color Changing Text".

**Step 5**

Jump back to the movie. Do this by choosing Edit > Edit Movie.

**Step 6**

Insert the symbol you just created into the movie. Choose Window > Library. Select the "changecolor" symbol and drag it into the middle of the Stage.

**Step 7**

Insert a keyframe in Frame 15 and in Frame 30.

**Step 8**

Go to Frame 15. Right click on the text in the Stage. In the pop-up menu, choose Panels > Effect.

**Step 9**

Choose Tint from the drop down menu. A color map will show. Set the colors to: R=0, G=255, B=0.

**Step 10**

Click on the Timeline any place between Frame 1 and Frame 15. Then right click and choose Create Motion Tween.

**Step 11**

Click on the Timeline any place between Frame 15 and Frame 30. Then right click and choose Create Motion Tween.

**Step 12**

Choose Control > Test Movie from the top menu to test your Flash movie.

**Flash Shape Tweening**

---

**With Shape Tweening you can change one object into another.**

---

**Example**

In this example you will learn how to change one object into another.

Example

**Step 1**

Choose the Text tool in the left toolbox. Choose Text > Size > 48 from the top menu to make the text big. Choose Text > Style > Bold to make the text thick.

**Step 2**

Click in the work area and write "Hello".

**Step 3**

Right click on the text you just wrote and choose Panels > Align from the pop-up menu.

**Step 4**

In the Align box select the "To Stage" button first. Then click on the "Align Horizontal Center" button and the "Align Vertical Center" button. Close the Align box.

**Step 5**

Select the Arrow Tool and click on the text. Choose Modify > Break Apart from the top menu.

**Step 6**

Insert keyframes at Frame 24, 50 and 51.

**Step 7**

Delete the text "Hello" in Frame 24. Select it and press the Delete button on your keyboard.

**Step 8**

Write a new text on the Stage. Write "World!" (Font size: 48, style: bold).

**Step 9**

Right click on the text you just wrote and choose Panels > Align from the pop-up menu. In the Align box select the "To Stage" button first. Then click on the "Align Horizontal Center" button and the "Align Vertical Center" button. Close the Align box

**Step 10**

Select the Arrow Tool and click on the text. Choose Modify > Break Apart from the top menu.

**Step 11**

Insert a keyframe in Frame 26.

**Step 12**

Double click the keyframe in Frame 1. In the small pop-up box click on the Frame tab. Set Tweening to Shape. Close the pop-up box.

**Step 13**

Double click the keyframe in Frame 26. In the small pop-up box click on the Frame tab. Set Tweening to Shape. Close the pop-up box.

**Step 14**

Double click the keyframe in Frame 51. In the large pop-up box click on the Frame Actions tab. Click on the + sign. Choose Basic Actions > Go To. Close the pop-up boxes.

**Step 15**

Choose Control > Test Movie from the top menu to test your Flash movie.

**Flash Button 1**

---

**Example**

In this example you will learn how to insert an image, convert it to a button, and add a URL to it so it becomes a link.

**Step 1**

Choose File > Import to import an image that will become a button. Locate the image and click Open. The image will be saved in the Library.

**Step 2**

Select the image with the Arrow tool.

**Step 3**

Convert the image to a symbol. Choose Insert > Convert to Symbol from the top menu. Name the symbol "button", choose Button from the Behavior list and click OK.

**Step 4**

Right click on the image. Choose Actions from the pop-up menu.

**Step 5**

In the Object Actions box click on the + sign. Choose Basic Actions > Get URL.

**Step 6**

Enter a full URL in the URL field (like <http://www.w3schools.com>).

**Step 7**

Choose target in the Window field. Close the Object Actions box.

**Step 8**

Choose Control > Test Movie from the top menu to test your Flash movie.

***Flash Button 2***

---

***Example***

In this example you will learn how to create your own button and add a URL to it so it becomes a link.

**Step 1**

Choose Insert > New Symbol from the top menu.

**Step 2**

Name the symbol "button", choose Button from the Behavior list and click OK. In the Timeline area, you will now see the four states of a button: up, over, down, hit.

**Step 3**

Select the Rectangle tool, pick a light red Fill Color and draw a rectangle in the work area.

**Step 4**

Select the Text tool, pick a dark Fill Color and write "Click Me" over the rectangle.

**Step 5**

Select the Arrow tool and place the text in the middle of the rectangle.

**Step 6**

Add a keyframe to the Over State in the Timeline. The Over State indicates what should happen when you mouse over the button.

**Step 7**

Select the Rectangle, change the Fill color to a light green.

**Step 8**

Choose Edit > Edit Movie to go back to the movie.

**Step 9**

Choose Window > Library to locate the button. Drag the button into the work area.

**Step 10**

Right click on the image. Choose Actions from the pop-up menu.

**Step 11**

In the Object Actions box click on the + sign. Choose Basic Actions > Get URL.

**Step 12**

Enter a full URL in the URL field (like <http://www.w3schools.com>).

**Step 13**

Choose target in the Window field. Close the Object Actions box.

**Step 14**

Choose Control > Test Movie from the top menu to test your Flash movie.

## ***Flash Animation***

---

### ***Example***

#### **Step 1**

Insert a text in the upper left corner of the Stage area. Do this by selecting the text tool from the left toolbar. Write some text in the "textarea".

#### **Step 2**

Select the arrow tool from the left toolbar. Click on the text once to select it.

#### **Step 3**

Convert the text to a symbol. From the top menu choose Insert > Convert to Symbol. Name the symbol "text", choose graphic from the Behavior list and select OK.

#### **Step 4**

Go to Frame 30 in the Timeline. Do this by clicking the gray field below 30. Then right click in this field. Choose Insert Keyframe. Keyframes appear as circles in a frame.

#### **Step 5**

Click on the Timeline any place between Frame 1 and Frame 30. Then right click and choose Create Motion Tween.

#### **Step 6**

Go back to Frame 30 in the Timeline. Move the text to the lower right corner.

#### **Step 7**

Make sure the text is selected. Choose Modify > Transform > Flip Horizontal.

#### **Step 8**

Choose Control > Test Movie from the top menu to test your Flash movie. The text should move from the first location (in frame 1) to the second location (in frame 2). The text should also turn around on its way to the second location.

---



## ***Flash Sound***

---

### ***Example***

#### **Step 1**

Choose File > Import to import a sound file. Locate the sound file and click Open. The sound file will be saved in the Library.

#### **Step 2**

Click in the first frame of "Layer 1" in the Timeline. Choose Window > Panels > Sound from the top menu.

#### **Step 3**

In the pop up window (Sound) choose the sound you imported in the Sound field. Choose Stream in the Sync field. Close the pop up window.

#### **Step 4**

Go to frame 50 in the Timeline. Right click and choose Insert Frame.

#### **Step 5**

Choose Control > Test Movie from the top menu to test your Flash movie.

# WEEK Fourteen (practical)

---

## Learning Outcome

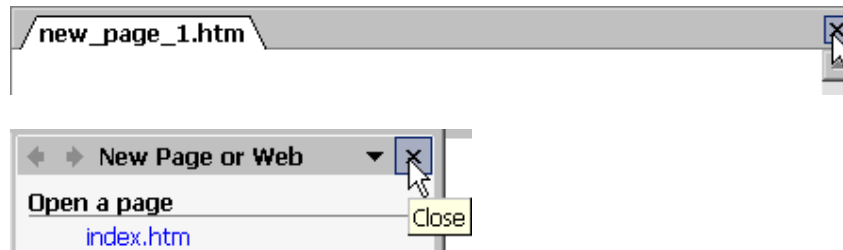
Students should know how to use front page as a web development tool

## Introduction to FrontPage

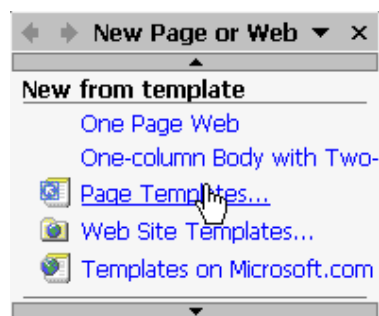
### Using Page Templates

- Use **Windows Explorer** to create a folder called **FrontPage Foundation Work Folder** in the **My Documents** folder.
- Copy the **Images folder** from your **Web design work** to your **FrontPage Foundation Work Folder**
- Launch **FrontPage**.

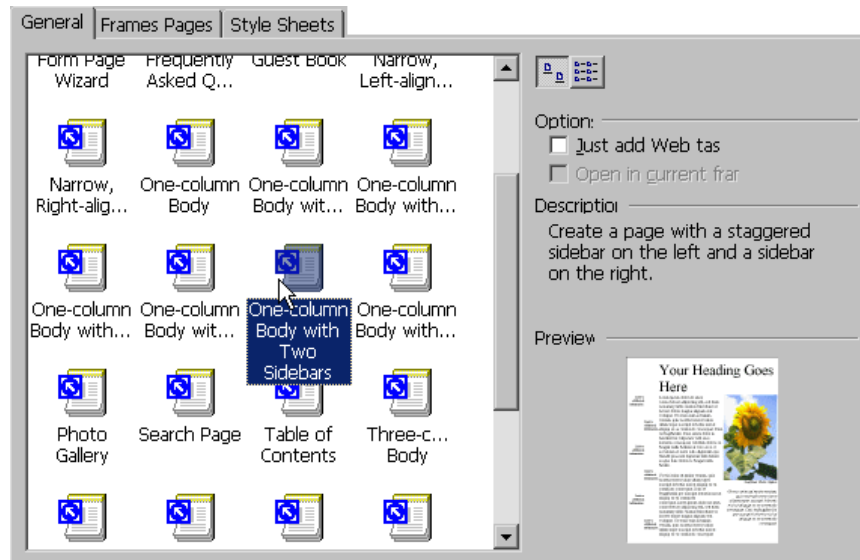
**Note:** If the **new\_page\_1.htm** page and the **New Page or Web** task pane are opened, click the **X** at the top right corner to close them down:



- From the **Main Menu**, choose **File > New > Page or Web** to open the **New Page or Web** task pane.
- From the **New from template** section of the **New Page or Web** task pane, select the **Page Templates** command:



- From the **General** tab of the **Page Templates** dialog box, select the **One-column Body with Two Sidebars** template, and press the **OK** button:



## Toolbars

### Using the Save Button

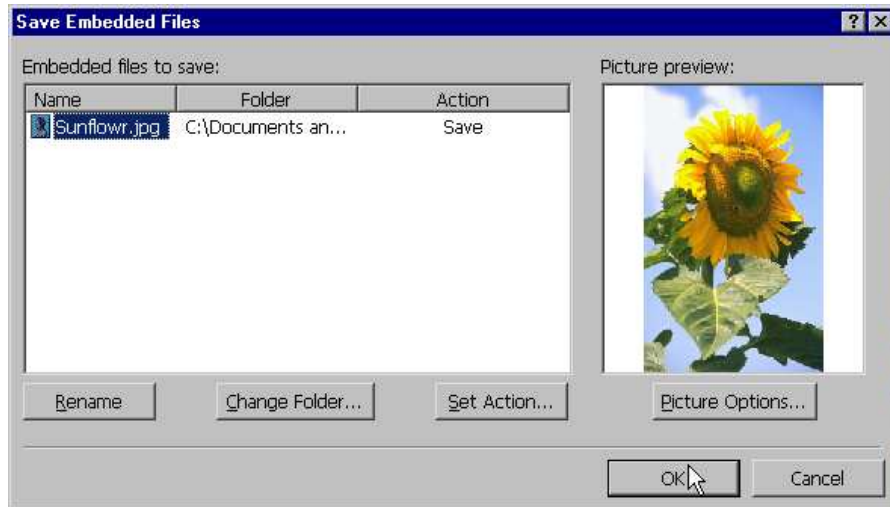
- From the **Standard** toolbar, click the **Save** button to save your page:



- Navigate to the **FrontPage 2002 Foundation Work Folder** and save your page as ***Index.htm***.

**Note:** The ***Index.htm*** name should automatically appear in the **File name** field when you save the page.

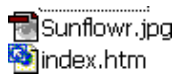
- Click the **Save All** button to display the **Save Embedded Files** dialog box:



**Note:** Any graphics that are not imported with the **Insert Picture** command will cause the **Save Embedded Files** dialog box to be displayed.

- Click the **Change Folder** button to display the **File Open** dialog box.
- Locate the **FrontPage Work Folder\Images** folder and click the **Open** button.
- Leave the picture as a **JPEG** file and click the **OK** button.

**Note:** If you check your **FrontPage Foundation Work Folder** you will notice two files have now been added:



## Text

### *Editing Text*

- Triple click the **Your Heading Goes Here** title *OR* place the cursor at the end of the title and drag it back to the beginning to highlight the title:



# Your Heading Goes Here

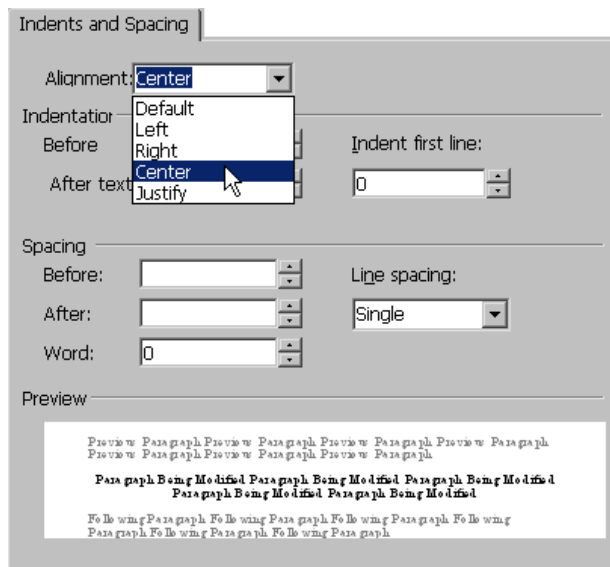
- Rename the **heading** to read *My First Web Page*:

# My First Web Page

Lorem ipsum dolor sit amet, consectetur

## Aligning Text

- With the cursor still in the title, choose **Format > Paragraph** to display the **Paragraph** dialog box.
- From the **Indents and Spacing** tab of the **Paragraph** dialog box, choose **Center** from the **Alignment** drop down list and click the **OK** button:



# My First Web Page

- From **Standard** toolbar, click the **Save** button

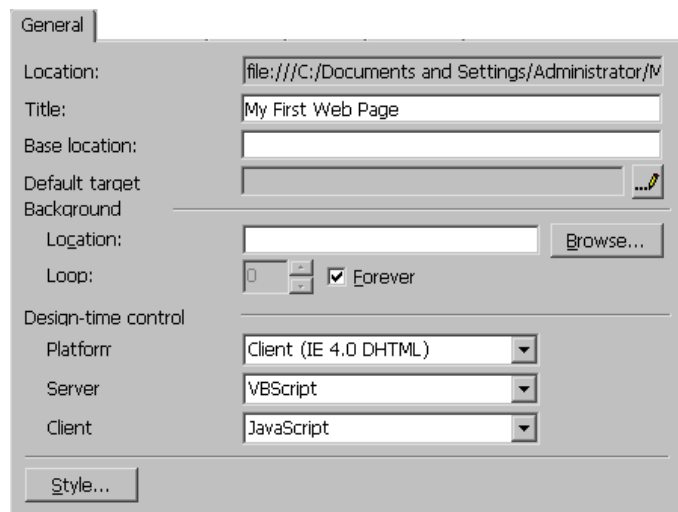
**OR** from the **Menu** toolbar, choose **File > Save**

**OR** press the **Ctrl + S** key combination to save your work.

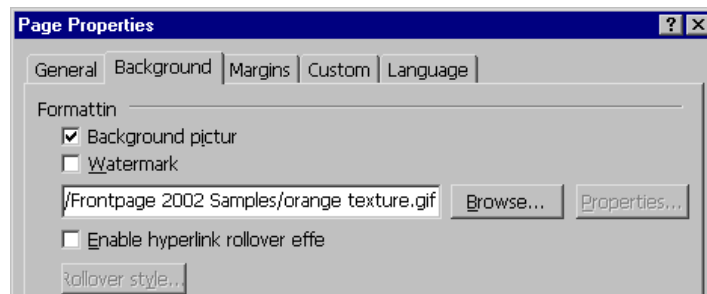
## Colors

### Changing the Page Properties

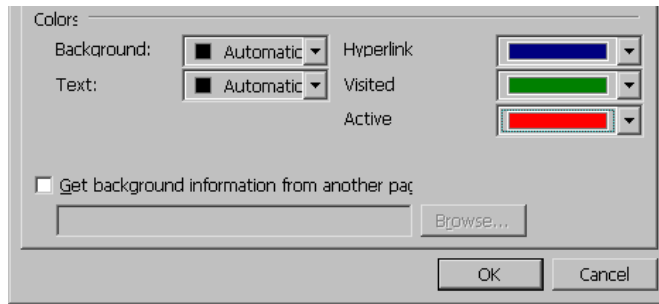
- From the **Main Menu**, choose **File > Properties** to display the **Page Properties** dialog box.
- Select the **General** tab and enter *My First Web Page* into the **Title** field:



- While you are still in the **General** tab select the **Background** tab and check the **Background Picture** checkbox.
- In the **Formatting** section, click the **Browse** button, and **Open** the *orange texture.gif* file from the **Images** Folder inside the **FrontPage 2002 Foundation Samples** folder:



- In the **Colors** section, use the drop-down menus to enter the following:

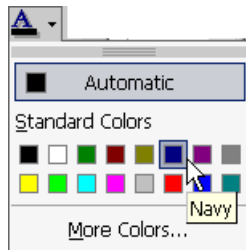


Hyperlink - **Navy**  
 Visited hyperlink - **Green**  
 Active hyperlink - **Red**

- Click the **OK** button to return to the page.
- Triple click the **My First Web Page** title **OR** place the cursor at the end of the title and drag it back to the beginning to highlight the title:



- From the **Formatting** toolbar, click **Font Color** button to reveal the drop down menu and select the **Navy** color swatch:



- From **Standard** toolbar, click the **Save** button  
**OR** from the **Menu** toolbar, choose **File > Save**  
**OR** press the **Ctrl + S** key combination to save your work.

# WEEK Fifteen (practical)

## Learning Outcome

Students should be able to xml package ND APPLY TO A GIVEN CASE

### Lab1: What Does XML Do?

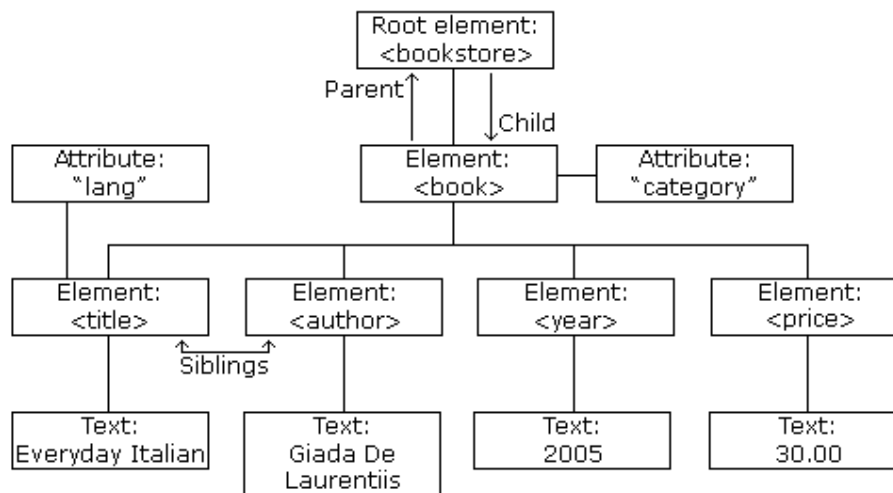
Maybe it is a little hard to understand, but XML does not DO anything. XML was created to structure, store, and transport information.

The following example is a note to Tove from Jani, stored as XML:

```
<note>
<to>Tove</to>
<from>Jani</from>
<heading>Reminder</heading>
<body>Don't forget me this weekend!</body>
</note>
```

The note above is quite self descriptive. It has sender and receiver information, it also has a heading and a message body.

But still, this XML document does not DO anything. It is just pure information wrapped in tags. Someone must write a piece of software to send, receive or display it.





The image above represents one book in the XML below:

```
<bookstore>
  <book category="COOKING">
    <title lang="en">Everyday Italian</title>
    <author>Giada De Laurentiis</author>
    <year>2005</year>
    <price>30.00</price>
  </book>
  <book category="CHILDREN">
    <title lang="en">Harry Potter</title>
    <author>J K. Rowling</author>
    <year>2005</year>
    <price>29.99</price>
  </book>
  <book category="WEB">
    <title lang="en">Learning XML</title>
    <author>Erik T. Ray</author>
    <year>2003</year>
    <price>39.95</price>
  </book>
</bookstore>
```

### XML Elements are Extensible

XML elements can be extended to carry more information.

Look at the following XML example:

```
<note>
  <to>Tove</to>
  <from>Jani</from>
  <body>Don't forget me this weekend!</body>
</note>
```

Let's imagine that we created an application that extracted the <to>, <from>, and <body> elements from the XML document to produce this output:

### MESSAGE

**To:** Tove  
**From:** Jani

Don't forget me this weekend!

Imagine that the author of the XML document added some extra information to it:

```
<note>
<date>2008-01-10</date>
<to>Tove</to>
<from>Jani</from>
<heading>Reminder</heading>
<body>Don't forget me this weekend!</body>
</note>
```

Should the application break or crash?

No. The application should still be able to find the <to>, <from>, and <body> elements in the XML document and produce the same output.

One of the beauties of XML, is that it can often be extended without breaking applications.