WEBSITE DESIGNING

Objective

You the student should be able to:

1. Explain the term HTML.
2. State the basic structure for HTML coding.
3. Use basic HTML tags.
4. Explain some best practices in website designing.
5. create Tables using HTML code
6. Format tables (width, height, cell padding, and boarder).
7. Insert text into table.
8. Format text using HTML code.
9. Create an ordered and unordered list.
10. Insert images.
11. Insert hyperlinks

Introduction

Web pages are ordinary files with .html file extensions. They contain a code named "hypertext mark-up language" or html. This codes when viewed in a browser like Internet Explorer or Netscape will be seen as beautiful web pages however code under web page may be complicated. To design an html web page, you have two options:

a. You can use a web page editor like **Microsoft FrontPage**, **NotePad, Notepad++** and **Sublime** to create web pages. It works exactly like Microsoft word (a complicated editor program used for creating and editing book, letter etc pages.) You just type text, insert graphics and finally save your document as an html web page. By the way MS Word itself can save your existing documents as html pages. So you see designing a web page can be very easy. But soon you will see that this is not a good option for creating a professional web page.
b. Second option is to learn html codes and write html pages in a simple text editor. As we said your codes will be seen as Webpages when viewed in a web browser.

Here you will need a simple text editor to write html codes. For example, notepad in windows or any text editor in other operating systems. You will also need a browser like Internet explorer or Netscape Navigator.

HTML CODE

Now open notepad and type the following code.

```
<html>
   Eeh! My first Web page.
</html>
```

Now save the text as "page1.html" and double click on the file. You must see your first web page opened in your web browser. <html> and </html> are called tags. First one is a start tag and second is an end tag. Tags are something like commands in programming languages. <html> tag

tells the browser that this is start of the HTML and </html> marks its end. <html> </html> mark start and end a html page.

Headers

Every html page must have a header. Header contains important information about the page. Different tags are used for different sections of a header. Header of an html page is specified by <head> and </head> tags.

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

We will enter header information between <head> </head> tags.

Title

One of the most important parts of a header is title. Title is the small text that will appear in title bar of viewer's browser. So, html document will be as below.

```
<html>
   <head>
      <title>This is the title of the page!</title>
   </head>
</html>
```

WEB PAGE BODY

Now our web page needs a body in which we will enter web page content. As you may guess we will use these tags: <body> </body>. Body will come right after header end tag. So, our web page will be something like this:

```
<html>
   <head>
      <title>This is the title of the page!</title>
   </head>
   <body>
      Welcome to our homepage. More text here.
   </body>
</html>
```

Most of html tags we will learn have optional parameters and extensions. Here we will learn extensions for <body> tag.

Background Color for Body of Web Page

You can change background color of your web page by extending <body> tag as below.

```
<html>
        <head>
                <title>Page with Back Color</title>
        </head>
        <body bgcolor="#00ff00">
                 Page with Back Color
         </body>

 </html>
```

This will change the background color to green. Format of color number is RRGGBB. You know that each color is a combination of three main colors: Red, Green and Blue. In color format RR is value of red component of the main color in hexadecimal format. GG is value of green component and BB is the value of blue component. Two digit hexadecimal number can be anything between 00 to FF i.e. 0 to 255 in decimal format. So if we write 00FF00 we mean (red=0, green=255, blue=0) so the result is a pure green color. You can produce 16 million colors in this way but pay attention that not all of the browsers will be capable to show all these colors. So test your web page in 256 colors mode.

Background Image

We can use a background picture for web page instead of background color. You must have a ready image file in .gif or .jpg formats. Now you must extend <body> tag as below. "image1.gif" is file name of the image we want to use as background image.

```
<html>
        <head>
                <title>Page with Back Color</title>
        </head>
        <body background="image1.gif">
                <b>Page with background image.</b>
        </body>
</html>
```

Image file must be in the same folder as your html file. Otherwise browser will not be able to find it.

TEXT FORMATTING

Until now we have learned to insert simple text into our web pages. In this lesson we will learn text formatting techniques. This part of html writing skills is the most important part of our whole web design course. So, you must learn it word by word.

Changing Text Style

We can make a text bold, italic or underlined by using ..., ... and <u>...</u> tags. We can make a text both bold and italic or any other combination. This called **Nested Tags.**
Note that the tag
 in the end of each line breaks it and has not an ending tag.

```
<html>
   <head>
      <title>This is the title of the page!</title>
   </head>
   <body>
      <b>This text is bold</b><br>

      <i>While this one is italic</i><br>

      <u>And this text is underlined</u><br>

      <b><i>Look at this, it's both bold and italic</i></b>
   </body>
</html>
```

Text with Fixed Width Font

Regular fonts use different horizontal space. Eg. 'w' uses more space than the letter 'i'. Sometimes we need a font with exactly the same width for all letters. Eg. making a table of numbers and you want the columns to be exactly under each other in different rows, we will need this kind of text by using <tt>...</tt> tags. tt means Typewriter Text.

Changing Size and Face of Fonts

It can be done by using ... tags with parameters to specify the kind of change you need in text/font.

For Size

..., { where $1 \leq n \leq 7$}

For Face of fonts

...

<font face="ARIAL"> This text is in ARIAL font</fonT>

Only font is installed on your computer will be displayed. Therefore it's better to use native windows fonts in your pages. Windows is used by about 95% of web surfers.

Changing font colors

```
<font color="#FF0000">This text is in red color.</font><br>
```

You can change text color by changing color number

Combining Font attributes: We can obviously combine <font> tag parameters as we wish. In this way we will be able to have text with different colors, font faces and font sizes. You can even use text styles with <font> tag by nesting style and font tags.

Example:

```
<b><i><font size="5" face="impact" color="#00ff00">.  How about this ?      </font></i></b>
```

Changing default font colors in a web page

Each browser has its own default settings for text color, link color, visited link color and active link color. Text color default is black. Links are usually blue. To change default settings for these values you must use <body> tag with more parameters. The syntax:

```
<body bgcolor="#ffffff" text="#000000" link="#0000ff" vlink="#00ff00"
alink="#ff0000">Some Text </body>
```

BGCOLOR: Web page background
TEXT: Text Color
LINK: Link Color
VLINK: Visited link
ALINK: Active link

Line Breaks, Paragraphs

As we saw in previous lesson if we break lines in html code by simply inserting enter keys (new line characters), lines will not break in output result in browser. They will be printed in a single line in browser. We must use
 tag to do this as you used it in previous lesson. You can also divide text using paragraphs. A paragraph starts on a new line with one blank line after previous line. Paragraph tag is

Syntax:

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

```
    <title>This is the title of the page!</title>
  </head>
  <body>
    <p>First paragraph</p>

    <p>Second paragraph</p>
  </body>
</html>
```

You will nest other tags inside paragraph tag for fonts, styles and other tags that will be used inside a paragraph.

There is another option in forming text that is using <pre> tag. Text between <pre> </pre> tags will be displayed exactly as it is typed in html source. Therefore you will not need
 tags to break lines. It is enough to enter text in separate lines with enter key (new line character) at their end.

Space between Texts

Browser does not show more than one space between to words even if you have entered a hundred spaces between them in html source. If you want to enter more than one blank character between two words you will need to use a small code for this purpose. It is " " without the quotes.

Syntax:
```
<body>
    Here we insert 5           extra spaces.
</body>
```

Paragraph Alignments in Your Web Page

You can determine how a paragraph will be aligned in a web page. You can align text in left, right or center of a web page. To specify alignment for a paragraph you must use an extra parameter for your paragraph tag. You can use one of these combinations:

```
<html>
  <head>
    <title>This is the title of the page!</title>
  </head>
  <body>
    <p align="left">Paragraph aligned left</p>

    <p align="center">Paragraph aligned at the center</p>
```

```
    <p align="right">Paragraph aligned right</p>
  </body>
</html>
```

Indented Text

If you need a text that is indented from both sides of web page you can use <blockquote> tag. Text that is enclosed in this tag will have a margin from left and right of your web page.

```
<html>
  <head>
    <title>This is the title of the page!</title>
  </head>
  <body>
    We see block quotes here: <br>

    <blockquote>
      In cases that you want to emphasis on a paragraph in your text you
      can use this tag. It will indent your text from both sides.
    </blockquote>
  </body>
</html>
```

IMAGES IN YOUR WEB PAGE

You learned how to use an image as a background for web pages. It was <body background ="image.gif">… </body>. Here we want to learn how to add an image in a web page. Tag to use is <img /> tag. Actually, we will need parameters for this tag that specify image file location, file name and other optional parameters. Look at this example:

```
<html>
  <head>
    <title>This is the title of the page!</title>
  </head>
  <body background="image1.gif">
    <b>This is an image:</b> <br>

    <img src="banner.gif" >
  </body>
```

```
</html>
```

If you want to show your image in a different size than its real size, you can specify its size as below:

```
<html>
   <head>
      <title>This is the title of the page!</title>
   </head>
   <body background="image1.gif">
      <b>This is an image:</b> <br>

      <img src="banner.gif" width="200" height="200">
   </body>
</html>
```

Alignment and Border Size for Images

You can align image in your web page by inclosing it in a paragraph that is aligned as aligned to left, right or center. See example below:

```
<html>
   <head>
      <title>This is the title of the page!</title>
   </head>
   <body background="image1.gif">
      <b>This is an image:</b> <br>

      <p align="center">
         <img src="banner.gif" width="200" height="200">
      </p>
   </body>
</html>
```

You can add a border to an image by adding a border parameter to <img> tag. See the results of this html code. You can see examples:

```
<html>
   <head>
      <title>This is the title of the page!</title>
   </head>
```

```
  <body background="image1.gif">
    <b>This is an image:</b> <br>

    <p align="center">
      <img src="banner.gif" width="200" height="200" border="3">
    </p>
  </body>
</html>
```

Alignment and Border Size for Images

You can align image in your web page by inclosing it in a paragraph that is aligned as aligned to left, right or center. See example below:

```
<BODY BACKGROUND="image1.gif">
      <B>This is an image:</B><BR>
      <P ALIGN="center"> <IMG SRC="abanner.gif"> </P>

</BODY>
```

You can add a border to an image by adding a border parameter to <IMG> tag. See the results of this html code. You can see examples:

```
      <BODY BACKGROUND="image1.gif">
          <B>This is an image:</B><BR>
          <P ALIGN="center"> <IMG SRC="abanner.gif" border=3> </P>
      </BODY>
```

Alternative Text for Images

Some web surfers may use browsers that do not support graphics. An example is lynx browser that is used in Unix text environments. If you want to consider these users, you can enter a text as an alternative to each image in your web page by just add an ALT parameter to <img> tag.

```
    <img src="banner.gif" alt="image here">
```

Path of Image File

In above examples, image file must be located in the same directory that html file is located. If our image file resides in other directory, we must add a relational path or a complete URL to this image. See examples below:

<img SRC="images/abanner.gif"> *Image is located in "images" directory below the directory that html file resides.* <img src="../abanner.gif"> *Image is located in parent directory of the directory of html file.*

HEADINGS
HTML has six "levels" of headings:

<h1> is used for main headings
<h2> is used for subheadings If there are further sections under the subheadings then the

***The six level headings are used in the example below*:**

```
<html>
  <head>
    <title>This is the title of the page!</title>
  </head>
  <body>
    <h1>This is a Main Heading</h1>
    <h2>This is a Level 2 Heading</h2>
    <h3>This is a Level 3 Heading</h3>
    <h4>This is a Level 4 Heading</h4>
    <h5>This is a Level 5 Heading</h5>
    <h6>This is a Level 6 Heading</h6>
  </body>
</html>
```

LINKS
Any object such as text, graphic images etc. that leads us to a new page on the web is called a link. Links can point to a page on our site or to a web page on another site.

Text Links
Creating a text link by using <a> tag. As before, we will need extra parameters from this tag. Look at example below:

```
<html>
  <head>
    <title>This is the title of the page!</title>
  </head>
  <body background="image1.gif">
    <a href="http://www.yahoo.com">Click here to visit yagoo</a>
  </body>
</html>
```

We have used “href” parameter to specify destination web page. Text between <a> and is link text.

Image Links

It is possible to use an image instead of text. To do this, you must replace link text between <a > and with an <img> tag that displays an image file.

```
<html>
   <head>
      <title>This is the title of the page!</title>
   </head>
   <body background="image1.gif">
      Click on below picture to visit my homepage <br><br>

      <a href="http://www.angelfire.com/nt/sarmadys">
         <img src="me.gif" alt="image link">
      </a>
   </body>
</html>
```

LISTS

There are times that you want to insert items related to a subject in list form in your web page. HTML provides you with tags to do this.   tags for bulleted list and <ol> tags for numbered list.

Eg 1: ***bulleted list***

```
<html>
   <head>
      <title>This is the title of the page!</title>
   </head>
   <body background="image1.gif">
      This is a list of subjects covered in this lesson:

      <ul>
         <li>Text links</li>
         <li>Image links</li>
      </ul>
   </body>
</html>
```

Eg 2: ***for numbered list***

```
<html>
   <head>
      <title>This is the title of the page!</title>
   </head>
   <body background="image1.gif">
      This is a list of subjects covered in this lesson:

      <ol>
         <li>Text links</li>
         <li>Image links</li>
      </ol>
   </body>
</html>
```

Horizontal Separator Rule

The <hr> tag is used to separate text in your web page by horizontal lines.

```
<html>
   <head>
      <title>This is the title of the page!</title>
   </head>
   <body background="image1.gif">
      First section

      <hr>

      Second section
   </body>
</html>
```

You can specify parameters for horizontal rule.

```
<html>
   <head>
      <title>This is the title of the page!</title>
   </head>
   <body background="image1.gif">
      First section
```

```
    <hr width="50%"> s width in percent
    <hr width="100"> width in pixels
    <hr size="5"> line diameter
    <hr size="1" noshade> for solid line instead of a shaded line
    <hr color="#000000"> color for the line

    Second section
  </body>
</html>
```

TABLES

Table is a matrix like object that holds other objects such as text, images, buttons and etc. Even if you don't see them they are present in all professional web pages. Hidden tables hold graphic images and text in their places in these pages.

Drawing a Table

To draw a table we will use <table> tag. We will need two other related tags to make table rows and columns. These are <tr> and <td> tags. <tr> tag is used to create a row in table. Data that will fit in a row will be enclosed in <tr> </tr> tags. We will need <td> tag to create columns in each row. Following example produces a table with two rows.

```
<html>
  <head>
    <title>This is the title of the page!</title>
  </head>
  <body background="image1.gif">
    <table>
      <tr>
        <td>First Row</td>
      </tr>
      <tr>
        <td>Second Row</td>
      </tr>
    </table>
  </body>
</html>
```

If you browse this code in a browser you may be surprised not to see any table but two lines of code. In fact, table is there but you cannot see it because default border size is 0. <table> Tag will not make table borders. You must use a parameter to add borders to the table. You can specify a border width for a table by adding a border parameter to <table> tag.

```
<html>
   <head>
      <title>This is the title of the page!</title>
   </head>
   <body background="image1.gif">
      <table border="1">
         <tr>
            <td>First Row</td>
         </tr>
         <tr>
            <td>Second Row</td>
         </tr>
      </table>
   </body>
</html>
```

Specifying Table Sizes

You can specify width for a table both in percent of page width and in pixels.

Examples:

```
<table width="50%" border="1">
         <tr>
            <td>Cell row1 col1</td>
            <td>Cell row1 col2</td>
         </tr>

         <tr>
            <td>Cell row2 col1</td>
            <td>Cell row2 col2</td>
         </tr>
</table>
```

Text Alignment in Table Cells

By default text entered in a cell will appear at the left side of the cell. You can add either of these options to <td> tag to specify horizontal alignment of text.

<td align="center">Cell row1 col1</td> or
<td align="right">Cell row1 col1</td> or
<td align="left">Cell row1 col1</td>

Images in Table Cells

You can insert an image in a table cell by inserting <img> tag between <td></td> tags of a certain cell.

```
<html>
   <head>
      <title>This is the title of the page!</title>
   </head>
   <body background="image1.gif">
      <table width="50%" border="1">
         <tr>
            <td><img src="image.gif" alt=""></td>
            <td>Cell row2 col2</td>
         </tr>
      </table>
   </body>
</html>
```

Cell Width (Column Width)

You can determine width of each column in your table by specifying width of cells in first row. Just be careful about correctness of sizes you specify. For example if your table width is 200 pixels sum of cell widths must be exactly 200.

```
<html>
   <head>
      <title>This is the title of the page!</title>
   </head>
   <body background="image1.gif">
      <table width="400" height="100" border="3">
         <tr>
            <td width="140">Top left</td>
            <td width="260">Top right</td>
         </tr>

         <tr>
```

```
            <td width="140">Bottom left</td>
            <td width="260">Bottom right</td>
          </tr>
        </table>
    </body>
</html>
```

You can also determine cell widths in percent. Sum of cell width percentages must be 100%. When you determine sizes of first row cells you will not need to determine widths for second row cells. If you want a cell to be empty, you cannot omit definition for that cell. Insert cell definition, and enter a " " between <td></td> tags . As we told in earlier lessons this means a space character. You must enter at least a space in this form if you need an empty cell. Otherwise area of that cell will not appear like an empty cell.

```
<html>
   <head>
      <title>This is the title of the page!</title>
   </head>
   <body background="image1.gif">
      <table width="400" height="100" border="3">
         <tr>
            <td width="140">Top left</td>
            <td width="260"> </td>
         </tr>

         <tr>
            <td width="140"> </td>
            <td width="260">Bottom right</td>
         </tr>
      </table>
   </body>
</html>
```

In above example we have two empty cells but as we have specified both table and cell sizes, table will not lose it's shape. If we remove sizes, we cannot guarantee how it will be displayed on different browsers and screen modes.

Cell Padding

You can specify two other important size parameters for a table. Cell padding is the space between cell borders and table contents such as text, image etc.

```
<html>
   <head>
      <title>This is the title of the page!</title>
   </head>
   <body>
      <table border="3" cellpadding="20">
         <tr>
            <td width="140">Top left</td>
            <td width="260"> </td>
         </tr>

         <tr>
            <td width="140"> </td>
            <td width="260">Bottom right</td>
         </tr>
      </table>
   </body>
</html>
```

Default value for this option is 1. It means that contents of a cell will have a distance of one pixel with borders. If you don't want any space between object inside the cells and its borders you can determine the value of 0 for this option.

Cell Spacing

Cell spacing parameter determines the space between inner and outer parts of a table. In fact a table is constructed form two borders. A border area and a cell area. There is a space between cell area and outer border. We call this "cell spacing". If you increase this value you will have a thick border. Default value for this property is 2. If you specify 0 for it, you will have a very thin border.

```
<html>
   <head>
      <title>This is the title of the page!</title>
   </head>
   <body background="image1.gif">
      <table border="3" cellspacing="20">
         <tr>
            <td width="140">Top left</td>
            <td width="260"> </td>
         </tr>
```

```
        <tr>
          <td width="140"> </td>
          <td width="260">Bottom right</td>
        </tr>
      </table>
   </body>
</html>
```

You can also mix cell spacing and cell padding options to make specific tables that you need.

Tables and images

Sometimes you need an image that when users clicks on different parts of it they go to different pages. In previous lessons you learned how to use an image as a link to another address or page. In this special case you will need to cut your picture into as many parts as you need and insert them in a table that holds image parts beside each other. Then you will link each image part to a different page. You will also need to set both cell spacing and cell padding to the value of 0 to prevent the table to be seen between image parts. In this way users will see a single image but when they click on different parts of image they will go to different addresses.

Table background color: We can use background colors for tables in new browsers. You can specify background color options inside <table> tag.

```
<table width="300" bgcolor="#66CCFF">
  <tr>
    <td width="50%">A</td>
    <td width="50%">B</td>
  </tr>

  <tr>
    <td width="50%">C</td>
    <td width="50%">D</td>
   </tr>
 </table>
```

You can also determine background color for each row of your table. If you want to do this, you must use bgcolor option inside <tr> tag of the desired row. This will only change colors of cells in specified row.

```
<tr bgcolor="#CCFFFF">
```

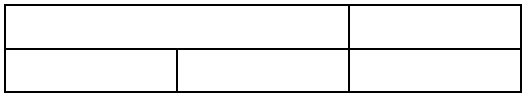
You can even change color of individual cells by using bgcolor option in <td> </td> cell tags.

```
<td width="50%" bgcolor="#66CCFF">C</td>
```

You can mix all above options to create your desired table.

Column Span

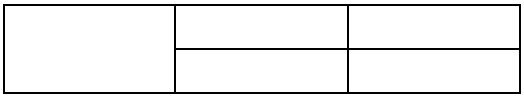
Sometimes you need to join two cells in a row to each other. For example in a 2*3 table we may want to join two cells with each other. In this way we will have two cells in first row and three cells in second row. Enter this html code in a file and browse it in your browser to see what is column span.



```
<html>
  <head>
    <title>This is the title of the page!</title>
  </head>
  <body>
    <table>
      <tr>
        <td colspan="2">Top Left</td>
        <td>Top Right</td>
      </tr>

      <tr>
        <td>A</td>
        <td>B</td>
        <td>C</td>
      </tr>
    </table>
  </body>
</html>
```

Just be careful that when you have for example 2 cells in first row and first one uses column span parameter COLSPAN=2 it means that it is equal to two cells. Therefore, you must have three cells in next row (three <tr> tags) or you may use COLSPAN to create cells that when you add them, it will be equal to previous row or 3 in this example.



Row Span

This time we want to join two cells in a column (from different rows). This is the same as previous section with the difference that we will join cells from different rows rather than cells in different columns. This time we must use ROWSPAN instead of COLSPAN.

```
<html>
  <head>
    <title>This is the title of the page!</title>
  </head>
  <body background="image1.gif">
    <table border="3">
      <tr>
        <td rowspan="2">Top Left</td>
        <td>Top Right</td>
      </tr>

      <tr>
        <td>A</td>
        <td>B</td>
        <td>C</td>
      </tr>
    </table>
  </body>
</html>
```

Again you must be careful that when you have for example a cell in first column that you have joined two cells to create it using the option ROWSPAN=2 then your table must have two rows and you must take this in mind in next parts of your table. In above example we only entered two cells in second row (started from second <tr>) as first cell of first row has occupied first cell of this row too and we have only two cells left of 3 cells. Enter this example and browse it to see the results.

You may want to mix these tags to create your custom tables however this is a complicated task and you must work hard to gain needed experience with these tables.

FORMS

Traditionally, the term 'form' has referred to a printed document that contains spaces for you to fill in information. HTML borrows the concept of a form to refer to different elements that allow you to collect information from visitors to your site.

Form Controls

There are several types of form controls that you can use to collect information from visitors to your site.

a. Adding text
    1. Text input (single-line)
    2. Password input
    3. Text area (multi-line)
b. Making choices
    1. Radio buttons
    2. Checkboxes
    3. Drop-down boxes
c. Submitting forms
    1. Submit buttons
    2. Image buttons
    3. File upload

Form Structure

Form controls live inside a <form> element. This element should always carry the action attribute and will usually have a method and id attribute too.

```
<html>
  <head>
    <title>This is the title of the page!</title>
  </head>
  <body>
    <form>
        ... This is where the controls would go
    </form>
  </body>
</html>
```

Text Input Control

The <input> element is used to create several different form controls. The value of the type attribute determines what kind of input they will be creating.

type="text"

When the type attribute has a value of “text”, it creates a singleline text input.

name

When users enter information into a form, the server needs to know which form control each piece of data was entered into. (For example, in a login form, the server needs to know what has been entered as the username and what has been given as the password.) Therefore, each form

control requires a name attribute. The value of this attribute identifies the form control and is sent along with the information they enter to the server.

```
<html>
  <head>
    <title>This is the title of the page!</title>
  </head>
  <body>
    <form>
      <p>
        First name:
        <input type="text" name="firstname">
      </p>
    </form>
  </body>
</html>
```

Text Area

The <textarea> > element is used to create a mutli-line text input. Unlike other input elements this is not an empty element. It should therefore have an opening and a closing tag. Any text that appears between the opening <textarea> and closing </textarea> tags will appear in the text box when the page loads. The cols attribute indicates how wide the text area should be (measured in numbers of characters). The rows attribute indicates how many rows the text area should take up vertically

```
<html>
  <head>
    <title>This is the title of the page!</title>
  </head>
  <body>
    <form>
      <p>What did you think of this gig?</p>
      <textarea name="comments" cols="20" rows="4">
        Enter your comments...
      </textarea>
    </form>
  </body>
</html>
```

Radio Button
We use the <input> element for the radio button, specifying type="radio". Radio buttons allow users to pick just one of a number of options.

The name attribute is sent to the server with the value of the option the user selects. When a question provides users with options for answers in the form of radio buttons, the value of the name attribute should be the same for all of the radio buttons used to answer that question. value The value attribute indicates the value that is sent to the server for the selected option. The value of each of the buttons in a group should be different (so that the server knows which option the user has selected).

The checked attribute can be used to indicate which value (if any) should be selected when the page loads. The value of this attribute is checked. Only one radio button in a group should use this attribute.

```
<html>
  <head>
    <title>This is the title of the page!</title>
  </head>
  <body>
    <form>
      <p>Please select your favorite genre:
        <br />
        <input type="radio" name="genre" value="rock" checked="checked"/> Rock
        <input type="radio" name="genre" value="pop" /> Pop
        <input type="radio" name="genre" value="jazz" /> Jazz
      </p>
    </form>
  </body>
</html>
```

Checkbox
We use the <input> element with the type attribute as “checkbox”. type="checkbox" Checkboxes allow users to select (and unselect) one or more options in answer to a question.

name
The name attribute is sent to the server with the value of the option(s) the user selects. When a question provides users with options for answers in the form of checkboxes, the value of the name attribute should be the same for all of the buttons that answer that question.

value
The value attribute indicates the value sent to the server if this checkbox is checked.

checked
The checked attribute indicates that this box should be checked when the page loads. If used, its value should be checked.

```
<html>
  <head>
    <title>This is the title of the page!</title>
  </head>
  <body>
    <form>
      <p>Please select your favorite music service(s):
        <br />
        <input type="checkbox" name="service"
        value="itunes" checked="checked" /> iTunes
        <input type="checkbox" name="service"
        value="lastfm" /> Last.fm
        <input type="checkbox" name="service"
        value="spotify" /> Spotify
      </p>
    </form>
  </body>
</html>
```

Submit Button
We use the <input> element with the type attribute as “submit”. type="submit" Submit buttons allow users to submit a form for processing.

value
The value attribute indicates the value of the button or the label on the button.

```
<html>
  <head>
    <title>This is the title of the page!</title>
  </head>
  <body>
    <form>
      <p>First Name: <input type=”text” name=”firstname” /></p>
```

```
            <p>Surname: <input type=”text” name=”surname” /></p>
            <p>Date of Birth: <input type=”date” name=”dob” /></p>

            <input type=”submit” value=”Submit form”/>
    </form>
  </body>
</html>
```

Labelling Form Controls

When introducing form controls, the code was kept simple by indicating the purpose of each one in text next to it. However, each form control should have its own <label> element as this makes the form accessible to vision-impaired users.

The <label> element can be used in two ways. It can:

1. Wrap around both the text description and the form input (as shown on the first line of the example to your rigth).
2. Be kept separate from the form control and use the for attribute to indicate which form control it is a label for (as shown with the radio buttons).

The For Attribute

The for attribute states which form control the label belongs to. Note how the radio buttons use the id attribute. The value of the id attribute uniquely identifies an element from all other elements on a page.

```
<html>
  <head>
    <title>This is the title of the page!</title>
  </head>
  <body>
    <form>
      <label for="age">Age: </label>
      <input type="text" name="age">

      Gender:
      <input type="radio" name="gender" id="female" value="f">
      <label for="female">Female</label>

      <input type="radio" name="gender" id="male" value="f">
      <label for="male">Male</label>

      <input type="submit" value="Sumit Form">
```

```
    </form>
  </body>
</html>
```

Grouping Form Elements

You can group related form controls together inside the <fieldset> element. This is particularly helpful for longer forms.

Most browsers will show the fieldset with a line around the edge to show how they are related. The appearance of these lines can be adjusted using a stylesheet.

The <legend> element can come directly after the opening <fieldset> tag and contains a caption which helps identify the purpose of that group of form controls.

```
<html>
  <head>
    <title>This is the title of the page!</title>
  </head>
  <body>
    <form>
      <fieldset>
        <legend>Contact details</legend>

        <label for="email">Email: </label> <br>
        <input type="email" name="email" > <br><br>

        <label for="mobile">Mobile: </label> <br>
        <input type="tel" name="mobile" > <br><br>

        <label for="password">Password: </label> <br>
        <input type="password" name="password" >
      </fieldset>
    </form>
  </body>
</html>
```