LAB – 1
Introduction to HTML

HTML stands for **H**yper**T**ext **M**arkup **L**anguage.

H yper

T ext

M arkup

L anguage

LET'S BREAK THIS DOWN A LITTLE FURTHER

HYPER

You may have heard the expression "hyper" in describing someone. In simplest terms, it means active, kind of "all over the place". The word "Hyper" as part of HTML is similar in context. It simply means that when you are on the internet using a browser such as Netscape Navigator or Internet Explorer, you can in fact, go "all over the place". In browsing through the World Wide Web (WWW), if you see something you like, you can go immediately to it. There is no set order to do things in. Hyper is the opposite of "linear". Linear means that there is a certain order you must follow such as "you must do this before you can do that". Programming languages such as BASIC and FORTRAN are linear. HTML does not hold to that and allows you to jump to any page on the WWW and at any time. Thus the word HYPER refers to the idea that the text in HTML is not linear.

TEXT

We are working with text only files.

MARKUP

"Markup" comes from the fact that in order to create web pages, we will be typing in the text and then "marking up" the text show importance, relevance and provide user friendliness.

LANGUAGE

"Language" means that we are using a language with all its syntax. Note that HTML is not a programming language such as BASIC or FORTRAN. These are linear programming languages and are based on a whole different set of rules and are far more complicated to learn. So HTML is the basic language for creating web pages on a website and, as you will see, is also an easy language to learn.

HTML TAGS

HTML works in a very straightforward manner. You type in your text and your tags. To get large print, centered text, bold text, text in italics, indented sentences, colored text, etc., is nothing more than inserting tags around your text. These tags are more accurately called **ELEMENTS** and you should think of these elements as describing the **meaning** of the text they contain, rather than how the enclosed text should be displayed. This concept is called **content-based** markup. To tell the browser that something is a tag, you simply place "less than" and "greater than" symbols around them. The LESS THAN symbol is "<" and the GREATER THAN symbol is ">". These symbols are also called "Angle Brackets". Thus we have an opening angle bracket "<" and a closing angle bracket ">" around each tag. I have also heard them called "pointed brackets".

CORRECT USE OF TAGS

We have "beginning" or "opening" tags (such as <HTML>) and we have "ending" or "closing" tags (such as </HTML>). Many elements consist of an opening tag and a closing tag. An element that has an opening and closing tag is referred to as a **container element** because anything contained between these tags are affected by the element.

Closing Tags cannot be placed just anywhere. Use the "Last In = First Out" principle or "LIFO". That is, the "Last" tag "In" must be the "First" tag "Out". Another way of stating this is that the last tag activated must be the first tag terminated. An example of a correct sequence of tags is:

<tag1><tag2> statements </tag2></tag1>

An example of an incorrect placement of tags is: <tag1><tag2> statements </tag1></tag2>

<HTML> and </HTML> tags

<HTML> is the beginning tag and </HTML> is the ending tag. The forward slash before the tag (</ >) cancels the effect of the tag. This is true for all tags that affect text. Thus <HTML> tells the browser that what follows is an HTML document and </HTML> tells the browser that the HTML document is completed. You can therefore think of the <HTML> and </HTML> tags as "containers", containing the entire HTML document. Therefore HTML is called a container element. You should use the HTML element for each of your web pages.

```
<HTML>
<HEAD>
        <TITLE>WEB PAGE DESIGN - BASIC TAGS</TITLE>
</HEAD>

        <BODY>
        <B>Hello, Students!!</B>
        </BODY>
</HTML>
```

Next comes the HEAD element which, like the HTML element, also has an opening and closing tag. Each web page must have the HEAD element. Statements (or tags) that give information to a person visiting your website, or information such as those needed for a Search Engine are placed between the <HEAD> and </HEAD> tags. Thus the HEAD part of a document provides information about the document. You do not see this information displayed in your browser. It can be seen by choosing **Source**, or **Page Source** or **Document Source** from the **View** menu of your browser (one of these choices should be in the browser's View menu).

One of the statements that **must** be included between the <HEAD> and </HEAD> tags is the **TITLE** of your web page. The title in our example (line 3) is "WEB PAGE DESIGN - BASIC TAGS". Notice that this title is placed by the browser at the very top of the screen - above the menu choices. The TITLE of your web page must occur between the <TITLE> and </TITLE> tags and you are only allowed one TITLE element per page. The information you provide in the title is also used to label the bookmark entry for your web page.

After the title comes the main body of your Web page. It contains all the text and tags. It is the part that will be displayed on the browser screen. Thus the BODY element contains the actual contents of the document. Of course the tags will not be displayed on the browser screen. The tags only tell the

browser how to display the information. The body of each of your Web pages is declared through the BODY element. <BODY> tells your browser that what follows is to be the body of the Web page and </BODY> tells the browser that the body part of the page has ended.

HEADER TAGS

Headings are controlled by HEADER tags. HEADER tags are logical tags and used extensively in HTML documents to display headings. HEADER tags not only make your headings larger (or smaller), they also bold the headings at the same time.

There are only six HEADER tags and they range from H1 to H6.

H1 produces the largest size heading and is called the "level 1 heading".

H6 produces the smallest size heading and is called the "level 6 heading".

```
<BODY>
<H1>THIS IS H1.</H1> THIS IS NORMAL SIZE.
<H2>THIS IS H2.</H2> THIS IS NORMAL SIZE.
<H3>THIS IS H3.</H3> THIS IS NORMAL SIZE.
<H4>THIS IS H4.</H4> THIS IS NORMAL SIZE.
<H5>THIS IS H5.</H5> THIS IS NORMAL SIZE.
<H6>THIS IS H6.</H6> THIS IS NORMAL SIZE.
</BODY>
```

<EM> = EMPHASIZE TEXT

<EM> is used to emphasize text. It is a logical tag and so describes the meaning of the text to be displayed rather than how the text is to be displayed. In most browsers, the meaning is italics. However, if the browser doesn't support italics or the viewer changes the meaning, the browser will pick the best alternative way to display the text on the screen.

<STRONG> = STRONGLY EMPHASIZE TEXT

<STRONG> is also a logical tag. It is used to strongly emphasize text. <STRONG> is distinct from <EM>. In most browsers, STRONG is identical to boldface. If a browser does not recognize boldface or if the viewer changes the meaning of STRONG, then the browser will pick the best alternative from the platform it is running on.

Using <B> for Boldface or <I> for Italics (Original Netscape Extension Tags)

<STRONG> is accepted by all browsers as a way of strongly emphasizing text which in most cases is boldface. Instead of the <STRONG> and </STRONG> tags for strongly emphasizing text, you will sometimes see <B> and </B> for bolding text. While <STRONG> is a "Logical Style Command", <B> is not. <B> is a "Physical Style Command". A physical style command cannot be rendered differently. Therefore if a browser does not accept the <B> tag, then your text will simply not be bolded as the browser has no alternative way to display them on the screen.

The same reasoning is also be applied for using the tag <I> to print in italics instead of the <EM> tag. Now if for some reason you want to ensure only italics or boldface and nothing else, then use the italic font <I> or the boldface font <B>.

** **

In ** **, the **nbsp** stands for **n**on-**b**reaking **sp**ace character. ** ** is simply known as the **space character**.

Table Tag

The <table> tag defines an HTML table. An HTML table consists of the <table> element and one or more <tr>, <th>, and <td> elements. The <tr> element defines a table row, the <th> element defines a table header, and the <td> element defines a table cell.

```
<table border="1">
  <tr>
    <th>Flower</th>
    <th>Color</th>
  </tr>
  <tr>
    <td>Rose</td>
    <td>Red</td>
  </tr>
</table>
```

Input Tags

1. **Input Text object**

The Text object represents a single-line text input field in an HTML form.
<input type="text">

2. **Input Password object**

The Password object represents a single-line password field in an HTML form.
The content of a password field will be masked (appear as blobs or asterisks) in a browser.
<input type="password">

3. **Input Checkbox object**

The Checkbox object represents a checkbox in an HTML form.
Checkboxes let a user select one or more options of a limited number of choices.
<input type="checkbox">

4. **Input Radio object**

The Radio object represents a radio button in an HTML form.
Radio buttons allow the user to select only ONE of a predefined set of options.
Radio buttons with the same name belong to the same group
<input type="radio">

5. **Input Hidden object**

The Hidden object represents a hidden input field in an HTML form (this input field is invisible for the user).
<input type="hidden">

6. **Input FileUpload object**

The FileUpload object represents a single-line text input control and browse buttons, in an HTML

form. This object allows file uploading to a server.
<input type="file">

7. Input Button object
The Button object represents a clickable button in an HTML form.
<input type="button">

8. Input Reset object
The Reset object represents a reset button in an HTML form.
Clicking on a reset button resets all controls within the form to their default values.
<input type="reset">

9. Input Submit object
The Submit object represents a submit button in an HTML form.
Clicking on a submit button sends the named contents of the form to the server.
<input type="submit">

Hyperlink

The <a> tag defines a hyperlink, which is used to link from one page to another. By default, links will appear as follows in all browsers:

- An unvisited link is underlined and blue
- A visited link is underlined and purple
- An active link is underlined and red

DDU

Image

The <img> tag defines an image in an HTML page. The <img> tag has two required attributes: src and alt.

```
<img src="ddu.png" alt="DDU" height="42" width="42"/>
```

Other important tags to try for…
- Ordered list
- Unordered list
- Div tag