LAB # 3: INTRODUCTION TO HTML

Objective:
- HTML Basics

- HTML Forms

Scope:
The student should know the following:

      Basic HTML

      Able to create static web pages

HTML (Hyper text markup language)

HTML is a language for describing web pages.
- HTML stands for **H**yper **T**ext **M**arkup **L**anguage
- HTML is not a programming language. It is a **markup language.**
- A **markup language** is a modern system for annotating a text in a way that is syntactically distinguishable from the text.
- HTML uses **markup tags** to describe web pages

The basic structure of an HTML document is as follows:

1. The entire document must be enclosed between a beginning <HTML> and ending </HTML> tag. Within the overall HTML tags are two sections, a HEAD and a BODY.
2. The head, is enclosed in the <HEAD> and </HEAD> tags. Information in this section is not displayed in the browser window. Inside of the HEAD tag is the <TITLE></TITLE> tag. The contents of this tag will appear in the Title bar of your browser (the Title bar is on the extreme upper edge of most browsers, not in the browser window).

3. The body, is enclosed in the <BODY></BODY> tags. Everything that appears in the browser window must be in the Body tag. All of the tags we will learn here will be contained between the beginning and ending Body tags (see first example below).

Some tags have a beginning and ending tag while others don't require ending tags. Each line break or paragraph requires a tag since HTML doesn't see indentations, or white space.

Document Structure

<HTML></HTML>
<HEAD> </HEAD>
<TITLE></TITLE>
<BODY></BODY>

The Code in This Column...	Will Display Like This
<HTML> <HEAD> <TITLE>Simple Page</TITLE> </HEAD> <BODY> Hello World! </BODY> </HTML>	Hello World!

Bold and Italic Text Formatting Tags

<B>Bold</B> and <I>Italic</I>

The Code in This Column...	Will Display Like This
<HTML> <HEAD> <TITLE>Simple Page</TITLE> </HEAD> <BODY> <B>Hello</B><I>World!</I> </BODY> </HTML>	**Hello** *World!*

The Heading Tag

<Hn>Heading</Hn>

The Code in This Column...	Will Display Like This
``` <HTML> <HEAD> <TITLE>Simple Page</TITLE> </HEAD> <BODY> <H1>Hello World!</H1> <H2>Hello World!</H2> <H3>Hello World!</H3> <H4>Hello World!</H4> <H5>Hello World!</H5> </BODY> </HTML> ```	Hello World! Hello World! Hello World! Hello World! Hello World!

Paragraphs and Breaks

<P> and

The Code in This Column...	Will Display Like This
``` <HTML> <HEAD> <TITLE>Simple Page</TITLE> </HEAD> <BODY> Hello World! How Are You?<P> I'm a little confused, myself. ```	Hello World! How Are You? I'm a little confused, myself.

</BODY> </HTML>	

Horizontal Rules

<HR>

The Code in This Column...	Will Display Like This
<HTML> <HEAD> <TITLE>Simple Page</TITLE> </HEAD> <BODY> Hello World! How Are You? <HR> I'm a little confused, myself. </BODY> </HTML>	Hello World! How Are You? --- I'm a little confused, myself.

The Code in This Column...	Will Display Like This
`<HTML>` `<HEAD>` `<TITLE>`Simple Page`</TITLE>` `</HEAD>` `<BODY>` `<H2>`A Greeting`</H2>` `<HR>` Hello World!` ` I am trying to learn how to write my own HTML pages and it's a `<I>`lot`</I>` easier than I thought.`<P>` But I'm a little confused. `</BODY>` `</HTML>`	**A Greeting** --- Hello World! I am trying to learn how to write my own HTML pages and it's a *lot* easier than I thought. But I'm still a little confused.

HTML Tables

`<TABLE></TABLE>` and `<TR></TR>` and `<TD></TD>`

The Code in This Column...	Will Display Like This

`<TABLE>`
`<TR><TD>`fruits`</TD><TD>`vegetables`</TD></TR>`
`<TR><TD>`apple`</TD><TD>`carrot`</TD></TR>`
`<TR><TD>`orange`</TD><TD>`potato`</TD></TR>`
`</TABLE>`
	fruits vegetables
	apple carrot
	orange potato

Tables with Borders

<TABLE BORDER=n></TABLE>

The Code in This Column...	Will Display Like This
<TABLE BORDER=2> <TR><TD>fruits</TD><TD>vegetables</TD></TR> <TR><TD>apple</TD><TD>carrot</TD></TR> <TR><TD>orange</TD><TD>potato</TD></TR> </TABLE>		fruits	vegetables
apple	carrot
orange	potato	

Tables with Headers

<TH></TH>

The Code in This Column...	Will Display Like This
<TABLE BORDER=2> <TR><TH>fruits</TH><TH>vegetables</TH></TR> <TR><TD>apple</TD><TD>carrot</TD></TR> <TR><TD>orange</TD><TD>potato</TD></TR> </TABLE>		**fruits**	**vegetables**
apple	carrot
orange	potato	
<TABLE BORDER=2> <TR><TH>fruits</TH><TD>vegetables</TD></TR> <TR><TH>apple</TH><TD>carrot</TD></TR> <TR><TH>orange</TH><TD>potato</TD></TR> </TABLE>		**fruits**	vegetables
apple	carrot
orange	potato	

Data Alignment

<TR ALIGN=middle, left or right></TR>

The Code in This Column...	Will Display Like This
``` <TABLE BORDER=2> <TR ALIGN=middle> <TH>fruits</TH><TH>vegetables</TH> </TR> <TR ALIGN=middle> <TD>apple</TD><TD>carrot</TD> </TR> <TR ALIGN=middle> <TD>orange</TD><TD>potato</TD> </TR> </TABLE> ```	<table><tr><th>fruits</th><th>vegetables</th></tr><tr><td>apple</td><td>carrot</td></tr><tr><td>orange</td><td>potato</td></tr></table>

Linking to other Documents

The power of HTML is it's ability to link to other resources within the same document, to a different document on your Web site, or to a document across the world. This is accomplished through the use of **Hypertext**. Below we demonstrate some of the most common ways hypertext links are utilized.

A Basic Link

The Code in This Column...	Will Display Like This
<A HREF="training.html">This is a link!</A>	This is a link!
This is a <A HREF="training.html">link!</A>	This is a link!
This is a link to <A HREF="http://www.fortlewis.edu">Fort Lewis!</A>	This is a link toFort Lewis!

Internal Links

Links from one part of a document to another part of the same document.

The Code in This Column...	Will Display Like This
<A HREF="#dogs">Below</A>you will find information about dogs.Clicking on the link will take you to a sentence about dogs at the bottom of this frame. -- -- -- -- -- -- -- -- <A NAME="dogs"><B>Dogs</B> </A>are man's/woman's best friend.	<u>Below</u> you will find information about dogs. Clicking on the link will take you to a sentence about dogs at the bottom of this frame. -- -- -- -- -- -- -- -- **Dogs** are man's/woman's best friend.

Linking to a Target in Another Document

Links from one part of a document to another part of another document.

The Code in This Column...	Will Display Like This
Follow this <A HREF="basic.html#rules">link</A>to find out about Horizontal Rules	Follow this <u>link</u> to find out about Horizontal Rules.

Image Tag
<img> is used to insert an image in the document. The `src` attribute specifies the image URL.
The required alt attribute provides alternative text in case the image cannot be displayed.
<img src=<"../images/tulips.jpg" alt="tulips">

HTML Forms

HTML forms are used to pass data to a server.
A form can contain input elements like text fields, checkboxes, radio-buttons, submit buttons and more. A form can also contain select lists and textarea elements.
The <form> tag is used to create an HTML form:

```
<form  action="url">
.
input elements
.
</form>
```

The Input Element

The most important form element is the input element.
The input element is used to select user information.
An input element can vary in many ways, depending on the type attribute. An input element can be of type text field, checkbox, password, radio button, submit button, and more.
The most used input types are described below.

Text Fields

<input type="text" /> defines a one-line input field that a user can enter text into:

```
<form>
First name: <input type="text" name="firstname" /><br />
Last name: <input type="text" name="lastname" />
</form>
```

How the HTML code above looks in a browser:

First name:

Last name:

Note: The form itself is not visible. Also note that the default width of a text field is 20 characters.

Password Field

<input type="password" /> defines a password field:

```
<form>
Password: <input type="password" name="pwd" />
</form>
```

How the HTML code above looks in a browser:

Password:

Note: The characters in a password field are masked (shown as asterisks or circles).

Radio Buttons

<input type="radio" /> defines a radio button. Radio buttons let a user select ONLY one of a limited number of choices:

```
<form>
<input type="radio" name="gender" value="male" /> Male<br />
<input type="radio" name="gender" value="female" /> Female
</form>
```

How the HTML code above looks in a browser:

○ Male

○ Female

Checkboxes

<input type="checkbox" /> defines a checkbox. Checkboxes let a user select ONE or MORE options of a limited number of choices.

```
<form>
<input type="checkbox" name="vehicle" value="Bike" /> I have a bike<br />
<input type="checkbox" name="vehicle" value="Car" /> I have a car
</form>
```

How the HTML code above looks in a browser:

☐ I have a bike

☐ I have a car

Submit Button

<input type="submit" /> defines a submit button.
A submit button is used to send form data to a server. The data is sent to the page specified in the form's action attribute. The file defined in the action attribute usually does something with the received input:

```
<form name="input" action="form_action.php" method="get">
Username: <input type="text" name="user" />
<input type="submit" value="Submit" />
</form>
```

How the HTML code above looks in a browser:

Username: [ ]

If you type some characters in the text field above, and click the "Submit" button, the browser will send your input to a page called "form_action.php". The page will show you the received input.

The Select Element

The <select> tag is used to create a select list (drop-down list).
The <option> tags inside the select element define the available options in the list.

```
<select>
 <option value="toyota">Toyota</option>
 <option value="mercedes">Mercedes</option>
 </select>
```

The textarea Element

The <textarea> tag defines a multi-line text input control.
The size of a textarea can be specified by the cols and rows attributes, or even better; through CSS' height and width properties.

```
<textarea rows="2" cols="20">
 This is my first HTML program.
 </textarea>
```

LAB TASKS

Before starting this set of exercises you must understand the process of editing HTML. The most basic method is to use a simple word processor like Note Pad, Word Pad, Notepad ++:

1. Type your HTML code into the editor.
2. Save the file (you can do this at any point if you want to view your work). Remember where you save it to.

3. View your work by going to your WWW browser and choosing **Open File** from the **File** Menu and navigate to your saved html file to view it. When you go back to the editor to make more additions or changes, and then you come back to the browser, you don't need to re-open the page each time. Use the **Refresh** or **Reload** Button to get the most recent version of your file.

4. Tip: If you leave both the editor and browser open you can toggle back and forth between them using the **alt-tab** command or the program buttons on the task bar.

TASK 1: Links

1. Create a new file called *yournamefile2.html* (it can be very basic).
2. Create a link from *yournamefile2.html* to Yahoo (*http://www.yahoo.com*).

3. Create a link from *yournamefile2.html* to *yournamefile1.html*.

TASK 2: Tables

1. Add a simple table to *yournamefile1.html* without borders. Make the table with 2 rows and columns, and insert some information save and view.
2. Add border value of 1, save and view.

3. Add a border value of 5, save and view.

4. Make the top row a table header, save and view.

5. Align all data elements to the middle of their cells, save and view.

TASK 3:
CREATE A WEB PAGE **named 'user_info.html' which outputs as follows.**

Hello visitor!!	
Please provide us the requested information	
Name	
Gender	⦿ Male ⦾ Female
Education	Masters ▾
	Masters Bachlors Intermediate
	Submit