Computer Science Intro

PACE Intro to Engineering

WWW Basics

Kyla Enters http://www.facebook.com/MrRedd.html

Where is facebook.com?   Facebook.com is translated to an IP Address like:
                                          192.168.1.104

Network Finds computer (www.facebook.com)

Routed Over IP (Internet Protocol) Network

Because we see "http" we need a web server

Facebook do you have a web Server ?   Give me your MrRedd.html file

Kyla is Happy

What is an HTML File

- HTML (Hyper Text Markup Language)
  - Hyper Text (Meaning it can is used with Hyper Text Trasmission Protocol (HTTP: The rules (protocol) of the world wide web)
  - Markup meaning it contains instructions for formatting (Bold, Italic, Font, Tables) text and images
- It's a flat text file. You can open and view it using notepad.
- It at the very least contains the <HTML> Tag

What is a Tag?

- An HTML Instruction
- A Tag is always contained with brackets: < >
- A Tag is usually Opened <> and closed </>
- Example: <html> </html>
  - Open: <html>
  - Close: </html>
- Tags sometime contain attributes

What is an attribute

- Refined Instructions to accompany a Tag

- A tag can have none or many attributes

- Example: **`<h1 align="center">`**
  - H1 is the Tag
  - Align is the attribute
  - "center" is the value that attribute is being set to

HTML File Basics

- Need to Open and Close with <HTML> Tags
- Need <Header> Tag which contains descriptive information, such as subject
- <Title> is contained within the Header
- <Body> is where the content of the web page is stored
- HTML (within your tags) is not case sensitive so <HTML> is the same as <Html> is the same as <html>

Simplest HTML File

```
<HTML>
</HTML>
```

Basic HTML File

```
<HTML>
  <HEADER>
    <TITLE> Any Title </TITLE>
  </HEADER>
  <BODY>
    Hello World !
  </BODY>
</HTML>
```

Also Basic HTML File

```
<HTML><HEADER><TITLE> Any Title
  </TITLE></HEADER><BODY>Hello World
  !</BODY></HTML>
```

Spaces and New lines don't matter to HTML unless it's the text within a tag

More HTML Tags

- Header Tags
  - <H1>
  - <H2>
  - <H3>
  - Etc
- Paragraph breaks <P>
- Line Break
- Bold <B>
- Italic <I>
- Underline <I>

Using HTML Tags Together

What if I want to make text bold and Italicized:

    \<I>\<B>Something\</B>\</I>

    Or

    \<B>\<I>Something\</I>\</B>

    Not

    \<B>\<I>Something\</B>\<I>

Must maintain order of inner and outer tags

Color in HTML

- Colors are encoded in Hexidecimal (0-F) instead of Decimal (0-9)
- Colors are prefixed with a # sign
- This is encoded as how much Red, Green, and Blue you want your color to contain.
- Format

  #RRGGBB
- 00 is for none
- FF is for all
- Example:

  #FFFFFF – Means all of the Red, Green and Blue you can add. This is actually the color white

  #000000 – Means no Red, Green, or Blue. This is Black
- Experiment !

Images in Your HTML

- Use the IMG Tag

- Use the src attribute within the tag

- Example:

  `<IMG src=c:\images\mrRedd.gif>`

Adding Hyperlinks to your HTML

- URL stands for Uniform Resource Locator. This locates any image or html file on the web. This is also used in your browser when

- The <a> tag

- HREF attribute is set to URL

- Example

  Click here to find something

Tables

- Tags needed for Tables
  - <Table> : Table tag
  - <TR> : Table Row
  - <TH> : Table Header (Column Header)
  - <TD> : Table data (Cell)

Table Example

```
<TABLE>
    <TR>
        <TH>Student</TH>
        <TH>Grade</TH>
    </TR>
    <TR>
        <TD>James</TD>
        <TD>D</TD>
     </TR>
    <TR>
        <TD>Latoya</TD>
        <TD>F</TD>
     </TR>
    <TR>
        <TD>Mike</TD>
        <TD>F</TD>
     </TR>
</TABLE>
```

Forms

<FORM action=""> - Start a table

<INPUT> - Various input widgets, such as radio buttons

<TEXTAREA> - Used to enter a lot of text

<SELECT> - Used for Drop downs

<OPTON> - Drop down options

Forms

```
<form action="">
Pick a Day:
<select name="day">
     <option value="monday">monday</option>
     <option value="funday">funday</option>
     <option value="tuesday">tuesday</option>
     <option value="wednesday">wednesday</option>
     <option value="thursday">thursday</option>
     <option value="friday">friday</option>
     <option value="saturday">saturday</option>
     <option value="sunday">sunday</option>
</select>
<br />
Pick an Account Status:
<input type="radio" name="status" value="valid" /> Working
<input type="radio" name="status" value="not valid" /> vacation <br />

<input type="submit" value="Submit" />
```

Scripts

- Used to add dynamic components to your page

- Only uses the <SCRIPT> tag:

- Sample:

```
<SCRIPT TYPE="text/javascript">
<!--
document.write("right now: " + new Date());
//-->
</SCRIPT>
```

Reference Sites

http://www.htmlcodetutorial.com

http://www.w3schools.com/html/html_intro.asp

Web Page Project

- Everyone has to complete one

- Must use notepad (If you don't we can tell)

- Page must contain Tables

- Page must contain a Form

- Page must be dynamic somehow

- You must be able to repair your page