Introduction to the Hyper Text Markup Language (HTML)

SE 101

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WHAT IS HTML?

- HTML (Hyper Text Markup Language) is a language for specifying how text and graphics appear on a web page

- When you visit a web site (e.g., www.google.com) your web browser retrieves the HTML web page and renders it

- The HTML page is actually stored on the computer that is hosting the web site and the page is sent to your browser

- To see what HTML looks like go to your web browser *View* menu and select *View Source*

HTML

- HTML is a textual language that includes special markup tags such as:

  - \<title\> Bob's Diner \</title\>

- The \<title\> ... \</title\> tag specifies a title for the web page

- HTML code is stored in a simple text file that has either a **.htm** or a **.html** filename extension (e.g., **restaurant.html**)

HOW TO AUTHOR HTML

- Use a simple text editor such as **vi** to create simple web documents

- Use a web editor tool such as Amaya to create more professional looking web documents

  - http://www.w3.org/Amaya/

- Amaya is simple to use. Use the editor tools to author a document as you would using a text editor such as Microsoft Word

- When you save the document it creates an .html file

HTML TITLE

- A title is usually displayed on the top bar of a web browser's window when you visit a web site

- The title will now be displayed in the main web browser window, just on the top bar

- <title> Your title text goes here </title>

- <title> is the start tag and </title> is the end tag

HTML HEADINGS

- HTML allows you to create sections in a document using headings, there are six levels of headings

- the first level creates the most significant heading, e.g.,

  - <H1> This is a major section </H1>

- ...

- and the sixth level creates the least significant heading, e.g.,

  - <H6> This is a minor section </H6>

- After each heading you insert the text and images that pertain to that section, like you would do in MS Word

HTML Paragraphs

- The <p> tag is used to start a paragraph

- The </p> tag is used to end a paragraph

- <p> The text in between the two tags is your paragraph ... </p>

- The </p> tag is optional, HTML assumes that you are in the same paragraph until it encounters the next <p> tag

- You can force a line break using the <br> tag

FORMATTING TEXT

- <i> *italics* </i>

- *also italics*

- **bold**

- <i> ***italics and bold*** </i>

- 2 ⁴ = 16

- H ₂ O

- This text is <del> ~~scratched~~ </del> out

- <code> use this tag for computer code </code>

PRE FORMATTING TEXT

- Text will always be formatted automatically unless you use the pre format <pre> ... </pre> tags to force a different format

- Very useful when you want to display examples of code (I suggest using <pre><code> ... </code></pre> for that purpose)

```
<pre> This text will appear
on the website
              exactly how
                   I pre formatted it
</pre>
```

INSERTING IMAGES

- <img src="dog.jpg" width="120" height="100" align="left">

- The image source is in file **dog.jpg** and the width and height attributes specify the dimensions of the image on the web page in pixels

- You can also add a brief description of the image in case the user cannot see the image e.g.,

- <img src="dog.jpg" width="120" height="100" alt="My pet dog">

HTML Lists

Unordered Lists

```
<ul>
   <li> Gold
   <li> Silver
   <li> Bronze
</ul>
```

Ordered Lists

```
<ol>
   <li> Gold
   <li> Silver
   <li> Bronze
</ol>
```

Definition Lists

```
<dl>
  <dt> Gold
  <dd> For the best
  <dt> Silver
  <dd> ... second best
</dl>
```

- Gold
- Silver
- Bronze

1. Gold
2. Silver
3. Bronze

Gold
   For the best
Silver
   ... the second best

LISTS CAN BE NESTED TOO

```
<ul>
  <li> A Students
      <ol>
          <li> John
          <li> Mary
          <li> Peter
      </ol>
  <li> B Students
      <ol>
          <li> Paul
          <li> Cathy
          <li> Jill
      </ol>
</ul>
```

- **A** Students
    1. John
    2. Mary
    3. Peter
- **B** Students
    1. Paul
    2. Cathy
    3. Jill

HTML TABLES

```
<table
cellpadding="2"
cellspacing="4"
border="1"
bordercolor="black"
bgcolor=rgb(0,255,0)>
   <tr>
     <th> Column 1 </th>
     <th> Column 2 </th>
   </tr>
   <tr>
     <td> (1,1) </td>
     <td> (1,2) </td>
   </tr>
   <tr>
     <td> (2,1) </td>
     <td> (2,2) </td>
   </tr>
</table>
```

- cellpadding determines the space between the cell borders and the text

- cellspacing determines the width of the border

- bgcolor defines the table's background color

- The table rows are defined one after the other; some rows can be headers and others data

LINKING TO OTHER PAGES

- Spiros' Page

  - This links to a page on the World Wide Web (WWW)

- Spiros' Courses

  - This links to a page called *courses.html* in the same directory as the html file

- Spiros' Music

  - This links to a page called *music.html* in the directory above the directory of the html file

- Spiros' Music

  - This links to a page called *soccer.html* in the hobbies sub-directory

LINKING TO ANOTHER PART OF THE SAME PAGE

- First define a link target header (anchor):

  - <h2> Soccer Scores </h2>

- Or you can avoid the use of <a>

  - <h2><id="soccer-scores"> Soccer Scores </h2>

- Then reference the link target:

  - Go to Soccer Scores

- Or you can reference the link target from a remote web site:

  - Go to Soccer Scores

Linking to an Email Address

- Send Spiros a message

- Caution: Web crawlers will find this e-mail address and I might start to get more spam messages!

- Better idea to use an image with the email address

LINKING AN IMAGE TO A WEB PAGE

- By clicking on the image (e.g., Drexel logo of Mario the Dragon) you can link to the Drexel University homepage

```
<a href="http://www.drexel.edu">
  <img src="mario.gif" alt="Drexel home page"
align="right"></a>
```

HTML SOUND FILES

- You can link sound files to your web pages:

- listen to my song from an m3u

- listen to my song as from an mp3

CASCADING STYLE SHEETS

- You can use cascading style sheets (CSS) to customize your html file

  - e.g., specify colors, fonts, bold, italics for the entire document

- Style rules are defined using the tags <style> ... </style>

EXAMPLE CSS

```
<style>
  body
  {

    background-image:url('imagesTurtles-Background.jpeg');
    background-position : 50% 50% ;
    background-size : 100% ;
    background-origin : content ;
    background-repeat: no-repeat ;
    font-family: "Times New Roman"
     color: blue

  }
</style>
```

PUTTING IT ALL TOGETHER

```
<!-- This is an optional comment -->

<html>

    <head>
        <title> Your title goes here </title>
        <style> Your style sheet goes here </style>
    </head>

    <body>
        Your content goes here ... Paragraphs, images,
        lists, links, texts, headings, etc.
    </body>

</html>
```

CREATE YOUR PERSONAL WEBPAGE

- Now that you know the HTML basics you can create a personal web page on **tux.cs.drexel.edu**

- Create the directory **public_html** under your home directory:

    - /home/userid/public_html

- Deposit the web page **index.html** with your personal homepage into the public_html directory

- To access your page go to: http://www.cs.drexel.edu/~userid

ADVANCING YOUR HTML SKILLS

- There are many on line resources to help you advance your knowledge of HTML

- http://www.freebookcentre.net/Web/Free-Html-Books-Download.html