The Hypertext Markup Language (HTML)

ICS4U - Mr. Emmell

History of HTML

- Hypertext systems were envisioned as early as 1940 by Vannevar Bush and have a rich history
- Tim Berners-Lee and Robert Caillau at CERN, in 1989-1990 developed HTML as a simplification of SGML
- CERN launched the web in 1991 (HTML+HTTP)
- HTML is now at version 5.2

Versions of HTML

- There are several different version of HTML

  – HTML 1.0, 2.0, 3.2, 4.0, 4.01, 5.0, 5.1, 5.2, etc

  – XHTML 1.0 and 1.1

- HTML & XHTML come in different flavours
- For these reasons, every HTML file must begin with a DOCTYPE definition

Structure of an HTML Document

Every document starts with a DOCTYPE, followed by an HTML section that contains a head and body:

```
<!DOCTYPE HTML>
<html>
    <head>
        <title>The Hello World Page</title>
        </head>
        <body>
                <p>Hello World!</p>
        </body>
    </html>
```

Tags

HTML tags are like keywords which defines that how web browser will format and display the content.

HTML tags contain three main parts:

- opening tag   ex: <title>
- content   ex: title content
- closing tag   ex: </title>   // Notice the closing slash

Some HTML tags are unclosed tags.

      ex: <br> for manual line breaks

Tags can have attributes defining their behaviour.

ex: click here

The Document HEAD

The HEAD section of the document contains information about the document as opposed to the contents of the document

- Minimally, it should include a TITLE
  - <title>My Page Title</title>
- The title typically appears in a Browser's title bar
- The head may also include metadata such as character encoding and information about how to format the document

The Document BODY

● The BODY contains the document itself, i.e., what the user sees

● Any text within the body must be contained within some other tag

Paragraphs

The P tag is used to enclose a paragraph of text

• Paragraphs appear formatted as you would expected

<p> In the case of a private wedding announcement cards should be mailed the following day to all relatives and acquaintances of both the contracting parties.

</p>

<p> Evening weddings are no longer the custom, and the fashionable hour is now high noon,

…

</p>

Headings

Headings are marked with H1, H2, …, H5 tags

• Hn denotes an nth level heading

        `<h1>Etiquette and Courtship</h1>`

        `<p>It is a growing custom … </p>`

        `<h2>Gifts and Attention</h2>`

        `<p>Just what attention a person is … </p>`

        `<h2>The Claims of Companionship</h2>`

        `<p>At this period it is a wise person … </p>`

        `<h1>Morning Customs</h1>`

        `<p>The morning of the wedding, the … </p>`

Some Other Tags

Lists:

- Unordered (bulleted) lists `<ul> </ul>`
- Ordered (numbered) lists `<ol> </ol>`
- All lists start and close, then each item in the list is wrapped in `<li> </li>` tags

Marking special text:

- Code snippets `<code> </code>`
- Preformatted text `<pre> </pre>`
- and many more

Simple HTML Tables

HTML tables are created TABLE tag

• Each table contains one or more rows (TR) containing table data (TD) or table headers (TH)

```
<table>
<tr>
    <th>First Name</th>
    <th>Last Name</th>
    <th>Favourite Author</th>
</tr>
<tr>
    <td>Mr.</td>
    <td>Emmell</td>
    <td>Douglas Adams</td>
</tr>
...
</table>
```

First Name	Last Name	Favourite Author
Mr.	Emmell	Douglas Adams

All styling (borders, padding, etc) added for demonstration

The A Tag

● So far we know enough to create a simple text documents
● What about the hyper in hypertext?
● For this we use the A tag

<p>Some of the better search sites on the Internet include

 Google,

A9, and

 Alta Vista.

For more information on internet searching, ... </p>

The A Tag (Continued)

- The attribute HREF of the A tag specifies the destination the link will take us to
- This destination can be absolute:

    – href="http://www.google.com/"

    – href="http://www.emmell.org/"

- Or relative:

    – href="notes/index.html">

    – href="/ics4u">

- Relative locations specify the location relative to the current document and are extremely useful when building large websites

The A Tag (Continued)

- The HREF attribute can even specify a target within a document

– <a href="http://abc.com/index.html#tuesday">

– <a href="#sectionA">

  - These link to the sections labels "tuesday" and "sectionA" within their respective documents

- To create these targets we again use the A tag in a different way

– Tuesday's Schedule

  - Creates a target named tuesday within the current document

Targets and Tags Example

...

<body>

<h1>Chapter 1</h1>

<p>Those already familiar with widgets can skip to Chapter 2.

...

<h1>Chapter 2</h1>

<p>If you are reading this and you still don't understand widgets then you should go back and read Chapter 1.

...

</body>

Images

- Images can be added to the document with the IMG tag
- The SRC attribute specifies the location of the image data
- The ALT attribute specifies some text to display if the image cannot be displayed

<img src="kafka.jpg" alt="Franz Kafka's Portrait">

Line Breaks

- For a quick and dirty line break you can use the <BR> tag
- Normally you should avoid this
- Why are you breaking the line?
  - For a list of items (or menu): use
  - To shorten a line: let the browser wrap it
  - For preformatted text: use the <pre> tag

- Do as I say, not as I do
- Some examples may contain <br> tag to make them shorter
- You should avoid them

HTML Formatting

- All of the HTML tags discussed have other attributes, examples:
  - <td align="right" valign="top" bgcolor="red">
  - <body background="image1.gif" link="blue" text="red">
- There are lots of other HTML tags
  - Some of these, like FONT, control formatting
- Tags and attributes that control formatting are usually not a good idea
- We will see a better alternative soon

Tutorial!

As linked on our class website...

https://www.learn-html.org/