HTML and CSS basics

Lecture 2
CGS 3066 Fall 2016

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Basics - Frimly Grasp It!!

Formatting

- You cannot change the output by adding extra spaces or lines in HTML code. The browser will ignore whitespace.
- New horizontal line: <hr >
- New Line tag:
- Whitespace:
- There are a variety of ways to introduce tab spacing, most of them using CSS.

Special formatting tags

Certain text usually has a conventional formatting, HTML has a few special formatting tags, usueful especially for computer code.

- <pre>- for preformatted text. Forces the browser to render white space as-is.
- <kbd>- for specifying keyboard input.
- <samp>- for specifying console output.
- <code>- for specifying computer code. Monotype font. Ignores whitespace.

Text Formatting

- Use tags for formatting output.
- A list of formatting tags:
  - <b>: defines bold text
  - <i>: defines italic text
  - <sub>: defines subscripted text
  - <sup>: defines superscripted text
  - <mark>: defines marked/highlighted text

Hyperlink

- The <a>tag defines hyperlink.
- A hyperlink is a word, group of words, or image that you can click on to jump to another web page.
- The href is the most important attribute, which indicates the links destination.
  Go To Google
- The target attribute specifies where to open the linked document.
  - _blank: in a new window or tab
  - _self: in the same frame as it was clicked (default)

Images

- <img>tag is always an empty tag. It contains attributes and has no closing tag.
- You need to use the src attribute. The value of this attribute is the URL of the image.
  Syntax: <img src="sampleImage.JPEG" alt="hint" >
- alt defines the text for an image when the image cannot be displayed.
- The width and height attributes define the size of the image.

HTML Table Element

- To start off a tables, use the <table>
- A table consists of rows <tr>. Each row is divided into data cells <td>(td stands for table data)
- A <td>tag can contain text, links, images, lists, forms, and other tables.

HTML Lists

- Lists can be ordered and unordered.
- An unordered list starts with the tag.
- An ordered list starts with the tag.
- Each item starts with the tag.
- A description list is a list of items with a description of each term/name.
- The <dl>tag defines a description list. <dl>is used with <dt>(defines items) and <dd>(describes each item).

Block and Inline Elements

- HTML elements are either block level elements or inline elements.
- Block level Elements start with a new line.
  E.g., <p>, <table>,
- Inline elements are displayed without a new line.
  E.g., <b>, <td>, <a>, <img>

element

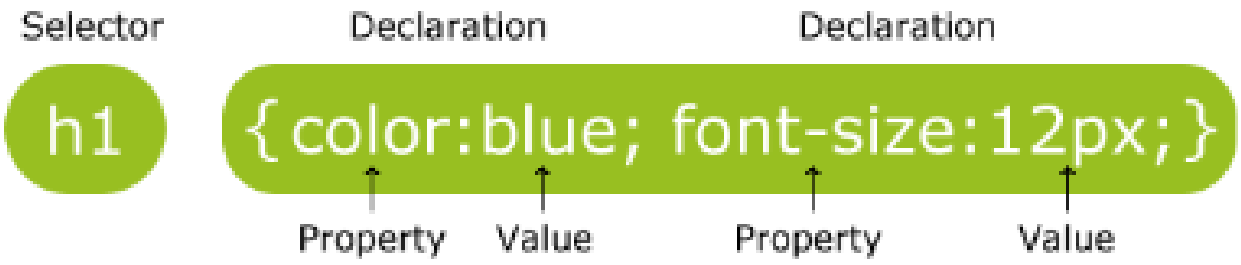
- element is an inline element that can be used as a container for text.
- element usually is used to set style to parts of the text.

DIV tag

- The tag defines a division or a section in an HTML document.
- The tag is used to group block-elements to format them with CSS.

CSS Syntax

- A CSS file consists of rule set, which define the presentation element for a particular part of the HTML document.
- A CSS rule set consists of a selector and a declaration block.
- A Rule Set has a selector and a declaration block.
- The declaration block is enclosed in { }.
- The declaration block contains one or more declarations separated by semicolons.
- Each declaration includes a property name and a value, separated by a colon.
- To make the CSS code more readable, you can put one declaration on each line.



CSS Comments

- CSS comments follow the multiline C comment syntax.
- A CSS comment starts with /* and ends with */.
- Comments can also span multiple lines and are ignored by browsers.
- Single line comments can start with "//".

CSS Selectors

- CSS selectors allow you to select and manipulate HTML elements.
- They are used to "find" HTML elements based on id, classes, types, attributes, values of attributes, etc.
- Typically, selectors are one of 3 kinds:
  - id selector
  - element selector
  - class selector

Element Selector

- The element selector selects elements based on the element name.
- Applied to all elements with the same name (tag).
- Example:

```
p {
        text-align: center;
        color: red;
}
```

ID Selector

- The id selector uses the id attribute of an HTML tag to find the specific element.
- An id should be unique within a page.
- To find an element with a specific id, write the character formerly known as the pound (#), followed by the id of the element.
- Example

```
#para1 {
        text-align: center;
        color: red;
}
```

Class Selector

- The class selector finds elements with the specific class.
- The class selector uses the HTML class attribute.
- To find elements with a specific class, write a period character, followed by the name of the class.
- Example:

```
.center {
        text-align: center;
        color: red;
}
```

- You can also specify that only specific HTML elements should be affected by a class.
- p.center {

```
        text-align: center;
        color: red;
}
```

Grouping Selectors

- In style sheets there are often elements with the same style.
- In the interest of code minimization, we can group selectors.
- Selectors are separated by commas.
- Example:

```
h1, h2, p {
        text-align: center;
        color: red;
}
```

Adding CSS to your HTML document

There are 3 ways to do styling

- **Inline Style** - Style elements are included as HTML attributes.
- **Internal Style Sheets** - A <style>tag is used in the HTML document to specify the presentation elements. **External Style Sheets** - A separate ".css" file is used as a part of your set of documents. It contains all the styling elements.

Inline CSS

- What little styling weve been doing so far.
- Mixes content with presentation. Loses many of the advantages of a style sheet.
- Used very rarely (when very few elements require styling).
- Add the style attribute to the relevant tag. The style attribute can contain any CSS property.
- Example:
  <h1 style="color:blue; margin-left:30px;">This is a heading.
  </h1>

Internal CSS

- Used when the current document has a unique style.
- A <style>tag is used under the <head>tag of the document to define the styles.
- The content of the <style>tag follows CSS syntax.
- Example:

```
<head>
<style>
body {
        background-color: linen;
}
h1 {
        color: maroon;
        margin-left: 40px;
}
</style>
</head>
```

External CSS

- Used when a style is applied to many pages (like a theme).
- The look of the webpage can be changed by just changing one file.
- Each page must include a link to the style sheet with the <link>tag. The <link>tag goes inside the head section.
- An external stylesheet is written as a separate file with a ".css" extension.
- The file should go into the same relative path as the rest of the files (or can be referred by absolute path).
- The external stylesheet should not contain any HTML tags.

External Stylesheet Example

- myStyle.css

```
body {
        background-color: lightblue;
}
h1 {
        color: navy;
        margin-left: 20px;
}
```

- In the head tag of the HTML document

```
<head>
<link rel="stylesheet" type="text/css" href="mystyle.css">
</head>
```

Why "Cascading"?

- Multiple styles will cascade into one.
- Styles can be specified:
  - inside an HTML element
  - inside the head section of an HTML page
  - in an external CSS file
- Generally speaking we can say that all the styles will "cascade" into a new "virtual" style sheet by the following rules, where number one has the highest priority:
  1. Inline style (inside an HTML element)
  2. Internal style sheet (in the head section)
  3. External style sheet
  4. Browser default