HTML Review

CSC 342 - Web Technologies

HTML elements

- `<element attribute="value">Content</element>`
  - `< ... >`: is an opening tag
  - `</ ... >`: is a closing tag
  - `element`: is the name of the element
  - `attribute`: is a property of an element, there can be zero or more attributes associated with a tag
  - `value`: is the value of an attribute

Recommended Basic Document Structure

```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="utf-8">
    <title>PAGE TITLE</title>
  </head>
  <body>
  PAGE CONTENT
  </body>
</html>
```

Semantic Markup

- The purpose of HTML is to add meaning and structure to the content
- HTML is not intended for presentation, that is the job of CSS
- When marking up a document, choose the element that provides the most meaningful description of the content

Block and inline elements

- **Block** elements start on new lines
- **Inline** elements do not start a new line
- Each type of element has a default value, but this can be modified with CSS

Paragraphs and Headings

- `<p>...</p>` a paragraph
- `<h1>...</h1>` a heading
- There are six levels of headings: `h1, h2, h3, h4, h5, h6`
- Headings should be used semantically – change the size with CSS

Unordered Lists

- `<ul>...</ul>` an unordered list
- `<li>...</li>` a list item
- Example:

```
<ul>
  <li>Item 1</li>
  <li>Item 2</li>
  <li>Item 3</li>
  <li>Item 4</li>
  <li>Item 5</li>
</ul>
```

Ordered Lists

- `<ol>...</ol>` an ordered list
- `<li>...</li>` a list item
- Example:

```
<ol>
  <li>Item 1</li>
  <li>Item 2</li>
  <li>Item 3</li>
  <li>Item 4</li>
  <li>Item 5</li>
</ol>
```

Description Lists

- `<dl>...</dl>` a list containing name and value pairs
- `<dt>...</dt>` the name or term
- `<dd>...</dd>` the value or description
- Example:

```
<dl>
  <dt>Term 1</dt>
  <dd>Description 1</dd>

  <dt>Term 2</dt>
  <dd>Description 2</dd>

  <dt>Term 3</dt>
  <dd>Description 3</dd>
</dl>
```

Elements for Organizing Page Content (HTML5)

- `<section>...</section>` a thematic group of content
- `<article>...</article>` a self-contained composition
- `<nav>...</nav>` primary navigation links
- `<header>...</header>` introductory material
- `<footer>...</footer>` a footer

Inline Text Elements

- Recommended:
  - `<em>...</em>` stressed emphasis
  - `<strong>...</strong>` strong importance
- Not Recommended:
  - `<b>...</b>` visual emphasis
  - `<i>...</i>` alternate voice
  - `<s>...</s>` incorrect text
  - `<u>...</u>` annotated text
  - `<small>...</small>` legal text; small print

Generic Elements

- `<div>...</div>` generic block-level element
- `<span>...</span>` generic inline element
- Usually given a `class` or `id` attribute to indicate purpose

HTML Special Characters

Character	Named Entity	Numeric Entity
	`&nbsp;`	&#160;
&	`&amp;`	&#038;
<	`&lt;`	&#060;
>	`&gt;`	&#062;

Links

- `<a>...</a>` the anchor element (hypertext link)
- Requires an `href` attribute indicating a URL
- Example:

  ```
  <a href="http://example.com">Example</a>
  ```
- The `href` URL value can be an absolute or relative path

Images

- `<img>` the image element
- Required attributes:
  - `src:` source URL
  - `alt:` alternate text
- Example:

  ```
  <img src=/image.gif" alt="an image">
  ```
- Some additional attributes:
  - `height:` height in pixels
  - `width:` width in pixels

Tables

- `<table>...</table>` tabular content
- `<tr>...</tr>` table row
- `<th>...</th>` table header
- `<td>...</td>` table cell data

Table Example

```
<table>
  <tr>
    <th>Column 1</th>
    <th>Column 2</th>
    <th>Column 3</th>
  <tr>
  <tr>
    <td>Row 1 Column 1 Data</td>
    <td>Row 1 Column 2 Data</td>
    <td>Row 1 Column 3 Data</td>
  <tr>
  <tr>
    <td>Row 2 Column 1 Data</td>
    <td>Row 2 Column 2 Data</td>
    <td>Row 2 Column 3 Data</td>
  <tr>
</table>
```

Spanning Table Cells

- Spanning is stretching a table cell to cover multiple rows or columns
- Attributes for `th` and `td`:
  - `colspan`
  - `rowspan`
- Example:

```
<table>
  <tr>
    <th colspan="2">Two Columns</th>
  <tr>
  <tr>
    <td>Row 1 Column 1 Data</td>
    <td>Row 1 Column 2 Data</td>
  <tr>
</table>
```

Forms

- `<form>...</form>` is a container for all the content of a form
- Attributes:
  - `action`: the URL of the action page
  - `method`: the HTTP method used to send data
- Example:

```
<form action="/process.php method="post">
FORM ELEMENTS
</form>
```

Form Controls

- Form controls facilitate the data submission
- Example form controls
  - Text entry fields
  - Buttons
  - Menus
- The `name` attribute is used in form controls to provide a variable name for the server application

Text Entry

- `<input type="text">` a single line text entry control
- `<textarea>...</textarea>` a multiline text entry control
- `<input type="password">` password text control
- `<input type="search">` a search line text entry control
- `<input type="email">` an email text entry control
- `<input type="tel">` a telephone number text entry control
- `<input type="url">` a URL text entry control

Submit and Reset Buttons

- `<input type="submit">` submits the form data to the server
- `<input type="reset">` resets the form
- The `value` attribute can be used to change the text displayed on the buttons
- Example:

  ```
  <input type="reset" value="Start Over">
  ```

Radio Buttons

- `<input type="radio">` is a radio button
- The `name` attribute binds multiple radio inputs into a set
- Example:

```
<input type="radio" name="x" value="1" checked>
<input type="radio" name="x" value="2">
<input type="radio" name="x" value="3">
<input type="radio" name="x" value="4">
```

Checkbox Buttons

- `<input type="checkbox">` is a checkbox button
- The `name` attribute with brackets sends the checkbox data as an array to PHP
- Example:

```
<input type="checkbox" name="x[]" value="1">
<input type="checkbox" name="x[]" value="2">
<input type="checkbox" name="x[]" value="3">
<input type="checkbox" name="x[]" value="4">
```

Menus

- `<select>...</select>` is a menu control
- `<option>...</option>` is an option within a menu
- Example:

```
<select>
  <option value="x">X</option>
  <option value="y">Y</option>
  <option value="z">Z</option>
<select>
```