

HTML Review

CSC 242, Web Programming

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

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

Facts About Attributes

- Attributes have a name and a value
- Attribute names and values are separated by an equals sign
- Multiple attributes are separated by spaces
- Attributes go after the element name in the opening tag
- When an element has multiple attributes, the order does not matter
- Most attributes take values, but certain attributes can be described with the name
- The attributes available to a given element are pre-defined
- Some attributes are required for a given element

Recommended Basic Document Structure

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

Components of the Basic Document Structure

- line 1: the document type declaration
- lines 2-10: the entire document is contained within an html element
- lines 3-6: the head element contains descriptive information about the document
- line 4: This meta element provides information about character encoding
- line 5: The title element is required in the head element and provides a descriptive title for the document
- lines 7-9: the body element contains everything that is shown in the browser

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 create an “outline” structure to a document

Unordered Lists

- `...` an unordered list
- `...` 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

- `...` an ordered list
- `...` a list item
- example:

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

- an ordered list can take a `start` attribute to change the starting number:

```
<ol start="3">
```

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>
```

Tables

- Tables are used to add tabular material (data arranged into rows and columns) to a webpage
- Examples: calenders, schedules, and statistics
- Tables should not be used for layout purposes

Basic Table Elements

- `<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>
```

Sectioning Elements (HTML5)

- A sectioning element creates a item in the document's outline structure
 - `<section>...</section>` a thematic group of content
 - `<article>...</article>` a self-contained composition
 - `<aside>...</aside>` identifies content related, but tangential to the main content
 - `<nav>...</nav>` primary navigation links

Elements for Organizing Page Content (HTML5)

- `<header>...</header>` introductory material
- `<footer>...</footer>` a footer
- If a header or footer is within a sectioning element, then it only pertains to that element, not the document
- `<address>...</address>` intended to contain contact information for the document's author

Inline Text Elements

- `...` stressed emphasis
- `...` strong importance
- `...` visual emphasis
- `<i>...</i>` alternate voice
- `<s>...</s>` incorrect text
- `<u>...</u>` annotated text
- `<small>...</small>` legal text; small print

More Inline Text Elements

- `<abbr title="full text">abbreviation</abbr>`: abbreviations and acronyms
- `<cite>...</cite>`: citations
- `<code>...</code>`: computer code
- `_{...}`: subscript
- `^{...}`: superscript

Marking Up Quotations

- `<q>...</q>` is for marking up short quotations and is an inline element
- `<blockquote>...</blockquote>` is for marking up long quotations and is an block element

Breaks and Rules

- `
` line break
- `<wbr>` word break
- `<hr>` horizontal rule

Generic Elements

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

```
<span class="tel">484-646-4389</span>
```

HTML Special Characters

| Character | Named Entity | Numeric Entity |
|-----------|--------------|----------------|
| | | |
| & | & | & |
| < | < | < |
| > | > | > |
| © | © | © |
| | ® | ® |

Links

- `<a>...` the anchor element (hypertext link)
- Requires an `href` attribute indicating a URL
- example:
`Example`
- The `href` URL value can be an absolute or relative path

Absolute and Relative URLs

- **Absolute URLs** provide the full URL for a document
- **Relative URLs** describe the pathname to a file *relative* to the current document

External and Internal Links

- An external link is a link to a document outside of your site
- An internal link is a link to a document that is part of your site
- An external link requires the absolute URL including the “http://” portion.
- An internal link can be a relative URL

Images

- `` 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

Image Formats

- In order for a web browser to render an image, it must be in one of the following file formats
 - GIF
 - JPEG
 - PNG
- Additionally, the image file must end in the file extension appropriate for the format – *.gif*, *.jpg* (or *.jpeg*), and *.png* respectively

Image Element Facts

- The image element is an *empty* element because it has no content
- The image element is a *replaced* element because it is replaced by an external file when the page is displayed
- The image element is an inline element
- The bottom edge of an image aligns with the baseline of the text

Image Accessibility

- Functions of alternative text
 - Read by screen readers in place of images
 - Displayed in place of images when the file is not loaded or the user has chosen not to view images
 - Provides a semantic meaning that can be read by search engines
- Alternative text can be presented in two ways
 - Within the `alt` attribute of the `img` element
 - Within the context of the surroundings of the image