Web Dev Lecture 1

Code Girls 2021-22

Helpful Resources

- W3schools:
  https://www.w3schools.com/html/default.asp

- MDN web docs:
  https://developer.mozilla.org/en-US/docs/Glossary/HTML5

Source File

Monuments and Memorials

A trip to Washington, D.C. is incomplete without visiting the numerous monuments and memorials that **honor** the nation's history and those who have shaped it. Many of these attractions are located around the National Mall.

Museums

Popular museums include:

- Smithsonian National Museum of Natural History
- National Museum of African American History and Culture
- National Gallery of Art
- United States Holocause Memorial Museum
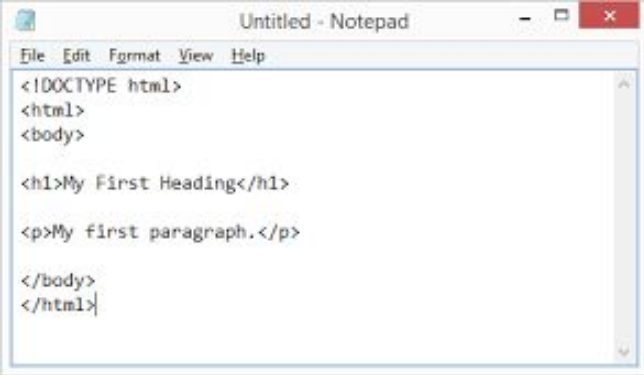- National Air and Space Museum

Food and Drink

Explore the restaurant scene in D.C. with this guide here.

What is HTML?

- Stands for Hyper Text Markup Language

- HTML is the standard markup language for creating Web pages

- Describes the structure of a Web page and tells the browser how to display the content

- Helps identify what is what. For example:

  - This is a link
  - This is a picture
  - This is a title

```
Untitled - Notepad
File  Edit  Format  View  Help
<!DOCTYPE html>
<html>
<body>

<h1>My First Heading</h1>

<p>My first paragraph.</p>

</body>
</html>
```
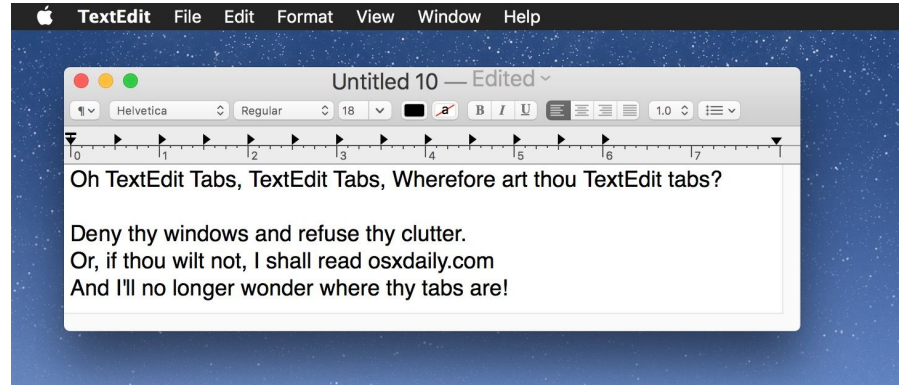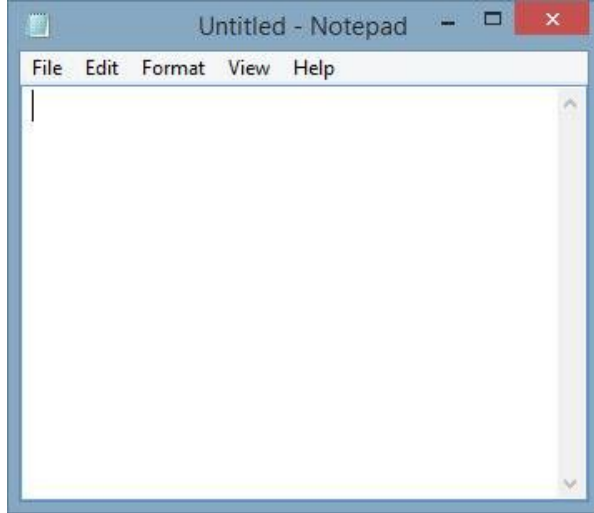
Writing in HTML: HTML Editors

- Web pages can be created and modified by using professional HTML editors.

- However, for learning HTML, we can start with a simple text editor like Notepad (PC) or TextEdit (Mac).

Untitled - Notepad

File   Edit   Format   View   Help

TextEdit   File   Edit   Format   View   Window   Help

Untitled 10 — Edited

Oh TextEdit Tabs, TextEdit Tabs, Wherefore art thou TextEdit tabs?

Deny thy windows and refuse thy clutter.
Or, if thou wilt not, I shall read osxdaily.com
And I'll no longer wonder where thy tabs are!

Getting our HTML editors set up

1. Find Notepad or TextEdit or Repl.it based on whether you have Mac or PC or chromebook

2. Write the following code in your text file

```
<!DOCTYPE html>
<html>
<body>

<h1>My First Heading</h1>
<p>My first paragraph.</p>

</body>
</html>
```
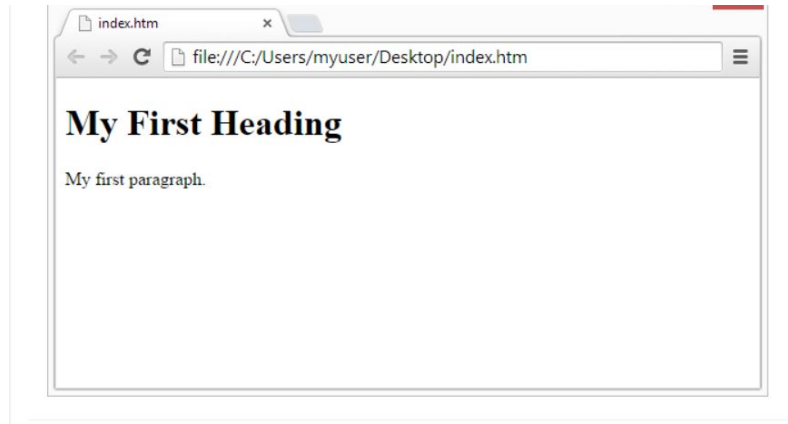
Getting our HTML editors set up (Cont.)

- Save the file on your computer. Select File > Save as in the Notepad menu.
- Name the file "index.htm" and set the encoding to UTF-8 (which is the preferred encoding for HTML files).
- Open the file with a browser (like Chrome)

The Basics of HTML

- All HTML documents must start with a document type declaration: <!DOCTYPE html>.

- The HTML document itself begins with <html> and ends with </html>.

- The visible part of the HTML document is between <body> and </body>.

This is a
paragraph with a line break.

HTML Elements

- HTML elements are defined by a start tag, some content, and an end tag:

  - <tagname>Content goes here... </tagname>

- HTML elements can be nested

- When writing elements, case doesn't matter but lower case is preferable since other editors may be more strict

- Some elements only have a single tag:

  - Break in a line is just

  - Example: <p>This is a <br> paragraph with a line break.</p>

Block and Inline Elements

- Block-level Elements
    - Always starts on a new line
    - Takes up full width available
- Inline Elements
    - Does not start on a new line
    - Only takes up as much width as necessary

<address>	<article>	<aside>	<blockquote>	<canvas>
<dd>	<div>	<dl>	<dt>	<fieldset>
<figcaption>	<figure>	<footer>	<form>	<h1>-<h6>
<header>	<hr>		<main>	<nav>
<noscript>		<p>	<pre>	<section>
<table>	<tfoot>		<video>	

<a>	<abbr>	<acronym>	<b>	<bdo>
<big>	 	<button>	<cite>	<code>
<dfn>	<em>	<i>	<img>	<input>
<kbd>	<label>	<map>	<object>	<output>
<q>	<samp>	<script>	<select>	<small>
<span>	<strong>	<sub>	<sup>	<textarea>
<time>	<tt>	<var>		

Inline Elements

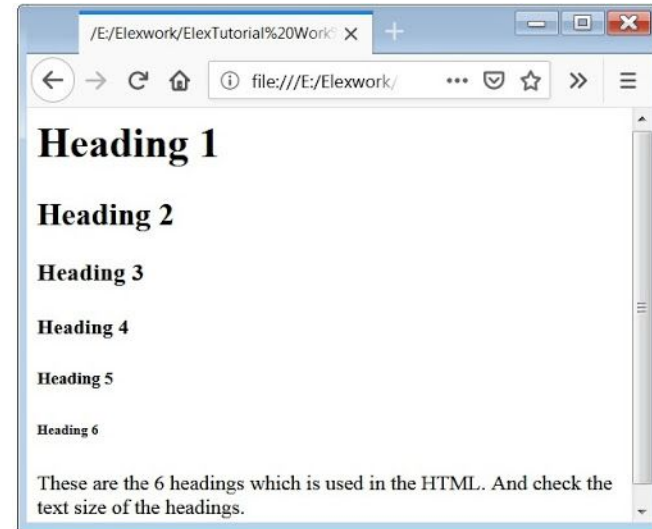Block-level Elements

HTML Attributes

- All HTML elements can have attributes
- Attributes provide additional information about elements
- Attributes are always specified in the start tag
- Attributes usually come in name/value pairs like: name="value"

Opening Tag

Attribute Name

Attribute Value

`<a href="http://dabrook.org">Visit DaBrook</a>`

Attribute

Element

Headings, Paragraphs

- HTML headings are defined with the <h1> to <h6> tags.

- <h1> defines the most important heading. <h6> defines the least important heading.

- Heading sizes are default. You can custom set the size

  - <h1 style="font-size:60px;">Heading 1</h1>

- HTML paragraphs are defined with the <p> tag

Text Formatting

- <b> - Bold text
- <strong> - Important text
- <i> - Italic text
- <em> - Emphasized text
- <mark> - Marked text (Highlighted)
- <small> - Smaller text
- <del> - Deleted text (Strike through)
- <ins> - Inserted text (Underlined)
- <sub> - Subscript text
- <sup> - Superscript text
- <q> - Add quotation marks

Style Attribute

- The HTML style attribute is used to add color, font, size, and more.
  - <tagname style="property:value;">
- Background color:
  - background-color:[color name]
- Text color:
  - color:[color name]
- Border color:
  - border:[number]px [solid/dotted] [color name]
- Text fonts:
  - font-family:[font name]
- Text size:
  - font-size:[percent value]
- Text alignment:
  - text-align:[right/left/center]

Example of Inline Style

First paragraph

Second paragraph

Colors

- In addition to using color names, you can use different methods of specifying colors:
  - RGB values
    - rgb(red, green, blue)
    - value between 0 and 255.
  - HEX values
    - #rrggbb
    - Value between 00 and ff
  - HSL values
    - hsl(hue, saturation, lightness)
    - Hue: 0 to 360. Saturation: 0-100%. Lightness: 0=100%
  - And others

Lists

- Unordered lists - , default bullet points
- Ordered Lists - , default numbers
- For both unordered and ordered lists, each list item -
- Description Lists - <dl>
  - <dt> for each term
  - <dd> to describe each term

An unordered HTML list

- Coffee
- Tea
- Milk

An ordered HTML list

1. Coffee
2. Tea
3. Milk

A Description List

Coffee
- black hot drink
Milk
- white cold drink

Links

- Basic syntax:

<a **href**="url">*link text*

- By default, this makes the link:
  - Underlined and blue
  - Underlined and purple after being clicked
- The "target" attribute
  - Where the link will be opened
  - _self - default (same tab)
  - _blank - new tab
  - _parent - in parent frame
  - _top - in full body of window

Tables

- Tags
  - whole table - <table>
  - Row - <tr>
  - table header - <th>, default bold and centered
  - data/cell <td>, default left aligned
- colspan/rowspan
  - to have a cell span multiple rows or columns (like merging cells in Excel)
  - inside a <td> or <th> tag
- Captions → acts as a title for the table
  - <caption>
  - must come right after the <table> tag
- Can customize a lot more with CSS!

```html
<table style="width:50%">
  <caption>Monthly savings</caption>
  <tr>
    <th>Month</th>
    <th>Savings</th>
  </tr>
  <tr>
    <td>January</td>
    <td>$100</td>
  </tr>
  <tr>
    <td>February</td>
    <td>$50</td>
  </tr>
  <tr>
    <td colspan="2">Total: $150</td>
  </tr>
</table>

</body>
</html>
```

Monthly savings

Month	Savings
January	$100
February	$50
Total: $150	

Commenting!

- Comment your code!!!
  - Helps identify errors
  - When you return to your project or share it with others, they know what you have done
- Syntax <!-- [Comment goes here] -->

Acknowledgments

Thanks to:

- Ms. B for sponsoring our club and guidance