HTML & CSS: LEVEL 1

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Week 1 - February 23 2017

INTRODUCTIONS

- Who are you?
- What do you do/study/etc?
- What is your experience with web development?
- What are you hoping to get out of this class?

CLASS SCHEDULE

- Thursdays from Feb 23 to March 23, from 6:30-9:30pm
- 10 minute break somewhere in the middle
- No grades, no tests
- Questions and feedback highly encouraged!

CLASS OVERVIEW

- The basic rules of HTML and CSS
- Using CSS to style web pages
- Website structure, navigation and file organization
- Preparing images for use on the web
- Intro to related technologies (Javascript, Git, Hosting)

SESSION OVERVIEW

- Overview of a website
- Code editors and web authoring tools
- Anatomy of an HTML document
- Basic HTML Elements
- Code and file organization
- Build your first webpage!

ODDS AND ENDS

https://kweeket.github.io

- Slides, homework, and interesting links will be posted here

OVERVIEW OF A WEBSITE

CONTENT, DESIGN, & CODE

Content is the most important part of any website

Design is critical to the best user experience.

Code is the language of the browser to bring the content and design to life.

CONTENT

What am I presenting?

TEXT

- Articles
- Links
- Captions
- Lists

MEDIA

- Images
- Videos
- Audio
- Games

DESIGN

What is the experience?

USER EXPERIENCE & INFORMATION ARCHICTECTURE

- Layout
- Navigation
- User flows
- Ease of use

GRAPHIC DESIGN

- Colors
- Fonts
- Backgrounds
- Borders
- Icons

</> CODE

How does the computer understand?

- **HTML** structures and organizes **CONTENT**

- **CSS** stylizes the content and creates layout.

- **Javascript** adds interactivity.

PRACTICE, STUDY, PRACTICE

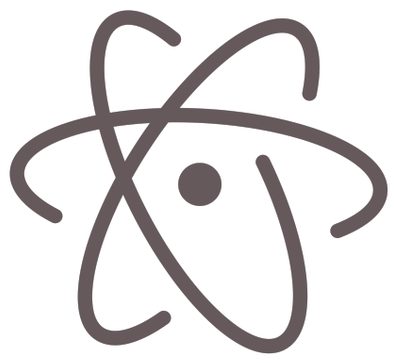
- Practice as much as you can. To get good at web development, it takes lots of repetition!
- HTML is just text - you can right-click and "View Source" on any webpage to see how they did it, or select "Inspect" to see sections of a page!

CODE EDITING TOOLS

CODE EDITORS

VS Code

Brackets



Atom

Sublime Text

Coda

WEB BROWSERS

HTML and CSS require testing in all major modern browsers and devices

DEVELOPER TOOLS

Firefox: Firebug plugin

- http://getfirebug.com/

Chrome: **Developer Tools**

- Right-click > Inspect
- F12 key

Safari: **Developer Tools**

- Open Preferences > Advanced > Show Develop menu
- Right-click > Inspect Element

Internet Explorer: **Developer Tools**

- F12 key

<html>

HTML DOCUMENTS

HTML DOCUMENT

```
<!doctype html>
<html>
<head>
    <meta charset="UTF-8">
    <title>My First Page</title>
</head>
<body>

    <h1>The body is what the browser sees.</h1>
    <p>Several ways to format text.</p>
</body>
</html>
```

HTML ELEMENTS

```
<!doctype html>
```

- HTML elements have tags in <> brackets.
- Most times, an HTML tag will have an **opening** tag and a **closing** tag
- Some elements are “self-closing”

```
<element>Content goes in here</element>

<p>I'm a paragraph!</p>
```

HTML RULES

- Tags are written in lowercase
  - `<a>` **NOT** `<A>`
- Tags must be closed
  - `<p>Stuff in here.</p>`
  - `<div>Content in here.</div>`
  - `<br/>` (“self-closing”)

DOCTYPE DECLARATION

```
<!doctype html>
```

- The very first thing in any HTML document
- Goes before `<html>` tag
- Tells the browser what version of HTML the document is written in - this one is written in HTML5, the most modern standard

HTML DECLARATION

`<html>`

- The top line after `<doctype>` declaration.
- Tells the browser “This is where everything starts!”

```
<html><!-- everything else --></html>
```

HEAD ELEMENT

`<head></head>`

- Must include a `<title>` for the document.
- Information about the document not visible to user
- Can contain styles in the form of CSS and Javascript (inline or linking a file)

```
<head>
   <!-- metadata and resources -->
</head>
```

META TAGS

```
<meta charset="UTF-8"/>
```

- Used to specify "meta" information to the browser like page description, author, search engine keywords, and character encoding
    - UTF-8 represents Unicode, a system to handle text consistently in a variety of languages.

```
<head>
   <meta charset="UTF-8">
   <meta name="author" content="Your Name" />
    <meta name="description" content="A thrilling page" />
</head>
```

TITLE TAG

```
<title>My First Page</title>
```

- **Required** in `<head>` for all HTML documents
- Displays the title in the browser toolbar or tab
- Name of the page when page is bookmarked
- The title for the page in search results on Google or Bing

<!--HTML COMMENTS-->

- Can be used anywhere in the HTML document
- Are not visible to the user in their browser
- Great for leaving notes for yourself or other developers

```
<!--  Comments are great for everyone! -->
```

BODY ELEMENT

<body></body>

- Area of the HTML document visible to the user
- Contains all content of the document, such as tags, links, images, tables, etc.

```
<body>
    <!-- all my sweet content -->
</body>
```

MAJOR BODY ELEMENTS

- **Headings** for dividing up your page and content.
- **Paragraphs** of text.
- Bulleted, ordered, unordered **lists.**
- **Images**
- **Links** to other pages, websites or resources.

HEADINGS

```
<h1>My Page Header</h1>
```

Headings range from most important to least important

<h1> to <h6>

Search engines use **<h1>** to determine important information about the page

PARAGRAPHS

```
<p>Hi! I'm a paragraph!</p>
```

- Most text in the document
- Browsers automatically add space around `<p>` elements (although this can be changed with CSS)

LIST ELEMENTS

```
<ul>
  <li>Puppies</li>
  <li>Kittens</li>
</ul>
```

Unordered lists `<ul>` appear in the browser by default with **bullets**

- Puppies
- Kittens

LIST ELEMENTS

```
<ol>
  <li>Puppies</li>
  <li>Kittens</li>
</ol>
```

Ordered lists `<ol>` appear in the browser by default with **numbers.**

1. Puppies
2. Kittens

LIST ELEMENTS

```
<ul>
  <li>Puppies</li>
  <li>Kittens</li>
</ul>
```

Both unordered and ordered lists can only contain **list items** `<li>` directly

IMAGES

```
<img src="kitten.jpg" alt="a picture of a kitten" />
```

- Images do not have a closing tag
- Images have two required **attributes**:
  - **src** is where the file lives (local or external)
  - **alt** is a description of the image (used for screen readers, search engines, etc)

IMAGES

```
<img src="kitten.jpg" alt="a picture of a kitten"
height="200" title="Ollie" />
```

- `height` and `width` resize images and ensure the page doesn't jump

- `title` is shown as a tooltip in some browsers when you hover your mouse over the image

LINKS WITH THE ANCHOR TAG

The `<a>` tag defines an "anchor" or link

- Create a link to another document with a **relative** path

```
<a href="other-page.html">Link to another page</a>
```

- Jump to external website with an **absolute** path

```
<a href="http://google.com">Google</a>
```

- Anything inside `<a>` is clickable - can be text, an image, or any other valid HTML

SOME <A>TTRIBUTES

```
<a href="http://google.com" title="Search"
target="_blank">Google</a>
```

- `href` attribute is where the link should send the user
- `title` appears as a tooltip when you mouse over the link. It is read by screen readers
- `target="_blank"` opens link in a new tab

FOUR LINK STATES

a:link

a:visited

a:hover

a:active

FILE ORGANIZATION

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- If you structure your site correctly, you are one step closer to faster updates

- The next person to work on or look at your code will be able to understand
what you've done and where to find things

FILE ORGANIZATION

Typical files in a website include:

HTML files (.html)
CSS files (.css)
Javascript files (.js)
Image files (.png, .jpg, .gif, etc)

- HTML should usually go in the main (root) directory
- Make subdirectories for media, CSS, and Javascript files

FILE NAMING RULES

- Use a consistent naming convention when naming files and folders
- Capitalization matters - kittens.png is **not** the same as KITTENS.png
- Use only letters, numbers, hyphens (-) or underscores (_).
- No spaces in file names
- Your homepage is **index.html** by default

FILE STRUCTURE

On the web, folders are called **directories.** This is what dictates paths to resources such as html files, images, and CSS and Javascript files.

All resources have a Universal Resource Locator (URL)

ABSOLUTE FILE PATHS

- **Absolute paths** are URLs that start with **http**
- They are not hosted by you, so if someone renames or deletes the file, your link will be broken

RELATIVE FILE PATHS

- Relative paths are URLs that go to a resource in relation to what page you're on (e.g **css/layout.css**)

- Resources "local" to you should all be relative paths (your images, fonts, CSS and JS files)

`<img src="image.gif" />` image is in the same folder

`<img src="images/image.gif" />` image is in a subfolder named "images"

`<img src="../images/image.gif" />` image is in a parent folder named "images"

PRACTICE TIME!

HOMEWORK

Create a website that about something that interests you

- At least 2 pages that are linked to each other
- Include a link to an outside website. Bonus: have the link open in a new tab
- Use 3 heading tags and at least one paragraph
- Use at least one list
- Show at least 2 images - one local and one remote
- Add one HTML comment
- Validate your website

"HOMEWORK"

- Practice!

- Next time you see a cool website, inspect how they did it

- If you have questions during the week, feel free to email me

- Optional: read chapters 6-7 of *HTML and CSS: Design and Build Websites*