Lecture 2: HTML

HTML: Questions over reading

- CH 3 - Basic HTML Structure
  - HTML Structure?
  - Parts of a document
    - <header>, <footer>, <aside>?
  - Naming elements
    - Classes
- CH 6 - Links
  - Block Level Links
    - Wrapping elements in anchor tag
  - Target Attribute

HTML: Last Week Review

- Hyper Text Markup Language
  - Think of as a Skeleton
  - Holds everything together
- Cascading Style Sheets
  - Think of as Clothes
  - Styling of website or rather **the presentation**
- JavaScript
  - Think of as Muscles
  - Creates functionality

HTML: This week overview

- What is HTML
- Brief history of HTML
- Atom Text Editor
- Hello World HTML page
- HTML Tags
- Semantic HTML

How the Internet Works

VIDEO LINK

HTML: What is it?

- Hyper Text Markup Language
- **NOT** a programming language
- Foundation for building websites
- The driver of content **NOT** presentation
  - HTML doesn't define how things look, that's for CSS
- Meant to be accessible
- Web Browsers are designed to render HTML for users
- Files must end in .html
- **"index.html"** is the root or homepage
- HTML is a text document containing "markup".
  - Markup describes the meaning
  - Meaning is the Semantics
- HTML is a requirement
  - New front end frameworks like Angular and ReactJS require HTML but in different ways
    - Angular Example
    - React Example
    - Ruby on Rails Example

HTML: Web Pages

- A web page consists of 3 primary components
  - Text Content - bare text that tells the user what your page or site is about
  - References to other files - items such as images, audio, video files or other HTML files
    - Assets - JavaScripts or CSS files
  - Markup - HTML Elements
- These files are all saved as text so they can be universally read by browsers
- There is other information contained in the files not viewable by users
  - Content in the <head>...</head>
  - The <head> contains character encoding usually UTF-8 and other information for the browser and search engines

PUPPIES!!!!

History of HTML

HTML: History

There is a great YouTube resource called DevTips. DevTips has been around for many years and has invaluable information. That we will periodically use in this course

There's a multi part series that was done by DevTips as an overview to HTML. Watch the complete list at your leisure for some great insight but let's take a look at the first couple of videos

DevTips HTML5 Basics Playlist:

1. History of HTML
2. Philosophy of HTML5
3. The DOM
4. Tags
5. Display Types
6. HTML5 Tags

HTML: A brief history of

VIDEO LINK

HTML: Philosophy of HTML5

VIDEO LINK

HTML: History Summary

Infographic: HTML5: Past, Present & Future.

Atom Text Editor

HTML: What is a text editor?

A text editor (TE) is like a word processor (WP) but vary in important ways

- TEs are used for writing and editing code files
- WPs are designed to format text for presentations
- TEs are plain text
- WPs have hidden code to run them

HTML: Welcome to Atom!

VIDEO LINK

HTML: OPEN ATOM!

OPEN ATOM!

Fun Facts:

- Released in 2014
- Free and Open Source
- Supports
  - Plugins
  - Themes
- Supports most major languages
- Very Extensible and hacker friendly
  - Uses a lot of the same technology used in building modern applications like HTML, CSS, and JavaScript

HTML: Why does my Atom look different?

Answer: I use a lot of Plugins and Themes

Helpful Atom Packages/Themes can be found in the GitHub Repo

HTML: Atom Themes & Plugins

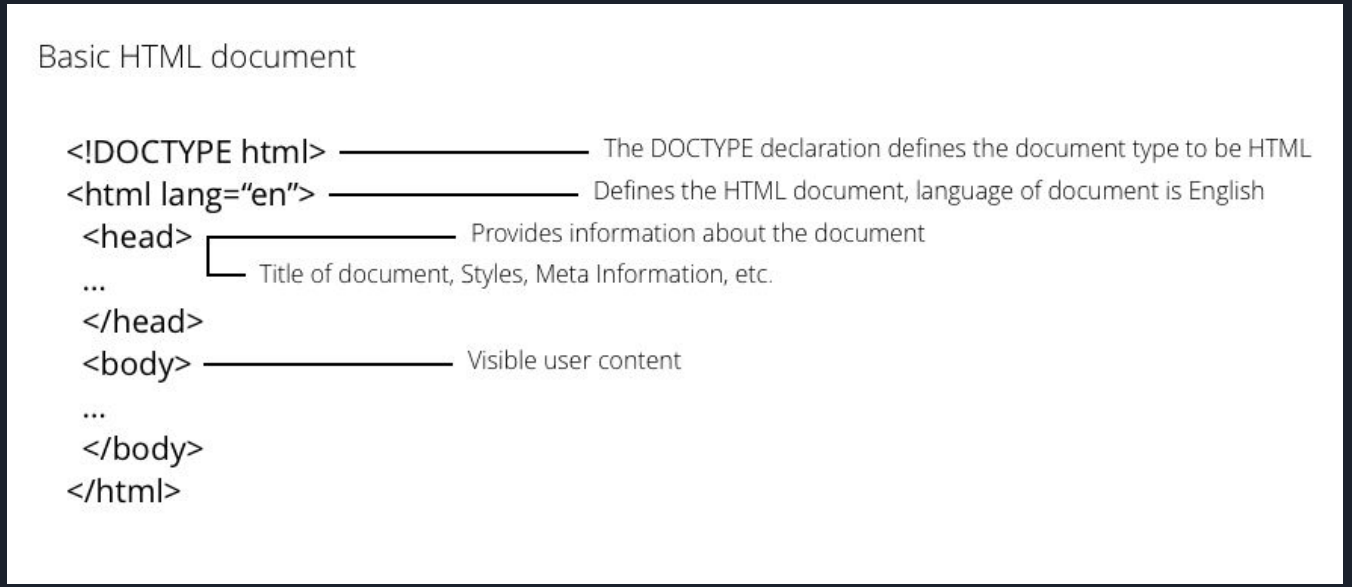
VIDEO LINK

Create our first HTML Page

HTML: Document

HTML documents have a few HTML tags that are required

- <!DOCTYPE>
- <html>
- <head>
- <body>



HTML: Hello World

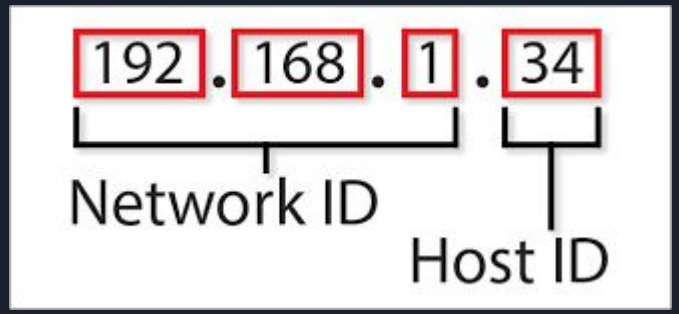
1. Open Atom in New Window
2. Type out an HTML document
3. Save as index.html
4. Open the index.html file by double clicking
5. Notice the URL when you double click the file “file:///Users/name/location/index.html”
    a. This means your file is being served on the local file system
6. Make an edit to your file
7. Save your file
8. Reload your browser

What we’ve done is create our first HTML file. Opened it in the browser, made a change and got to see that change take place.

HTML: Hello World using a Server

The way the internet works is that a Client will make REQUESTS to a Server and the Server will send back RESPONSES.

Servers don't have to be somewhere else we can actually do it on our own computer for a better development experience.



1. Click Atom > Preferences or cmd + ,
2. Click Install in Settings tab
    a. Make sure "Packages" is highlighted
3. Search for "atom-live-server"
4. Click install
5. Go back to your index.html tab
6. Click Packages > atom-live-server
7. This will start a server on 127.0.0.1:3000
8. Make an edit to your index.html & save
9. Your browser should autoreload your changes


Dr.
Phil

HTML: Hello World using a Server Breakdown

Ok so you may be asking yourself, what is going on? Simply put the package we are using is running some JavaScript behind the scenes that when we make changes to the file it will tell the browser to refresh itself.

This is one of the many time saving tools available while developing. The other added benefit is that we are able to test our code in a real browser.

For fun copy the URL or type in 127.0.0.1:3000 into FireFox and or Safari and you should see the same page. Now you can test your code in different browser all in real time if you wanted.

Fun fact 127.0.0.1:3000 is the same as typing localhost:3000

HTML: Help Resources

- StackOverflow - HTML
- W3Schools
- HTML Cheatsheet

HTML: What is a tag?

An HTML tag is anything that resembles <tag>...</tag>

<h1>Hello World</h1>

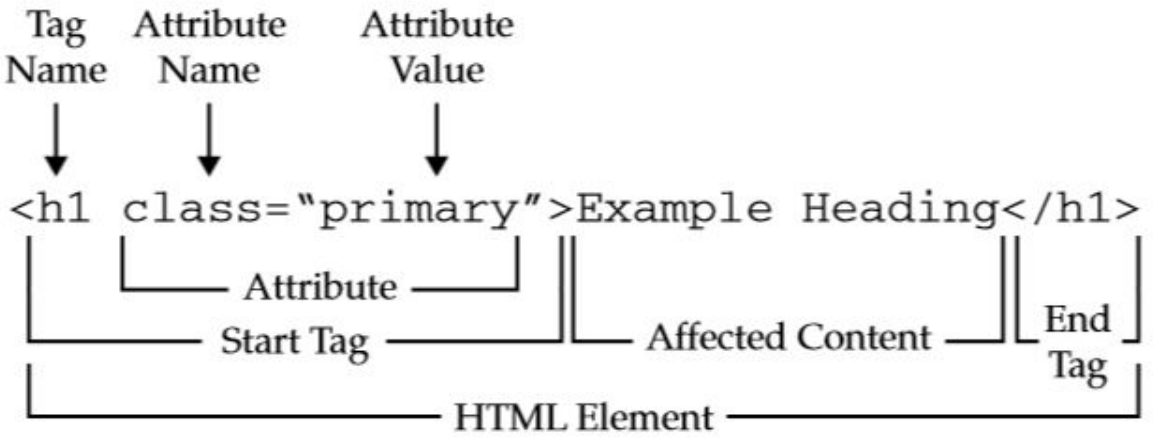
What opens must close unless it is a special **Self Closing Tag:**

 or

- Tags are surrounded by angle brackets
- Come in pairs, what you open you must close
- Some tags are self closing

HTML: Tag Breakdown

A graphical overview of the HTML markup syntax shown so far is presented here:



HTML: Experiment with Tags

Let's together start writing some tags and watch what happens in the browser

- Headers: h1 - h6
- Paragraph: p
- Span: span
- Anchor: a
- Image: img
- Unordered Lists: ul
- Ordered Lists: ol

Full list of Inline and Block Elements

You will notice that some elements render on new lines and other elements render inline. This concept is **Inline vs Block Level Elements**

Inline Elements:

- Do not start on a new line
- Only as wide as needed

Block Elements

- Start on new line
- Full width

HTML: Tag Attributes

<tag attributename=”attributevalue”>...</tag>

Link to Google

- Tags can have one or more attributes attached to them
- Some tags have specific attributes
- Attributes are always used with the start of a tag
- Are show in Key Value pairs key=”value”

HTML: Week 2 Homework

- Homework
  - Read: Ch 7 & 8
  - Wireframes
    - Media
    - Merch
    - Tour Dates
  - Practice Coding
    - Make an index.html file
    - Practice tags
    - Use attributes on your tags
    - Lists, Paragraphs, Headers
    - Test out Atom Plugins and Themes