Lecture 4: CSS

Submit Homework

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Make sure you have submitted your designs

- Homepage
- About Page
- Discography

CSS: Last Week Review

- More in depth look into HTML
  - Why HTML is important
  - Browsers are designed to render HTML
  - HTML has 3 main components
    - Text
    - References
    - Markup
  - Parts of HTML Doc
- Set up working ‘class-directory’
- HTML Semantics

- Learned what HTML is meant to do and not do
- Elements, Attributes, and Values
- Parent > Child relationships
- URLs, linking items
- File naming

CSS: Questions over reading

- CH 7
  - Colors
  - Transparencies
  - URLs
  - Rules
  - Properties
  - etc.
- CH 9
  - Selectors
  - Relationships
  - Pseudo Elements
  - Pseudo Classes
  - etc.

CSS: This week overview

- What is CSS
- Why is CSS important
- Developer Tools
- Class Directory
  - Adding external style sheets
  - Setting up
- Naming files
- URLs, Linking, Images

There’s going to be a lot to cover

CSS: Helpful Resources

- StackOverflow - CSS
- W3Schools - CSS
- Can I Use?
- CSS Cheat Sheet

CSS: What is CSS?

- CSS stands for Cascading Stylesheets
- CSS **is NOT** a programming language
- Where HTML defines your contents meaning CSS defines the appearance
- CSS can describe how HTML elements are displayed on
  - Screens
  - Paper
  - Other Media
- External stylesheets are stored in .css files
- Where HTML is more rigid, CSS there can be multiple way to do the same thing
- Fun Fact: CSS1 was released proposed in ‘94 and released in ‘96

CSS: Solving a Big Problem

- HTML was never intended for presentation
- HTML was created to **describe the content** of a web page
- HTML 3.2, released in ‘97, allowed for attributes to affect a web pages presentation
- With CSS1 being released it was able to create a “separation of concerns” between presentation and content meaning

Open your class directory

1. Create a new HTML file called “css-basics.html”
2. Create a new CSS file called “css-basics-styles.css” inside your /stylesheets folder

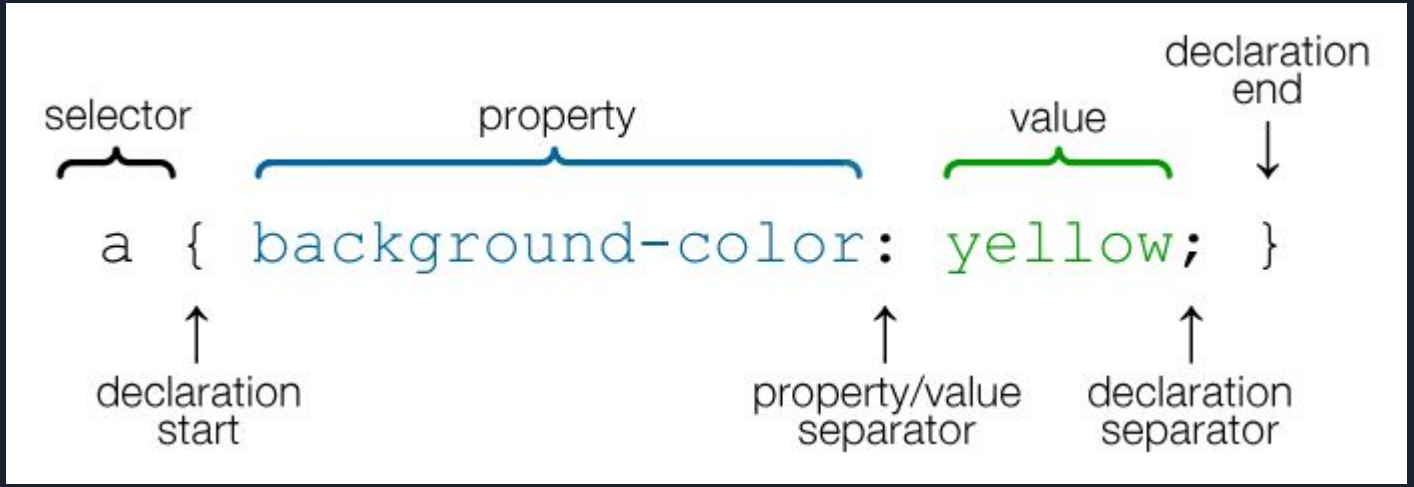
CSS: Ways to add

CSS can be added in 3 way

1. Inline CSS
    a. which is directly in HTML
    b. <tag style="width: 100px; ..." />
    c. Not recommended
2. Internal/Embedded CSS
    a. Using <style> tags
    b. Use sparingly
3. External CSS
    a. Using a .css file
    b. Recommended

Demo CSS methods (inline, internal, and external)

CSS: Rule


selector
property
value
declaration end
a { background-color: yellow; }
declaration start
property/value separator
declaration separator

CSS: Constructing a Style Rule

- *Selector* - identifies the element(s) you want to format
- *Property* - a property is always associated with a *Value*
- *Value* - is the allowable option(s) for a *Property*

p { color: red; }

- p - is the *selector*
- color - is the *property*
- red - is the *value*

When using one or more properties attached to a selector you create a rule

Yeah this is intense I know

CSS Basics

CSS: Colors

Colors can be defined in multiple ways

- Name: red, yellow, purple aqua
- Hexadecimal: #ff0000, #00ff00, #0000ff <<<<< Preferred
- Hexadecimal Shorthand: #fff, #f0f, #00f
- RGB: rgb(255, 255, 255)
- Hue, Saturation, and Lightness: hsl(56, 100, 50)
- RGBA & HSLA are the same as above but add a transparency property 1 > 0.0

Defining Colors in CSS

CSS: Fonts

Working with fonts is another big part of your sites presentation

Many browser have predetermined “Web Safe Fonts” which give you a set of fonts ready to use

Web Safe Fonts

Fonts in CSS have a lot of different properties such as:

- font-family
- font-size
- font-weight
- color

CSS Font Properties

CSS: Typography Properties

Aside from choosing a font family, size, and weight. You also have the ability to choose *line-height* and *letter-spacing*

- CSS line-height - similar to Leading
- CSS letter-spacing - similar to Kerning
- CSS word-spacing - similar to Tracking
- CSS text

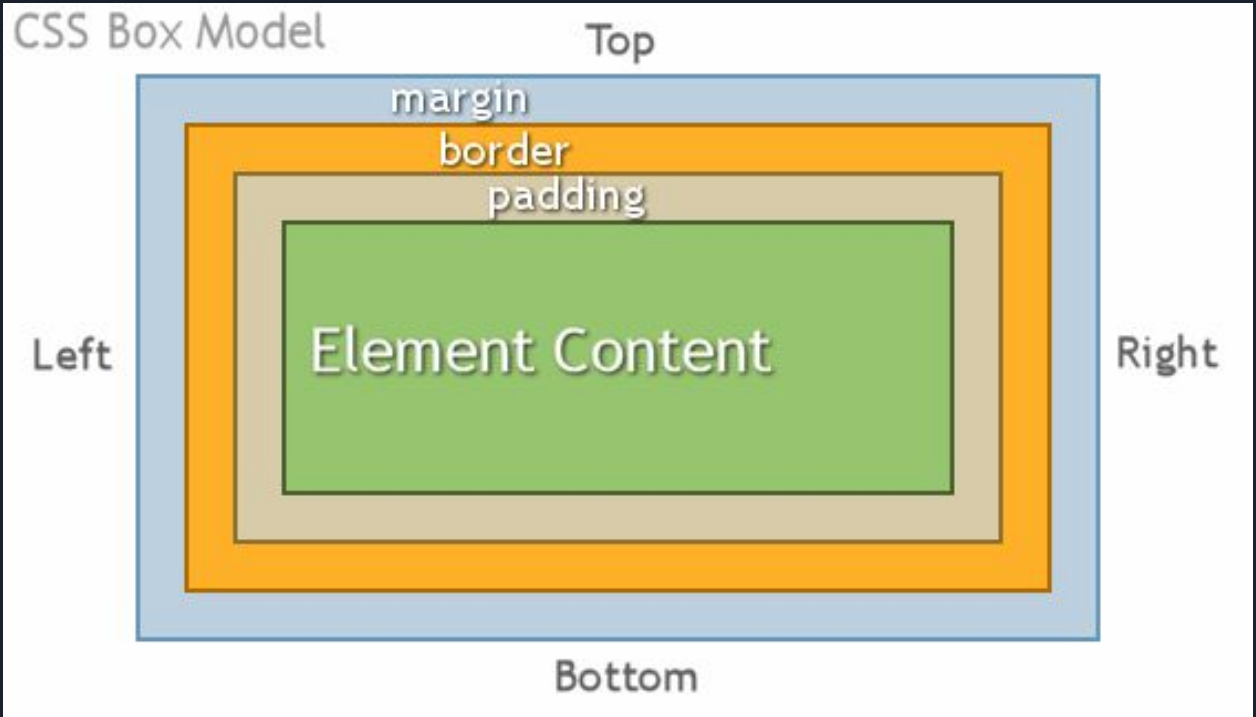
CSS: Selectors

There are many selectors to hook your CSS into your HTML

- Class, most common
  - HTML <tag class="hi">...</tag>
  - CSS .hi{...}
- Element
  - HTML <tag>...</tag>
  - CSS tag{...}
- ID, for unique element per HTML page
  - HTML <tag id="hi">...</tag>
  - CSS #hi{...}
- *, which is a "Universal Selector" and matches elements of any type
  - * {...}


4GIFs
.com

CSS: Box Model



Link

CSS: Box Model contd

All HTML elements can be considered boxes

In CSS, the term “box model” is used when talking about a layout

The Box Model is a box that wraps around every HTML Element

- Content: your text, images, etc.
- Padding: area around the content
- Border: wraps around the padding
- Margin: clears area around border

Another important topic is box-sizing which determines how your boxes are calculated

CSS: Shorthand

With many CSS properties you'll see things written in 1 of 2 ways

```
.class{

margin-top: 10px;

margin-right: 5px;

margin-bottom: 10px;

margin-left: 5px;

}
```

Or in SHORTHAND

```
.class{

margin: 10px 5px;

}
```

CSS Shorthand Reference

CSS: Comments

Just like how you can make comments in HTML with <!-- this is an HTML comment →

You can do the same in CSS /* this is a css comment */

CSS: Layouts

Currently all our elements are taking up full horizontal width. This is because we are using block elements, But now we want to make a layout of sorts

- CSS Float

This is a common way to create a layout for websites

CSS: Positioning

The position property specifies the type of positing method used for an element

- Static - Default, not affected by top, bottom, left, and right properties
- Relative - Positioned relative to normal position, affected by top, bottom, left, right
- Fixed - Positioned relative to viewport, leaves no gaps affected by top, bottom, left, and right
- Absolute - Positioned relative to nearest ancestor (usually inside Relative) affected by top, bottom, left, right
- Sticky - positioned based on users scroll.

Link

CSS: Backgrounds

Backgrounds are yet another way you can really enhance the visual appeal of your site

1. Find a background image by google search
2. Save that file to your /assets/images/your-image.png
3. Create a div with a class background image
4. In your CSS reference your image as a “background-image”
    a. background-image: url(‘../images/your-image.png”);

Try playing around with colors as well

CSS Background property

Hang in there I know...

CSS: Image Optimization

- When talking about performance, images are a big way to increase performance
  a. Download a **LARGE** Google Image
  b. Open https://tinypng.com/
  c. Drag & Drop or Select from filesystem
  d. Compare Images
- Do note I have seen issues with this and shadows on .png files with terrible results

CSS: Loading in Styles

- CSS can be brought in with various methods
  - External Files
  - Embedded <style> blocks
  - Inline Styles

1. Open /class-directory
2. Within /assets/stylesheets
   a. New File > styles.css
   b. Add a Comment: /* CSS Comment */
3. Create css-styles.html
4. Add <style> tag in the head
5. Load in styles.css

```
<!doctype>

<html>

<head>

<title></title>

<link rel=”stylesheet” type=”text/css” href=”./assets/stylesheets/styles.css” />

<style></style>

</head>

<body><div class=”myBox”>...</div></body>

</html>
```

Week 4: Homework

- Start Designing your Website
  - Designs for:
    - Media
    - Merch
    - Tour Dates
- Read Chapters
  - 12 & 14