GENERAL ASSEMBLY 6.2

Front-End Web Development

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Start your engines!

- Connect to wifi
- Open your text editor
- Open GitHub desktop and GitHub website
- Open schoology

Submit your assignment

- Please submit assignment 3
- REMINDER: No “auto” extensions - if you need an extension please ask me personally

Reminder - Graduation requirements

- To graduate from the course, students must:
  - 1. complete at least 80% of assigned homework
    - 8 assignments so you can only miss one!
  - 2. attend 80% of classes - so you can miss up to a maximum of four
  - 3. satisfactorily complete the final project (as determined by the course instructor and stated on the class syllabus).

What are we going to cover today?

- Lesson 6 Review - 5 min
- Introduction To Programming - 75 min
- Break - 15min
- Introduction to Javascript
  - What JS Can Do - 20min
  - Reading JS - 15min
  - Lab - 30 min

LESSON 6 REVIEW

FEWD - LESSON 6

WIREFRAMES

FEWD - LESSON 6

CSS HEIGHT AND MARGINS COLLAPSE

CSS height and margins collapse

- Take care when choosing to use height
- For the most part you want the height of your elements to be natural according to their contents, you may want to specify a min-height, but rarely a height.
- Element padding and margins should dictate spacing.

- Vertical margins in CSS collapse!
- This is a good thing but can be a pain.

  https://css-tricks.com/what-you-should-know-about-collapsing-margins/

  http://www.sitepoint.com/web-foundations/collapsing-margins/

FEWD - LESSON 6

CSS SELECTORS

Basic selectors

- Tag or Type selector

```
p { }
```

- Class selector

```
.error { } /* all elements with class=“error” */
p.error { } /* all p tags with class=“error” */
```

- Id selector

```
#main-nav { }  /* all elements with id=“main-nav” */
div#main-nav { } /* all div tags with id=“main-nav” */
```

Descendant selector

```
div p { }
```

- Selects all p tags within div tags

```
<div>
    <h2>Bobby</h2>
    <p>Hello</p>
    <section>
        <p>All the way down the tree</p>
    </section>
</div>
<div>
    <h2>Richard</h2>
    <p>Hi</p>
    <p>My name is</p>
</div>
```

Child selector

```
div > p { }
```

- Selects all p tags that are direct children of div tags

```
<div>
    <h2>Bobby</h2>
    <p>Hello</p>
    <section>
        <p>Not me I’m a grand child</p>
    </section>
</div>
<div>
    <h2>Richard</h2>
    <p>Hi</p>
    <p>My name is</p>
</div>
```

Adjacent sibling selector

```
p + ul { }
```

- Selects all ul tags that direct follow p tags

```
<div>
    <h2>Bobby</h2>
    <p>Hello</p>
    <ul>
        <li>List</li>
    </ul>
    <h2>Richard</h2>
    <ul>
        <li>Not me I follow a ul not a p</li>
    </ul>
</div>
```

Attribute selectors

img[src="small.gif"]

- Selects all img tags with attribute src="small.gif"

[src="small.gif"]

- Selects any tag with attribute src="small.gif"

[alt]

- Selects any tag with an alt attribute regardless of its value

Pseudo class selectors

- We spoke about these last lesson, they target element ‘state’ that the browser defines for you
- eg

:first-child

:hover

:active

:odd()

:nth-child()

Pseudo element selectors

- Similar to pseudo classes pseudo elements are defined by browser and not you
- eg

p:first-line { }

p:first-letter {font-size: 200%; font-weight: bold; }

:before { }

:after { }

- Allow you insert content before or after an elements html content - very powerful!

Selector specificity

- More specific selectors trump less specific ones

```
div p.error {color: blue; }

p.error { color: red; }

.error { color: green; }
```

https://developer.mozilla.org/en/docs/Web/CSS/Specificity

https://css-tricks.com/specifics-on-css-specificity/

Even more selectors: http://code.tutsplus.com/tutorials/the-30-css-selectors-you-must-memorize--net-16048

FEWD - LESSON 6

BACKGROUND IMAGES

Background images

- CSS background images are good for decorative images
- Syntax:

```
body {
     background-image: url(“some-background.jpg”);
     background-repeat: no-repeat;
     background-size: 300px 100px;
     background-position: top right;
}
```

- Shorthand

```
body {   background: url(“some-background.jpg”) no-repeat top right;   }
```

FEWD - LESSON 6

HTML BOILERPLATE

HTML Boilerplate

- Best practice starting point for web sites and web apps.

https://html5boilerplate.com/

FEWD - LESSON 7

INTRODUCTION TO PROGRAMMING

What is a Program

- A program is a set of instructions that you write to tell a computer what to do

What Is Programming

- Programming is the task of writing those instructions in a language that the computer can understand.

Becoming A Programmer

- It isn't about the programming language. It is about changing how you think.
- We have to know how the computer thinks to change how we think.

How Computers 'Think'

- Well they don't really think - otherwise this guy would be teaching you
- While computers don't think, they act as if they do, by sequentially executing simple instructions.
- The only things a computer knows are the things we tell it.

Pseudo Code

- Pseudocode is the process of writing a program without using the syntax of a programming language.
- Pseudocode is a mixture of natural language and high-level programming constructs. For example, If the door is closed and I want to exit the room, then open the door.
- Pseudocode is for programming what wireframes are for web design.

Exercise – Thermostat

KEY OBJECTIVES

Understand programming and programming constructs such as variables, loops and conditionals

AGENDA

30 mins	1. Class discussion, write some pseudo code together

DELIVERABLE

RESOURCES

None

Exercise - Rock Paper Scissors

KEY OBJECTIVES

Understand programming and programming constructs such as variables, loops and conditionals

AGENDA

30 mins

1. Get into groups of 3-4
2. Write pseudo code to program a computer to play the game rock paper scissors.
3. Write 1 line on a post-it note and paste on wall, window.

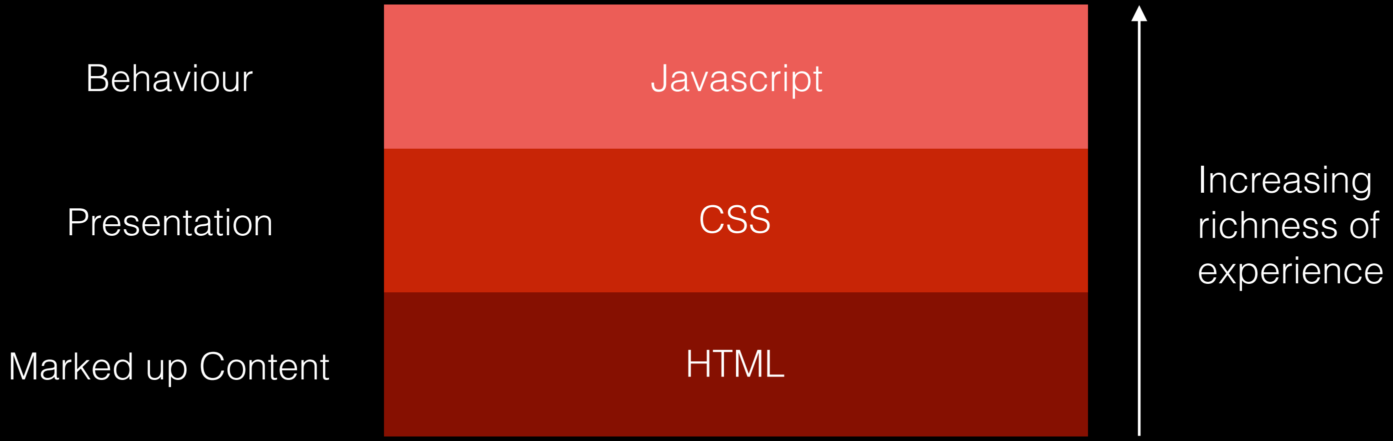
DELIVERABLE

RESOURCES

None

FEWD - LESSON 7

INTRODUCTION TO JAVASCRIPT



Behaviour — Javascript

Presentation — CSS

Marked up Content — HTML

Increasing
richness of
experience

What JS Can Do!

http://www.stepsproject.org.au/

http://www.industrysuper.com/

http://remstep.org.au/

https://1d3f4d2cdae4973a2a77ca403512d0f826a5fa33.googledrive.com/host/0B5mepx8e31jDVFlmcUFpYlRIOG8/#q0

GA front row video: What can I do with JavaScript

https://generalassemb.ly/online/videos/what-can-you-do-with-javascript/cinema?

chapter=0

Reading JS

http://codepen.io/anon/pen/JGmavb

Lab

http://codepen.io/nevan/pen/shtLA

Fix the traffic light!