Front-End Web Development

Albert Penticoss
Web Designer, University of Melbourne

Who am I?

… to be teaching you about front-end coding

‣ I made a career change to web design and development in 2007

- ‣ Graduate Diploma in Internet and Web Computing, RMIT - 2002-2004

- ‣ Advance Certificate of Graphic Design, Grenadi school of design (now TRACTOR) - 2006

‣ I have mainly worked in the education sector but have also worked commercially and freelance

https://youtu.be/24a9ty1m3ZU

Aviel Goh
your teaching assistant

‣ I just completed the Web Development Immersive course at the end of last year

‣ I previously worked as a tax consultant and now I'm looking to get into the technology sector

Who are you?

‣ Name

‣ Occupation

‣ Why do you want to learn to code?

‣ Fun fact about yourself, something you think we wouldn't guess about you, or something that interests you.

Why learn to code?

Its a great time to learn to code!

CODING IS
FUN!

‣ Cross browser compatibility so much less painful than it used to be!

‣ Responsive design necessitates some design in the browser.

‣ Prototyping is more fun than writing a specification - and great for early user testing.

‣ There is a place for non-coding designers, a place for coding designers and place for pure developers in the industry - it all depends on project scale and approach. No one size fits all model.

Homework assignments and final project

‣ 1 homework assignment per week for first 8 weeks:

  ‣ Set Wednesday, due following Monday, feedback by following Thursday

‣ Project is website of your choice with following milestones:

  ‣ Milestone 1 Week 05 Project Proposal / Wireframes

  ‣ Milestone 2 Week 07 Draft of HTML / CSS (no JS)

  ‣ Milestone 3 Week 08 First draft of JS

  ‣ Milestone 4 Week 09 Updated Rough Draft

  ‣ Milestone 5 Week 10 Final Presentation

Team rules

‣ We are a team, we all need to work together to complete our mission, so lets agree on some team rules:

  ‣ Be on time - Start at 6pm sharp and Finish at 9pm sharp
                    we have a lot to cover each lesson

  ‣ Phones on silent and put away

  ‣ Laptop lids down during lecture portions

Have you got your text editor ready?

‣ I'm going to use http://brackets.io/

‣ Feel free to download it now, or just use what ever you have already.

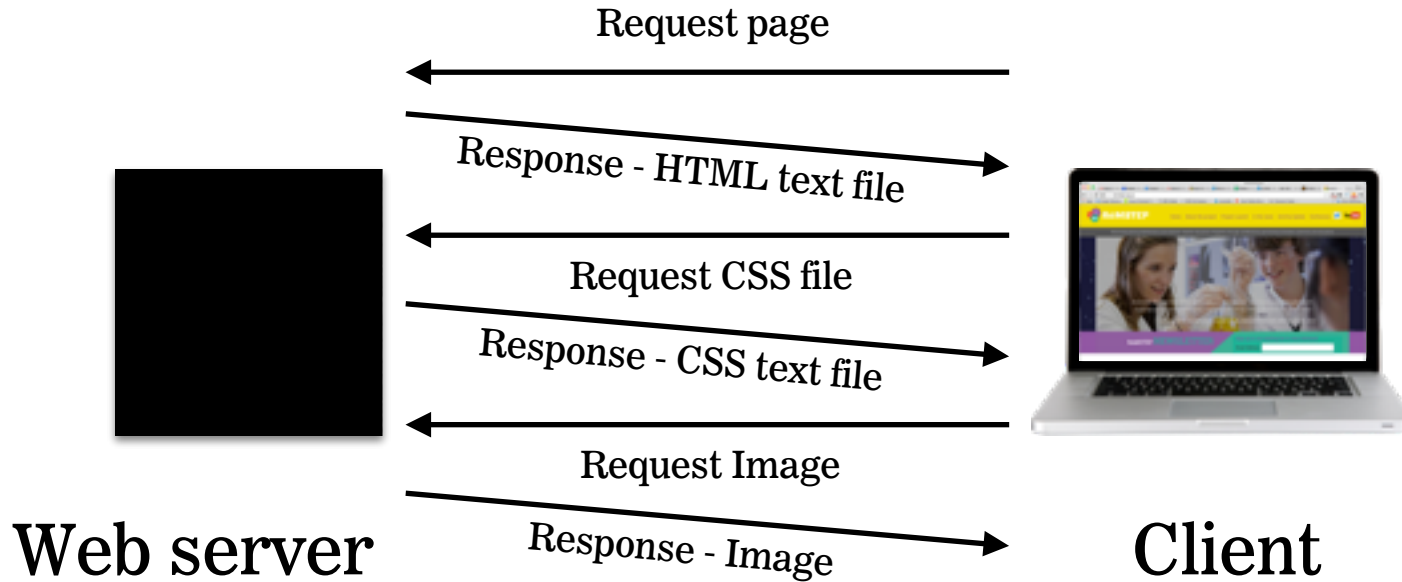‣ Also connect to wifi, if haven't done so already.
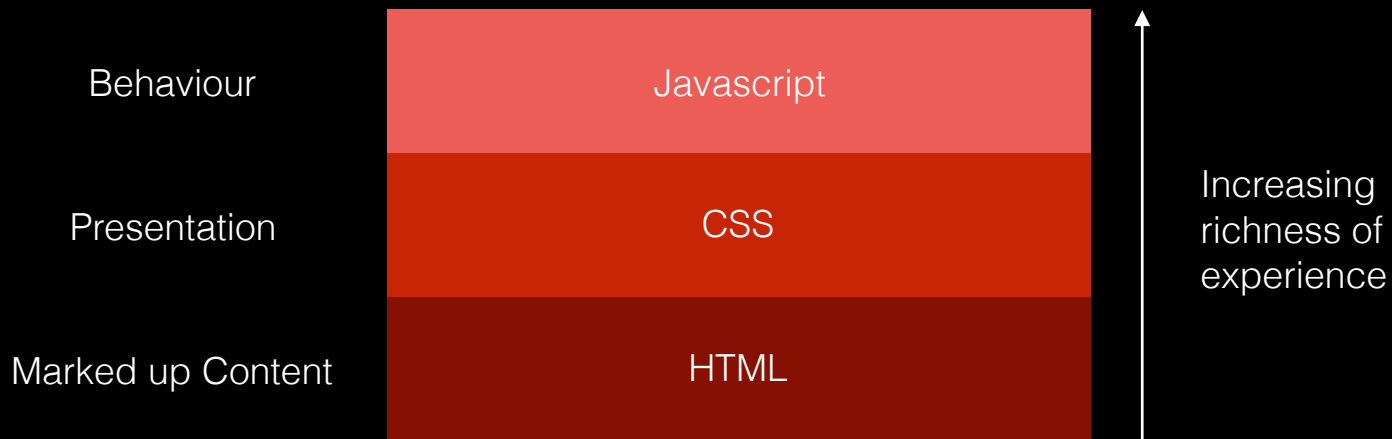
HTML (& CSS) BASICS

What are we going to cover today?

‣ Introduction - 10 min ✓

‣ How web sites work - 5 min

‣ Adding structure (HTML) - 30 min

   ‣ Activity: Mark-up GA Press Release - 20 min

‣ Practice creating a Github repository and syncing your files - 15min

‣ Break - 15 min

‣ External Style Sheets (CSS) - 20 min

   ‣ Activity: GA Press Release Styled - 15 min

‣ Lab Time - 50 min

HOW WEB SITES WORK

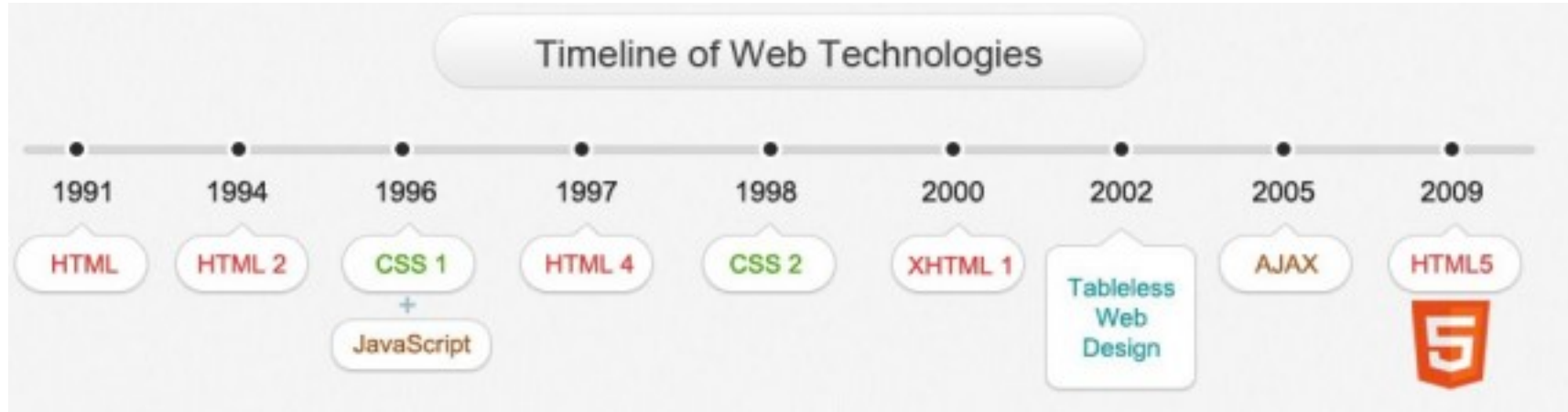Behaviour   Javascript

Presentation   CSS   Increasing
                                            richness of
                                            experience
Marked up Content   HTML

ADDING STRUCTURE (HTML)

HTML *Hypertext Markup Language*

- ‣ HTML is not a programming language!
- ‣ We us HTML to markup our content to give it structural meaning.
- ‣ The web browser relies on this markup to present the content in a visually meaningful way.
- ‣ Screen readers rely on this markup to present the content in a audibly meaningful way.
- ‣ Search engines and other computer programs rely on this markup to index the content and extract or display important parts.

HTML History

Note: image retrieved from http://www.onbile.com/info/wp-content/uploads/2013/09/Timeline-of-web-technologies-639x168.jpg on October 1, 2013.

HTML vs HTML5

‣ HTML5 is HTML with a few additions
  ‣ New structural elements such as <main>,<section>,<nav>
  ‣ In-built support for video, audio and scripted graphics (<canvas>)
  ‣ New APIs e.g. Web storage
‣ The Doctype tells you if the page is HTML5 <!doctype html>

Barebones HTML5 file

```html
<!doctype html>
<html>
    <head>
        <meta charset="utf-8">
        <title>Title</title>
    </head>
    <body>

    </body>
</html>
```

HTML Syntax

‣ A HTML element is piece of content on a page defined by markup.

\<h1\>I am the main heading\</h1\>

start tag   end tag

‣ Some elements are self closing \<img/\>, \<br/\>, \<hr/\>

‣ Elements can have attributes \<a href="http://google.com"\>Google\</a\>

attribute

HTML Syntax

‣ An element is piece of content on a page defined by markup.

HTML Syntax

‣ Elements can have attributes

HTML Semantics

‣ <u>Semantics</u> are important in HTML!

‣ Always call a 'bucket a bucket' in HTML.

   ‣ e.g., if a heading is the main heading of the entire page use the <h1> tag to mark it up. No other heading on the page can then be a <h1> because they should all be subordinate to this page.

   ‣ <table> should be used for tabular data! not for layout.

HTML Elements

- Heading Elements

<h1>Largest Heading</h1>

<h2> . . . </h2>

<h3> . . . </h3>

<h4> . . .</h4>

<h5> . . . </h5>

<h6>Smallest Heading</h6>

- Text Elements

<p>This is a paragraph</p>

<code>This is some computer code</code>

- Unordered list

- List item

First item Next item

- Hyperlink

First item

HTML Elements

‣ Where do I find all the elements I can use?

 ‣ The HTML5 specification - http://www.w3.org/TR/html5/

 ‣ HTML5 Doctor - http://html5doctor.com/

 ‣ Mozilla developer network - https://developer.mozilla.org/en/docs/Web/HTML/Element

 ‣ w3schools - http://www.w3schools.com/html/default.asp

 ‣ Google!

ACTIVITY
GA PRESS RELEASE

EXERCISE – GA Press Release

KEY OBJECTIVES

Read with understanding and apply the correct tag.

AGENDA

20 mins   1. Code along with instructor

DELIVERABLE

Markup our press release

RESOURCES

Code editor
Starter code

ACTIVITY GITHUB

EXERCISE – GitHub

KEY OBJECTIVES

Learn how to setup a repository in GitHub and sync

AGENDA

15 mins   1. Follow along with instructor

DELIVERABLE

Github repository for coursework

RESOURCES

GitHub account
Github Desktop app

EXTERNAL STYLE SHEETS (CSS)

CSS *Cascading style sheets*

‣ We us CSS to style our HTML pages.

‣ CSS can be used to control positioning and visual appearance of HTML elements.

‣ Cascading refers to how rules are applied, the browser applies its default rules first, then rules from external stylesheets, then rules from styles within the HTML page.

CSS – Syntax

selector {

    property: value;

}

A selector selects the elements you want to apply the style to. Property is the name of the CSS property you want to set, value is the value you want to use.

e.g.

h2 { color: red; } will make all your h2's red.

CSS – Linking external Style sheet

In most cases we want to put all our styles in a separate file to our html and link it like so:

```html
<!doctype html>
<html>
    <head>
        <meta charset="utf-8">
        <title>Title</title>
        <link href="my.css" type="text/css" rel="stylesheet"/>
    </head>
    <body>

    </body>
</html>
```

CSS properties

‣ Where do I find all the CSS properties I can use?

  ‣ The CSS specifications - https://www.w3.org/Style/CSS/
  Overview.en.html

  ‣ Mozilla developer network - https://developer.mozilla.org/en-US/
  docs/Web/CSS/Reference

  ‣ w3schools - http://www.w3schools.com/css/default.asp

  ‣ https://css-tricks.com/

  ‣ Google!

EXERCISE – GA Press Release styled

KEY OBJECTIVES

Create and link an external style sheet.
Practice simple CSS styling.

AGENDA

15 mins   1. Code along with instructor

DELIVERABLE

Styled press release

RESOURCES

Code editor
Exercise 1 code

LAB TIME

EXERCISE – Chocolate Chip Cookie Recipe

KEY OBJECTIVES

Practice HTML and CSS
Practice use of web
development tools

AGENDA

50 mins

1. Follow the instructions in starter code file to create a web page for a cookie recipe.

DELIVERABLE

Marked up and style cookie
recipe page

RESOURCES

Code editor
Starter code

WELCOME DRINKS and SNACKS