**Coding Course:**

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***DAY 1***

- Some OS want you to use certain programming languages

- Some translation tools (PhoneGap) - but imperfect (not native to that OS)

- Common modern languages: Ruby, Javascript. Apple new language is Swift. Javascript is a lot like PHP and Swift.

- JQUERY is a library of code written to make it easier to write. Works on every browser, very efficient & open source. Its for Javascript

- Decisions, repeating, remembering, displaying. Not good at pattern recognition (HTML is good for telling computers what stuff is - establishing context)

- W3C build HTML, CSS, JS - meet every few months & discuss updates

- Web Application gives you feedback v Website

- iOS simulator - to test stuff (xcode - apple developer toolkit)

- Web Server - sends copy of text, images, instructions/layout to display the page, instructions on usage

- Inspect Element displays code HTML. You can change what you see locally

- Front end - interface (text, image, colours, layout). Runs locally. Gets copied to your machine. Stored temporarily on memory & cached for future usage.

- Back end - runs remotely

- RAM = random access memory. Temporary storage, very fast. Anything program requires gets stored.

- Cache - temporary storage of websites. Web browser has a limit. Saved in RAM.

- Single threaded - can think of one process at the same time. Multi threaded, etc.

- Browser history then moves to hard disk - just names & URLs

- Cookies - text files that save

- Render - making website appear

- Front End - JS, HTML, CSS

- Back end - PHP/Java/Pearl/Ruby. Pulls info out of a database. Cant have form without having server

- HTTP (hyper text transfer protocol) request - when you go to a website, it does a HTTP Request to the web server. Language between website and server. Server responds with HTTP File

- 404 is HTTP error when page isn’t there. 200 is if they found the page

- You can run your own web server… but will run very slowly if multiple requests

- DNS (domain name server) is like a telephone book: names v IP address

- Computer then speaks to WiFi router, which then passes it on to a few switches, and then servers

- FB needs central database.. Don’t do Silo’ing.

- HTTPS - encrypted so only computer and server know

- Proxy server only tells which proxy its going to - so you can watch iPlayer from outside the UK

- Web browser page auto-fills are stored by web provider

- Turn off cookies so it doesn’t know who you are

- Ghostery shows you what’s being data-fied

- Know your IP address, rough location, time, and pages without logging in. Next time, cookie is the same so links it.

- View-> Developer-> Developer tools is same as Inspect Element

- When develop in Chrome it looks v similar to Safari

- Agile (iterative) v Waterfall

- First Best or Free

- Wireframe - Axsure, Balsamiq, Wireframe.cc, OmniGraffle

- Wireframe, itation, written overview of functional specifications - more specific, the better (less interpretation for a developer)

- QA’s (quality assurance) needs to know what they are testing too (shouldn’t do internally as you know

- Allocate a lot of time to testing

- Structural / architectural problems is when different technologies don’t talk well together. API’s as an example.

- emails are written by html. They are basically web pages sent by email

HTML

- hypertext (links) markup (highlights - to allow other pages to understand what things are and whats it about) language (communication).

<h1> is opening tag

..content..

</h1> closing tag

<h1>Hello World<h/1>

h1 - main header. should be accurate content. important for google search. ‘h’ are like a content page.

google reads html, runs javascript to make sure you aren’t just gaming it.. good content is still the best.

codepen.io

HTML doesn’t do layout or styling.. thats for CSS

<!— means its just comments

WebPlatform.Org - cheat sheet for HTML language

CSS

- Cascading Stylesheets

- visual styling of website

- can create rules & exceptions

h1 {color: red;}

spacing doesn’t matter.. colour = proper, red = value

CSS cheat sheet will really help

Sublime text points out mistakes

Have to build front end design for all different size brackets. Responsive design - send all CSS to web server and they decide

CSSZengarden.com

if you write another rule thats the same, it will overrule the prior one.. done for backward integration (but if more specific (body h1 v h1) then uses more specific)

can put <span> to customise specific letters, etc. won’t carry to further sections

/\* … \*/ is to leave comments

JavaScript

Behavioural interaction when page is loaded - can detect how far down and display certain things

Building a site

- Good to have all files in one place. Name them in lower case & no spaces.

**HTML**

every html starts with Doctype <!doctype html>

<head> <body> elements are ‘children’ to <html>

*head:*

info about the page (meta-data)

page title (what appears when you search)

*body:*

heading <h1>

image <img src=“…” alt=“Alexander Hersham” width=“200")  [image, source, text to describe].. content images should be in html, decoration in css

<p> are paragraph tabs.

Class Names: Can also do <p class=“xyz”> so you name the paragraph & can refer to it in CSS. Can do 'Class’ with anything. Classes are bracketing various things together. Then need to refer to it in CSS as a general class. If you put a space, then its multiple class names. Can also do this with images - as you can’t alter design of multiple images otherwise. Specificity is very important

<ol> ordered list

<li> listed item

<ul> unordered list

<a href= “…:> to do links (a=anchor)

Twitter (underneath so its blue/underlined)

<http://validator.w3.org/> - check the code

Character encoding - how each letter is disclosed to the browser. i.e. Japanese not just English

<meta charset="utf-8”> … massive character set

meta is info about itself

For bringing in CSS:

<link rel="stylesheet" href="css/style.css”>

because it knows where Index file is, it will find “css/style.css” relative to it

<div> gives you boxes to segment things. Name column, put paragraphs and headings, width, tell it to float left. padding gives space between borders, border-right (column:first-of-type { border:none; } removes column on first box

**CSS**

body {

background-color: #F5F7C6; (colorpicker.com)

font-family: helvetica, arial, sans-serif;

/\* this gives you fallbacks for fonts\*/

}

h1 {

text-align: center;

font-size: 40px;

}

h2 {

text-align: center;

letter-spacing: 5px;

font-weight: normal;

font-style: italic;

text-transform: uppercase;

}

img {

border: 15px dotted #5C328F;

border-radius: 50%;

/\*making it round\*/

margin: 0 auto;

/\* no margins on top/bottom but automatic width but need to display as block\*/

display: block; (you can change block so that you have images side by side - images are in line by default)

}

p,

ul,

ol {

line-height: 1.4;

list-style: none;

/\*the ol boxes the margin, so still have a margin of padding on the righ\*/

padding-left: 0;

font-family: serif;

/\*impacted all of p / ul / ol given what we've written\*/

}

a {

text-decoration: none;

color: green;

font-weight: bold;

}

a:hover,

a:focus {

/\*this allows it to change when user is hovering over it\*/

text-decoration: underline;

color: blue;

}

***DAY 2***

- The phone icon next to Elements on Insect can show you what its like on a handheld with various speeds

- browsershots.org also does this

Margin - away from each other

Border - lines around

Padding - space around

Content

Can do them all independently (Margin-Top)

Can download any fonts, but very heavy files & takes time to load for the user & EACH user has to be ok to use it (can pay on their behalf)

linotype.com (pay)

Google.com/fonts (free)

JQuery ($)

JQuery = a bunch of JS written by very talented coders that others find useful. Used on 85% of websites

When you open a website, the browser reads through the HTML & creates map of elements of page (DOM - document object model)

JS is linear

// When the page has loaded

$(function() {

// $ - calling JQUERY

// () - anonymous function to do certain things between the {}

//Hide the content

$('h3').next().hide();

//hide all content from the start

// When the user clicks on an h3

$('h3').on('click', function () {

// find the h3's withing the DOM, when they click, do something

// find the next element & hide it

$(this).next().slideToggle(50);

// whatever the element that was clicked on, find the next one & hide it

// the word (this) is important in JS

// slideToggle etc are all words JQUERY can do / gives meaning to

$(this).toggleClass('open');

//creating a class of open

});

});

// have to pull this into HTML, see last line before end of body

The CONSOLE section allows you to test stuff. Will also tell you where any mistakes are

Variables & Data in JS

Variables = how you store data in programme memory. Called variables as you can change it

Declare variables: var age

Assignment; age = 21

or.. var age = 21

Strings - text info.. use “xxx” - stops trying to interpret & just treats it as a lump of data. Can use single quotes or double quotes.

var userName = prompt('what is your name?’)

*good way of getting data off user*

Numbers - int: or float:.. you can do math with it.

when you ask for age, its a string, not a number.. so you have to convert from string into a number (prompt doesn’t allow you to pull in numbers)

age = parseInt(age);

Boolean - true or false