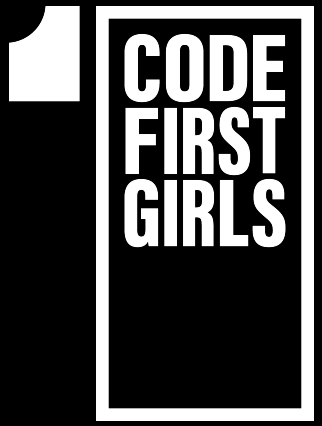
JavaScript MOOC SPRINT

AKA Introduction to JavaScript

Session 0: JavaScript Prerequisite



MOOC: JAVASCRIPT

AGENDA

01 What is JavaScript?

02 Introduction to HTML

03 Introduction to CSS

04 IDE Practice: Visual Studio Code

HTML SYNTAX

This session is optional content to provide you with some JavaScript Prerequisite. This session was a part of a JavaScript MOOC that covers the basics of HTML and CSS and the structure of a website.

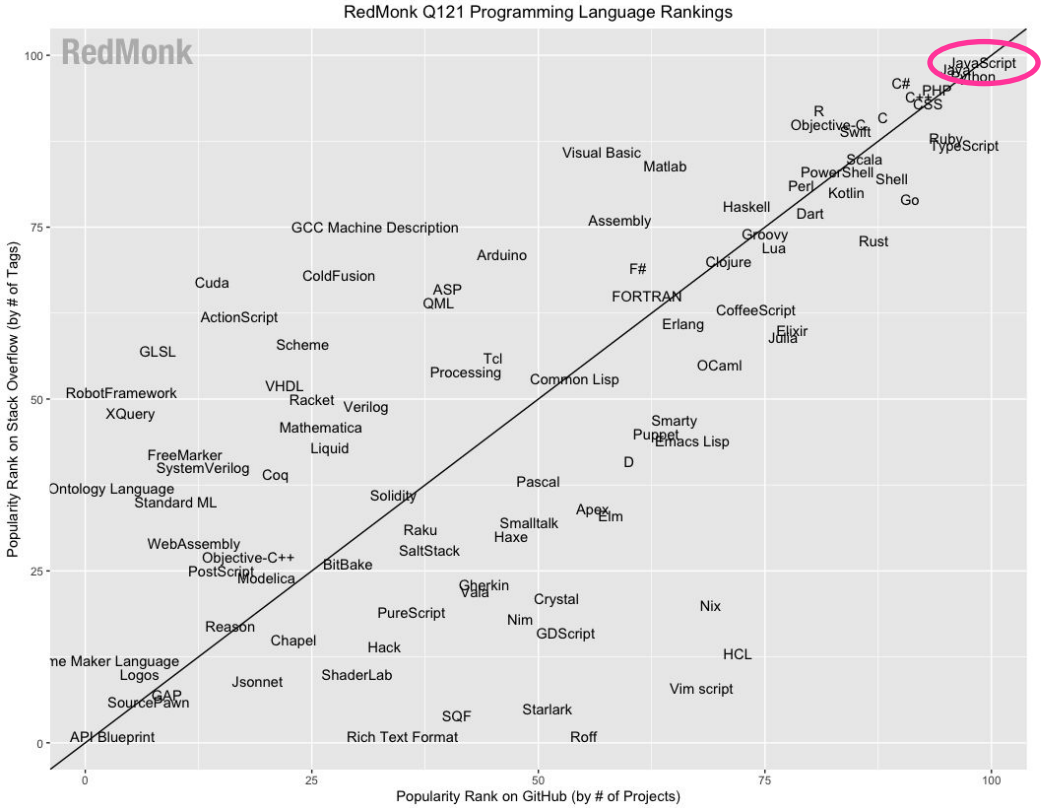
It’s important that you go through these slides and exercises along with the video here.

Happy coding!

“**JavaScript** is a high level, interpreted,
programming language used to make web pages more interactive”

“**JavaScript** runs on the client’s computer”

“**JavaScript** is platform independent”



"**JavaScript** is the top language, followed by Python and Java"

([published](#) in 2021)

Web application

Website

Smart watches

Games

Google Maps

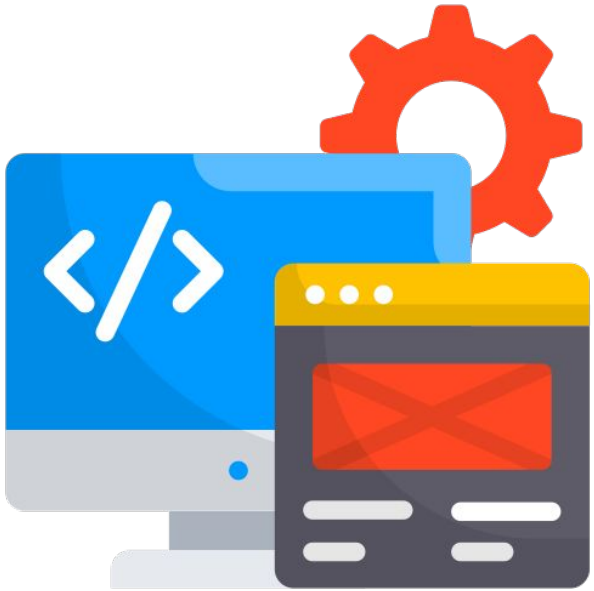
NETFLIX

MINECRAFT

"What can **JavaScript** do?"

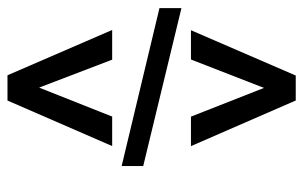
BEFORE WE GET STARTED

To be able to utilise JavaScript and fulfill its potential we need to have a prerequisite on the structure of a website



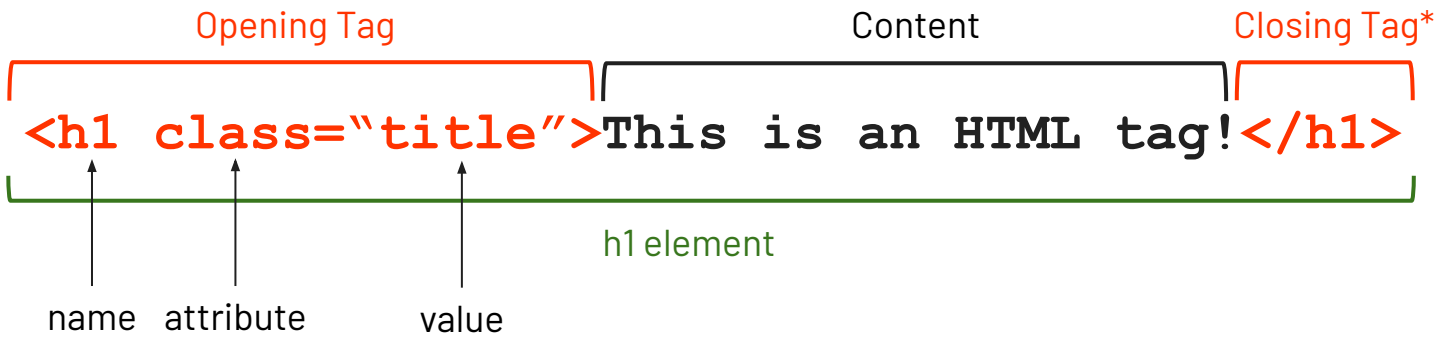
STRUCTURE OF A WEBSITE

WHAT IS HTML?



- HyperText Markup Language
- Used to build and define the structure of a web page
- Written using various HTML tags
- Saved in a .html file
- Let’s check out the syntax!

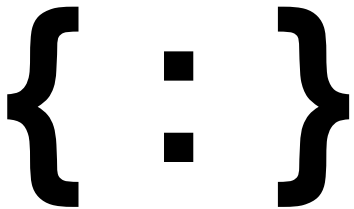
HTML SYNTAX



* Some elements don't need a closing tag!

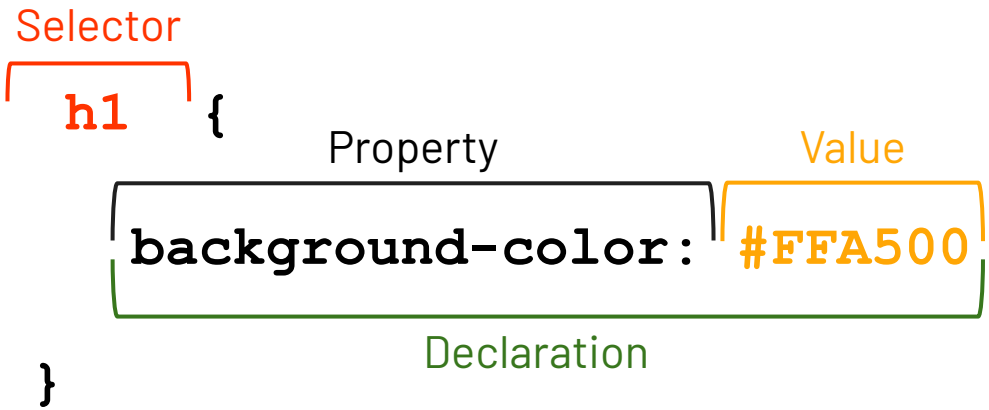
```
<img src="image-path" alt="alt text">
```

WHAT IS CSS?

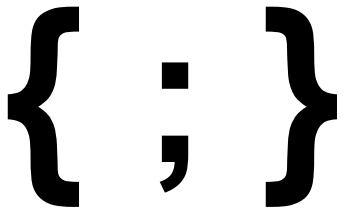


- Cascading Style Sheets
- Describes how HTML is displayed
- Styles typography, colours, responsiveness, etc
- Has multiple frameworks available: Bootstrap, Tailwind, Bulma, etc
- Saved in a .css file
- Let’s check out the syntax!

CSS SYNTAX


Selector
h1
{
Property
Value
background-color:
#FFA500
Declaration
}

WHAT IS JAVASCRIPT?



- Platform independent programming language
- Various data types
- Allows user interaction
- Handles complex functions and features
- Saved in a .js file
- We will see it in action later today

How does it all come together?

HTML, CSS & JavaScript come together to form your website. Let's think of it like building a house.

Building a “house”: HTML

HTML is the foundation of “our house” i.e our website! It’s dividing up the rooms, laying down the walls, setting up the spaces for the windows & doors, etc.

Building a “house”: CSS

CSS is the decor of “our house.” It’s deciding which colours to paint our walls, the shape, colour and size of your furniture, adding accent walls, hanging up some posters and paintings, etc. We use it to give our house a personality!

QUICK SIDENOTE: Accessibility

Your website should be available to the biggest pool of diverse people. This includes people at different technical expertise, people with disabilities, etc.

Hence why keeping accessibility in mind when building a website is crucial.

Accessibility Tools

Accessibility is the inclusive practice of ensuring there are no barriers that prevent interaction with, or access to, websites.

Your website should be accessible to people with disabilities, socio-economic restrictions on bandwidth and speed, etc

Many tools are available to allow accessibility into websites:

- ReciteMe: Web Accessibility toolbar
- Adobe Color Accessibility: Color blind safe colour palettes
- Bionic Reading: revises texts so that the most concise parts of words are highlighted.

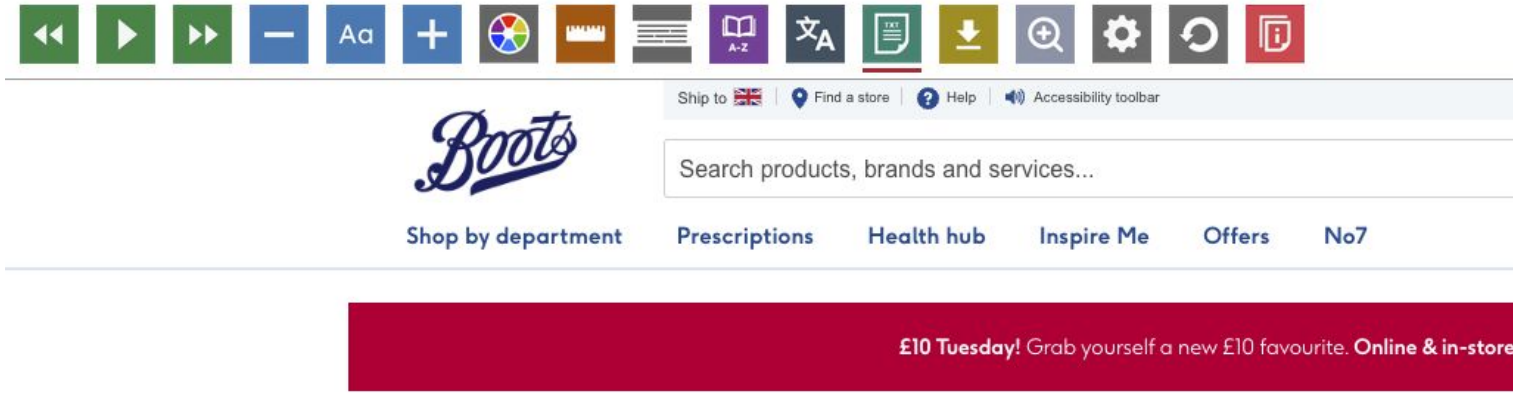
This also includes Responsiveness i.e ensuring that your website is usable on multiple devices with different sizes, settings, etc

More resources on Accessibility here

Accessibility Tool Example: ReciteMe

Let's take a look the Boots Pharmacy website.

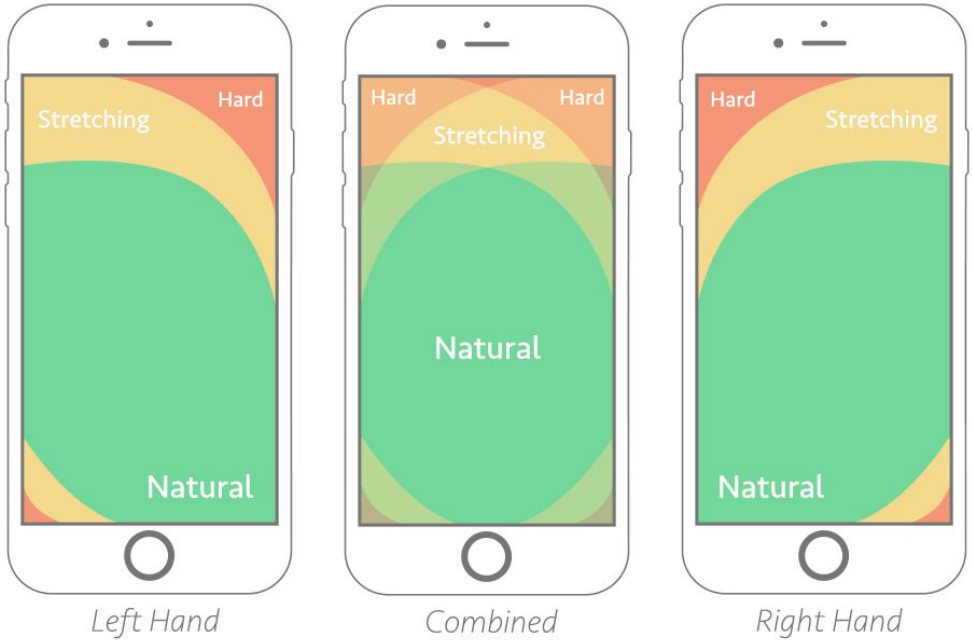
It has a "Accessibility Toolbar" integration, ReciteMe!



Accessibility Can Be Temporary

Some accessibility needs are temporary - it might be that the user is in a sunny room, so needs good contrast, or they're using their phone at night so they need a dark mode for your website.

They are carrying a small child, or are pushing a trolley/wheelchair so only have one hand available and need to just use one thumb

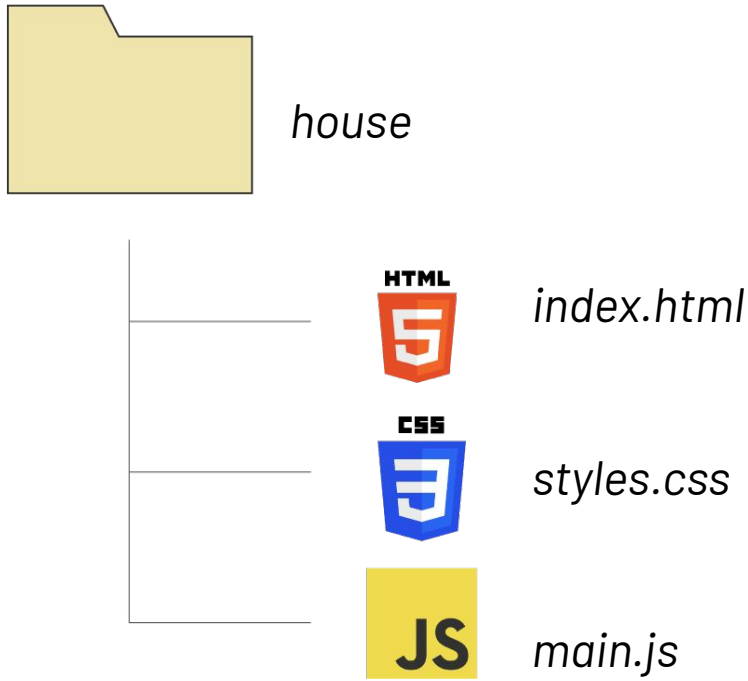


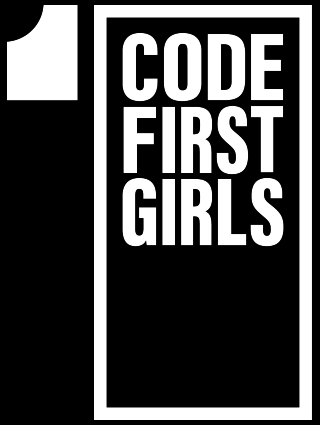
Building a “house”: JavaScript

JavaScript breathes life into “our house.” It’s getting the electricity working, getting the water to run through, using the tap to change from hot to cold, using the light switches to turn the lights on and off, getting the garage door to open with the press of a button, etc. Your house is now ready to be lived in!

Technically speaking...

- HTML builds the structure of our website
- CSS is linked to the HTML to add styling to our website
- JavaScript is linked to our HTML to add interactivity to our website and give it functionality

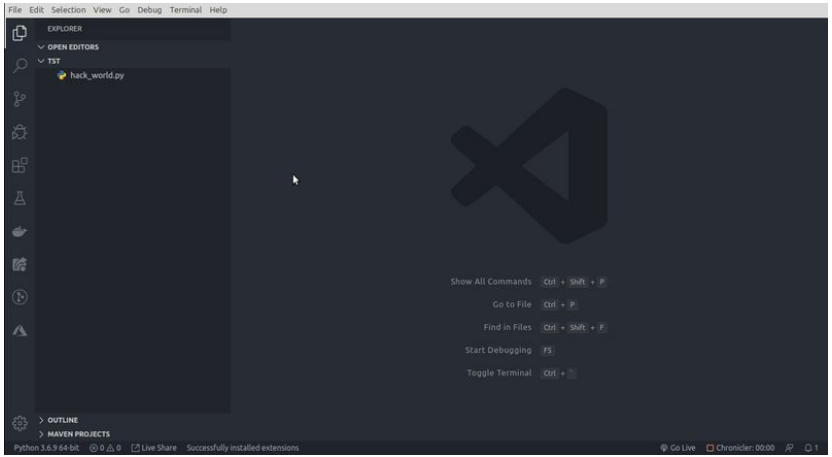




Let’s code!

Visual Studio Code

- VSCode is an IDE. It's the playground where we will create our document and make our website!
- It provides a lot of customization and packages to aid you in your coding journey
- We will be using VSCode through out the MOOC
- If you have a preferred IDE, feel free to keep using it!



PRACTICE

Let's create our first website!

Let's open up VSCode and go through the process of creating our documents and linking them together.

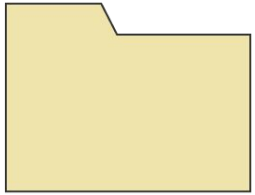
We will start with invitation-card folder where we will add the following:

- HTML document called *index.html*
- CSS document called *styles.css*
- JavaScript document called *main.js*

We'll add some code and go through the 'debugging' process and see what JavaScript does behind the scenes.

Let's get started!

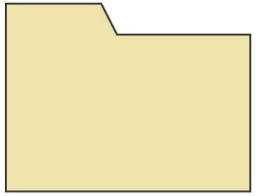
HTML



invitation-card

index.html

HTML + CSS



invitation-card

index.html

styles.css

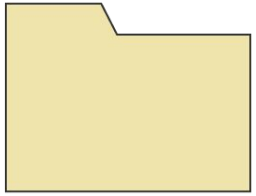
HTML + CSS

invitation-card

index.html

styles.css

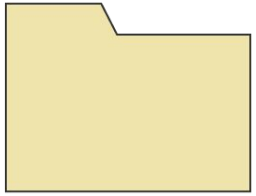
HTML + CSS + JavaScript



invitation-card

- *index.html*
- *styles.css*
- *main.js*

HTML + CSS + JavaScript



invitation-card

- *index.html*
- *styles.css*
- *main.js*

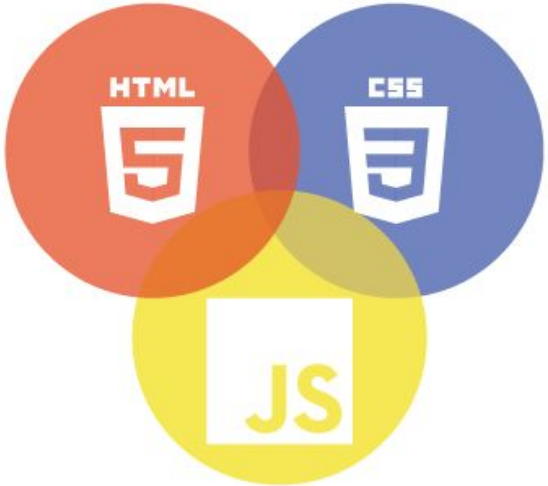
SUMMARY

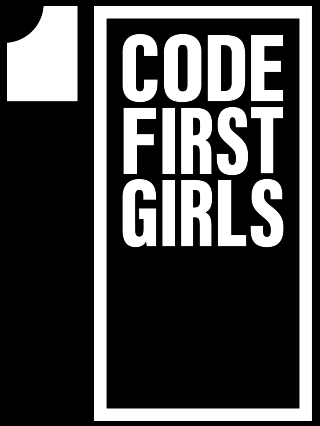
01 JavaScript is a very powerful language

02 In order to use it for a website, we need HTML & CSS

03 JS allows interactivity and adds functionality to your website

04 It is important to put JS linking at the end of your HTML doc





THANK YOU!