

# HTML Basics



# Learning Objectives

- Meet each other
- Discuss web development and its history
- Identify correct tags for content
- Apply HTML tags to a webpage
- Experiment with other HTML tags
- Describe and draw the Document Object Model
- Create and link an external stylesheet
- Experiment with CSS
- Be excited about learning to code!

# Agenda

- Introductions
- What is web development?
- What is HTML?
- What is CSS?
- Lab Time
- Questions and Answers

# Introductions



# Who am I?

- Teacher
- Programmer || Hacker || Code Enthusiast (Addict)
- Generative (Algorithmic) Artist
- Web Proponent
- @threeequal on Twitter

# Who are you?

- What is your name?
- What do you do?
- What got you interested in coding?
- Have you done any coding before?
- Potentially, what is your guilty pleasure?

# What is this course about?

- HTML
- CSS
- Responsive Websites
- Programming
- JavaScript
- Lots of other stuff

# Getting the most out of it

- Do much more than we ask
- Ask a lot of questions
  - Not just in class!
- Work together
- Embrace your inner nerd



# How I teach...

- I'm a dork
- I make lots of incredibly bad jokes
- Respectful interruptions are always welcome
- I'm very open about my methods
  - For example, I always wait ten seconds
- I'll try to keep it interesting
- I always want to keep learning

# Tools

- Google Chrome
- Github Atom Text Editor
- Slack
- Schoology

# Web Development?



# What is coding?

- Coding, programming... Mostly they are interchangeable
- Computers are very general machines
- Coding is teaching them how to do something very specific
- There are so many styles of programming
  - From making forms
  - To creating art and music
  - To teaching computers to think for themselves

# What is the web?

- Billions of connected devices through a series of networks

## **Is the internet and the web the same thing?**

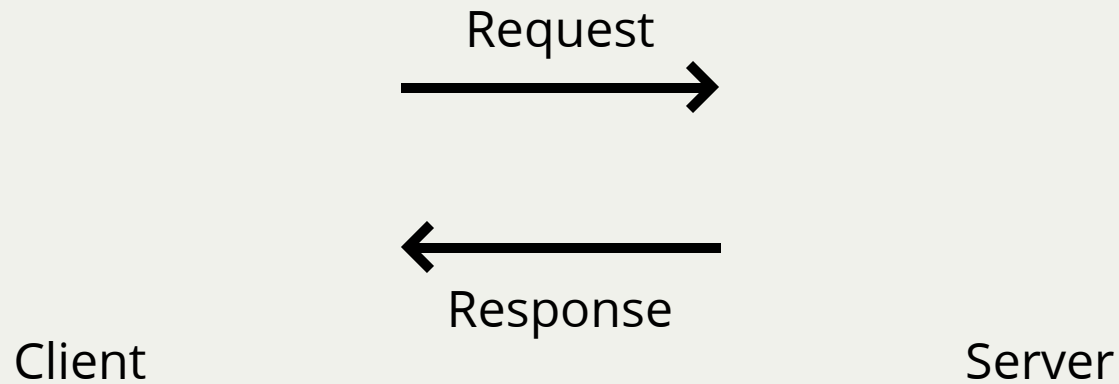
- Nope! The Web is a physical network of devices
- The Internet is the virtual network of information

# Where did it come from?

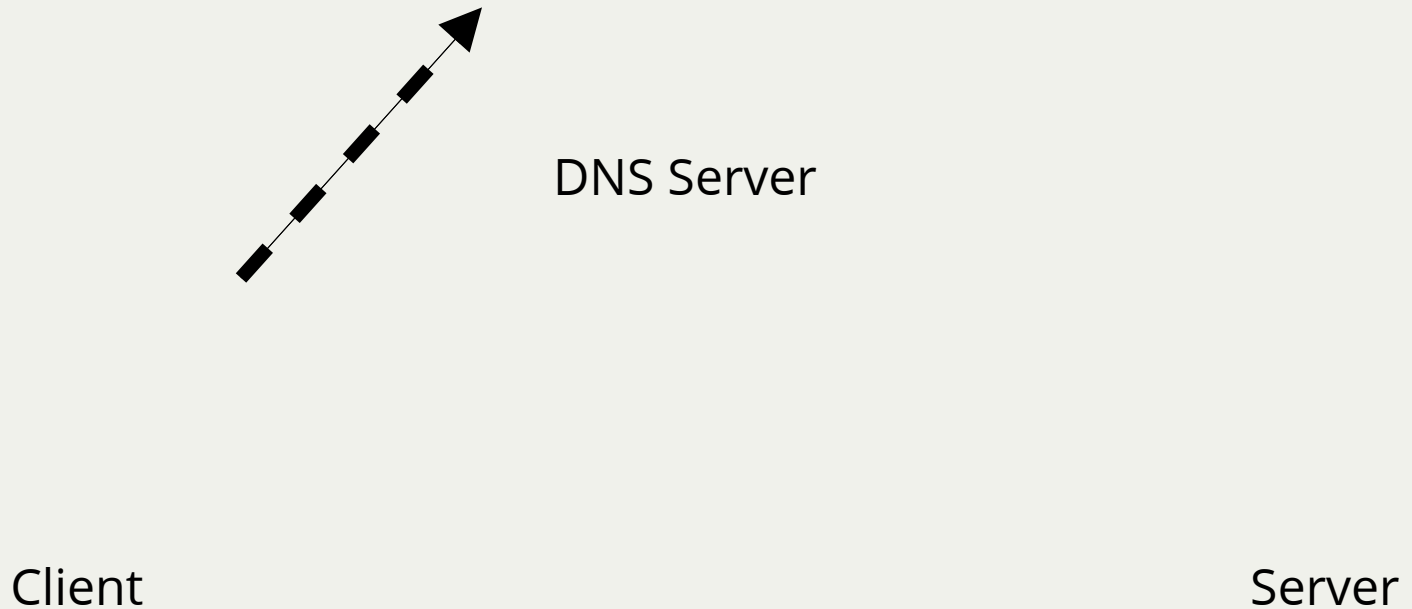
- J.C.R. Licklider came up with 'The Galactic Network' (Aug. 1962)
- ARPAnet in the 1960's for the US Government
- Vint Cerf and Bob Kahn invented TCP/IP in 1974

Then, Tim Berners-Lee released the "World Wide Web" in 1991, with this site

# How does it work?

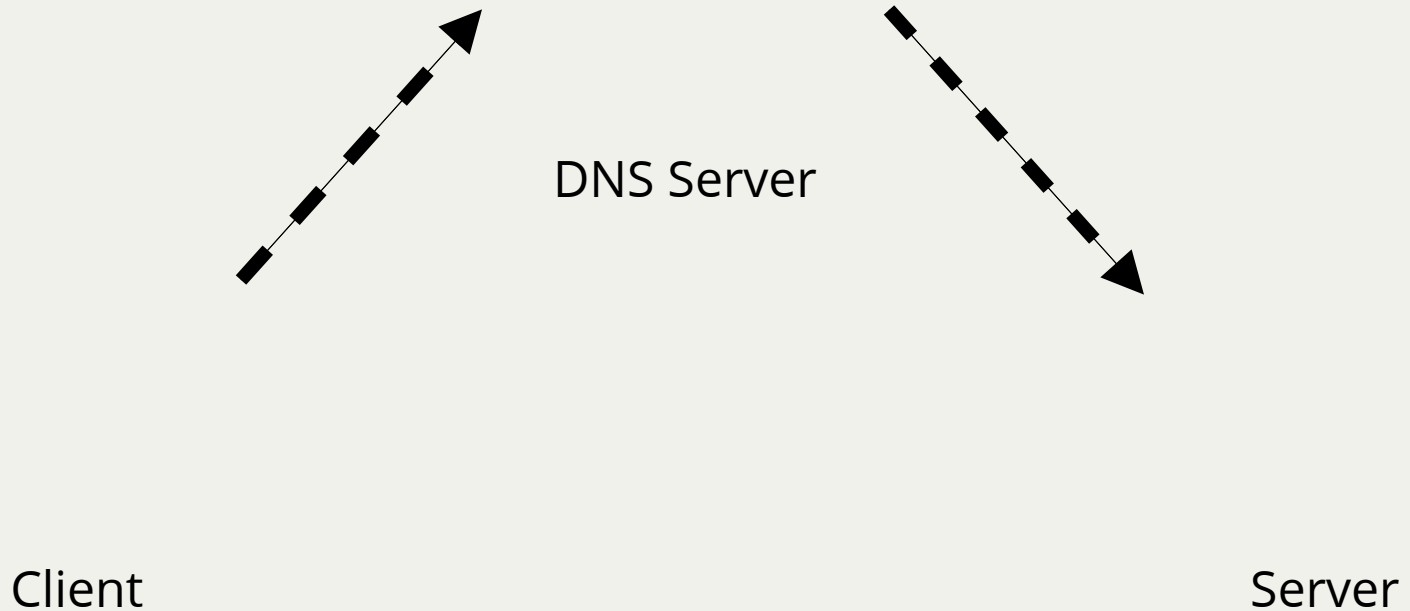


# How does it work?

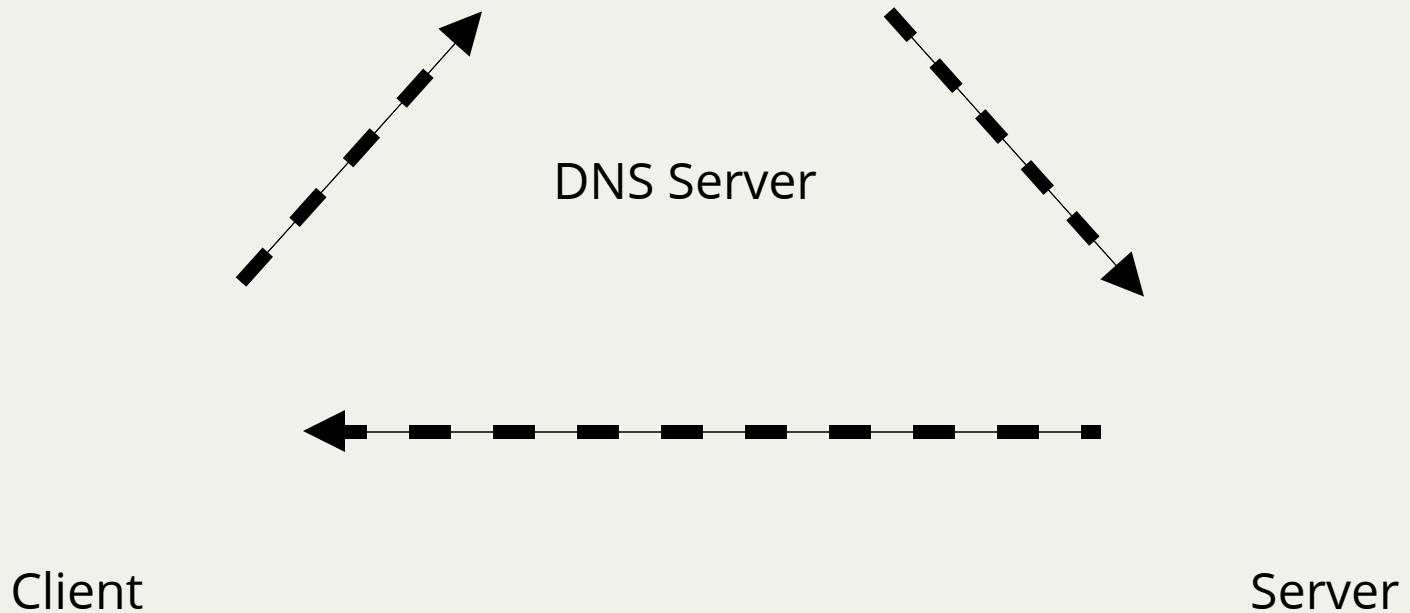




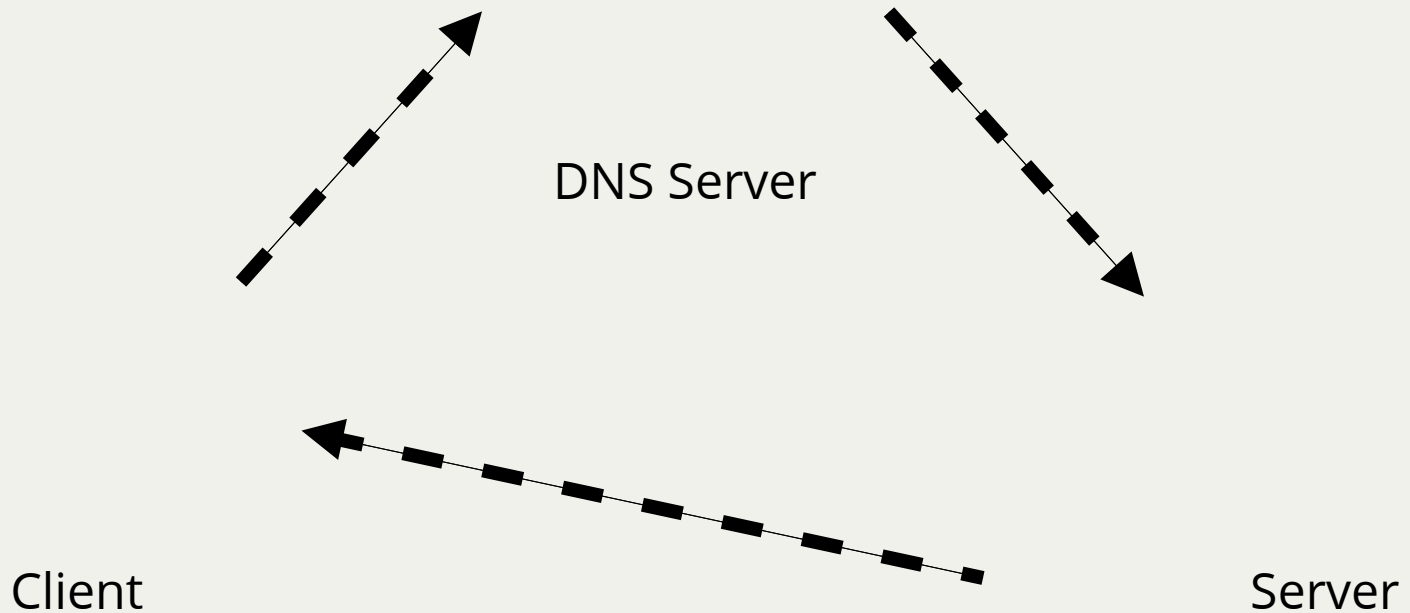
# How does it work?



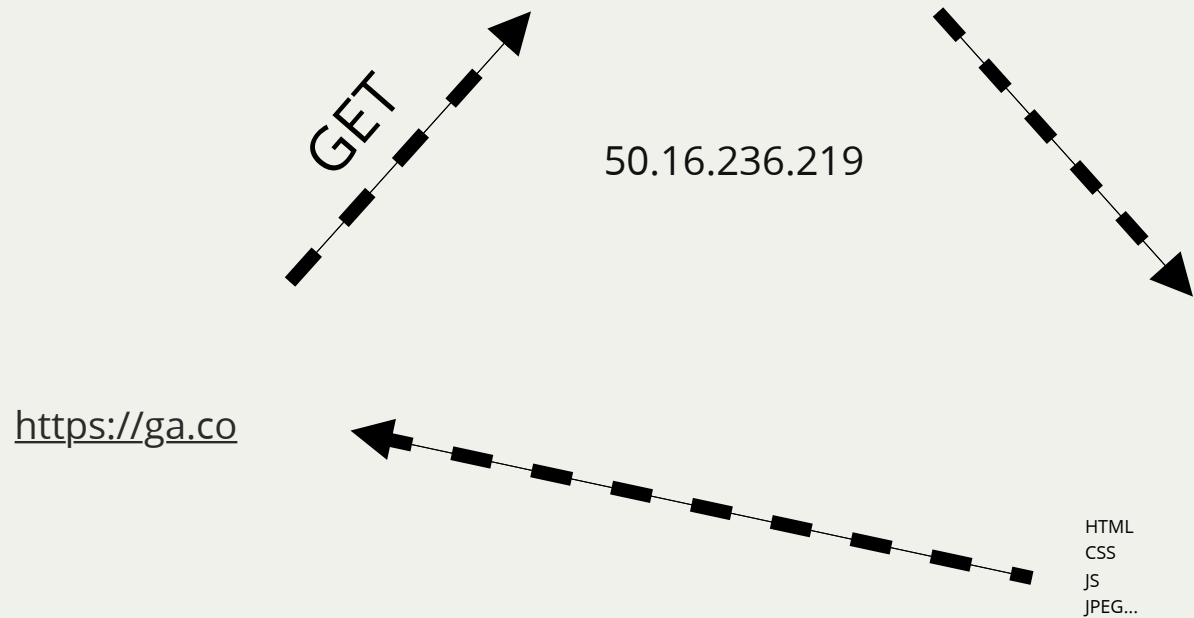
# How does it work?



# How does it work?



# How does it work?



# What is web development?

The creation and management of both websites and web-based applications

Made up of the Front-end and the Back-end

Most developers will try to convince you it is magic

# What is the front end?

It is what the user sees

It powers the visuals and interactions of the web

It is meant to be pretty, like this (or this, or this, or this)

Made up of HTML, CSS and JavaScript

# What is the back end?

It is what goes on behind the scenes

Consists of databases, servers etc.

Lots of languages:

Ruby, Node.js, Python, C++, Go etc.

# What do we do?

- Take a design and turn it into code and assets
- Use HTML and CSS to create the page
- Add interactions with JavaScript
- Lots of other responsibilities
  - Accessibility, performance, cross-browser differences, cross-device differences, responsive etc.



# The Front End



# The Languages

## HTML

Defines the content (the bones)

## CSS

Defines the style (the clothes, hair, skin, eyes etc.)

## JavaScript

Adds the functionality (the brain)

# HTML



# HTML - Content (Bones)

- **H**yper **T**ext **M**arkup **L**anguage
- Currently at version 5.1 (it's open source, too)
- It is a system for defining, or tagging, pieces of text

```
<h1>Hello World</h1>
```

```
<p>I am a paragraph</p>
```

```
<ul>
```

```
  <li>I am a list item</li>
```

```
  <li>I am another list item</li>
```

```
</ul>
```

# HTML - Content (Bones)

We rely on visual cues to show importance  
Computers and search engines can only understand text  
... for now

# HTML - Content (Bones)

## The Condensed History

- In 1980, physicist Tim Berners-Lee proposed a system for researchers to share documents
- In 1989, Berners-Lee wrote a memo proposing an Internet-based hypertext system
- In late 1990, Berners-Lee specified HTML and wrote the browser and server software



# HTML5

HTML was never designed to deliver a rich experience, it was just a way to share documents

HTML5 changed that. It introduced rich, native functionality that can be used directly in the browser. Things like video, audio, canvas, svg. It also was a huge push for **web semantics**



# HTML - Content (Bones)

An element is made up of an:

- Opening tag
- Attributes
- Content
- Closing tag

```
<a href="https://ga.co">General Assembly</a>
```

# HTML - Content (Bones)

```
<tag attrName="attrValue">  
    Content  
</tag>
```

# HTML - Content (Bones)

Common tags include:

## **Actual Content**

h1, h2, h3, h4, h5, h6, p, a, img, button, form

## **Dividing Content**

div, article, section, header, nav, footer

# Content Tags

```
<h1>Hello World</h1>
```

```
<h2>Doughnut Recipe</h2>
```

```
<h3>Method</h3>
```

```
<h4>Making the Dough</h4>
```

```
<!-- ... -->
```

```
<h4>Proofing the Dough</h3>
```

# Content Tags

```
<h5>Ingredients</h5>
```

```
<ul>
```

```
  <li>Plain Flour</li>
```

```
  <li>Sugar</li>
```

```
  <li>Butter</li>
```

```
</ul>
```

```
<h4>Method</h4>
```

```
<p>Start by combining all <em>dry</em> ingredients...</p>
```

# Content Tags

```
<a href="https://goo.gl/BEVv9s">  
  Another Doughnut Recipe  
</a>
```

```

```

# Document Structure

```
<!DOCTYPE html>
<html>

<head>
  <meta charset="UTF-8">
  <title>My HTML Page</title>
</head>

<body>

  <!-- Content goes here! -->

</body>

</html>
```

# Coding Style!

- All HTML tags, attributes and values should be lowercase
- All open tags should be closed
- All attributes should use double quotation marks
- Indent for developer clarity
- [Google's HTML Style Guide](#) and [MDO's Code Guide](#)



# HTML Syntax Errors!

- Forgetting to close a tag
- Forgetting to open or close quotes
- Missing angle brackets
- [MDN: Handling common HTML problems](#)

# Exercise!

Fix the syntax errors!

- Open the page in the browser and try and guess what is going wrong
- Solve any syntax errors that you can find
- Indent it correctly
- If you get it done, have a look into some more tags

# HTML - Content (Bones)

You can see a list of the tags, and how to use them at these places:

- [MDN HTML Element Reference](#)
- [HTML Reference](#)
- [W3Schools Tags](#)

# Exercise!

## Markup the GA Press Release

- Turn it into HTML
- If you get it done:
  - Add an image tag for the GA logo
  - Turn each campus into a link to the GA website for that campus (e.g. Sydney should go here)

# HTML Review

- What is HTML?
- What is an element?
- What are attributes?
- What is the DOCTYPE

# CSS



# CSS - The Style (Clothes)

- Cascading **S**tyle **S**heets
- Currently at version 3
- You apply properties and values to HTML. It's a presentation language

```
h1 {  
  font-family: "Comic Sans";  
  color: hotpink;  
}  
  
p {  
  text-align: center;  
}
```

# CSS - The Style (Clothes)

- A CSS **Rule** is made up of:
  - A **selector**
  - Curly brackets
  - **Declaration(s)**
- A CSS **Declaration** is made up of:
  - **Property**
  - **Value**



# CSS - The Style (Clothes)

```
selector {  
    /* DECLARATION */  
    property: value;  
}  
  
body {  
    background-color: limegreen;  
    color: chartreuse;  
}
```

# CSS - The Style (Clothes)

You reference HTML with CSS

```
<!-- THE HTML -->  
  
<h1>Hello World</h1>  
  
<p>Angle brackets - ugh!</p>
```

```
/* THE CSS */  
  
h1 {  
    font-size: 25px;  
}  
  
p {  
    font-style: italic;  
}
```

# CSS - The Style (Clothes)

How do we add styles to our page?

Three ways:

- ~~Inline Styles~~
- ~~Style Tag~~
- External File ✓

# CSS - The Style (Clothes)

Adding an external CSS file

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

Why external files?

1. Reusability
2. I won't cry
3. Performance
4. I won't cry

# Exercise!

Style your GA Press Release

- Add an external CSS file
- Use things like:
  - font-family
  - font-weight
  - text-decoration
  - background-color
  - color

# Lab Time!

Cookie Recipe

It's HTML and CSS time

# CSS Review

- What does CSS stand for?
- What version of CSS are we up to?
- What is a CSS rule made up of?
- How do we link up HTML and CSS?

# Homework

- Write HTML and CSS!
- Start thinking of something that you would like to build



# Q & A



# Feedback Time

Lesson 1: **HTML Basics**

<https://ga.co/fewd32syd>

# Thanks!

