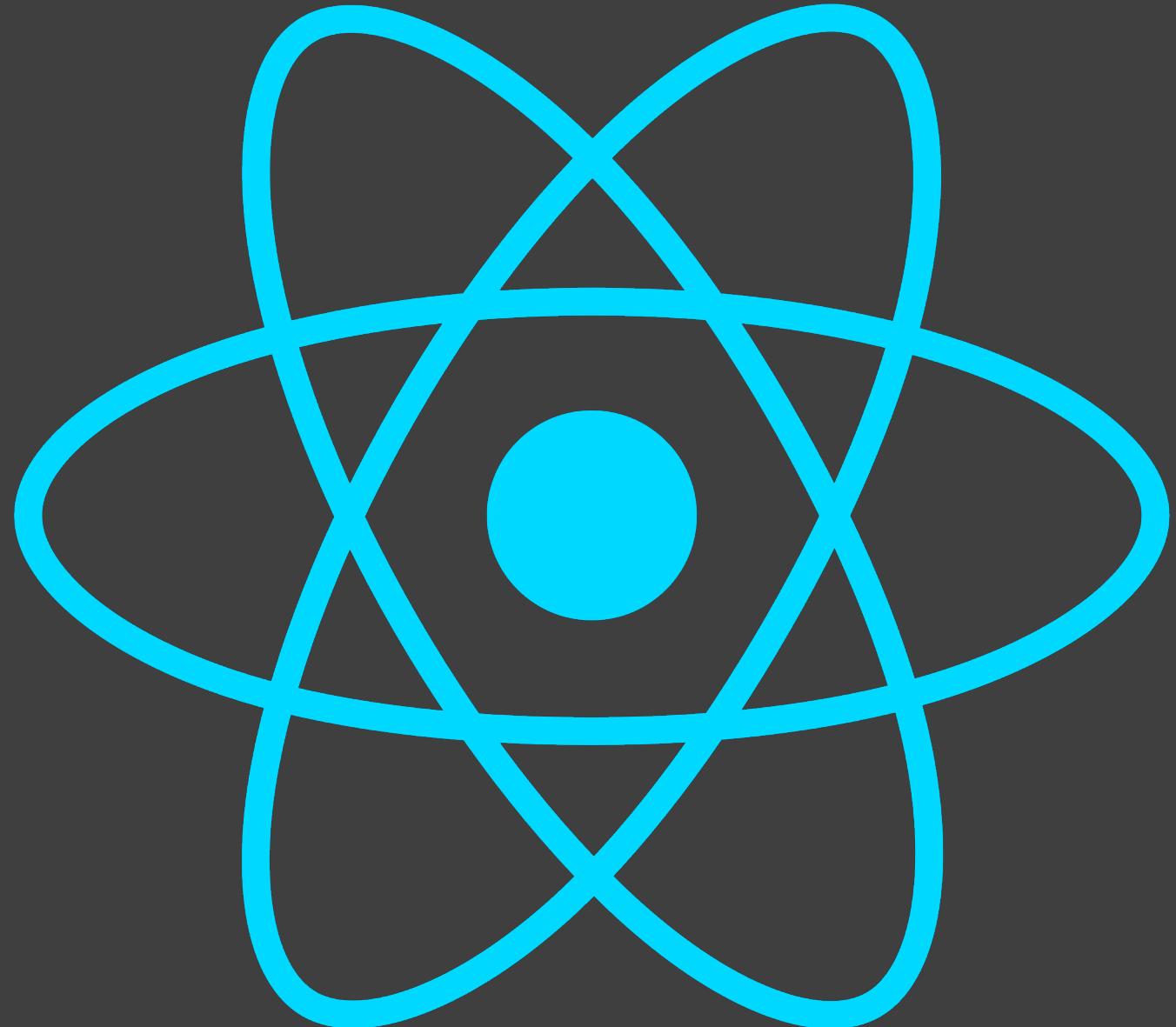


Intro to Web Development with React.js



Did you get through the prerequisites?

- Respond through chat
 - **Y or Yes**
 - **N or No**

Have you ever written code before?

- Respond through chat
 - **Y or Yes**
 - **N or No**

How often do you learn by reading things on the internet?

- Respond through chat
 - **C or Constantly**
 - **D or Daily**
 - **W or Weekly**
 - **N or Never**



This workshop is
part of a series:

Part 1: Intro to Web Development Concepts

Part 2: Hands on / Deep Dive with React

Welcome!

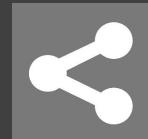
- What is a web page?
- HTML
- JavaScript
- CSS
- Intro to React
- How to learn more about modern web development
- Q&A



Welcome!

Why do we want to talk about this **today**?

- Building a web page is a free method to get your voice heard, express your creativity or build a business
- You are in control of your own message; there are no moderators to control whether your content is seen by the people that need to see it
- You can share your web site with whoever you choose!



What is the web?

The web is an **information system** where documents are identified by URLs, such as <https://www.google.com>.

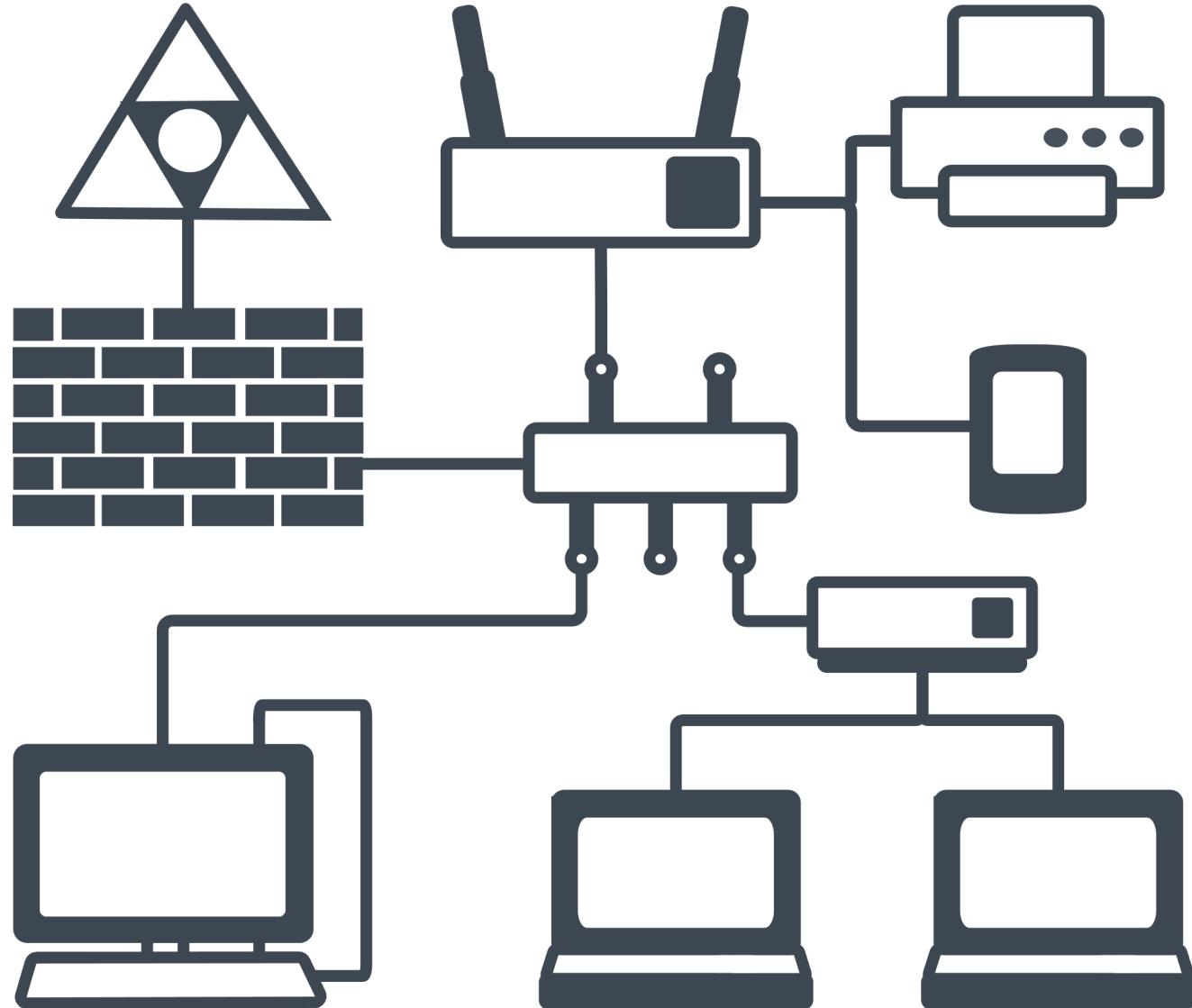
These can be linked together, and accessed over the Internet.



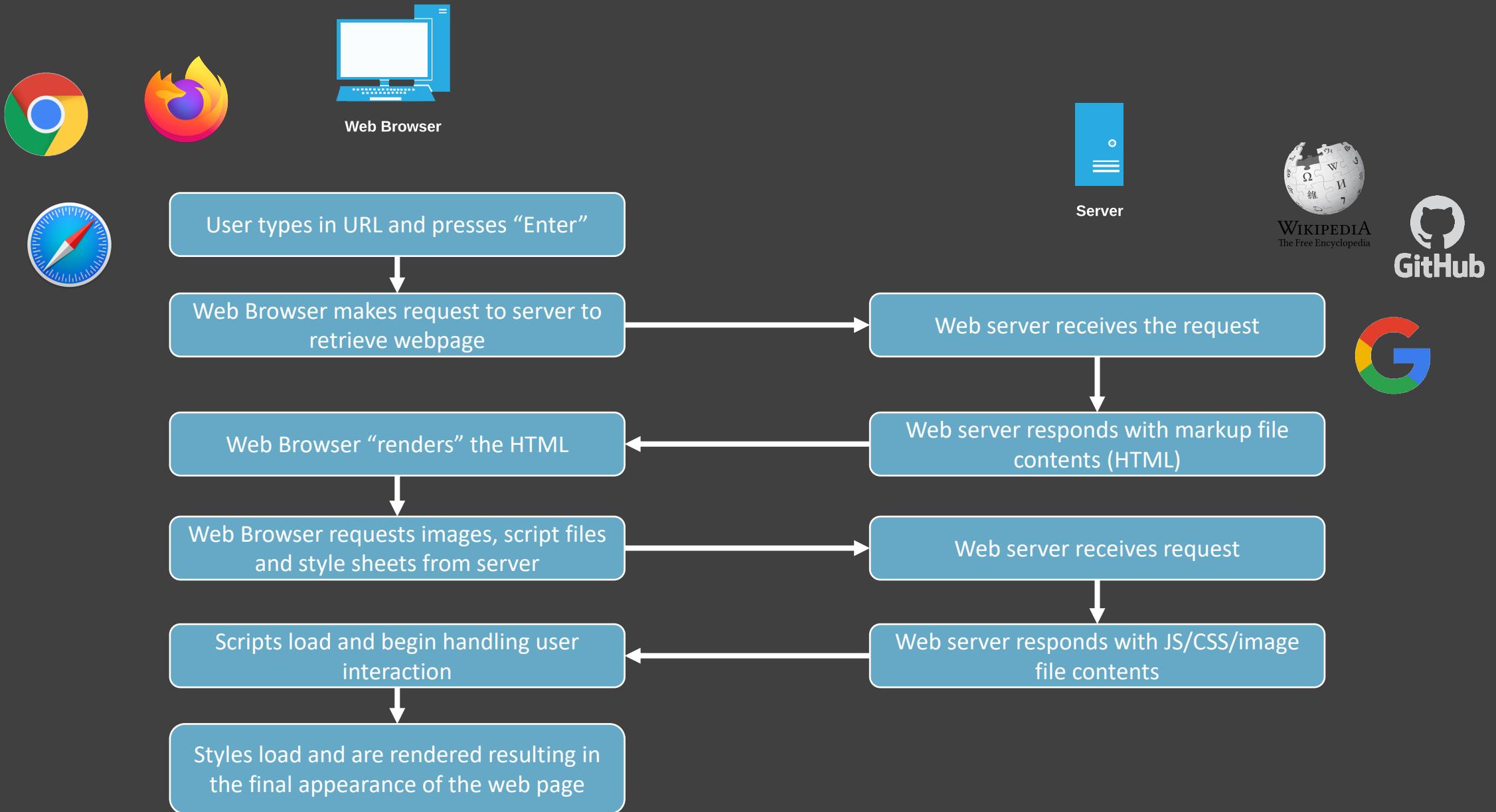
What is the internet?

The internet is a global system of interconnected computer networks that a specific protocol (TCP/IP) to communicate between networks and devices.

Network protocols are sets of established rules that dictate how to format, transmit and receive data so computer network devices – like clients and servers -- can communicate regardless of the differences in their underlying infrastructures, designs or standards.



How do web browsers work?



What is a web
page made of?

HTML

- A markup language
- .htm or .html files
- Starts with <html>, ends with </html>
- Defines **what** goes on a page, but does not usually define where it will go or what it will look like
- In modern times, most HTML is generated by other “higher level” frameworks



Exercise 1: View Example HTML File

1. Open Terminal (on Mac) or Powershell (on Windows).

2. Enter:

```
cd ~/Downloads  
cd BGC-React-Intro
```

3. Enter:

```
MAC -> open helloworld.html
```

```
WINDOWS -> Start-Process "helloworld.html"
```

Hello World!

Hello, HTML.

What this HTML looks like after
being rendered by a browser

Open Example HTML File

1. Open Finder (on Mac) or Windows Explorer and open your Downloads folder.
2. Open BGC-React-Intro.
3. Right-click helloworld.html.
4. Go to:

MAC -> Open With → VSCode

WINDOWS -> Open With → More Apps → VSCode



A screenshot of a Mac OS X window titled "helloworld.html". The window shows the following HTML code:

```
<!DOCTYPE html>
<html>
<head>
</head>
<body>

<h1>Hello World!</h1>

<p id="demo">Hello, HTML.</p>

</body>
</html>
```

JavaScript

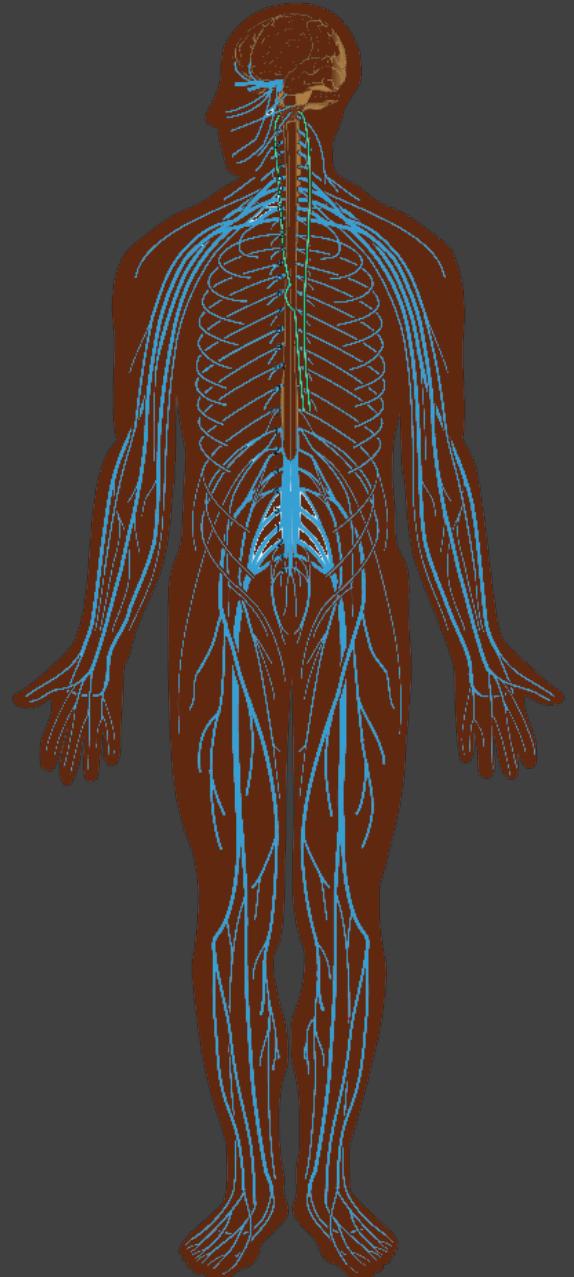
JavaScript defines the behavior and interactivity of a web page.

JavaScript is responsible for deciding what to do when a button is clicked. It can update the HTML of a page to add/remove/update content, retrieve data from other servers (also known as APIs) and so much more!

JavaScript code is usually included by an **HTML** file, as shown here:

```
<script src="myscript.js"></script>
```

As a web browser processes an HTML file and encounters a “script” tag, it will download the contents of that JavaScript file and inject the code right into the HTML.



Exercise 2: Add Javascript

1. Open exercises.txt to find the “button” element.
2. Click and drag your cursor to select all the button text.
3. Right-click it, and select “Copy”.
4. In helloworld.html, find the line that says “Javascript can change...”
5. Add a couple blank lines below this by pressing the Enter key.
6. Right-click the blank line, and select “Paste”.
7. Save helloworld.html (File -> Save).
8. Refresh the webpage to see the results!

JavaScript Embedded in HTML

What Can JavaScript Do?

JavaScript can change HTML content.

Click Me!

Example: JavaScript in A Second File

index.html

```
<!DOCTYPE html>

<html>
<body>
<p id="demo">A Paragraph.</p>
<button type="button"
onclick="myFunction()">Try
it</button>

<script src="myScript.js"></script>
</body>
</html>
```

myScript.js

```
function myFunction() {
    document.getElementById("demo")
        .innerHTML = "Paragraph changed.";
}
```

CSS

- CSS is an acronym for Cascading Style Sheets.
- CSS defines the look and feel of a web page by applying “styles” to the HTML elements via “selectors”.
- CSS can be used to change all sorts of attributes of a web page, from text appearance (size, font, color, style), to layout elements size, shape and background color, to what happens when a user is hovering over an element.



Exercise 3

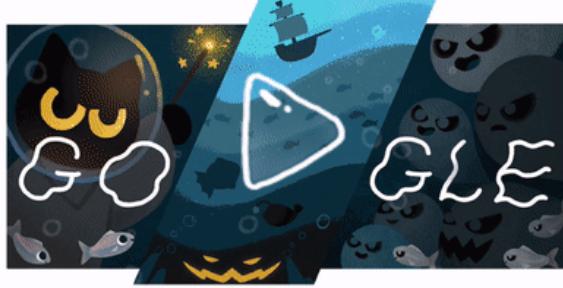
Use Web Inspector to Change a Website's CSS!

1. Open Google Chrome to google.com
2. Right click on the search box in the middle of the screen and select “Inspect”
3. The “Web Inspector” will open and allow you to see the HTML elements, CSS styles and many other important parts of a web page.
4. As shown in the following video, changing the background-color attribute to red makes the search bar background red.

Google x +

google.com/?gws_rd=ssl Incognito ⋮

About Store Gmail Images ⋮ Sign in



Search Microphone

Google Search I'm Feeling Lucky

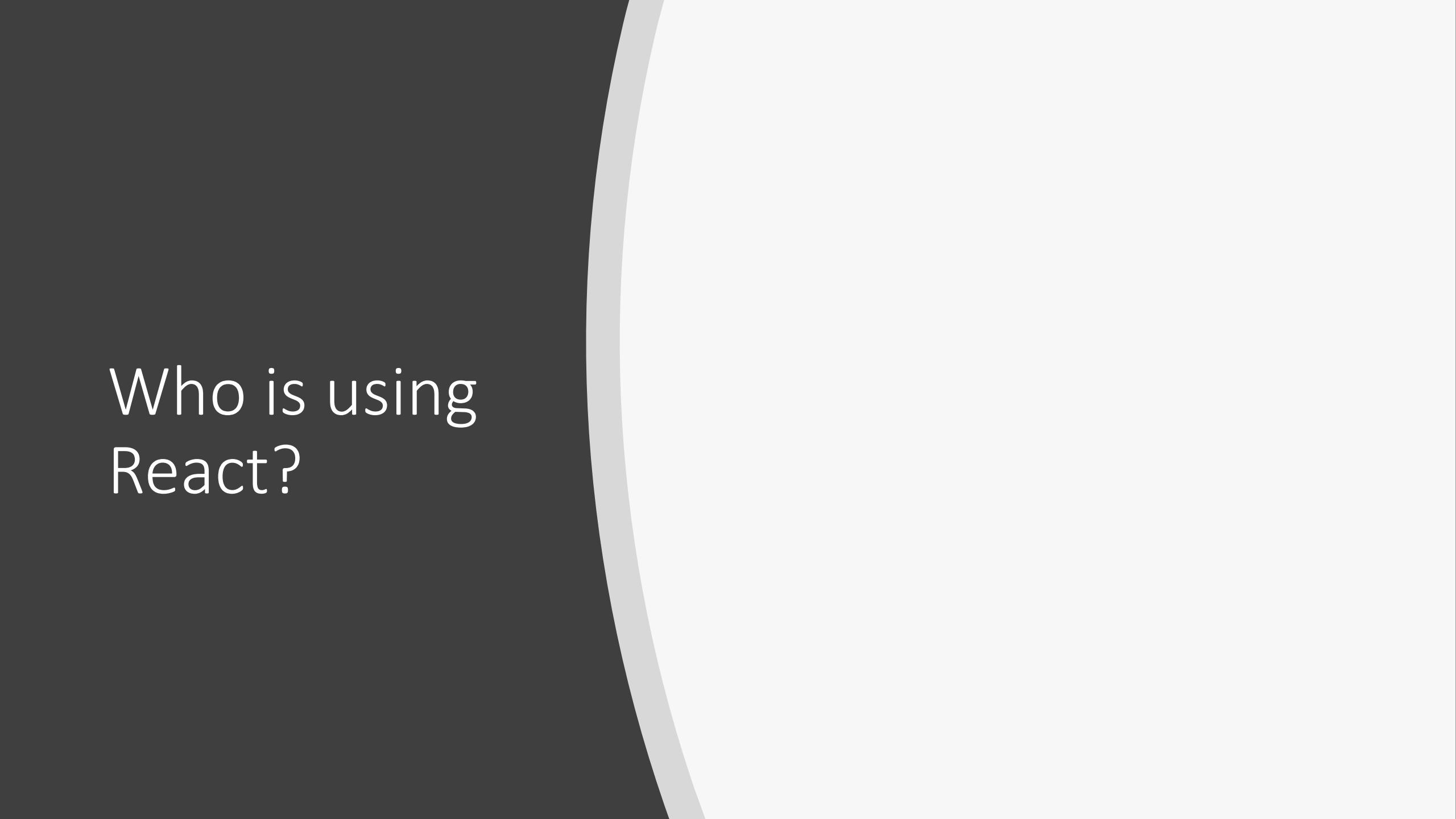
New! Meet the 5G Pixel phones on the Google Store

Advertising Business How Search works Privacy Terms Settings

Break

What is React?

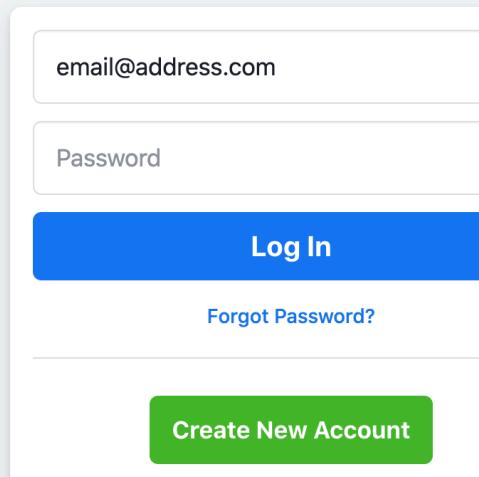
- React is a JavaScript library for building user interfaces
- React makes it easier to build small building blocks that can be used to make larger building blocks which eventually make up a whole page
- React was developed by Facebook and is now published as an open-source project. This means that in addition to the large team of developers from Facebook that work on making React the best that it can be, the rest of the world can also contribute their own improvements and has visibility into the development process of the React ecosystem.



Who is using
React?



Connect with friends and the world around you on Facebook.



A screenshot of the Facebook login interface. It features two input fields: one for email or phone number containing "email@example.com" and another for password. Below these is a large blue "Log In" button. Underneath the button is a "Forgot Password?" link. At the bottom of the form is a green "Create New Account" button. A small note at the very bottom right of the form area says "Create a Page for a celebrity, band or business".

email@example.com

Password

Log In

Forgot Password?

Create New Account

Create a Page for a celebrity, band or business

Facebook

Instagram



Dunder Mifflin ▾

- Threads
- Mentions & reactions
- Show more

▼ Channels +

- # General**
- # Sales
- # Corporate
- # Party Planning
- # Warehouse
- # World's Best Boss
- # Conference Room
- # Diversity
- # Pranks

▼ Direct Messages +

- Michael
- Dwight
- Jim
- Angela
- Ryan
- Kelly

General

14 Add a topic



Michael 9:05 AM

@channel!

It's Michael.

Help me!

I need help right now.



Pam 9:05 AM

Michael what's wrong?

Where are you?

Slack

Other Examples

- Khan Academy
- Dropbox
- Tesla
- Airbnb
- Netflix

Why are they using it?

- Makes managing complex interfaces much easier
- Development is led through JavaScript which plays well with lots of other platforms/tools/etc

Seeing What A Site is Made Of

Websites leave clues in their HTML, JS, and CSS code that allows you to make a pretty good guess as to what tools may have been used to make them.

The following tools can be used to quickly tell you what a site is built with.

- BuiltWith Chrome Extension
- Wappalyzer Chrome Extension



Wappalyzer

[Website & contact lists →](#)

Widgets

Facebook

Analytics

Google Analytics

JavaScript frameworks

React 0

Security

reCAPTCHA

Web frameworks

Ruby on Rails 50% sure

Miscellaneous

Programming languages

Ruby 50% sure

Tag managers

Google Tag Manager

JavaScript libraries

Apollo 2.6.3

Lodash

SaaS

Google Analytics

Social logins

Facebook Sign-in

Learning More About Web Development

Our next session will have you dive right into the code to learn how to create a new React app on your computer as well as some other introductory concepts.

In addition to attending that session, some other ways you can learn React are:

- Online courses that cover HTML, JS, and/or CSS to build more foundational knowledge and learn more of the HTML building blocks that pages are built of, such as lists, and tables.
- Build foundational knowledge in js, css, html but don't worry if you don't know everything about them because you will continue learning more as you dig in to React itself
- Pick one of the React learning courses below and dig in to that
- Practice with example projects
- Participate in the community through meetups, webinars, open source, etc
- Come to our next session

Khan Academy

- Free online courses
- Use sites like this to learn HTML, JS, and/or CSS to build more foundational knowledge and learn more of the HTML building blocks that pages are built of, such as lists, and tables

The screenshot shows a Khan Academy page for learning computer programming, specifically focusing on HTML and CSS. The top navigation bar includes 'Courses', a search bar, the Khan Academy logo, and a 'Donate' button. Below the header, the text 'Computer programming' is followed by the main title 'Unit: Intro to HTML/CSS: Making webpages'. On the left, a sidebar titled 'Lessons' lists several topics: 'Intro to HTML', 'Intro to CSS' (with an edit icon), 'More HTML tags', 'CSS text properties' (with an edit icon), 'Web development tools', and 'CSS layout' (with an edit icon). To the right, under the heading 'Intro to HTML', there is a list of video lessons and challenges:

- Learn
 - Welcome to the web!
 - HTML basics
 - Quick tip: HTML tags
 - Challenge: Write a Poem
 - HTML: Text emphasis
 - Challenge: You can learn text tags
 - HTML: Lists
 - Challenge: Wishlist

Your Public Library

Many public libraries have resources available to you such as:

- Lynda.com or other paid learning memberships
- Ebooks that can be checked out from home
- Programming Books

Other Internet Sources

- **YouTube**
 - Endless videos that show off programming concepts
- **Google**
 - Googling an error message can be a quick way to help you learn how to overcome a mistake.
- **StackOverflow**
 - Sites such as StackOverflow are used daily by professional developers in a real workplace to quickly solve their issues rather than spending unnecessary time investigating the cause.

Questions?

Thank you!