



WELCOME TO JAVASCRIPT DEVELOPMENT

Please write your name on your
whiteboard and say hello
to your new classmates.

Wi-fi: GA-Guest
pw: yellowpencil

YOUR INSTRUCTIONAL TEAM

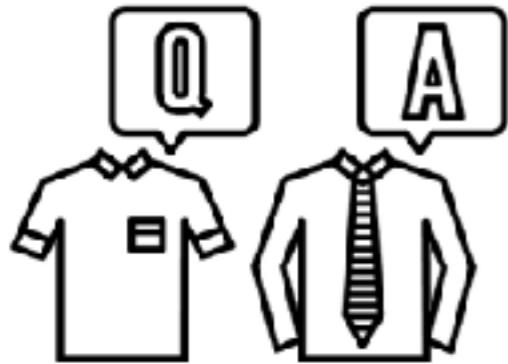


SASHA



Let's get to know each other

STRUCTURE



PAIRS

**INTROS: 5 MIN
SHARING: 10 MIN**



OBJECTIVES

1. Take 5 minutes to get to know your neighbor by finding out:
 - a. Their name
 - b. Why they are taking this course
 - c. A guilty pleasure

2. Be prepared to introduce your neighbor to the rest of the room



COURSE EXPECTATIONS

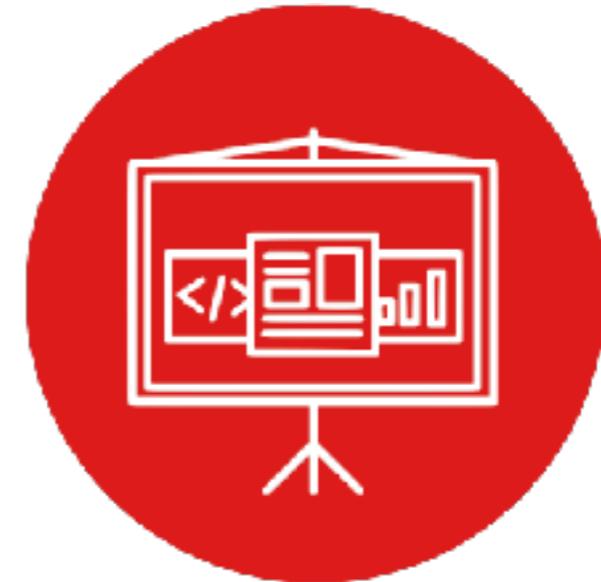
Course dates

JavaScript Development 16

Course dates:

- Tuesdays & Thursdays, 6:30pm - 9:30pm
- September 17 - November 21

Holidays: none



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SYLLABUS

Lesson	Title	Lesson	Title
0	Installfest	10	Asynchronous JavaScript & callbacks
1	Command line & data types	11	Advanced APIs
2	Arrays & loops	12	Unit 2 Lab - Feedr
3	Conditionals & functions	13	Prototypal inheritance
4	Scope	14	Context & this
5	Unit 1 Lab - Slackbot	15	Intro to CRUD & Firebase
6	Objects & JSON	16	Deploying your app
7	Intro to the DOM & jQuery	17	Instructor-student choice
8	Events & jQuery	18	Final project lab
9	Ajax & APIs	19	Final project presentations

How to get a certificate



How to get a certificate



Complete 80% of the homework



Don't miss more than 3 classes



Complete and present a final project



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HOMEWORK

OVERVIEW:

- Assigned every Thursday, starting this week
- Due the following Tuesday
- Expect feedback within 5 days

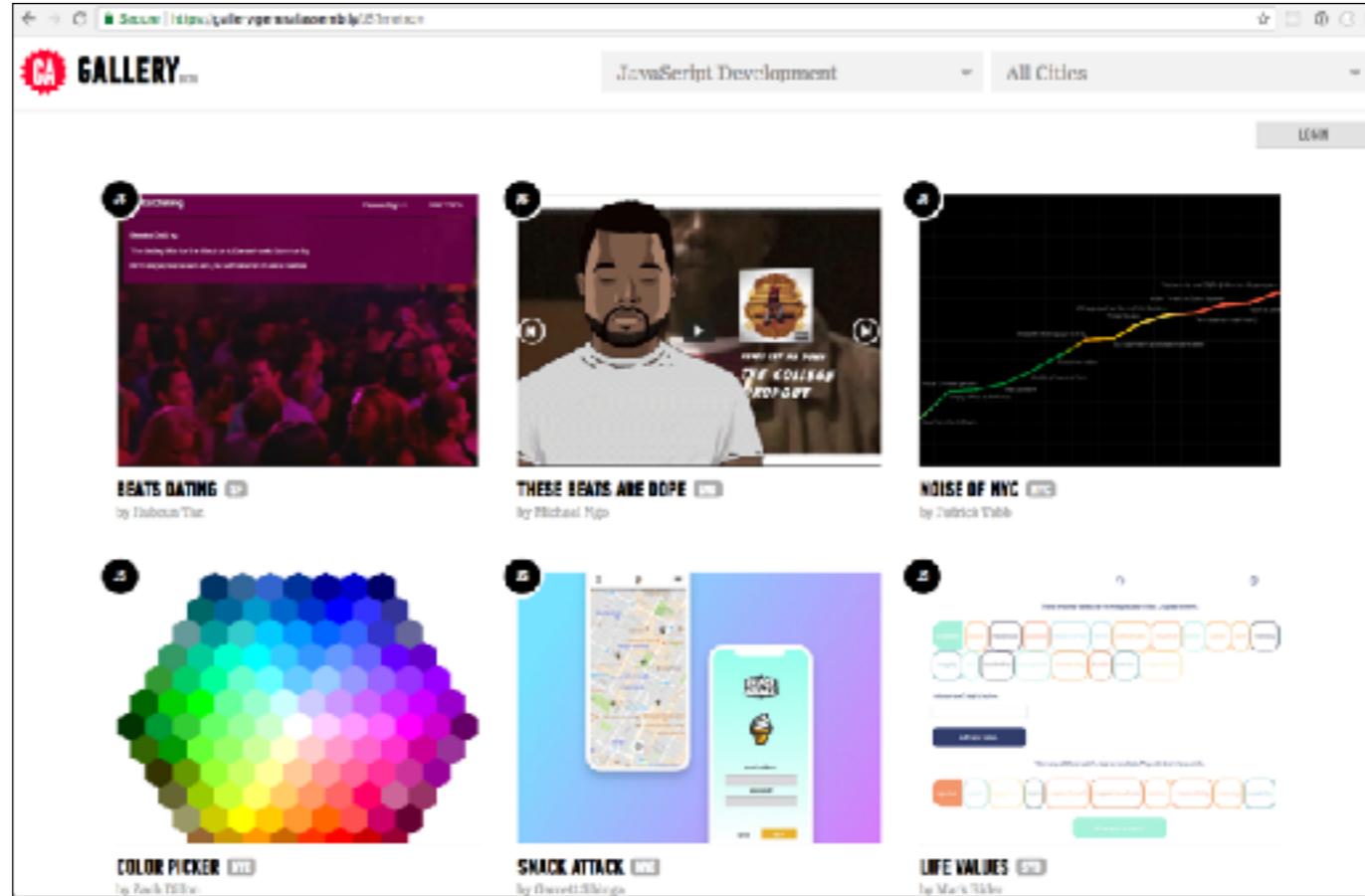
GRADING:

- Complete/Incomplete

LATE ASSIGNMENTS:

- Accepted, but will not receive feedback; schedule office hours

Final Projects



<https://gallery.generalassemb.ly/JS>

TIPS FOR SUCCESS



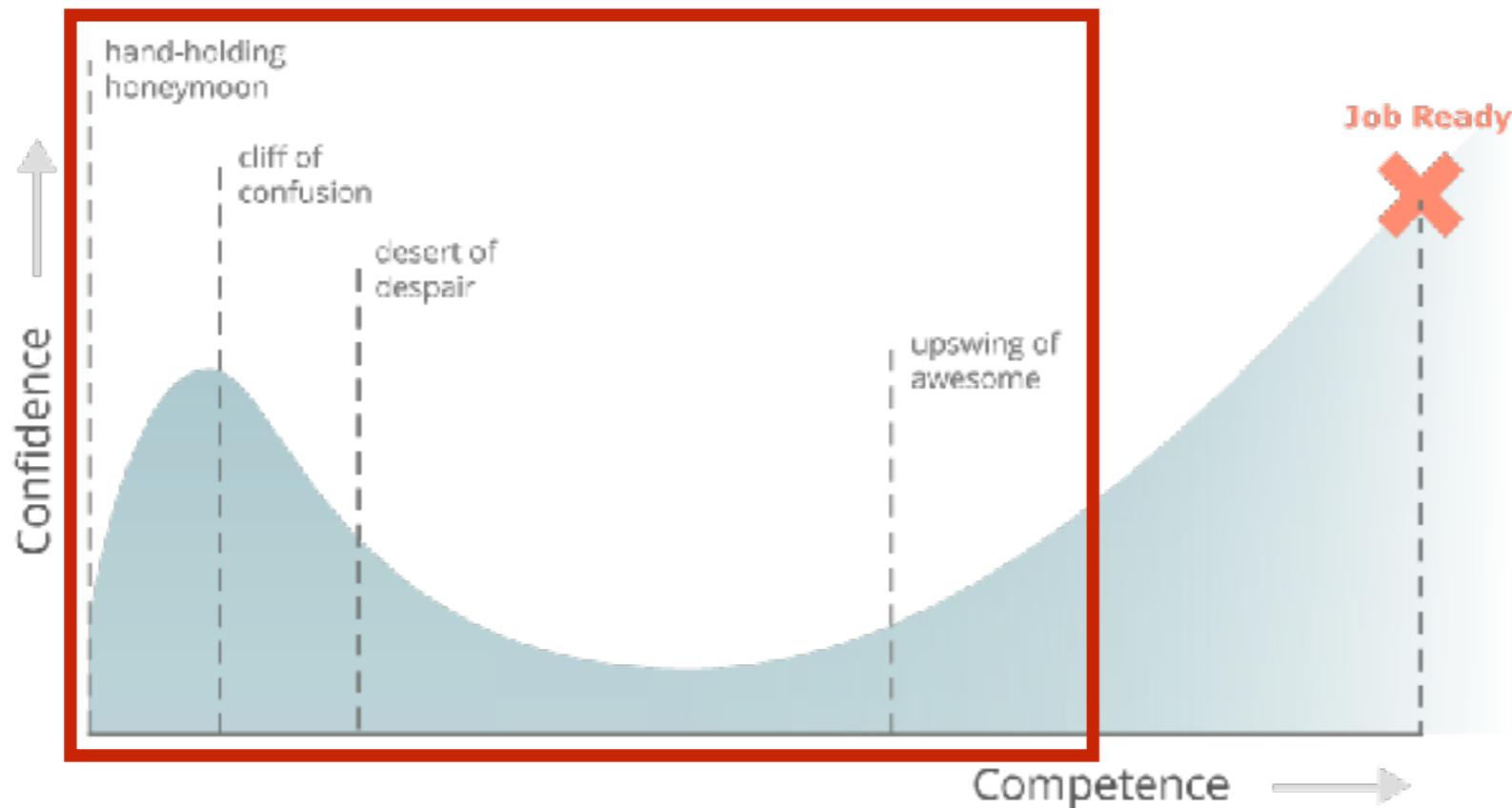
```
div  
#main  
.special
```



- Complete homework on time
- Brush up on your element, ID, and class CSS selectors
- Ask questions!

Common Misconceptions: Learning Curve

Coding Confidence vs Competence



Common Misconceptions: Googling



Common Misconceptions: Course Content



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CLASS NORMS

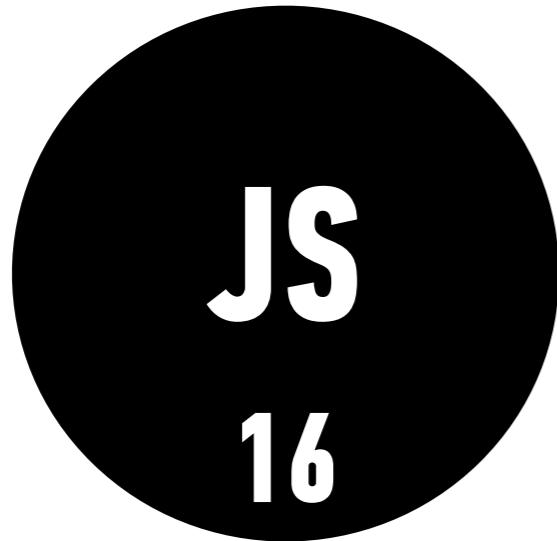
Let's all agree to:

- Come on time
- Participate
- Step up, step back
- Ask for help when you need it
- Help each other



RESOURCES

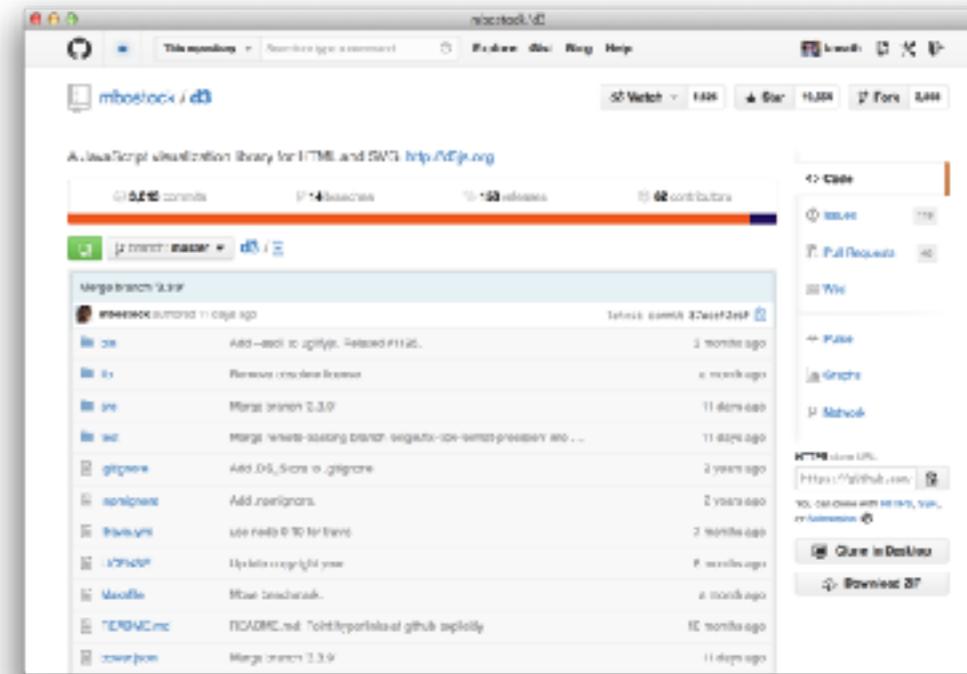
Class website



The screenshot shows a class website for "JavaScript Development". The header features a blue bar with the title "JAVASCRIPT DEVELOPMENT" and a navigation menu with links for Home, Lessons, Homework, Projects, Resources, Edit course, and Slack channel. Below the header, a welcome message reads "Hello! Welcome to the home for General Assembly SF JavaScript Development (JSD) Course 13." To the right is an illustration of a laptop displaying code. A circular profile picture of a man with glasses and a beard, identified as "Sasha Vodnik Instructor", is displayed. On the right side, there is a "LOGISTICS" section with details: START: Tuesday, 01/15/2019, END: Thursday, 01/31/2019, MEETS: Tuesday and Thursday, 6:30pm - 9:30pm. Below this is a location pin icon and the text LOCATION: 225 Bush St, 5th Fl, Classroom C. At the bottom, there is an "OFFICE HOURS" section.

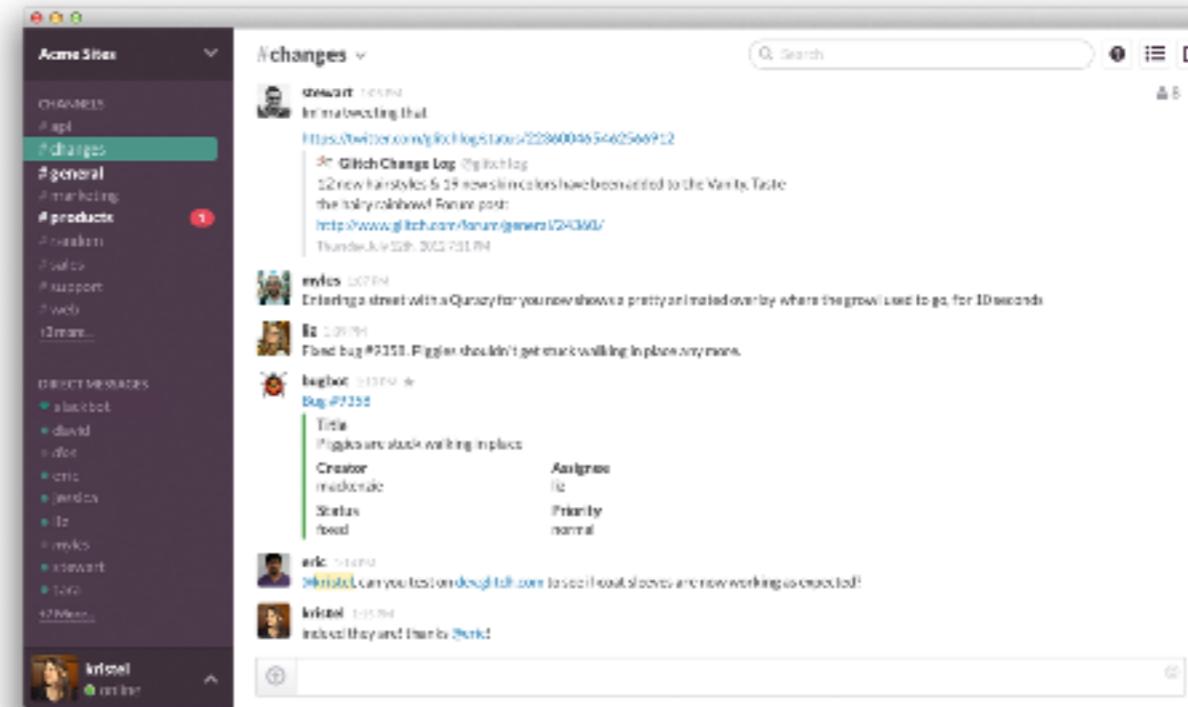
The class website will have slide decks and handouts for each class, as well as details on assignments and projects.

Github Enterprise



Github Enterprise will have starting code for all class activities and assignments.
You'll also use GitHub Enterprise to submit homework.

Slack



All course communication with each other and instructor will happen here.

Help Me Help You!

Slack me if:

- You know in advance that you will be missing a class or multiple classes
 - You're sick, overloaded at work, or something comes up and you can't make it to class last minute
 - You will be 10 or more minutes late to class
 - You need to leave early
 - You will be submitting your homework late
-

Getting Help

- 3 then me
- 30 minutes - then #homework channel on Slack
- Acknowledge those who helped you!!



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OFFICE HOURS

- › Mon/Wed, 5:15-6:15pm
- › Other times by appointment:
 - in-person at GA or elsewhere
 - Skype/FaceTime/Hangouts



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EXIT TICKETS/FEEDBACK

Please write your full name:
We want to be able to contact you directly if you indicate that you need support.

Your answer _____

Lesson Number *

Choose ▾

How are you feeling? *

Choose ▾

I feel this lesson helped me make progress towards my learning goals. *

1 2 3 4 5

Strongly Disagree Strongly Agree

I was engaged throughout this entire lesson. *

1 2 3 4 5

Strongly Disagree Strongly Agree

I feel prepared to continue practicing this skill outside of class. *

1 2 3 4 5



JAVASCRIPT DEVELOPMENT

Sasha Vodnik, Instructor

JAVASCRIPT DEVELOPMENT

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LEARNING OBJECTIVES

At the end of this class, you will be able to

- Differentiate between the Internet and the World Wide Web.
- Summarize the client-server model & explain how DNS lookup works.
- Run Node.js, npm, Git, and other command line tools on your computer.
- Write pseudocode and explain how it relates to programmatic thinking.

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AGENDA

- JavaScript & web development
- Set up Slack, Brew, Git, Node, and code editors
- Set up GitHub
- Pseudocode

JAVASCRIPT DEVELOPMENT

JAVASCRIPT & WEB DEVELOPMENT

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JAVASCRIPT AND WEB TECHNOLOGIES

What is web development?

The process of building sites and applications for the web

JAVASCRIPT AND WEB TECHNOLOGIES

What is front-end development?

The development of client/browser code (HTML, CSS, JS),
i.e., what the user sees and interacts with

JAVASCRIPT AND WEB TECHNOLOGIES

What is back-end development?

The development of server-side code that handles such functions as routing, data handling, and databases (Ruby, Python, Java, JavaScript)

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JAVASCRIPT AND WEB TECHNOLOGIES

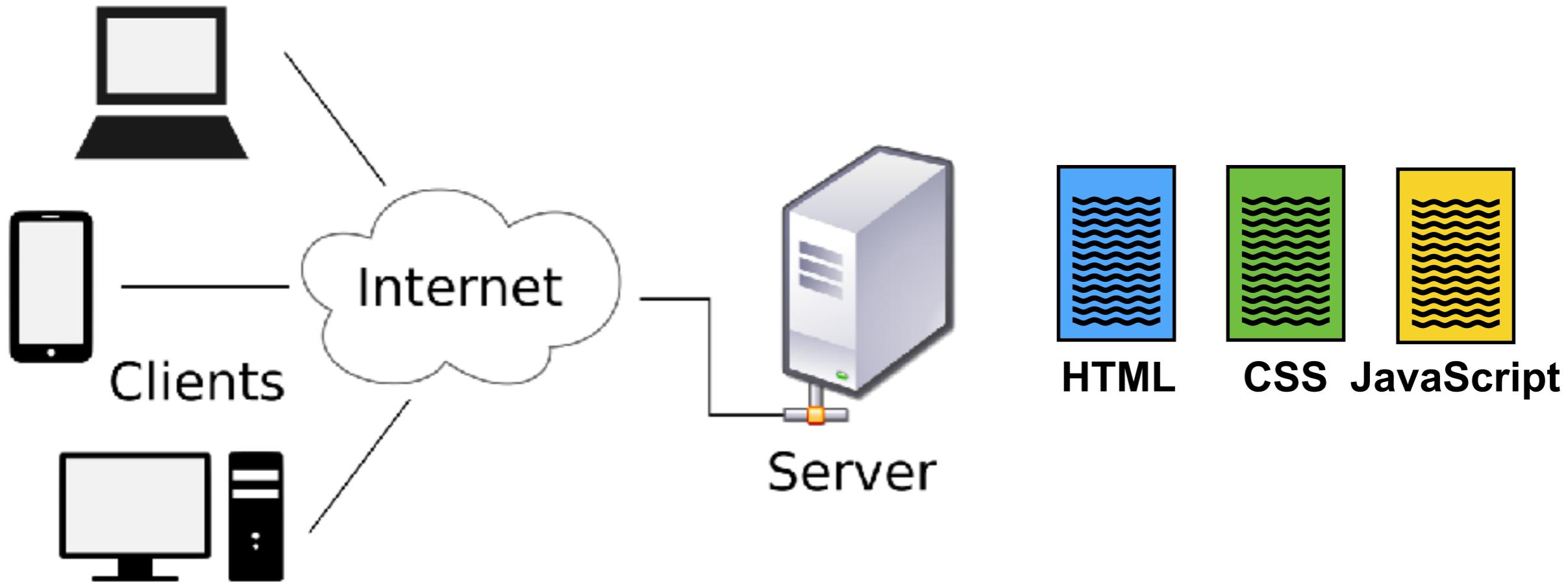
How do these fit together?

web development

front-end development

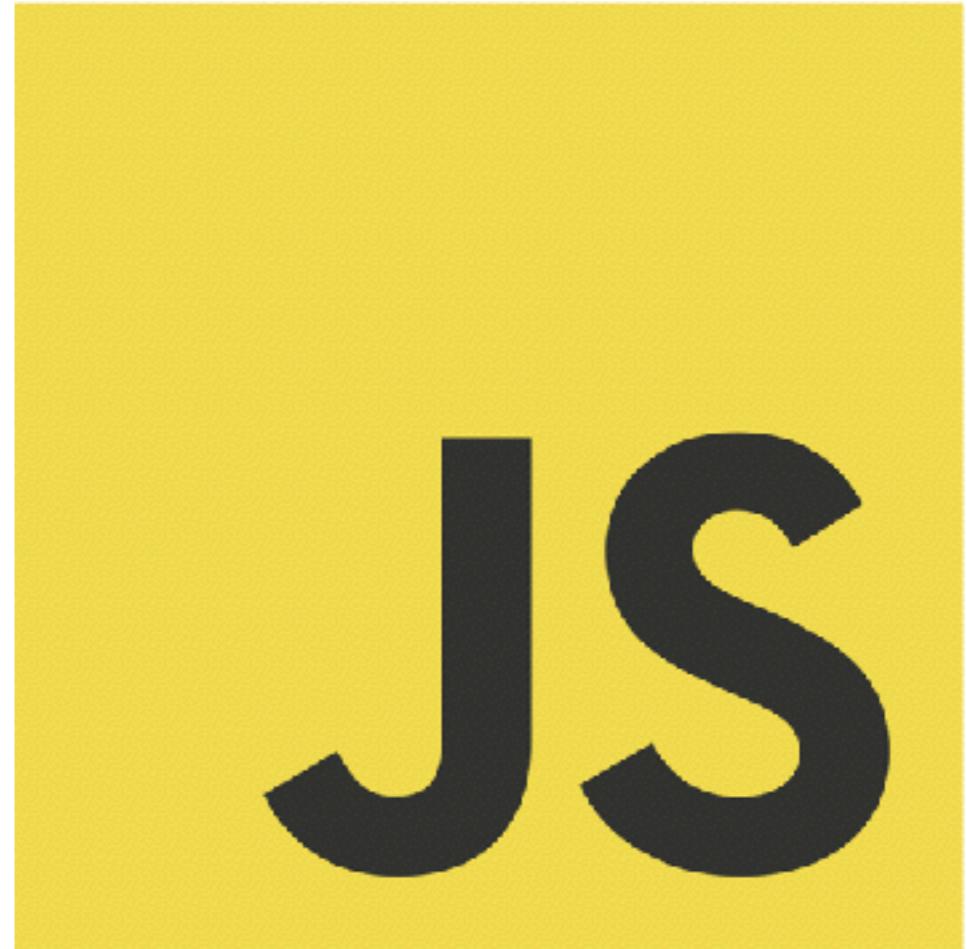
back-end development

JavaScript's role in the web



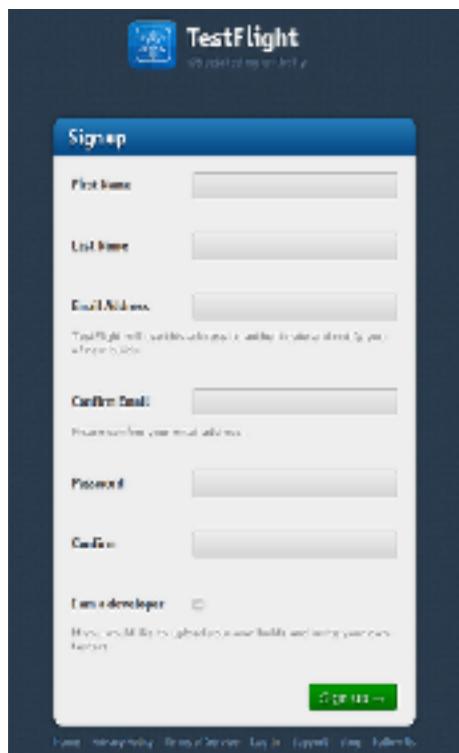
WHAT IS JAVASCRIPT?

- The language of the browser
- NOT Java!
- Super popular!



HOW IS JAVASCRIPT USED?

Front End
(browser)



Back End
(server)



node.js

INTERNET VS WORLD WIDE WEB

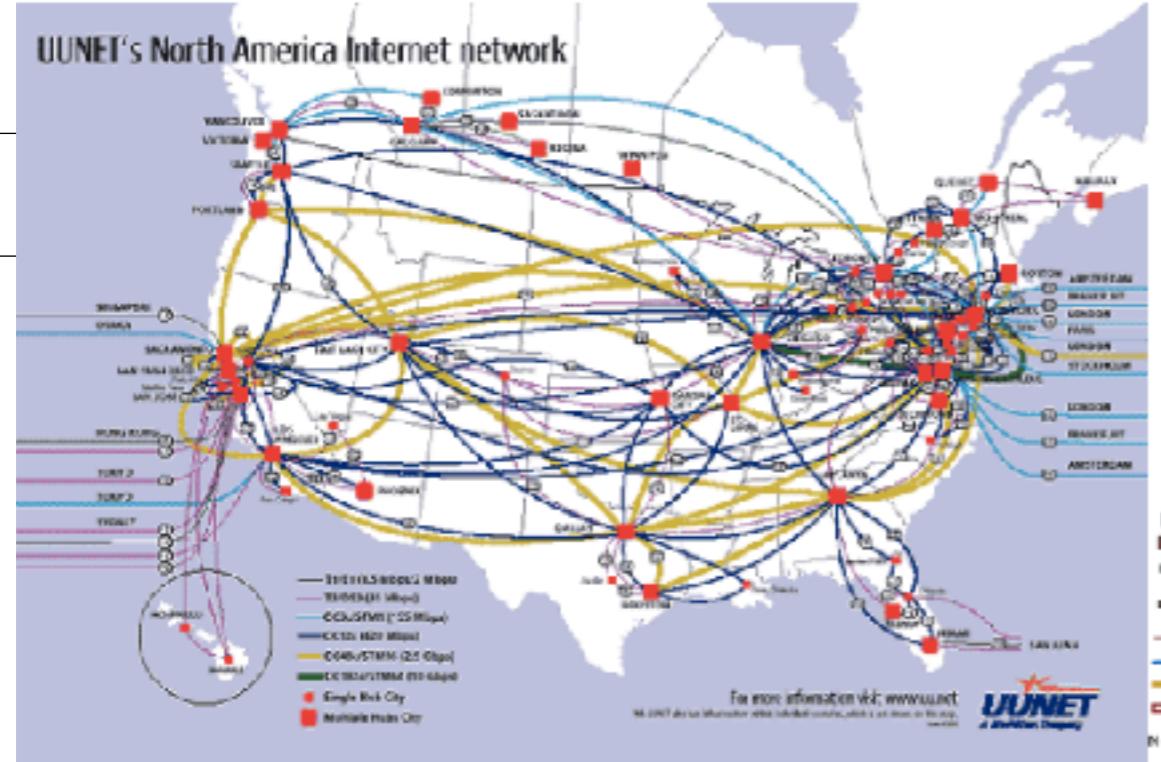
What is the Internet?

- ▶ A set of interconnected computer networks
- ▶ The infrastructure to connect computers around the world
- ▶ Communication can use any agreed upon protocol

A SERVER FARM



UUNET's North America Internet network



AT&T IP BACKBONE NETWORK



The internet's undersea world

The ever-increasing volume of the world's communications traffic is not carried by satellite or fibre-optic cables under the earth's technology, cables under the earth's oceans. As a ship can't easily types out dissolved oxygen, this map shows how we rely on a network of wires to keep our world all tied together.

Submarine cable systems

In service

Planned

Delayed

Under construction
or awaiting regulatory
approval

Proposed

Abandoned

Retired

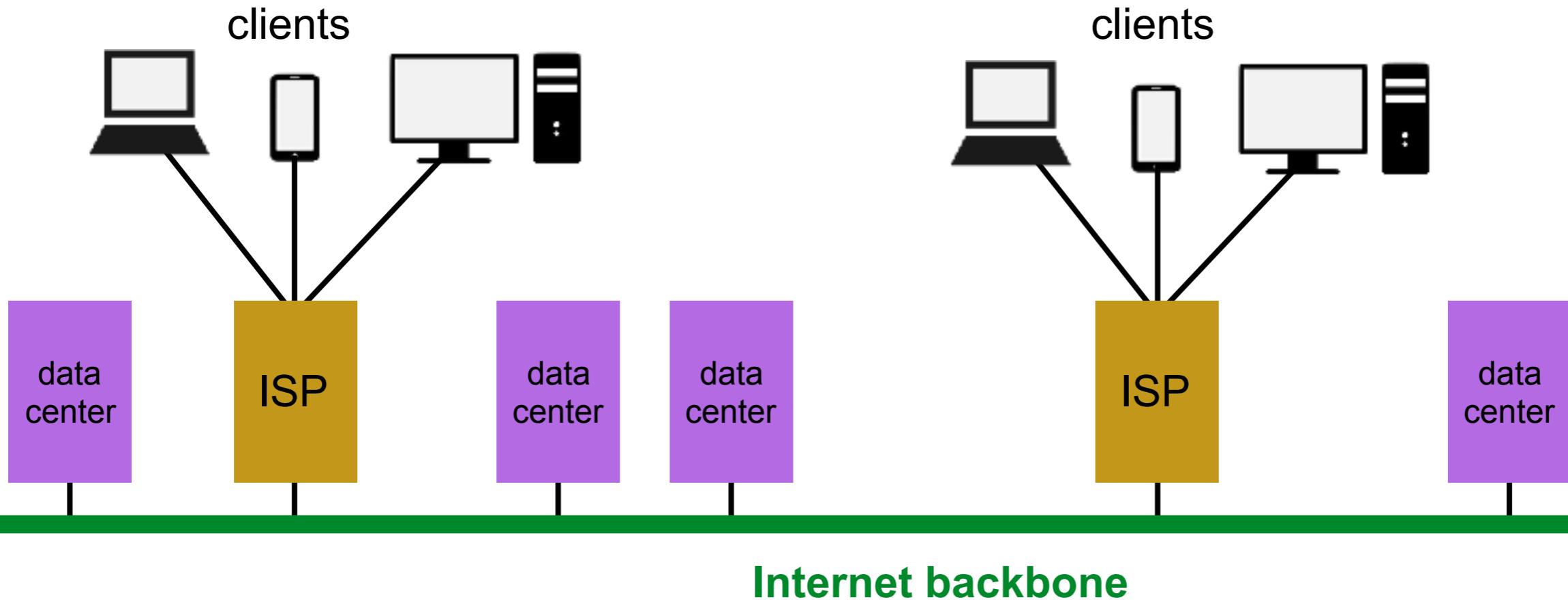
Under construction

Delayed

Proposed</p

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EXCHANGING INFORMATION OVER THE INTERNET



INTERNET VS WORLD WIDE WEB

What is the World Wide Web?

- ▶ A massive collection of HTML documents
- ▶ Accessed over the Internet
- ▶ Communication is based on Hypertext Transfer Protocol (HTTP)

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THE FIRST EVER WEB PAGE

World Wide Web

The WorldWideWeb (W3) is a wide-area [hypermedia](#) information retrieval initiative aiming to give universal access to a large universe of documents.

Everything there is online about W3 is linked directly or indirectly to this document, including an [executive summary](#) of the project, [Mailing Lists](#),
[Policy](#), November's [W3 news](#), [Frequently Asked Questions](#).

[What's out there?](#)

Pointers to the world's online information, [subjects](#), [W3 servers](#), etc.

[Help](#)

on the browser you are using

[Software Products](#)

A list of W3 project components and their current state. (e.g. [Line Mode](#) [X11](#) [Viola](#) , [NeXTStep](#) , [Servers](#) , [Tools](#) , [Mail robot](#) , [Library](#))

[Technical](#)

Details of protocols, formats, program internals etc

[Bibliography](#)

Paper documentation on W3 and references.

[People](#)

A list of some people involved in the project.

[History](#)

A summary of the history of the project.

[How can I help ?](#)

If you would like to support the web..

[Getting code](#)

Getting the code by [anonymous FTP](#) , etc.

hypertext

INTERNET VS WORLD WIDE WEB

Name some things you use the Internet for that are not part of the web

- Email
- Skype/GoogleTalk/FaceTime
- Dropbox/iCloud/cloud storage
- Spotify/Pandora/music streaming
- YouTube/Netflix/video streaming

ACTIVITY



KEY OBJECTIVE

- ▶ Differentiate between the Internet and the World Wide Web.

TYPE OF EXERCISE

- ▶ Turn and Talk

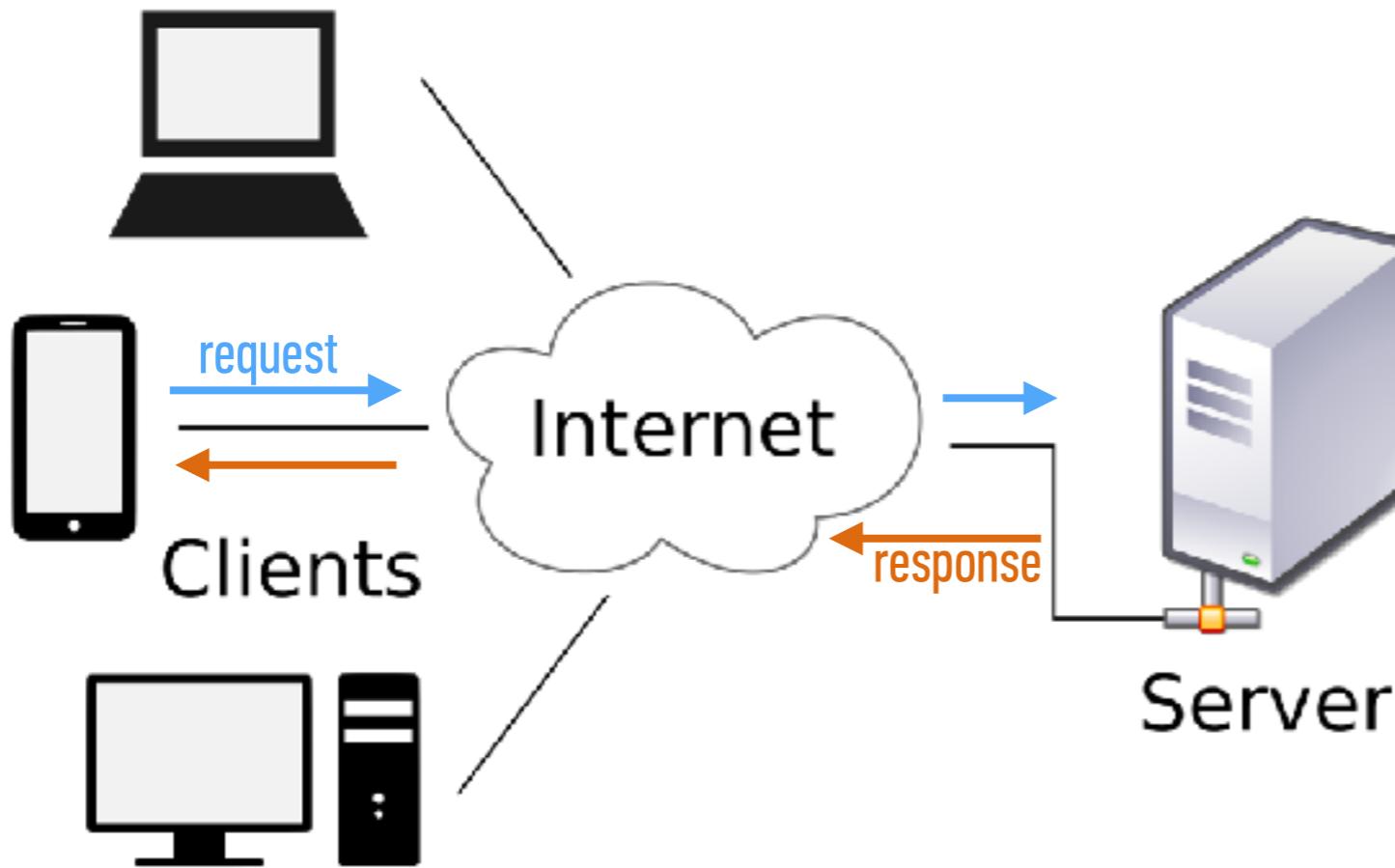
TIMING

4 min

1. What is the Internet?
2. What is the World Wide Web?
3. What is the difference between the two?

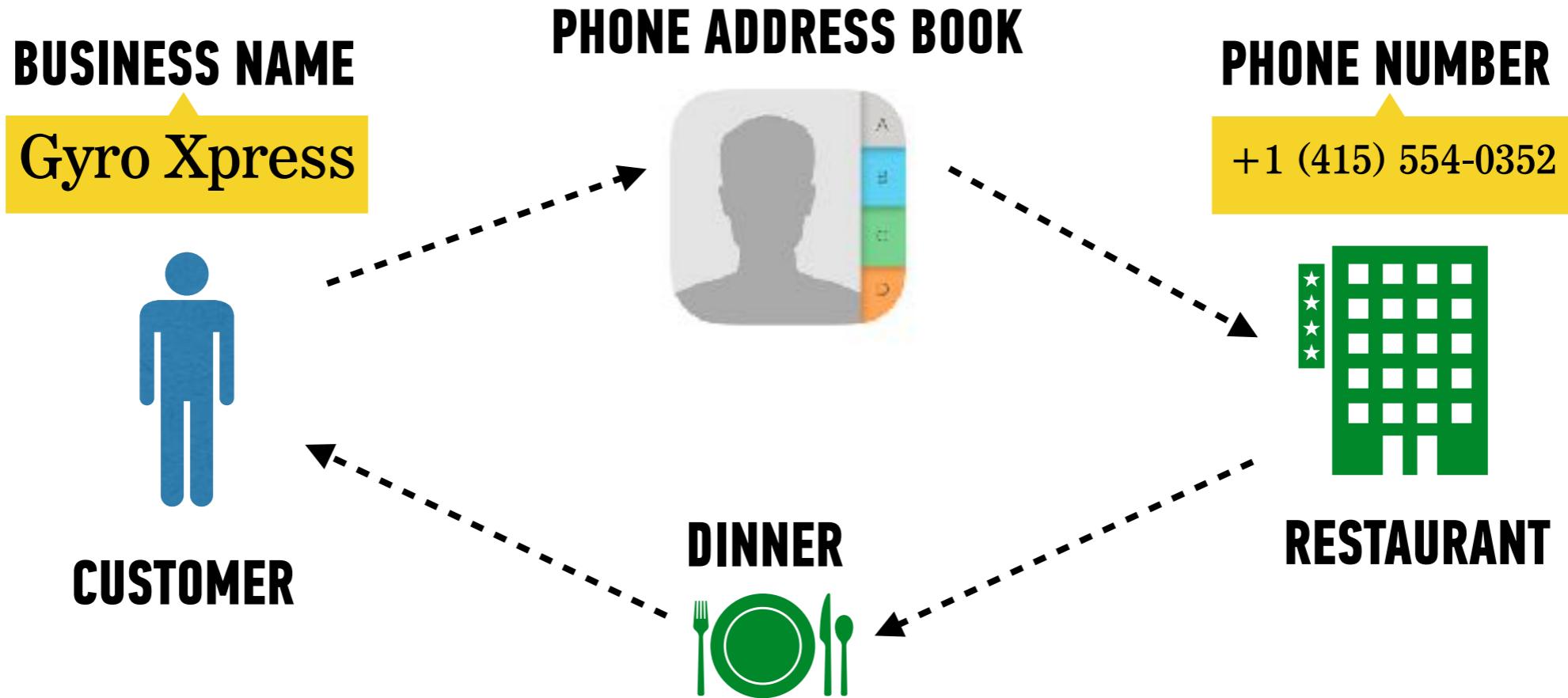
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THE CLIENT-SERVER MODEL

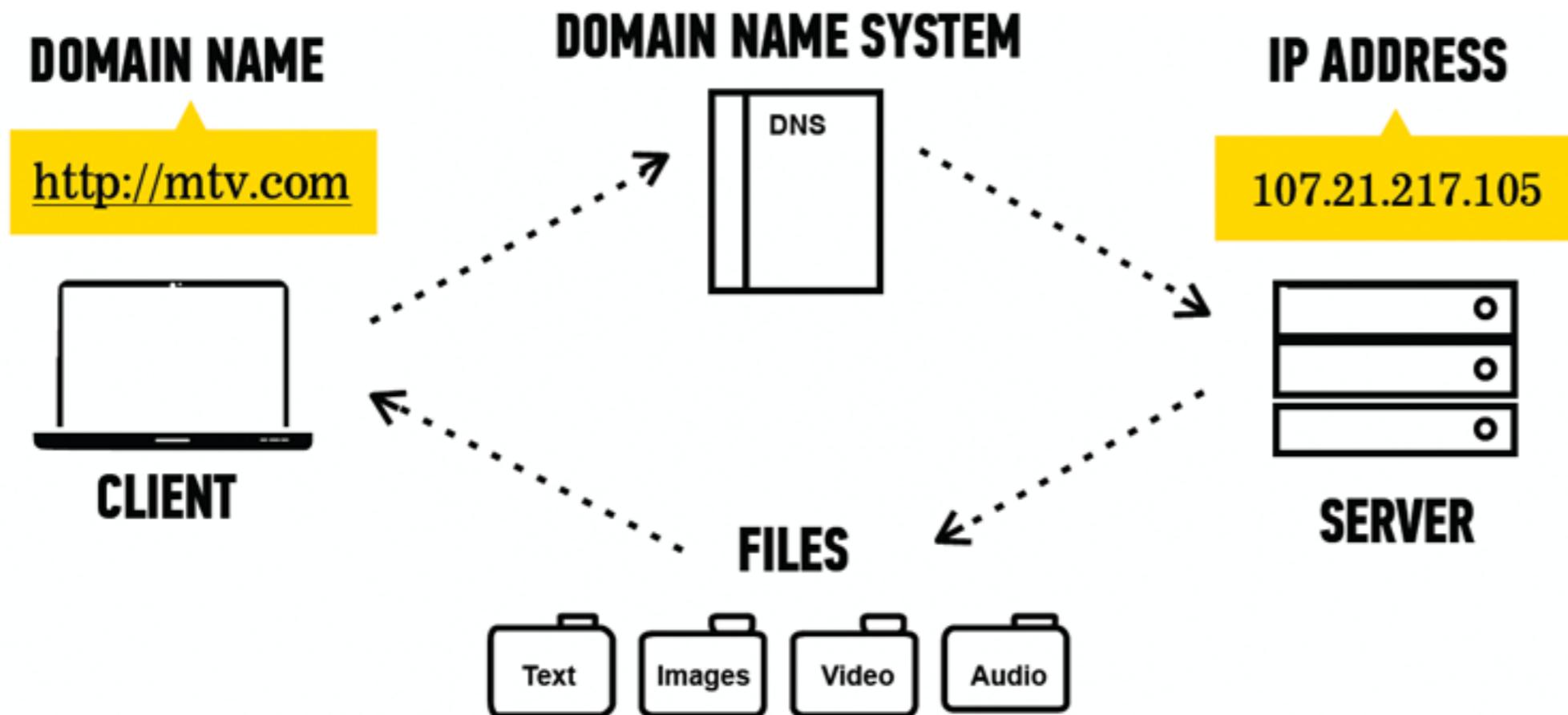


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HOW DO YOU REACH A SPECIFIC SERVER?



HOW DO YOU REACH A SPECIFIC SERVER?



ACTIVITY



KEY OBJECTIVE

- ▶ Summarize the client-server model & explain how DNS lookup works.

TYPE OF EXERCISE

- ▶ Partner activity (groups of 2-3)

TIMING

2 min

1. In your browser, open a new tab, type **50.0.2.222**, then press Enter.
2. Discuss with your partners what happened and why.
3. On your desk, collaborate to draw a diagram illustrating what happened. Include **client**, **server**, and **DNS** in your diagram.

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LET'S INSTALL!

ACTIVITY - GET YOUR COMPUTER READY TO GO

TASKS

5 min



1. Visit **git.generalassemb.ly**
2. Sign up using your email



1. Visit **slack.com/downloads** to download the application
 2. Sign up using your email and join our class Slack channel: **JS-SF-16**
 3. Upload a profile picture to Slack
- BONUS:** Download the Slack app to your phone and sign in to **JS-SF-16**

ACTIVITY - OPEN THE TERMINAL (COMMAND LINE)



TASKS

1 min

- **Mac:** Open the Terminal app
(Applications > Utilities > Terminal)
- **Windows:** Open Windows PowerShell
(Start Button > type **powershell**)

TOOLS WE'LL BE USING

HOMEBREW (BREW)

- Package manager (Mac only)
- Software that helps you install other software



TOOLS WE'LL BE USING

GIT & GITHUB

- **git**: code versioning software
- **GitHub**: online storage
- Together, they let you collaborate and keep track of code



TOOLS WE'LL BE USING

NODE & NPM

- **Node**: for running JavaScript from the command line
- **npm**: package manager for JavaScript



TOOLS WE'LL BE USING

TEXT EDITOR

- I'll use Visual Studio Code on screen
- Other popular options:
 - Sublime Text
 - Atom



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TAKE A DEEP BREATH: Problems getting your environment configured come with the territory

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PROTIP: Don't type the \$

Installing on macOS

There are several ways to install Git on a Mac. The easiest is probably to install the Xcode Command Line Tools. On Mavericks (10.9) or above you can do this simply by trying to run `git` from the Terminal the very first time.

```
$ git --version
```



ACTIVITY



KEY OBJECTIVE

- ▶ Use Node.js, npm, Git, and other command line tools on your computer.

TIMING

- 20 min*
1. Follow the instructions to install tools on your machine:
[Mac instructions](#)
[Windows instructions](#)
 2. If classmates around you are still working on this when you finish, please offer to lend a hand
 3. BONUS: Explore and install one or more of the customizations for your editor listed on the [Resources page](#).

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PSEUDOCODE

- * If the red button is tapped
 - * Check to see if the light is red
 - * If the light is not red, turn the light red and set the light color to red
 - * If the light is red, turn the light off and set the light color to off
- * If the blue button is tapped
 - * Check to see if the light is blue
 - * If the light is not blue, turn the light blue and set the light color to blue
 - * If the light is blue, turn the light off and set the light color to off
- * If the yellow button is tapped
 - * Check to see if the light is yellow
 - * If the light is not yellow, turn the light yellow and set the light color to yellow
 - * If the light is yellow, turn the light off and set the light color to off

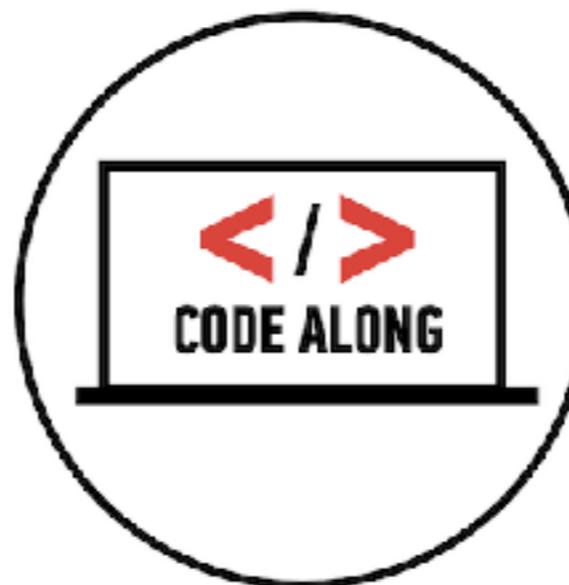
PSEUDOCODE — THE IMPORTANCE OF PLANNING



PSEUDOCODE — HEIGHT COMPARISON



PSEUDOCODE — PASSING SCORE



LAB — PSEUDOCODE



KEY OBJECTIVE

- Write pseudocode and explain how it relates to programmatic thinking.

TYPE OF EXERCISE

- Pairs

TIMING

5 min

1. Create pseudocode for a program that calculates the number of miles a user travels between home and work (or another destination) per year.
2. Take into account distance between home and destination, times per day the user makes that trip (probably 2), and working days per year.

ACTIVITY



KEY OBJECTIVE

- ▶ Explain how pseudocode relates to programmatic thinking.

TYPE OF EXERCISE

- ▶ Turn and Talk

TIMING

4 min

1. Describe pseudocode in your own words.
2. Explain what programmatic thinking is, and how it relates to pseudocode.

Exit Tickets!

(Class #0)

LEARNING OBJECTIVES - REVIEW

- Differentiate between the Internet and the World Wide Web.
- Summarize the client-server model & explain how DNS lookup works.
- Use Node.js, npm, Git, and other command line tools on your computer.
- Write pseudocode and explain how it relates to programmatic thinking.

NEXT CLASS PREVIEW

Command Line & Data Types

- Work with files/directories via the terminal window
- Create a Git repository and push/pull changes
- Run basic JavaScript code on the command line
- Describe the concept of a data type and how it relates to variables.

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Q&A