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

Student Services

Email: studentservicesSF@ga.co

Slack: Student Services SF

Patricia Anderson

Course logistics

- Access to tools
- Feedback about the course
- Enrollment and finances
- Graduation certificates

Campus questions

- GA Facilities
- GA events outside of class
- Discounts for other courses

Others you may see

JANET LEE

Instructor Manager

NIÑA PINEDA

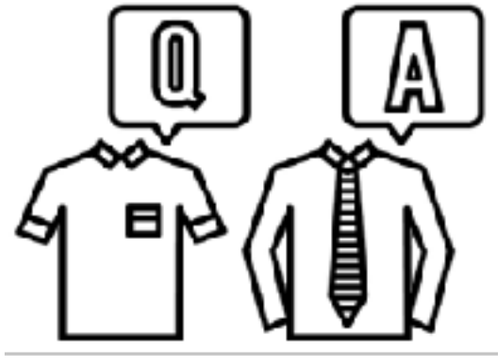
Front Lines Lead

VANESSA OHTA

Instruction Manager

Let’s get to know each other

STRUCTURE



PAIRS

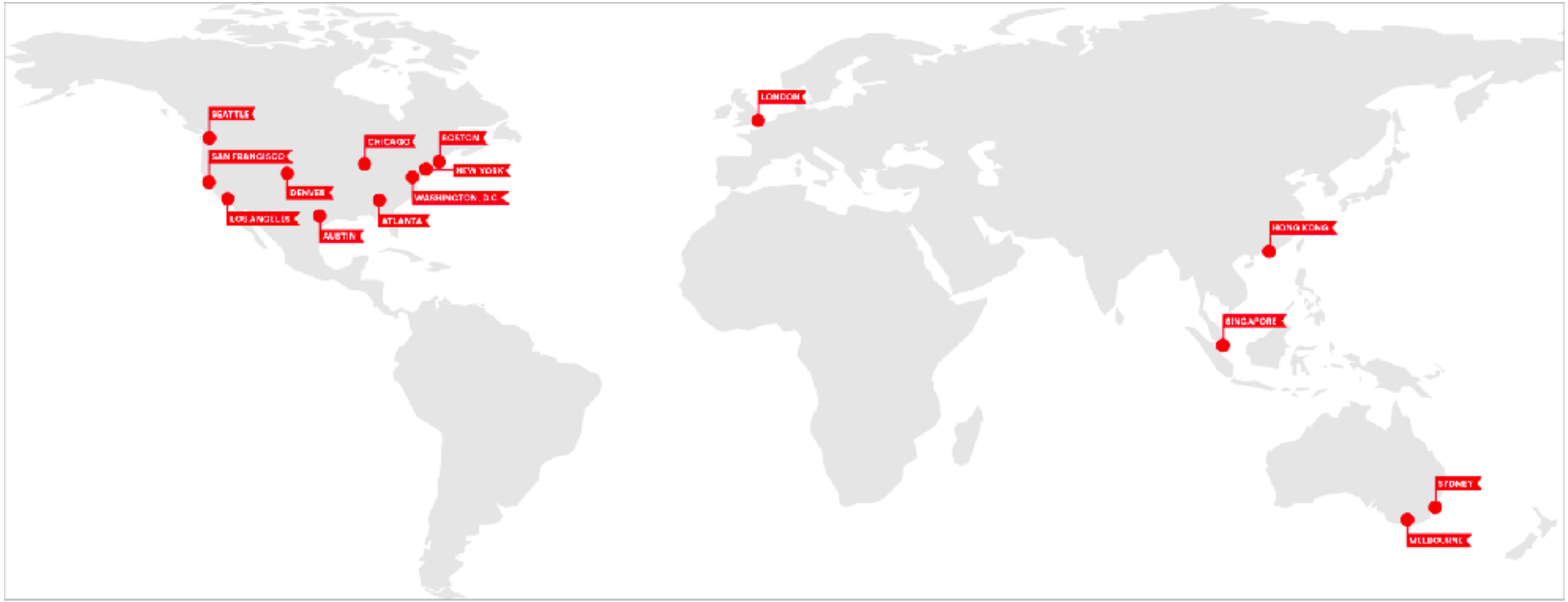
INTROS: 5 MIN
SHARING: 10 MIN

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

THE STUDENT
EXPERIENCE

20 campuses around the world

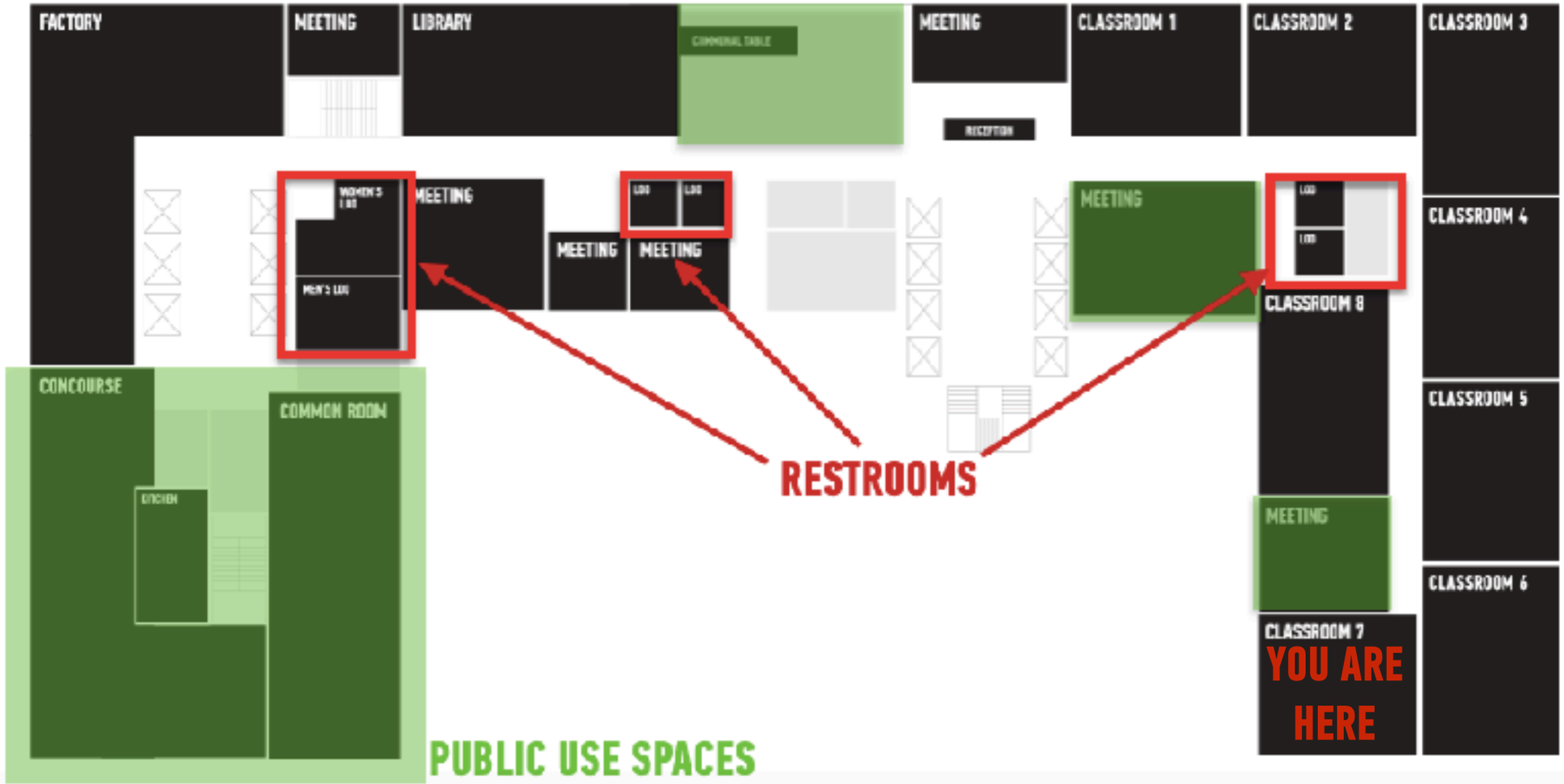


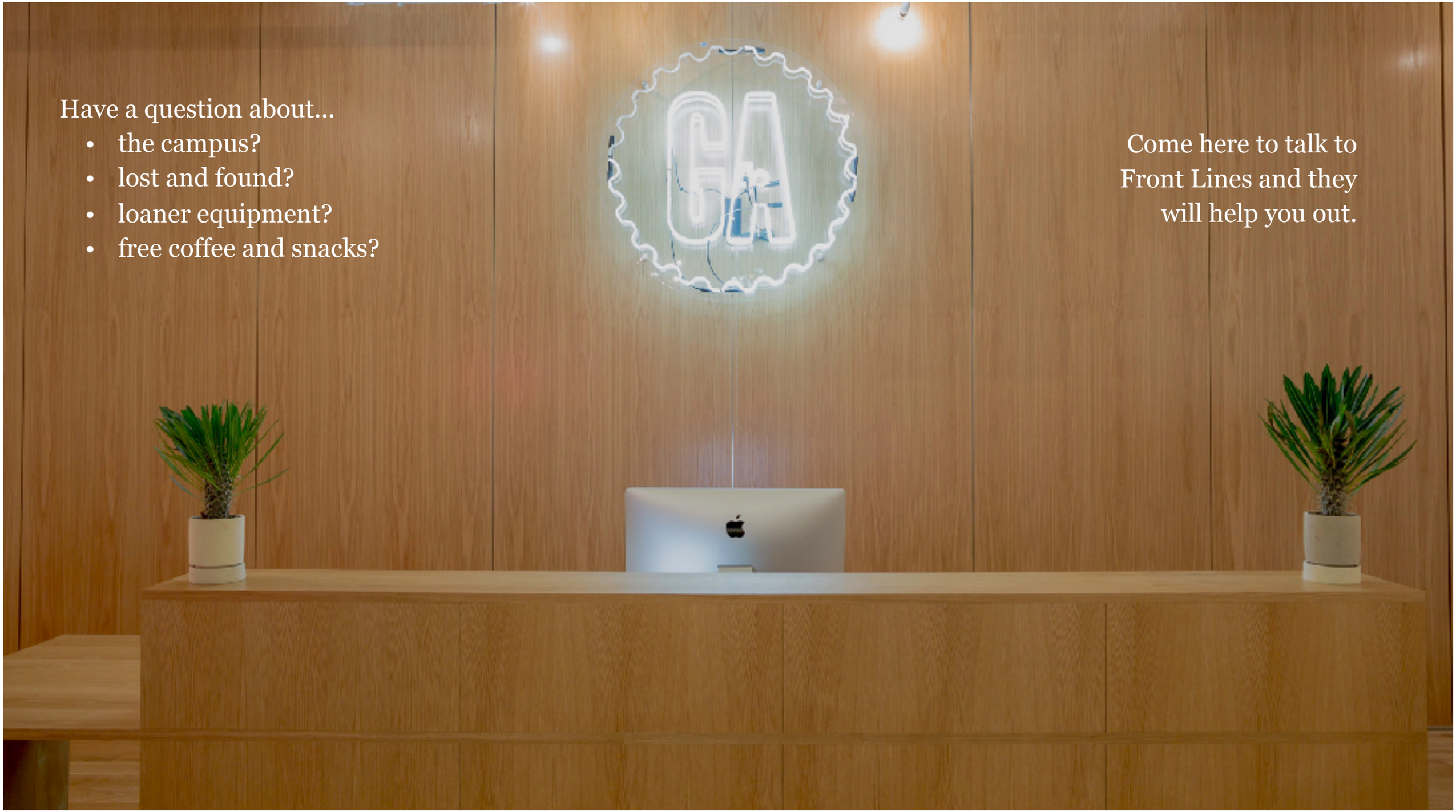
Come work on campus.

We’re open:
8am - 10pm, Monday to Friday
10am - 6pm, Saturday and Sunday

GENERAL ASSEMBLY

San Francisco




Have a question about...
• the campus?
• lost and found?
• loaner equipment?
• free coffee and snacks?
Come here to talk to Front Lines and they will help you out.

COURSE EXPECTATIONS

Course dates

JavaScript Development 14

Course dates:

- Mondays and Wednesdays, 6:30pm - 9:30pm
- February 11 - April 22

Holiday: February 18

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	Closures & `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

1

2

Don’t miss more than 3 classes

Complete and present a final project

3

HOMEWORK

OVERVIEW:

- Assigned every Wednesday, starting this week
- Due the following Sunday at 11:59pm
- Expect feedback within 5 days

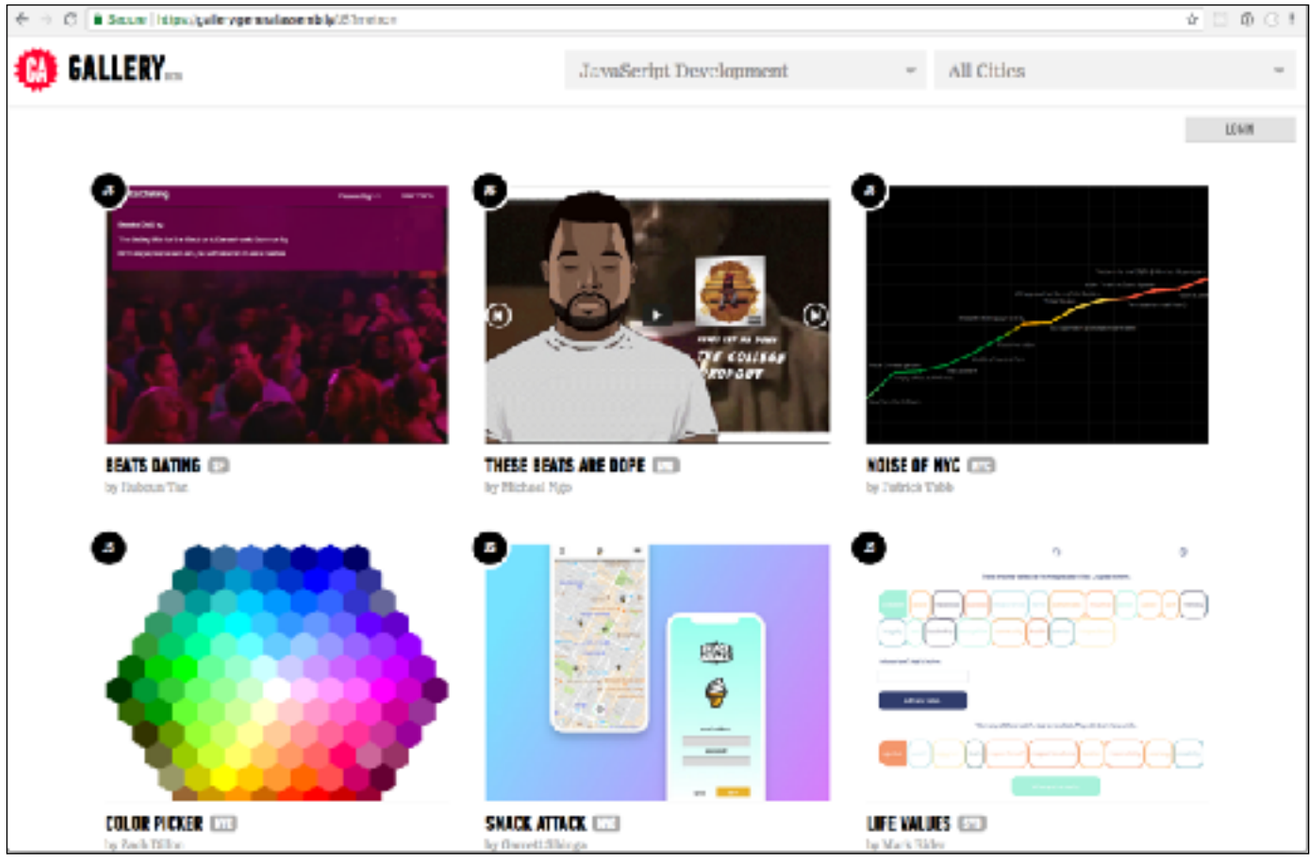
GRADING:

- Complete/Incomplete

LATE ASSIGNMENTS:

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

Final Projects



https://gallery.generalassemb.ly/JS

TIPS FOR SUCCESS

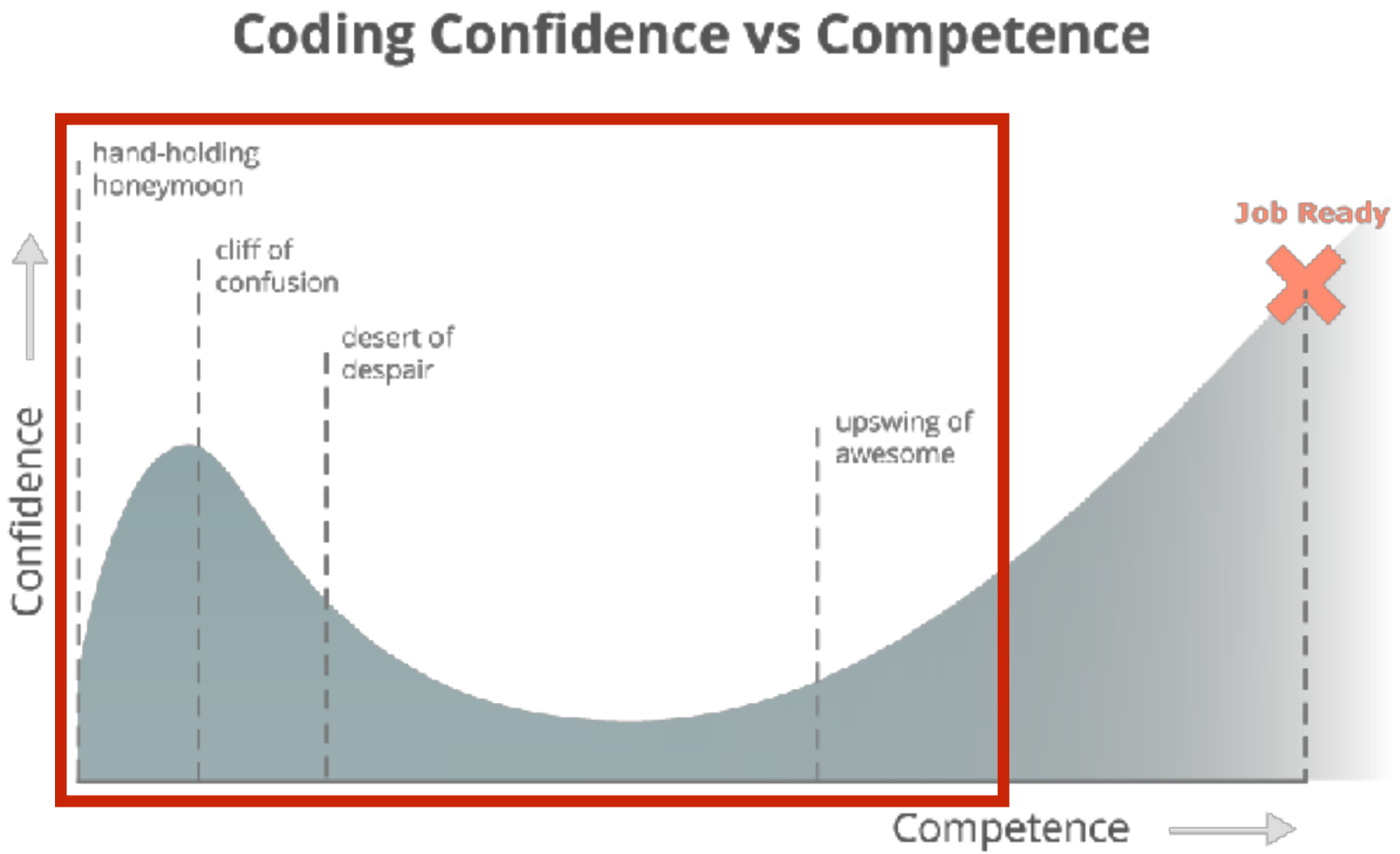
- Complete homework on time

```
div
#main
.special
```

- Brush up on your element, ID, and class CSS selectors

- Ask questions!

Common Misconceptions: Learning Curve

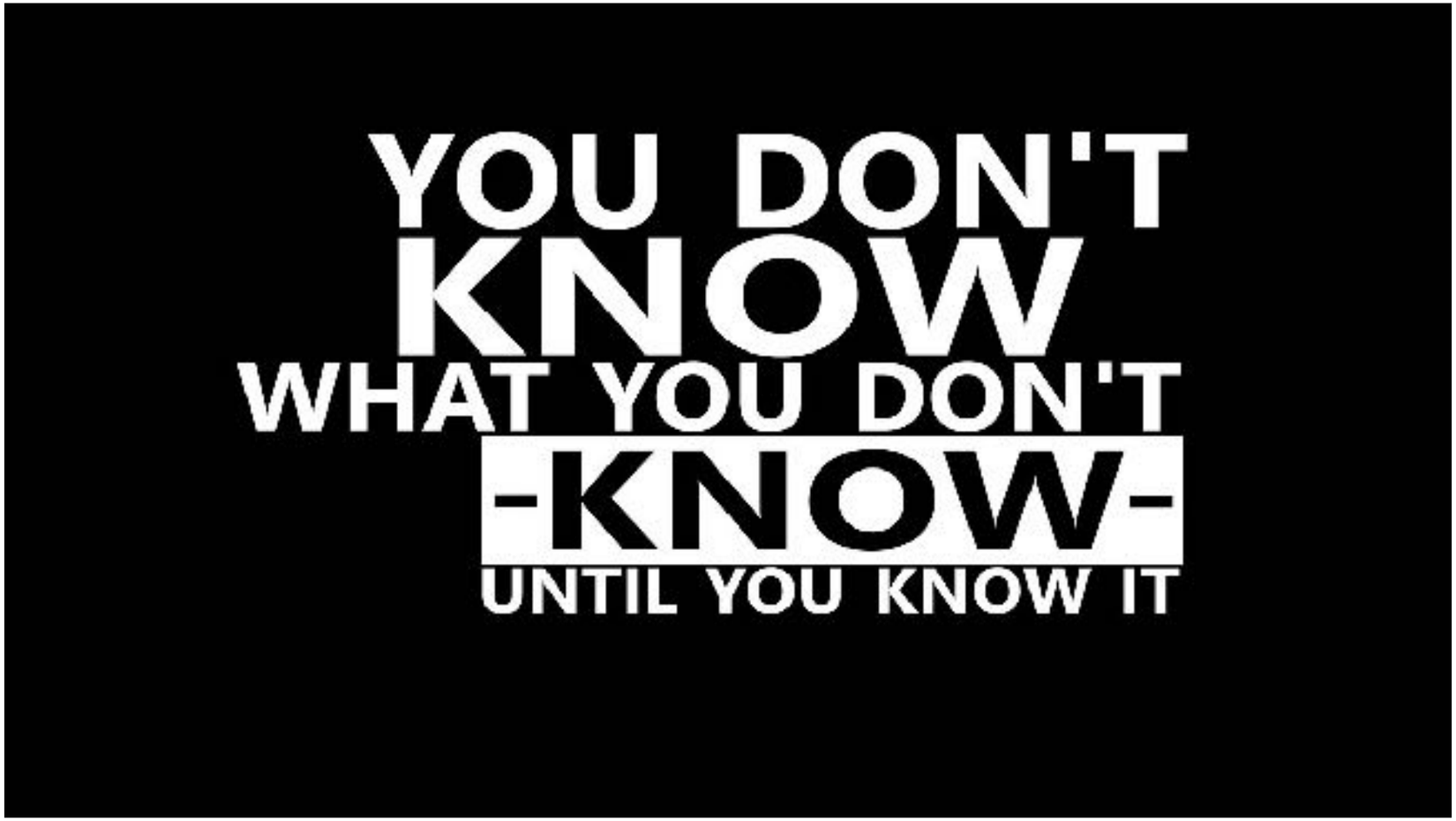


Common Misconceptions: Googling

Common Misconceptions: Outside Tutorials

Common Misconceptions: Course Content

Goals



GA VALUES

- GRIT
- TEAMWORK
- CURIOSITY
- RESOURCEFULNESS
- GENEROSITY

INSTALLFEST

GA VALUES

- GRIT
- TEAMWORK
- CURIOSITY
- RESOURCEFULNESS
- GENEROSITY

GRIT

We keep going when things get tough.

GA VALUES

- GRIT
- TEAMWORK
- CURIOSITY
- RESOURCEFULNESS
- GENEROSITY

TEAMWORK

We work together to meet our goals.

INSTALLFEST

GA VALUES

- GRIT
- TEAMWORK
- CURIOSITY
- RESOURCEFULNESS
- GENEROSITY

CURIOSITY

We accept feedback with poise and professionalism.

GA VALUES

- GRIT
- TEAMWORK
- CURIOSITY
- RESOURCEFULNESS
- GENEROSITY

RESOURCEFULNESS

We take advantage of the many resources around us and ask for help when we need it.

GA VALUES

- GRIT
- TEAMWORK
- CURIOSITY
- RESOURCEFULNESS
- GENEROSITY

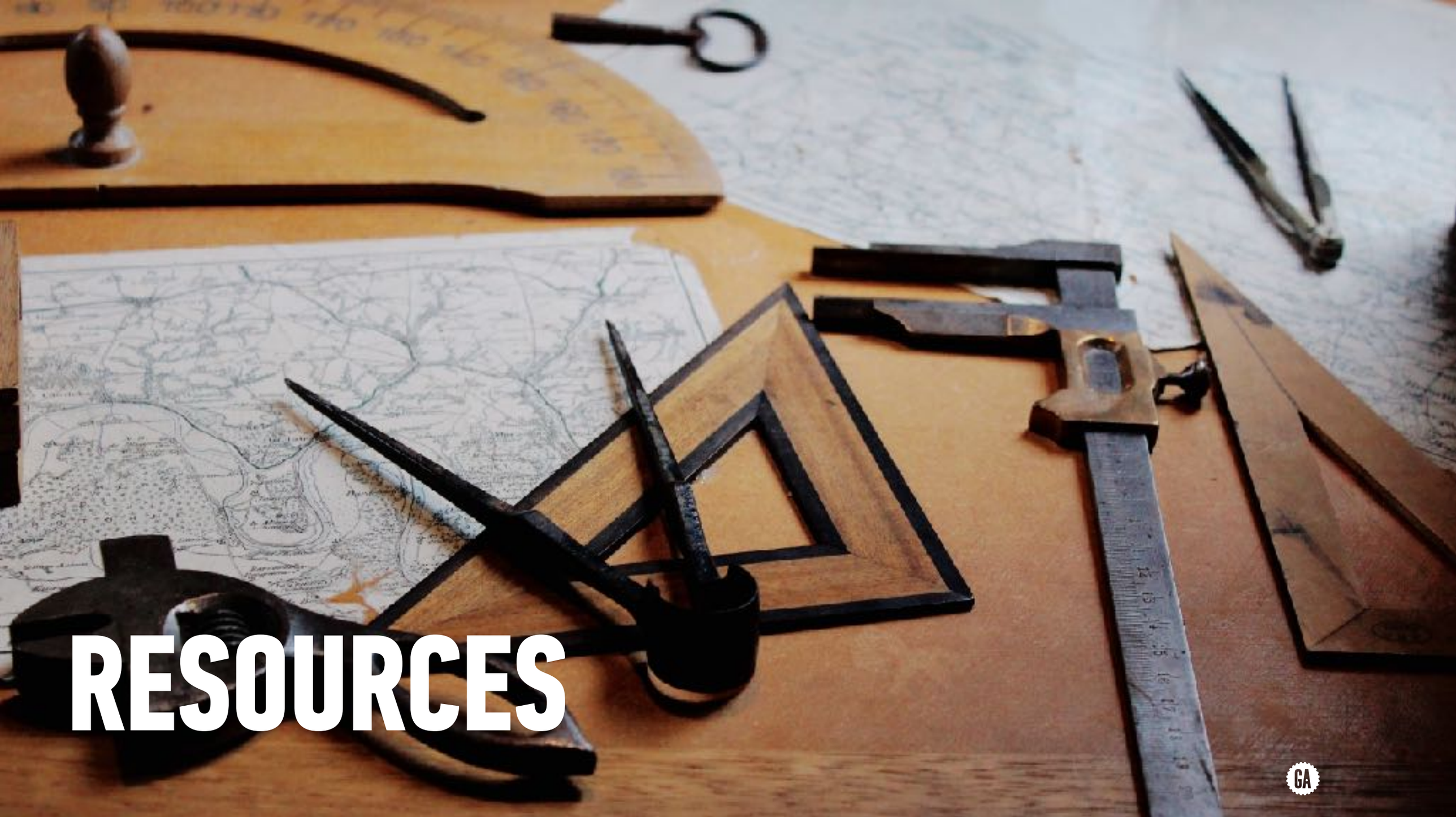
GENEROSITY

We share our experiences, skills, and gifts to help those around us.

CLASS NORMS

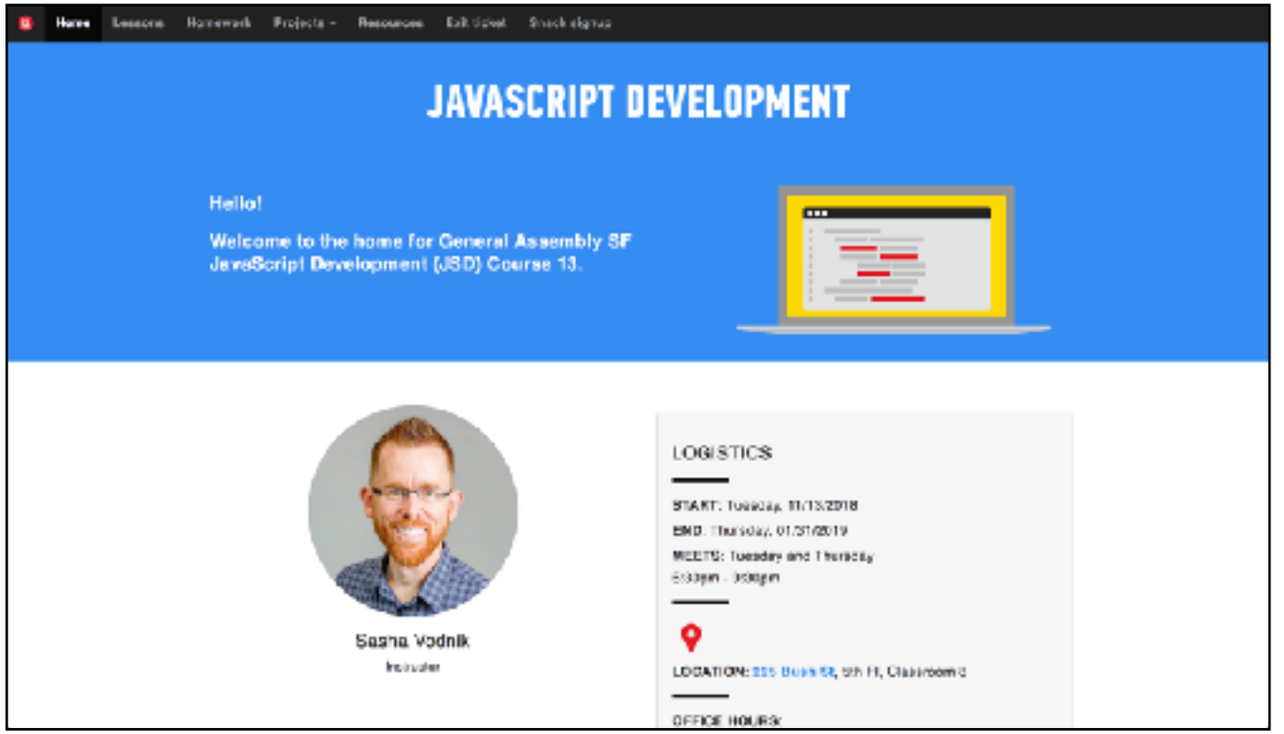
Let's all agree to:

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



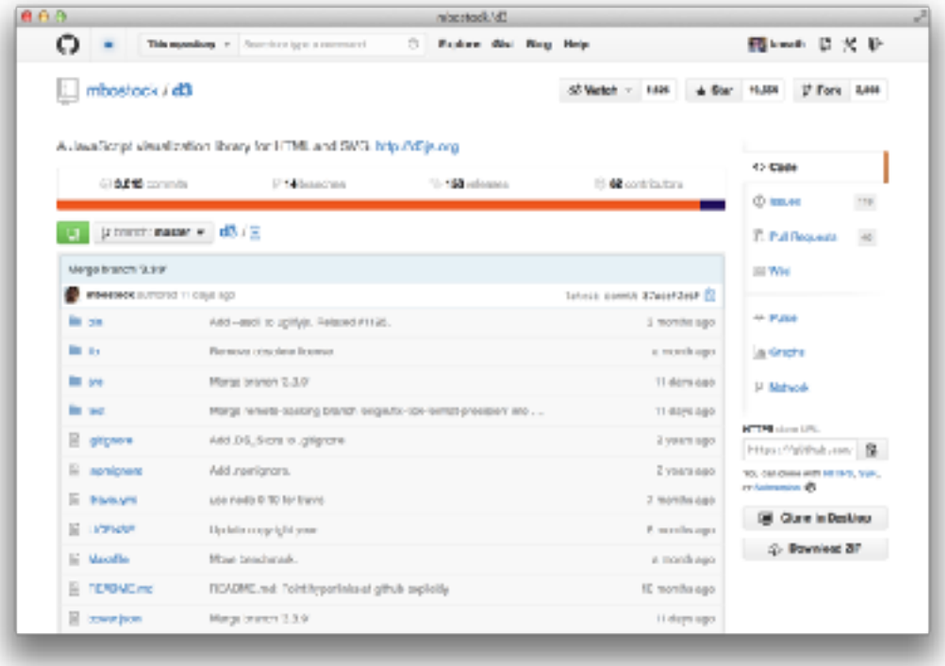
RESOURCES

Class website



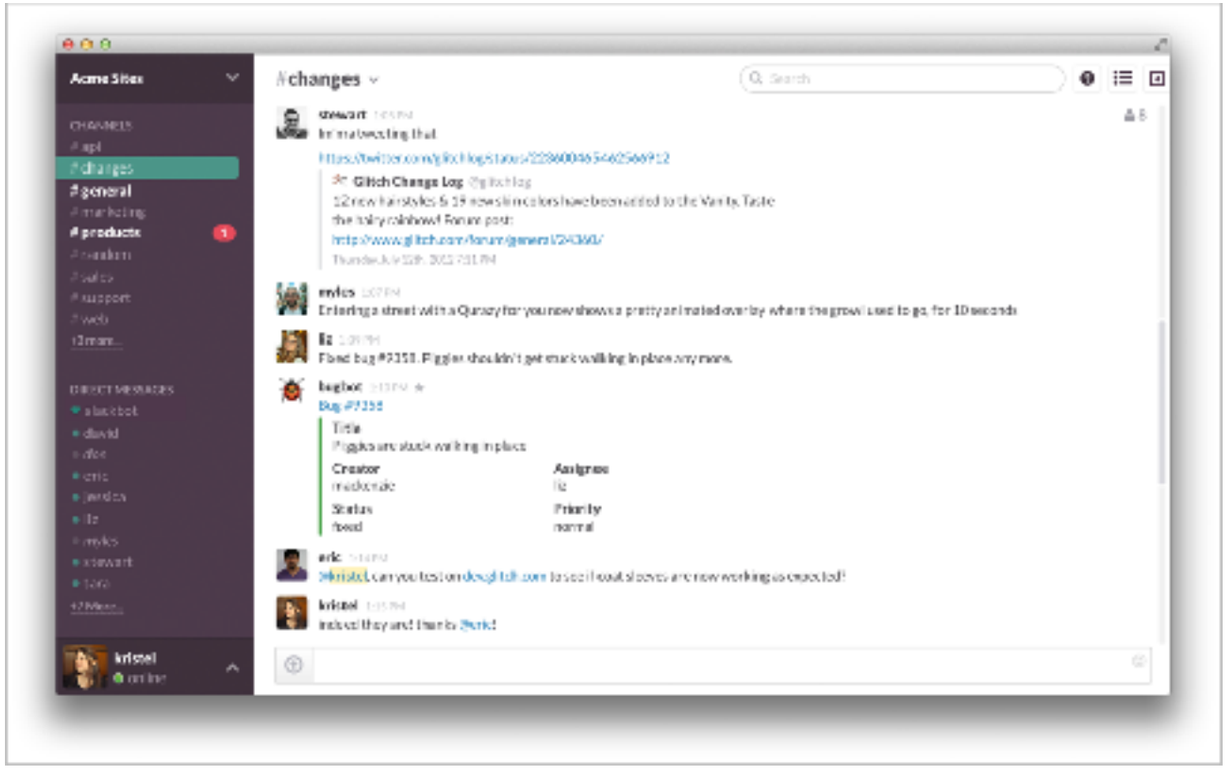
The class website will have slide decks and handouts for each class, as well as details on assignments and projects.

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!!

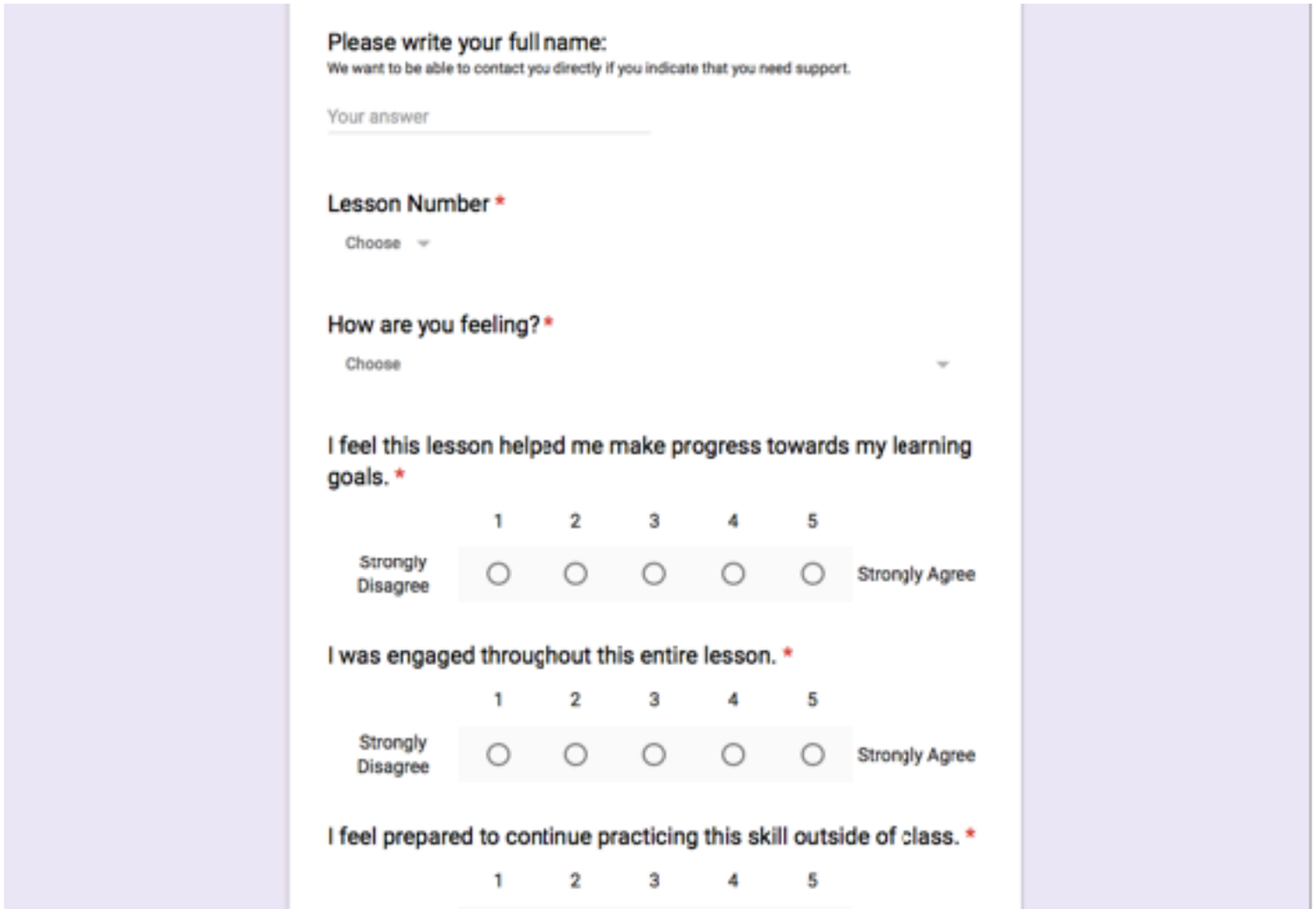
INSTALLFEST

OFFICE HOURS

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

INSTALLFEST

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	

GENERAL ASSEMBLY

JAVASCRIPT DEVELOPMENT

Sasha Vodnik, Instructor

INSTALLFEST

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.

AGENDA

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

JAVASCRIPT & WEB DEVELOPMENT

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)

JAVASCRIPT AND WEB TECHNOLOGIES

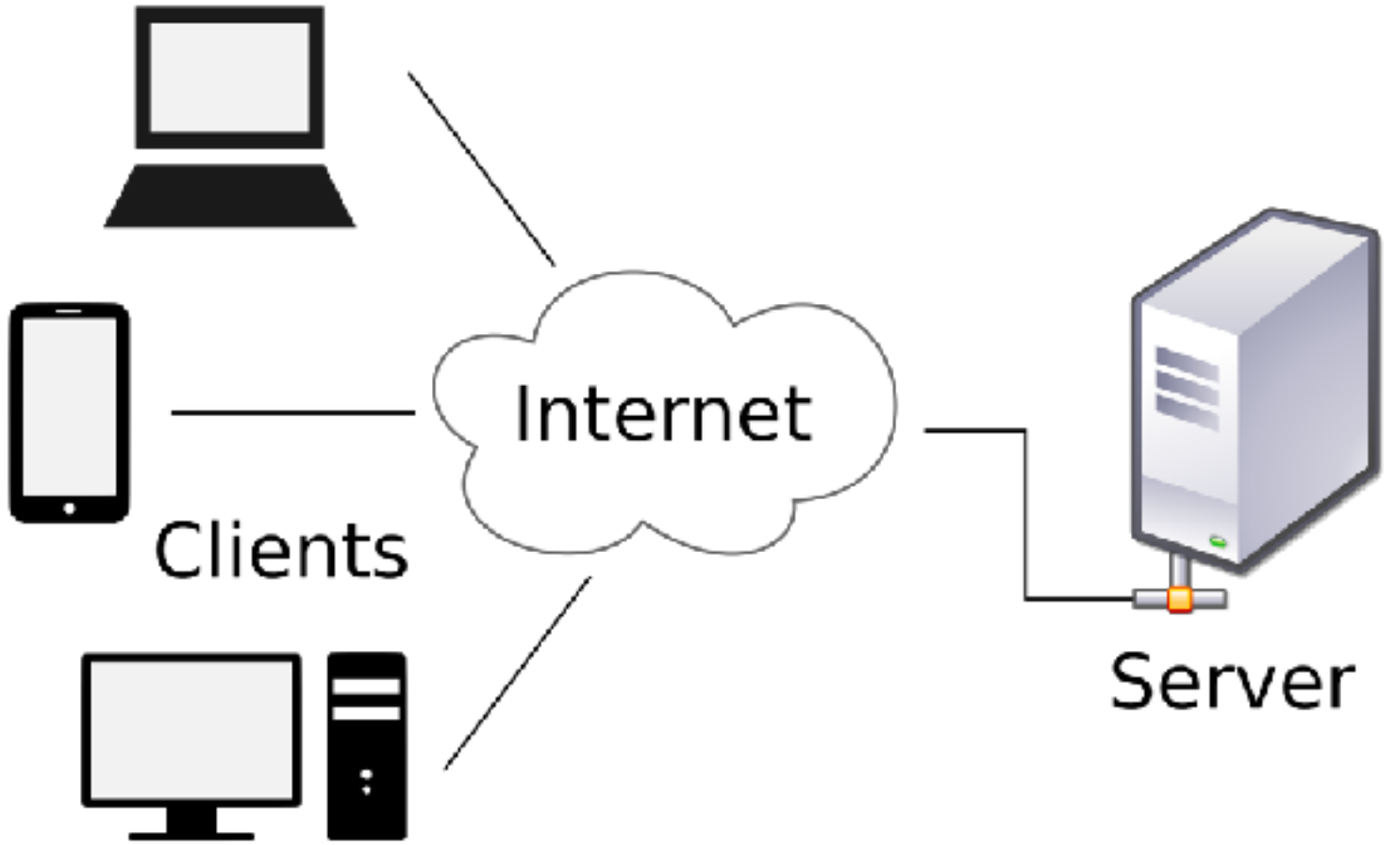
How do these fit together?

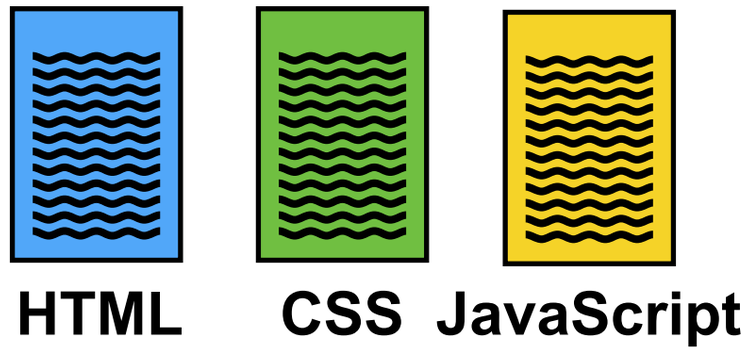
web development

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)

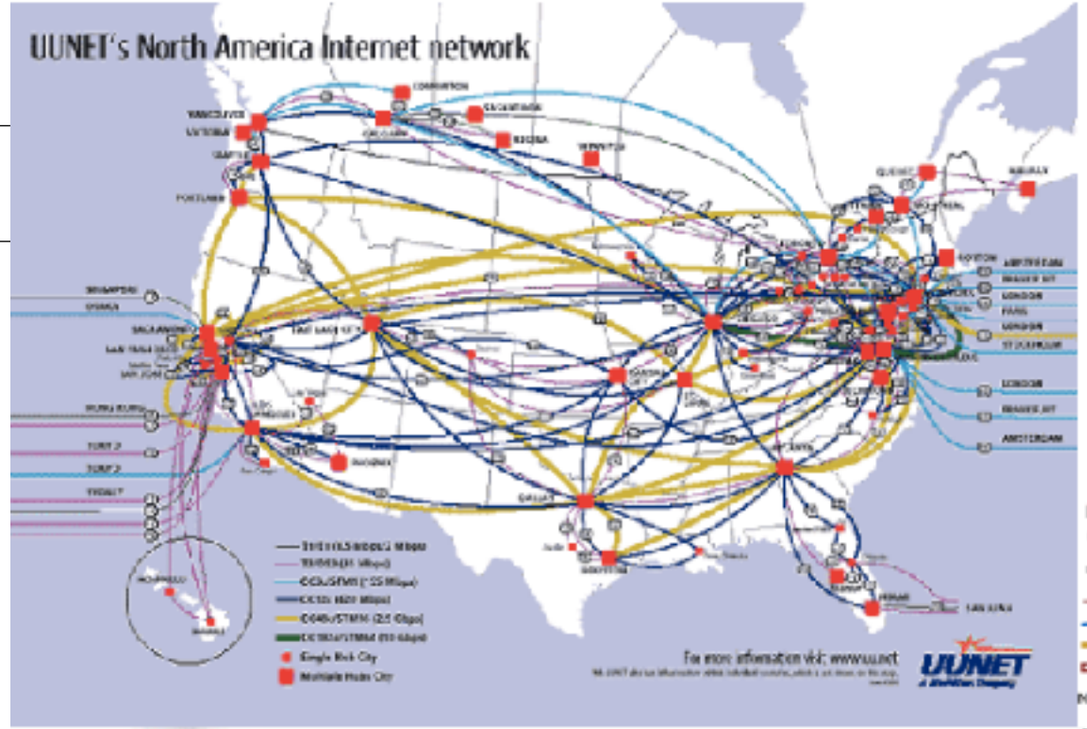
node.js

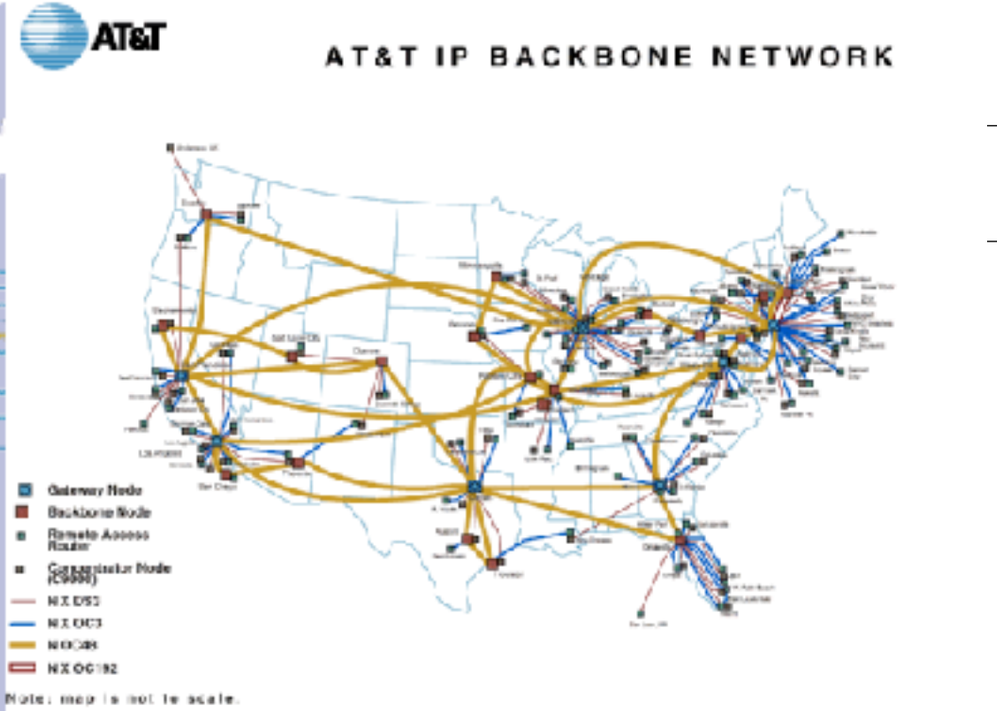
INTERNET VS WORLD WIDE WEB

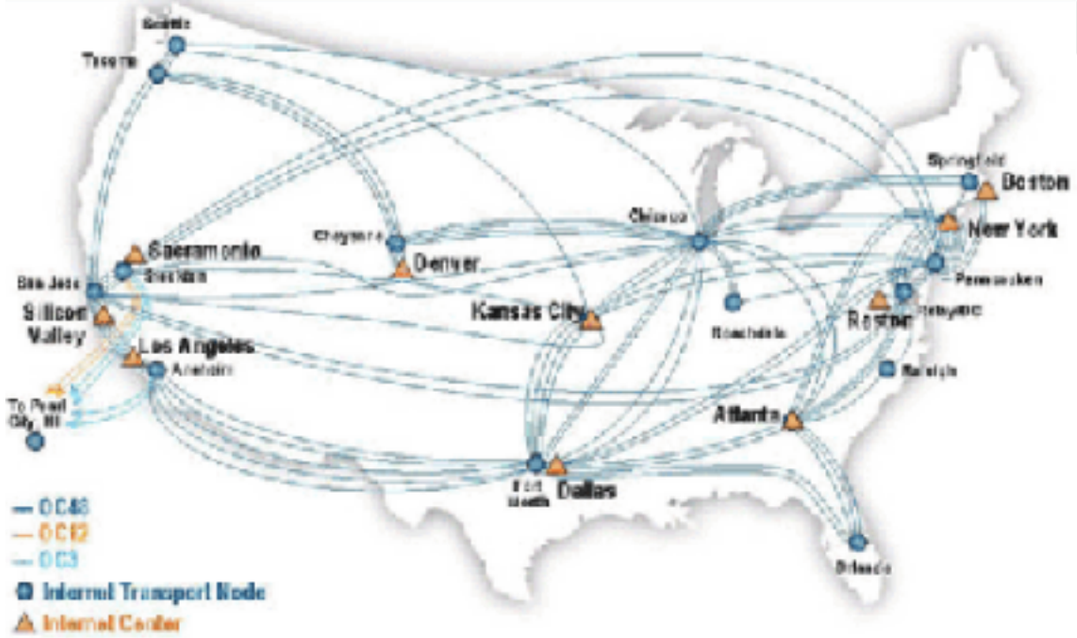
What is the Internet?

- 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
For more information visit: www.uu.net
UUNET

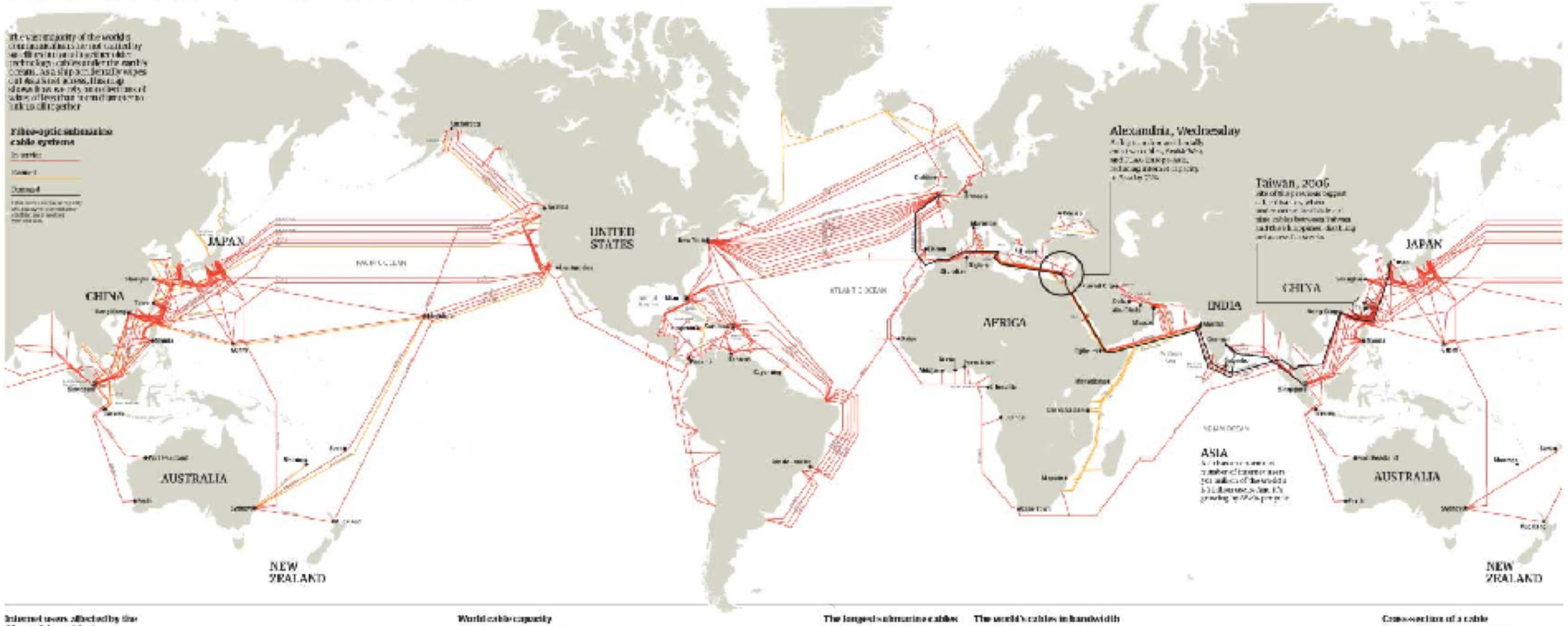

AT&T
AT&T IP BACKBONE NETWORK
Gateway Node
Backbone Node
Remote Access Router
Concentrator Node (C8000)
Note: map is not to scale.


Seattle
Tacoma
Sacramento
San Jose
Silicon Valley
Los Angeles
Anaheim
To Pearl City, HI
Chicago
Denver
Kansas City
Boston
New York
Pennsauken
Reston
Atlanta
Dallas
Orlando
OC48
OC12
OC3
Internal Transport Node
Internet Center

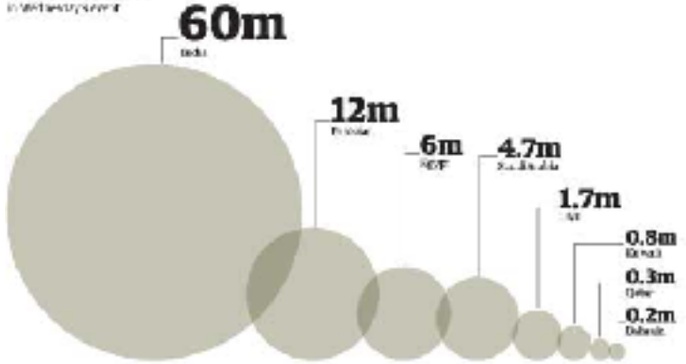
Level(3)
Seattle
Portland
Oakland
San Jose
Sacramento
San Francisco
Salt Lake City
Denver
Las Vegas
San Luis Obispo
Los Angeles
Orange
San Diego
Phoenix
El Paso
Fort Worth
Dallas
Austin
San Antonio
Houston
Omaha
Chicago
Detroit
Cleveland
Buffalo
Albany
Pittsburgh
Indianapolis
Cincinnati
Louisville
St. Louis
Kansas City
Richmond
Raleigh
Nashville
Memphis
Charlotte
Atlanta
New Orleans
Jacksonville
Orlando
Tampa
Miami
Manchester
Boston
Providence
Hartford
Stamford
Long Island
New York City
Jersey City
Newark
Princeton
Philadelphia
Baltimore
Wilmington
Washington DC

Sprint

The internet's undersea world



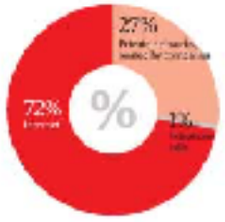
Internet users affected by the Alexandria accident



World cable capacity

Capacity in terabytes a second

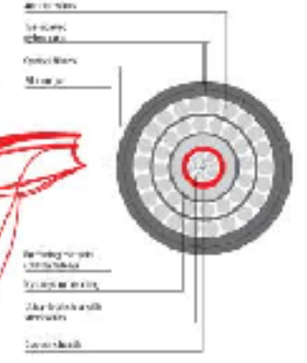
What makes up "used capacity"?



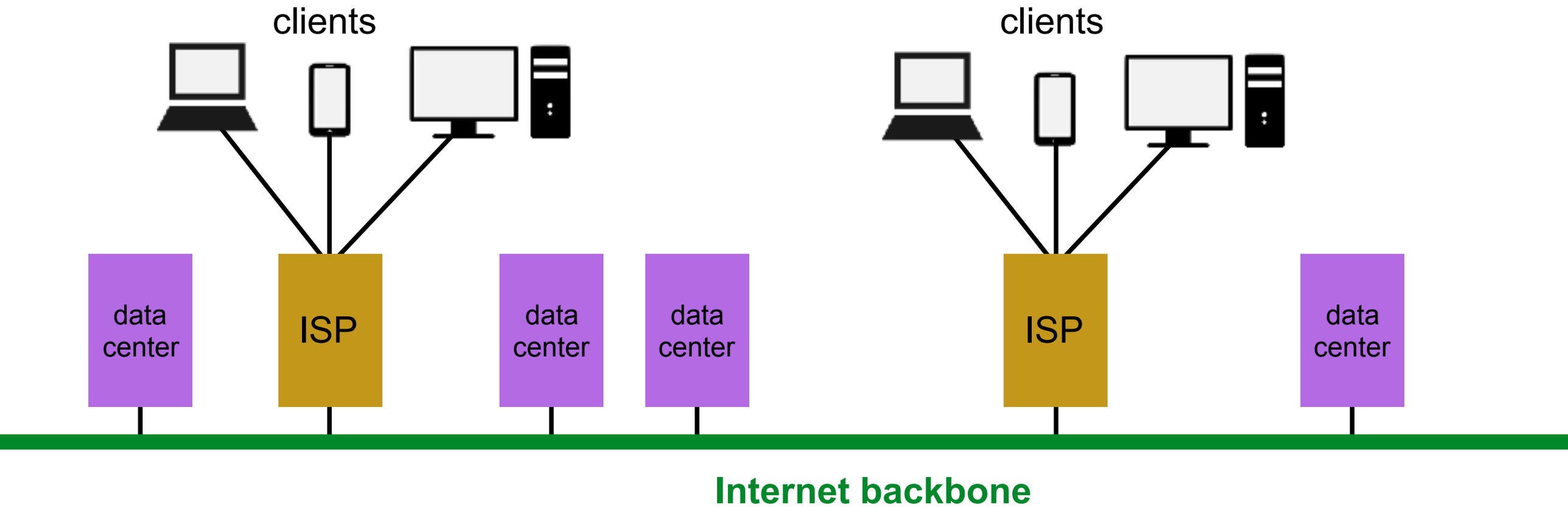
The longest submarine cables

The world's cables in bandwidth

Cross-section of a cable



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)

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

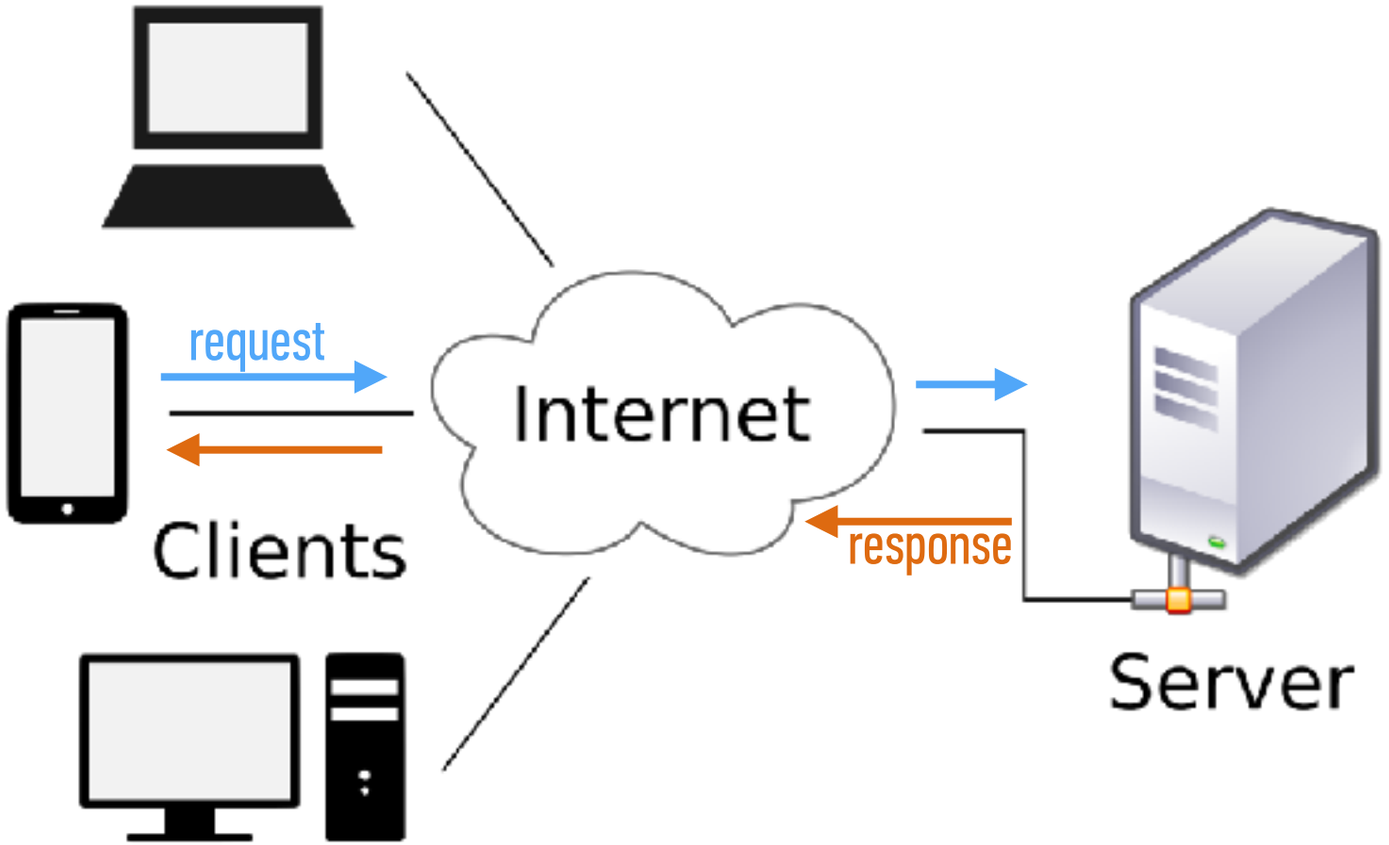
- Turn and Talk

TIMING

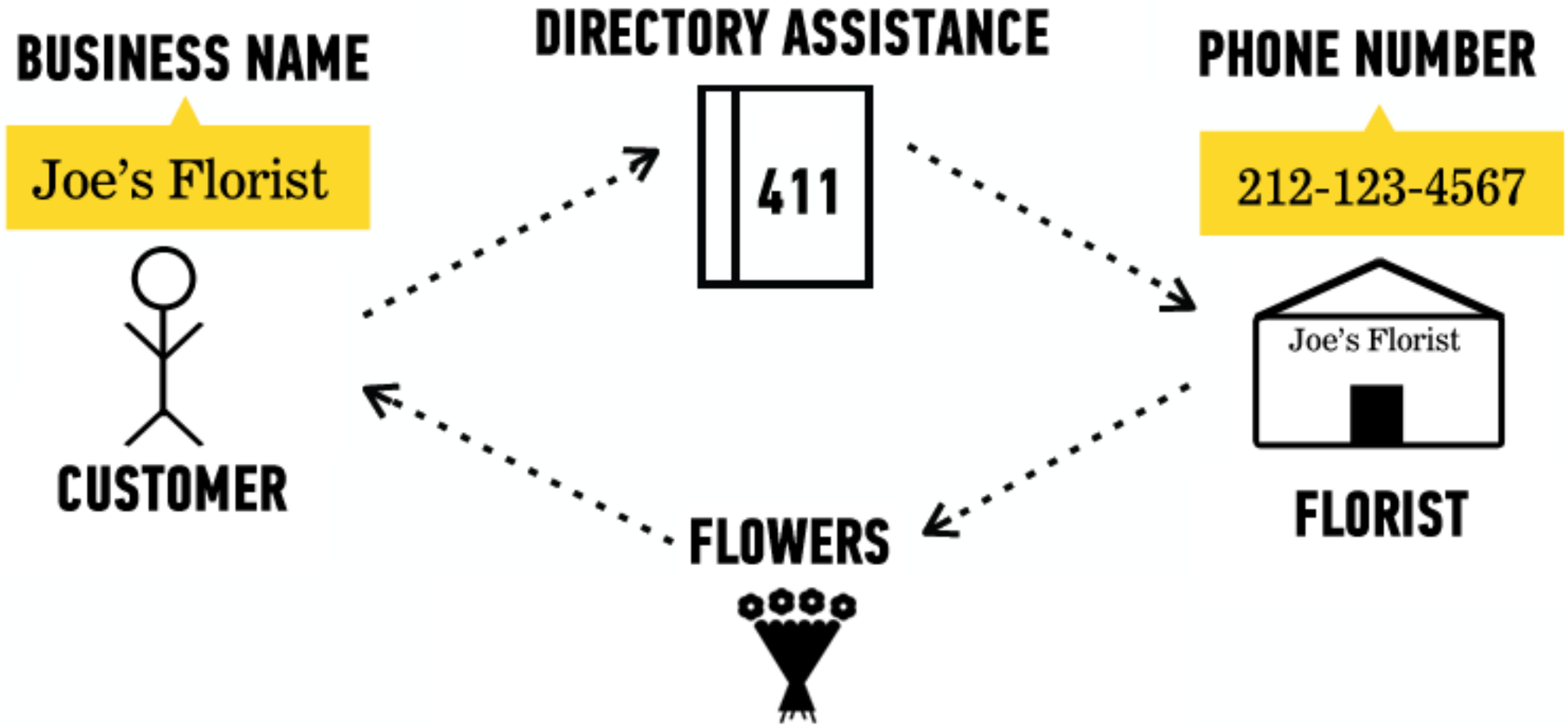
4 min

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

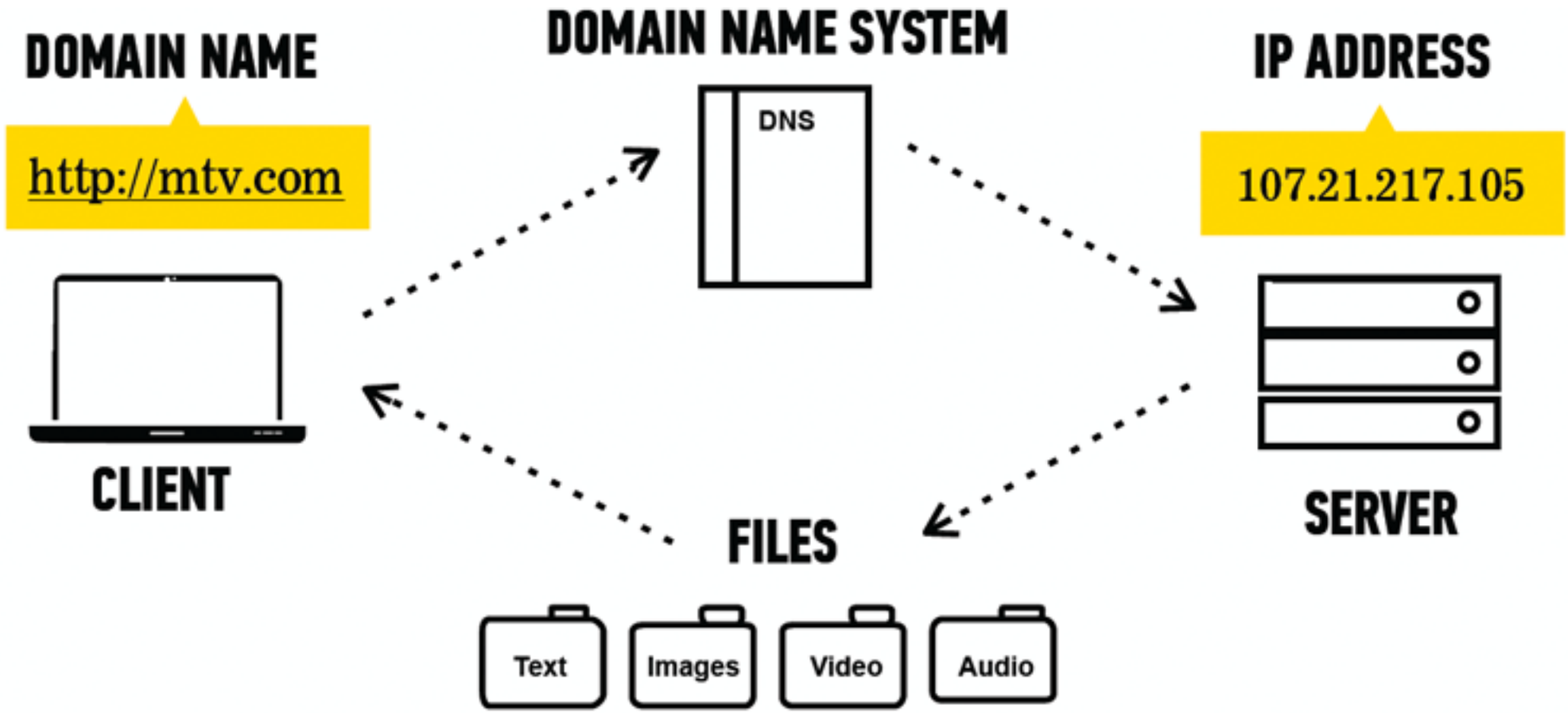
THE CLIENT-SERVER MODEL



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.

LET'S INSTALL!

ACTIVITY - GET YOUR COMPUTER READY TO GO

TASKS

5 min

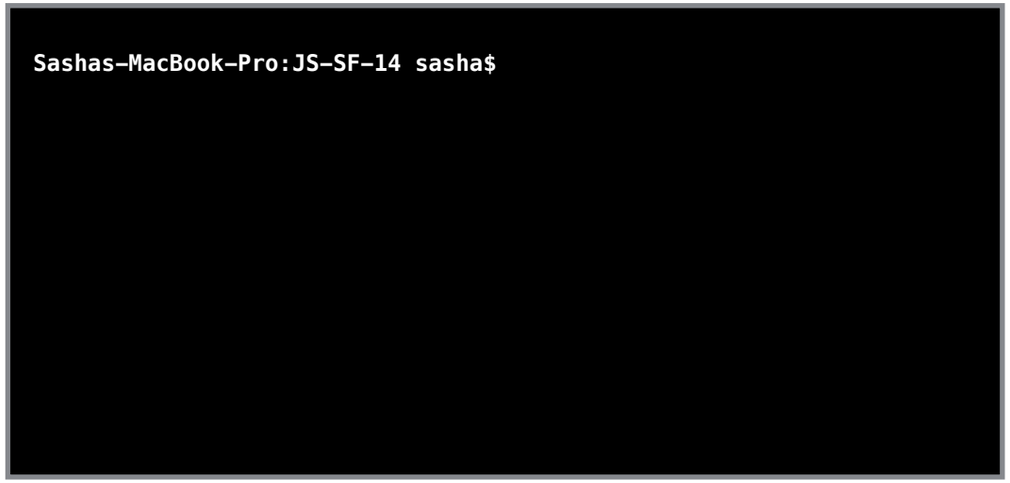
1. Visit **git.generalassemb.ly**
2. Sign up using your email

1. Visit **slack.com/downloads** to download the application
2. Sign up using your email and join our class Slack channel: **JS-SF-14**
3. Upload a profile picture to Slack

   BONUS: Download the Slack app to your phone and sign in to **JS-SF-14**

ACTIVITY - OPEN THE TERMINAL (COMMAND LINE)

EXERCISE



TASKS

1 min

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

HOMEBREW (BREW)

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

GIT & GITHUB

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

NODE & NPM

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

VISUAL STUDIO CODE

- Text editor
- Other popular options:
  - Sublime Text
  - Atom

INSTRUCTIONS

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

See Slack for the instructions URL

ACTIVITY

EXERCISE

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 extensions listed in the Visual Studio Code section of the Resources page.

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

EXERCISE

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.

Q&A