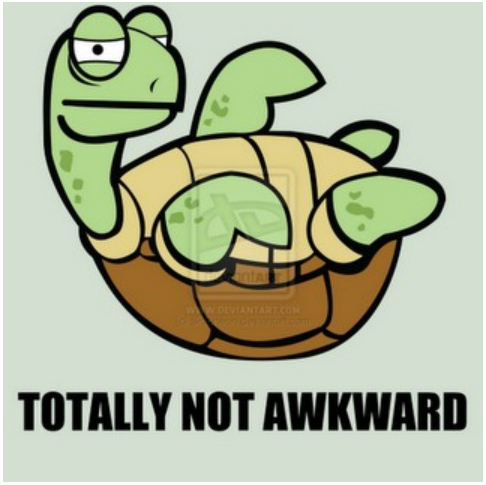
The Zen of Coding

The Coding Bootcamp

Quick Introductions! (30 seconds)

- Name
- Location
- Background (Career, Education, Interests)
- Why learn web development?
- Excited about class?



Instructor = … ?

Michael Bethencourt

- B.S. in CS from UW-Madison
- 10+ years experience in industry
- 1 year experience teaching this course!

On his spare time he likes to…

* Play (& make) video games

* Cycle around the Bay Area

* Get in deeply nerdy debates about science fiction (Star Trek > Star Wars, Picard > Kirk)

* Eat an unhealthy amount of cup noodles

TAs = … ?

- Sergio Barrera
- Leo Liao

Some Cool Stuff I Made…

The Path of Learning

Your Goals...

99% of my students want a... **New Career**

Your Goals...

And why do we want new careers?

To escape a “dead-end job”

To pursue a “dream”

To be able to “create”

To follow a “fascination”

To attain “financial stability”

To attain “financial freedom”

To “challenge” yourself

To be a “role model” for kids

Your Goal = Our Goal

As instructors,
we take your goals very, *very* seriously.

Our Promise:

If you're willing to put in the time – and you take our advice, we're here to help you 100% of the way.
This goes for everyone working behind the program:

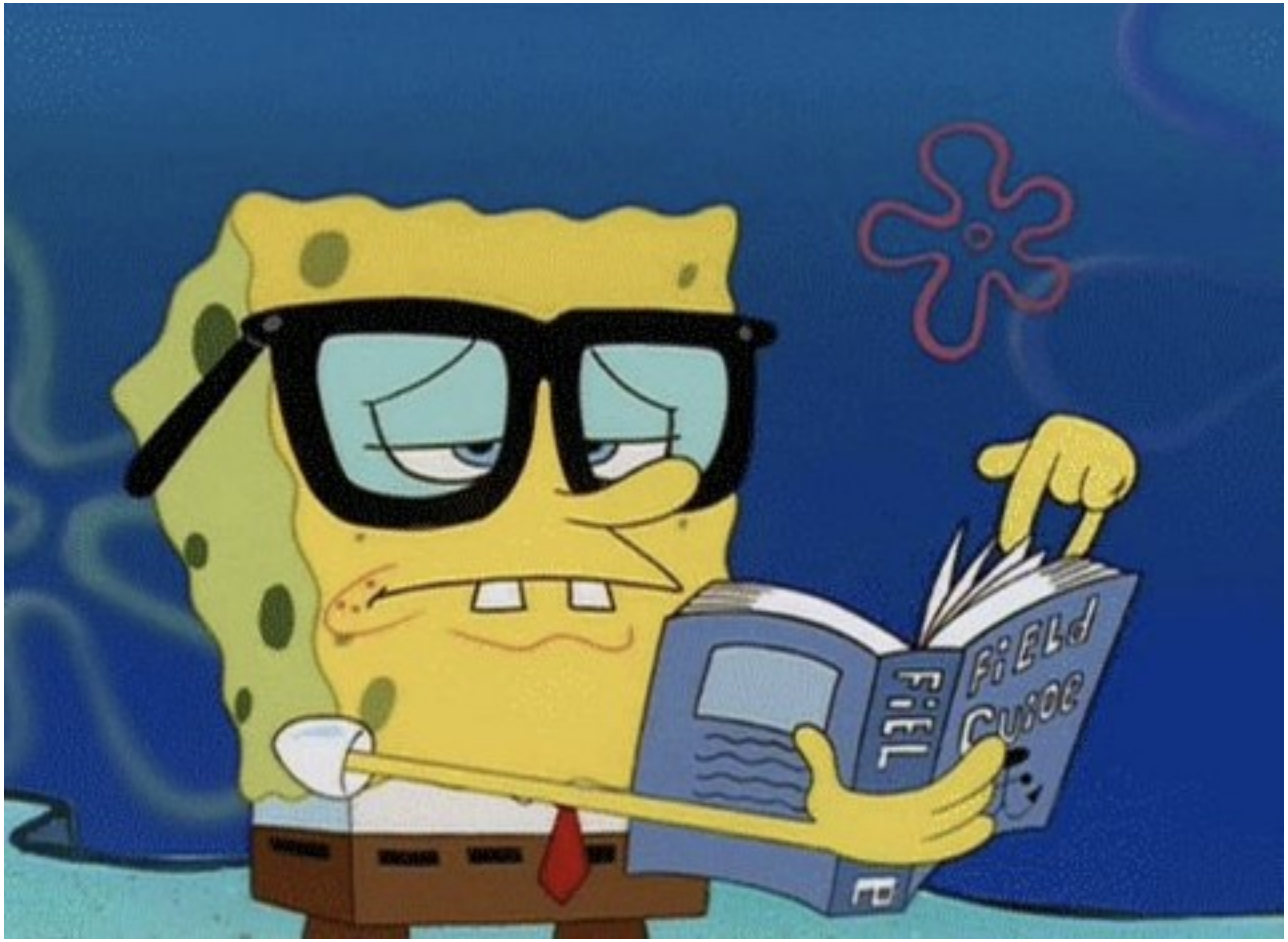
- Instructor
- TAs
- Student Success Team
- Career Coaches
- Everyone Else!

But Remember…

Nothing good comes easy.

On Keys To Success…

Don’t Be This Guy…



This Should Be You.

Our Mantra for Today and Beyond…

When it comes to web development…

Our Mantra for Today and Beyond…

*I know **nothing.***

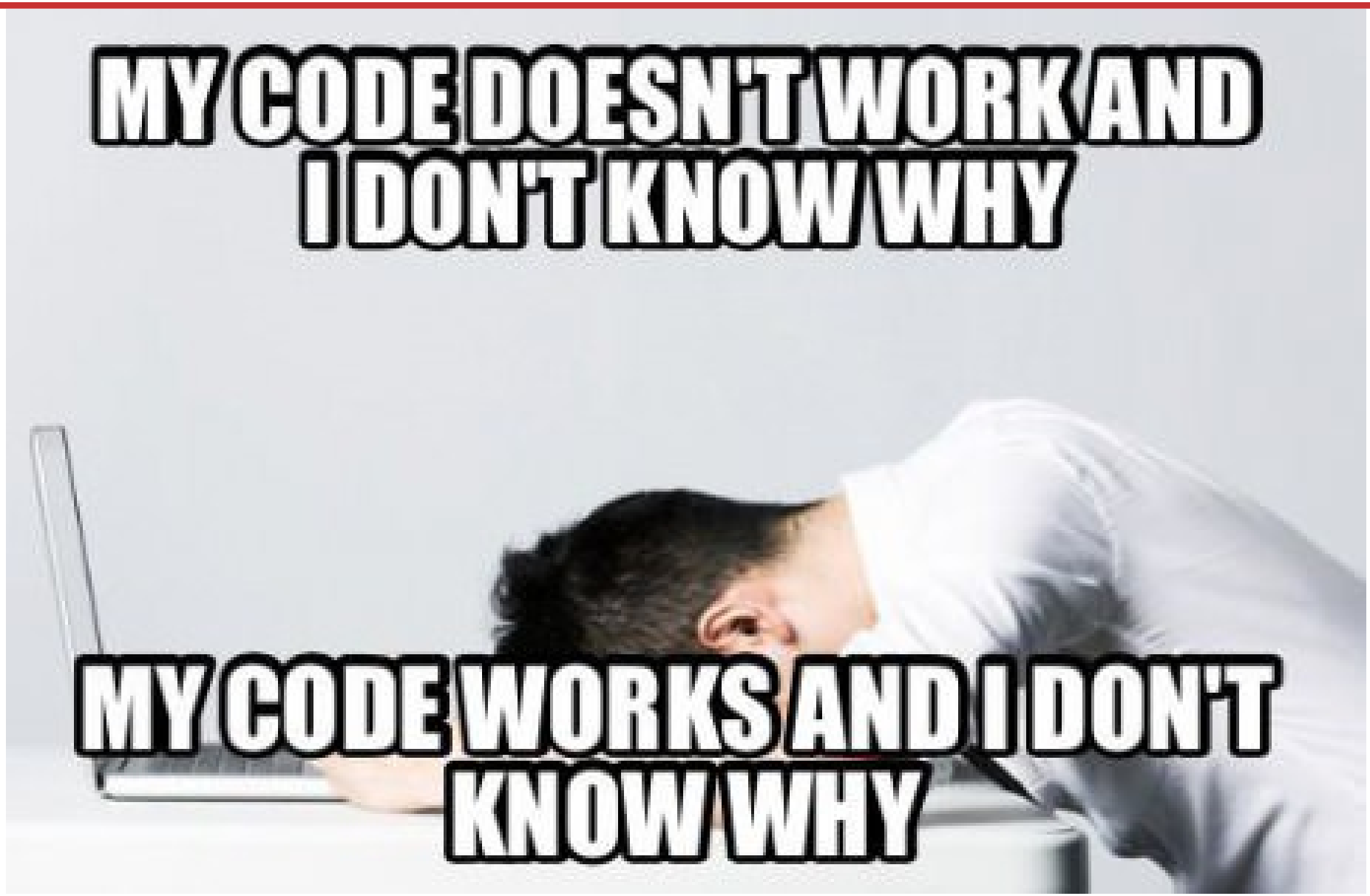
You.

The Path of Learning

Nothing Comes Easy…

As students, you face three
HUGE obstacles!

Obstacle #1 – The Great Confusion



Obstacle #2 – The Great Doubt

Obstacle #3 – The Great Distance

Learning to Code Requires Two Things:

1. Persisting in the face of something that feels incredibly hard and confusing.

2. Maintaining the self-confidence necessary to believe that you CAN DO THIS.

Learning is “Frustrating”

“You can’t tell whether you’re learning something when you’re learning it—in fact, **learning feels a lot more like frustration**.”

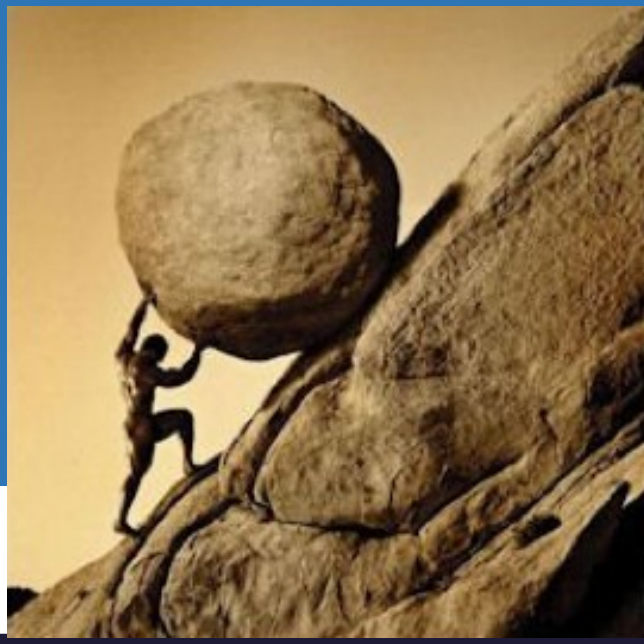
“What I’ve learned is that during this period of frustration is actually when people improve the most, and their improvements are usually obvious to an outsider. If you feel frustrated while trying to understand new concepts, try to remember that it might not feel like it, but you’re probably rapidly expanding your knowledge.”

Jeff Dickey, Author of Write Modern Web Apps with the MEAN Stack: Mongo, Express, AngularJS, and Node.JS

Advice for the Journey

Throughout this course, always remember to:

1. ***Work Hard!!***



Advice for the Journey

Throughout this course, always remember to:

1. *Work Hard!!*

2. ***Appreciate your successes***

Advice for the Journey

<u>Throughout this course, always remember to:</u>

1. *Work Hard!!*
2. *Appreciate your successes*
3. ***Trust yourself***

But remember…

If you want to go fast, go alone.
If you want to go far, go in a team.

Google Fu – The Most Important Skill of All

What is Google Fu?

Course Structure

Daily Schedule

For each class we'll run through the following:

- Set Objectives
- Brief Background Lecture
- Watch Me / Coding Demos
- Code Discussions
- In-Class Exercises
- Project Work

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The Super Important Stuff!!!

i.e. Always be coding!

Pre-Work

Software Checklist

At this point, you should have each of these installed:

- ❑ Slack
- ❑ Visual Studio Code
- ❑ Git for Version Control
- ❑ Git Bash (Windows) or Terminal (Mac)
- ❑ Node.js
- ❑ Heroku-CLI
- ❑ Google Chrome

Accounts Checklist

You should also now have accounts for:

- ❑ GitHub (with SSH Integration)
- ❑ Heroku
- ❑ LinkedIn
- ❑ Stack Overflow

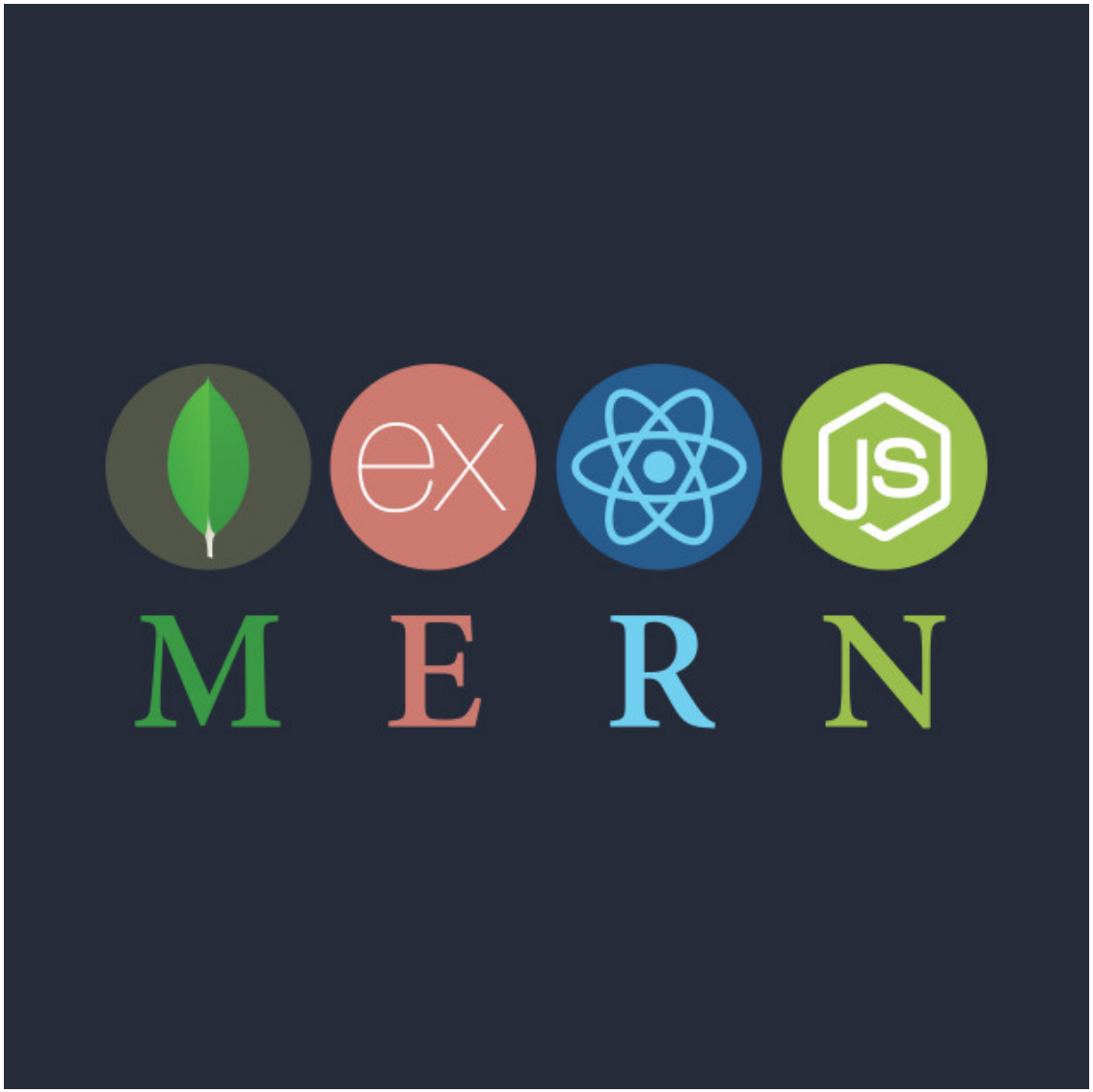
Self-Check

Let’s do some quick checks of the following

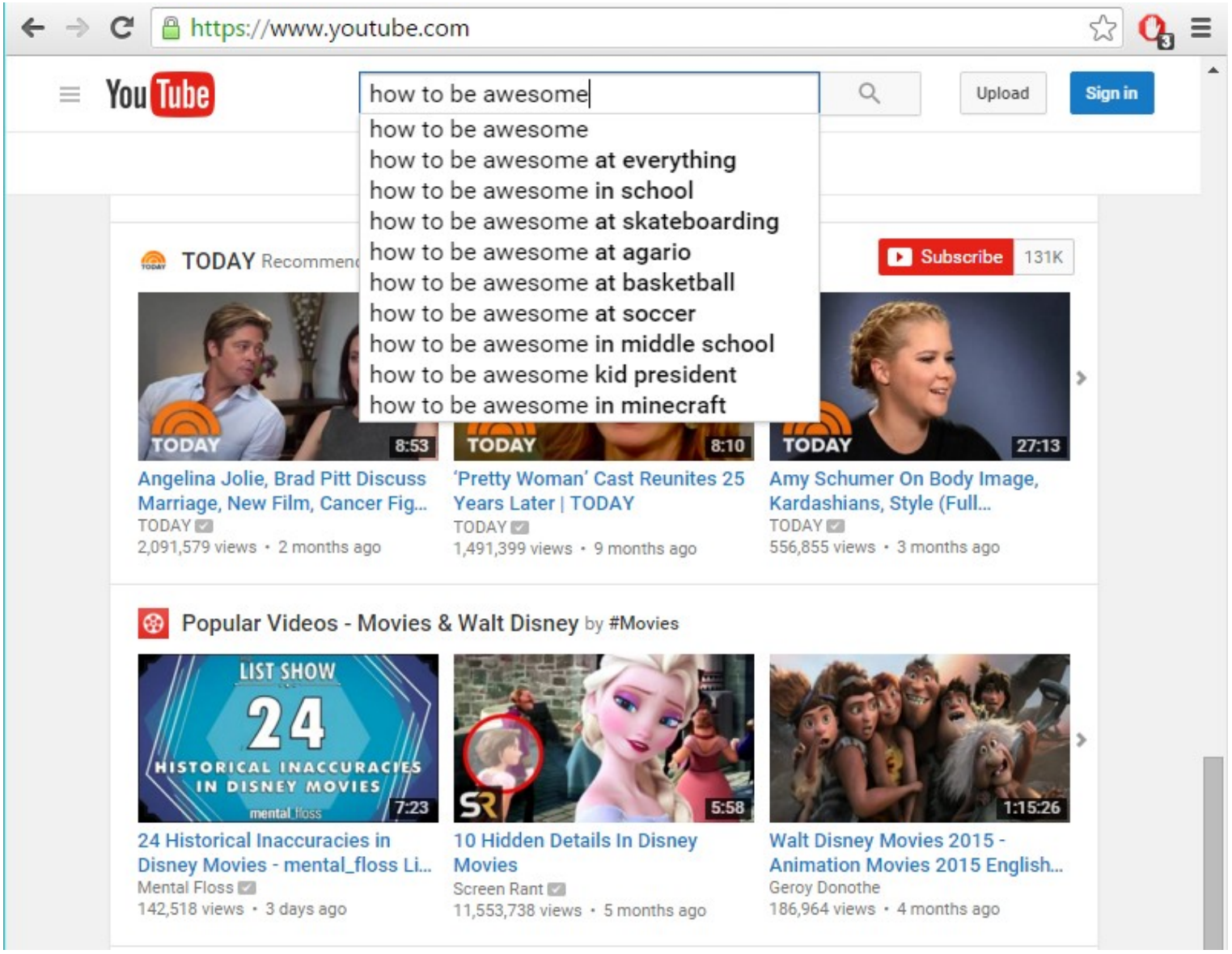
- ✓ VSCode Check
- ✓ Git Bash / Terminal Check
- ✓ Node Check
- ✓ Git Check
- ✓ Heroku Check

On the Modern Web

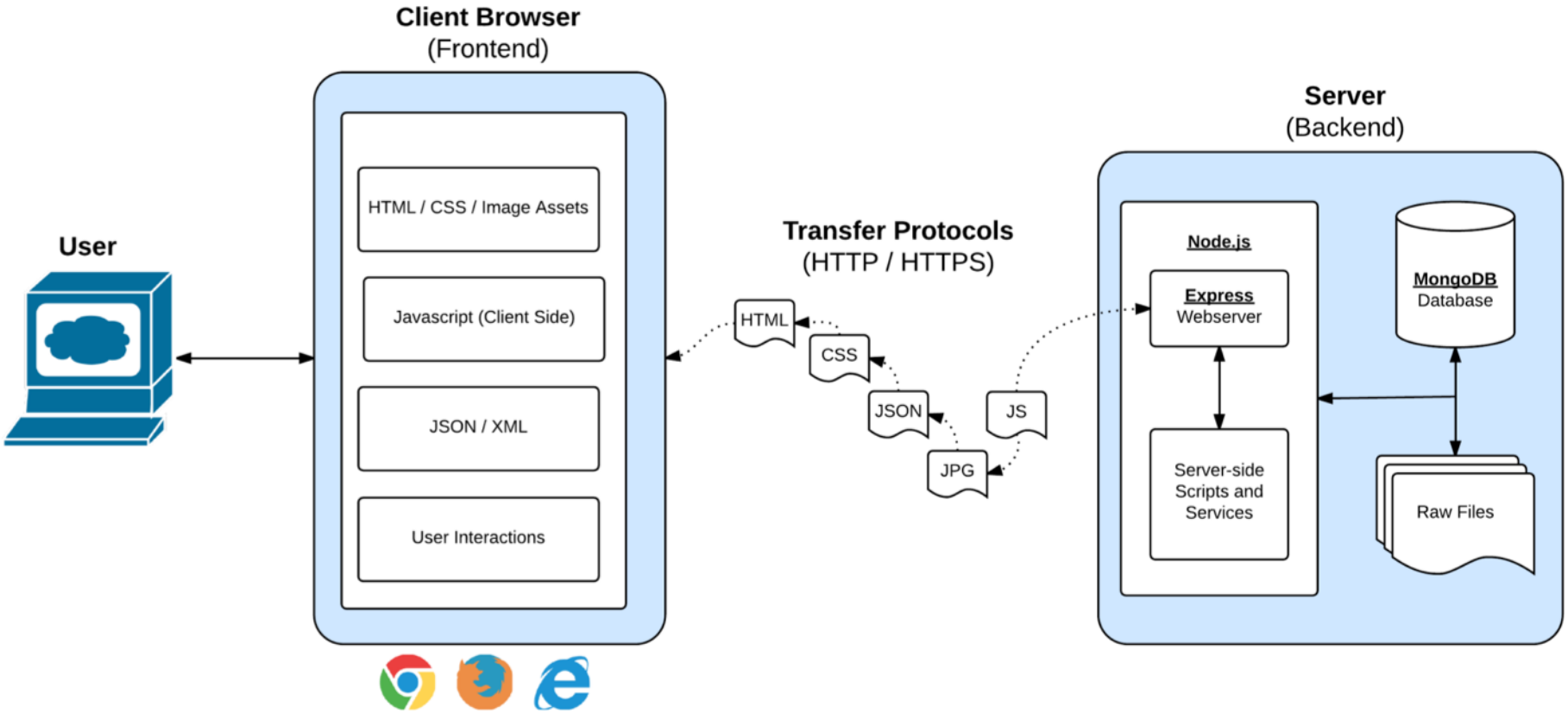
Full-Stack Development?



The “Magic” of YouTube

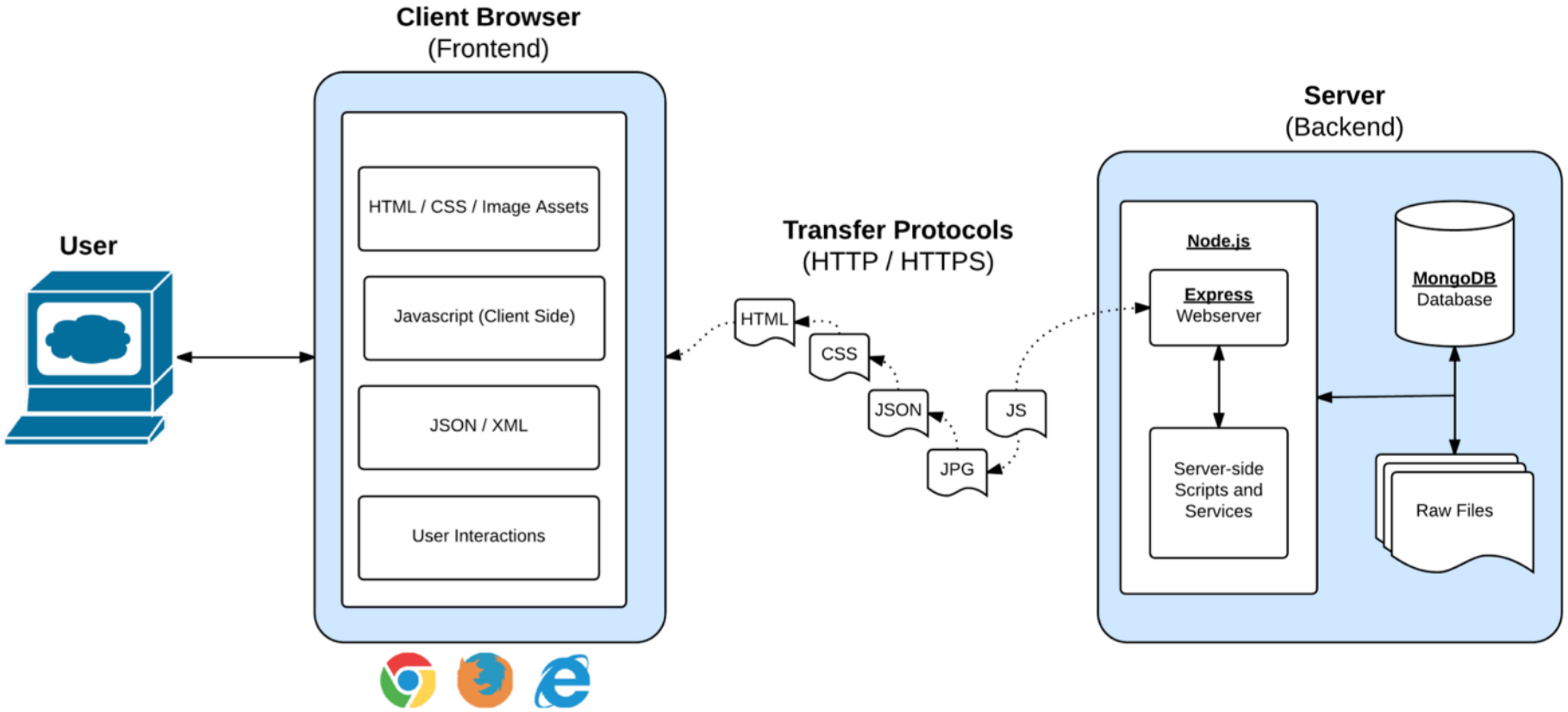


Full-Stack Development



- In modern **web apps,** there's a constant back-and-forth communication between two key components: the visuals displayed on the user's browser (**frontend)** and the data and logic stored on the server (**backend).**

Full-Stack Development



- **Full-Stack Development** is the concept of building ***every*** aspect of the web application – from the visuals and interactions, to the data transfer and processing.

Full-Stack Development

The Browser

- HTML
- CSS
- JavaScript
- jQuery
- Bootstrap
- SEO

API Interaction

- APIs (Consuming)
- JSON
- AJAX
- Real Time Cloud Database via Firebase

Cutting Edge Development

- React.js

Dev Tools

- Heroku
- Git
- GitHub

Databases

- MySQL
- MongoDB

Server Side

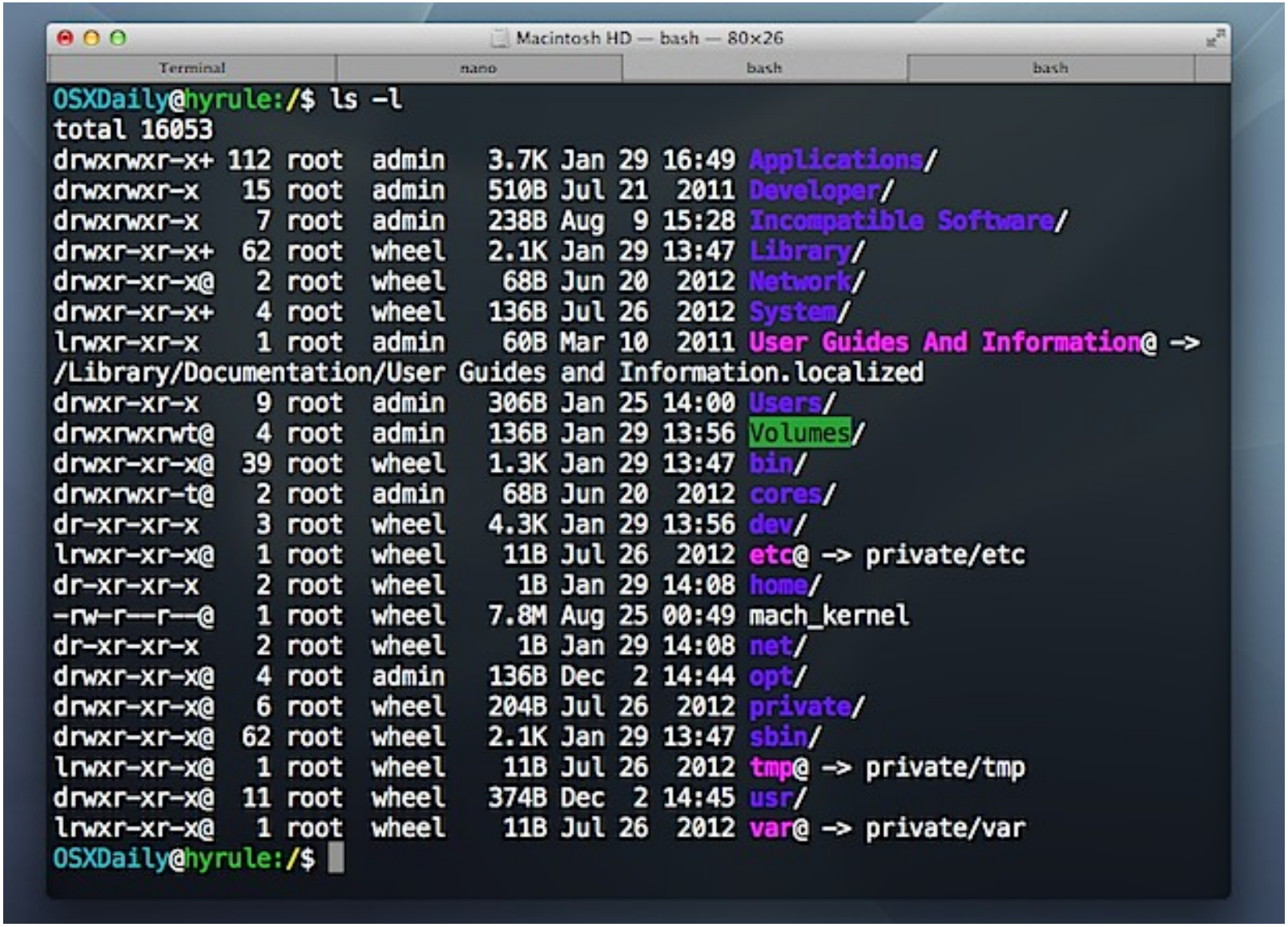
- Templating Engines
- Sessions
- Writing tests
- Node.js
- Express.js
- Creating APIs
- MVC
- User Authentication
- ORM (Sequelize)

CS Fundamentals

- Algorithms
- Design Patterns

Let’s Get Crackin!

Intro to Console / Terminal



INSTRUCTOR DEMO

Instructor: Demo

(1-ConsoleCommands)

> YOUR TURN!

Activity: Get Situated **| Suggested Time:** 1 min

Assignment:

- Make a folder on your desktop named code.
- Put all of your code that you do inside of that folder.

Best Practices:

- Always use lowercase for folder and file names.
- Never put in spaces in your folder and file names.
- Use dashes to separate.

> YOUR TURN!

Activity*:* Console Commands **| Suggested Time:** 12 min

Assignment:
From the Terminal / Console and using only the command line, create:

- A new folder with the name of first_day_stuff.
- A new HTML file with the name of first_day.html.
- Open the current folder containing the new HTML file.

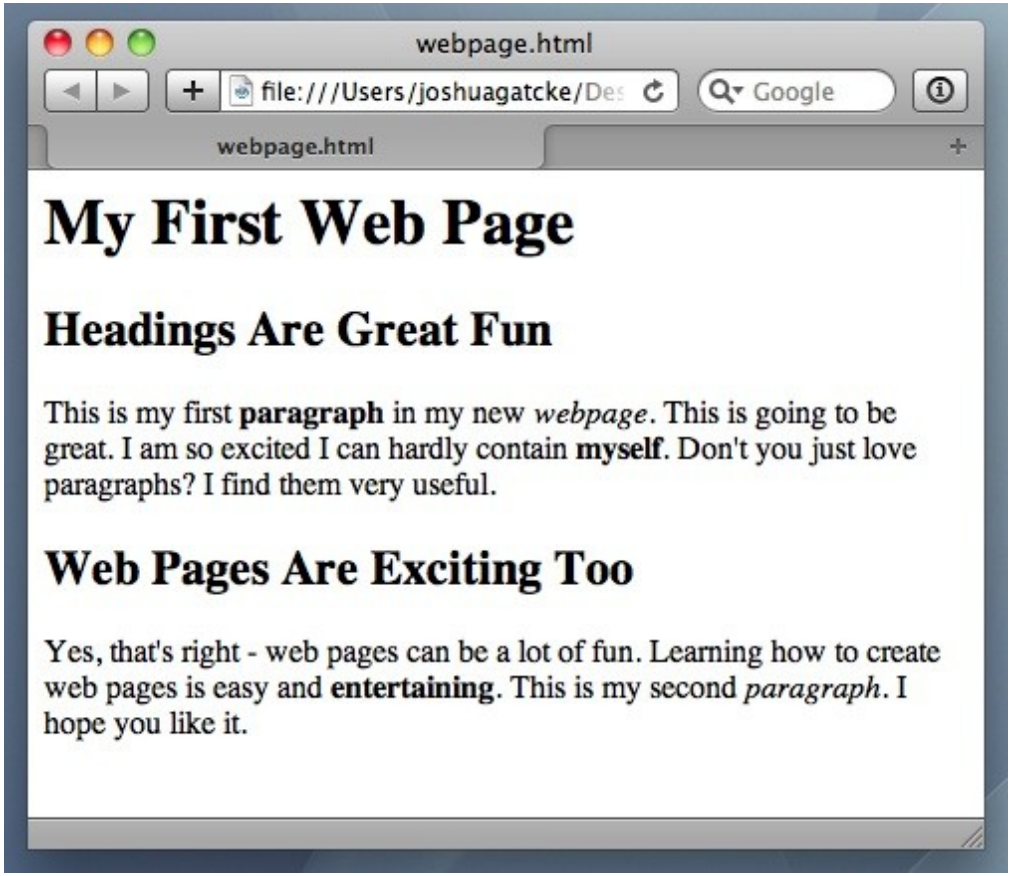
Bonus:

- Create multiple directories/folders with the names one_folder and second_folder in one command.
- Create multiple files with the names one.html and two.html in one command in the first_day_stuff directory.

Discuss with Neighbors

Hello, HTML

<title> Intro to HTML </title>



- **HTML** is one of the three base languages behind every single website.
- It defines all of the basic content and a *bit* of formatting.

> YOUR TURN

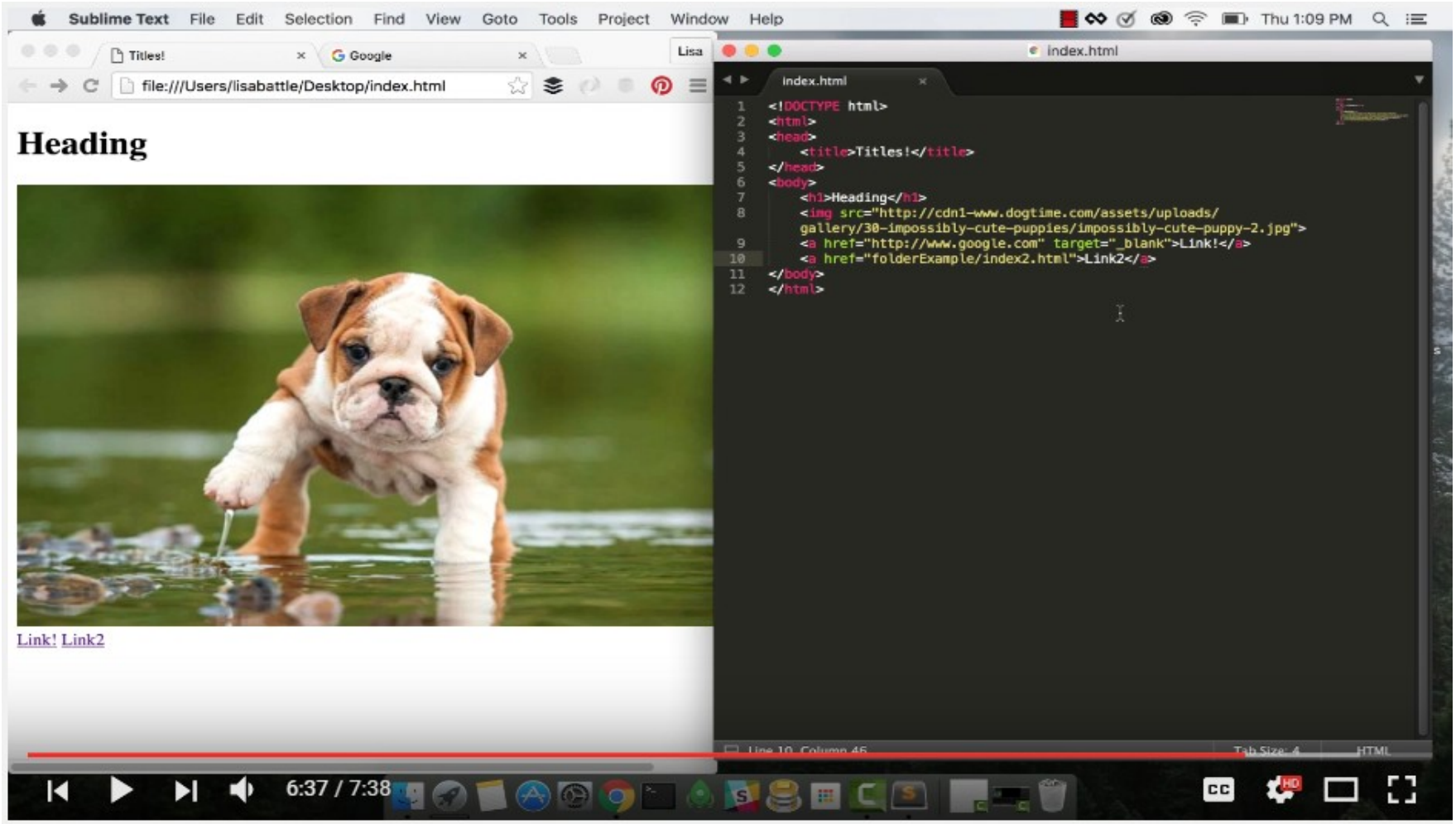
Assignment:
In a new HTML file, create the basic structure of an HTML document and include the following in it:

- DOCTYPE declaration.
- Head tag with a title tag.
- H1 tag with a title of your choice.
- Embed an image.
- Create the following three links on your page:
  - One link that is target="_blank" so that it opens a new tab when clicked on.
  - Make the second link bold.
  - Make the third link a placeholder so it goes nowhere.

Bonus:

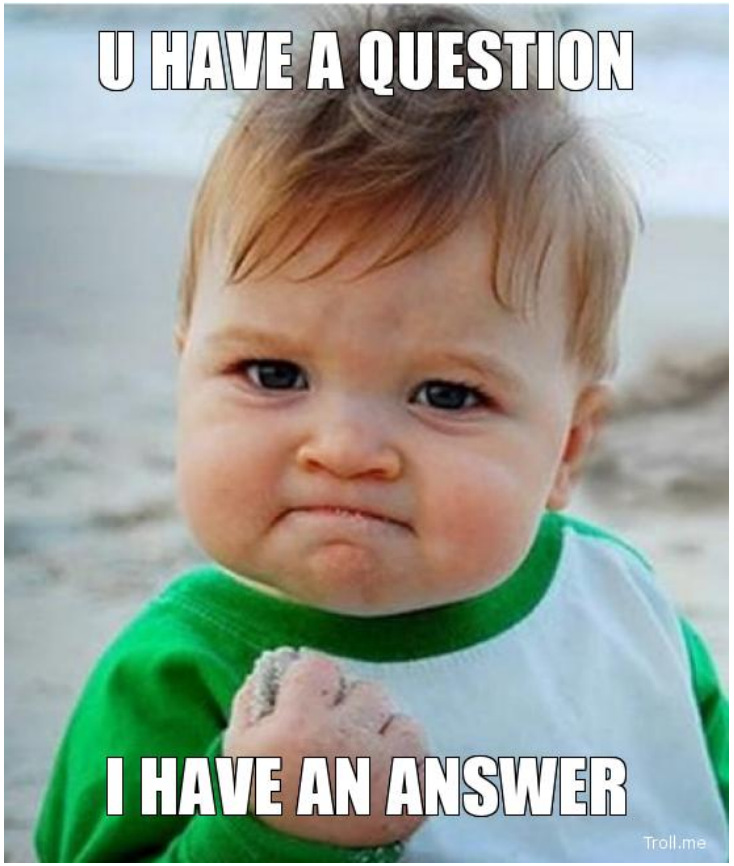
- Create an ordered list of steps to make a sandwich.
- Create an unordered list of 5 bands/musicians you like.
- Create a table with 2 columns (animal class and animal name) and 4 rows of animals.
- Use an alternate way of separating links without line breaks.
- Embed a YouTube video of your favorite band/musician.

YouTube Video Walkthrough!



https://www.youtube.com/watch?v=ieb6Svbc10E&index=1&list=PLgJ8UgkiorCnMLsUevoQRxH8t9bt7ne14

<title> Intro to HTML </title>



How'd it go?

Homework!

Homework “Due”: Next Class

By Next Class:

- Figure out where the GitHub Repo is for our class.
- Re-do the Terminal example from class today.
- Re-do the HTML example from class today.
    - Watch the Walkthrough Video if you felt a bit lost.