

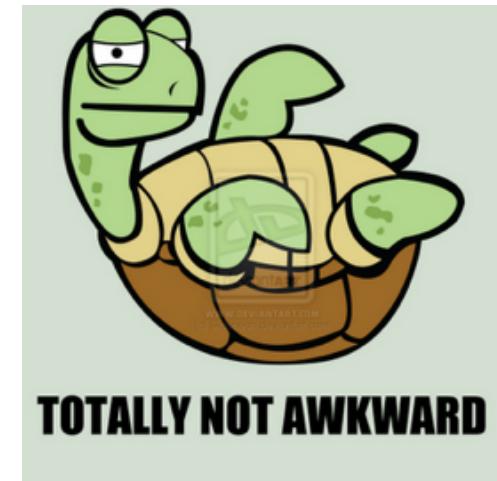
Day 1

The Zen of Coding

The Coding Bootcamp

Quick Introductions! (30 seconds)

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





MUSA SIDDEEQ
siddeeqm@gmail.com

TECHNOLOGIST ENTREPRENEUR SOMETIMES BRILLIANT GUY

Coca-Cola

Georgia
Tech

TURNER

UNDER ARMOUR

Instructor = ...?

Musa Siddeeq

- Georgia Tech > University System of Georgia
- Neurostar Solutions > Georgia Tech Alumni Assoc.
- Agentek > EZ Prints > EHIRE Labs > **SoITech**
- **Turner > Coca-Cola > Under Armour > Turner**
- Over 10 years coding, (with plenty of experience being a n00b at it.)



- *I bake and sell an original bean pie >> “food tech”*
- I come from a BIG family

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TECHNOLOGY

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Feedback

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INTRODUCING FILMSTRUCK



>./meetShahein.sh
Engineer.
Hacker.
Cloud Evangelist.
Political Guru.
Trekkie.
Academic.
Nerd.

shaheinm@gmail.com



aws **CERTIFIED**
Solutions Architect - Associate

Instructor = ...?

Shahein Moussavi

- B.A. Political Science, Georgia State University, 2011
 - Sold cars, worked in a bookstore, a warehouse, and several restaurants.
 - Returned in 2013 for B.S. Computer Science
- Worked in .NET, Node.js, Python, Java, React, and more.
- Over 5 years coding, (with plenty of experience being a n00b at it.)



- I speak five languages.
- My first time on a plane was in 2009.

Some Cool Stuff I Made...

The image displays three separate web application interfaces side-by-side.

Top Left Application: A website for the "UNIVERSITÉ INTERNATIONALE DE RABAT MODEL ARAB LEAGUE". The header includes "ABOUT UIRAL", "COUNCIL", "SECRETARIAT", "ANNOUNCE", "CONTACT", and "SIGN IN". The main content features a green background with a grid pattern, the text "NEW CHALLENGES, NEW PATHS", and "WEDNESDAY NOVEMBER 9 - SUNDAY NOVEMBER 13, 2016". A "REGISTER NOW!" button is visible at the bottom.

Top Right Application: A forecasting interface titled "Forecasting > Searchlight". It shows two line graphs: one for "Cost vs Revenue" comparing "Actual" (blue line) and "Forecast" (orange line) over time from November 11, 2017, to November 20, 2017; and another for "Forecast Summary (Non-Brand)" showing various metrics like "Revenue", "Profit Margin", and "ROI".

Bottom Application: A "RotoBidMod1511900023944" workflow management system. It features a visual workflow diagram with nodes like "Start", "Decomposition", "Decomposition", "Decomposition", "Decomposition", "Decomposition", "Decomposition", and "End". A legend indicates colors for Success (green), Failed (red), Calculated (yellow), and In Progress (blue). Below the diagram is a table of step details:

ID	Type	Step	Resource	Elapsed Time (ms)	Timestamp
1	ExecutorEntered		—	0	Nov 28, 2017 03:13:44,827 PM
2	TaskHandlerEntered	DatabaseUpdate	—	45	Nov 28, 2017 03:13:44,872 PM
3	LambdaFunctionScheduled	DatabaseUpdate	Lambda CloudWatch Logs	45	Nov 28, 2017 03:13:44,872 PM
4	LambdaFunctionScheduled	DatabaseUpdate	Lambda CloudWatch Logs	90	Nov 28, 2017 03:13:44,917 PM

The Path of Learning

Your Goals...

Basically 1000% of you said...

New Career



Your Goals...

And why do you want a new career?

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:

- Instructors
- 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.

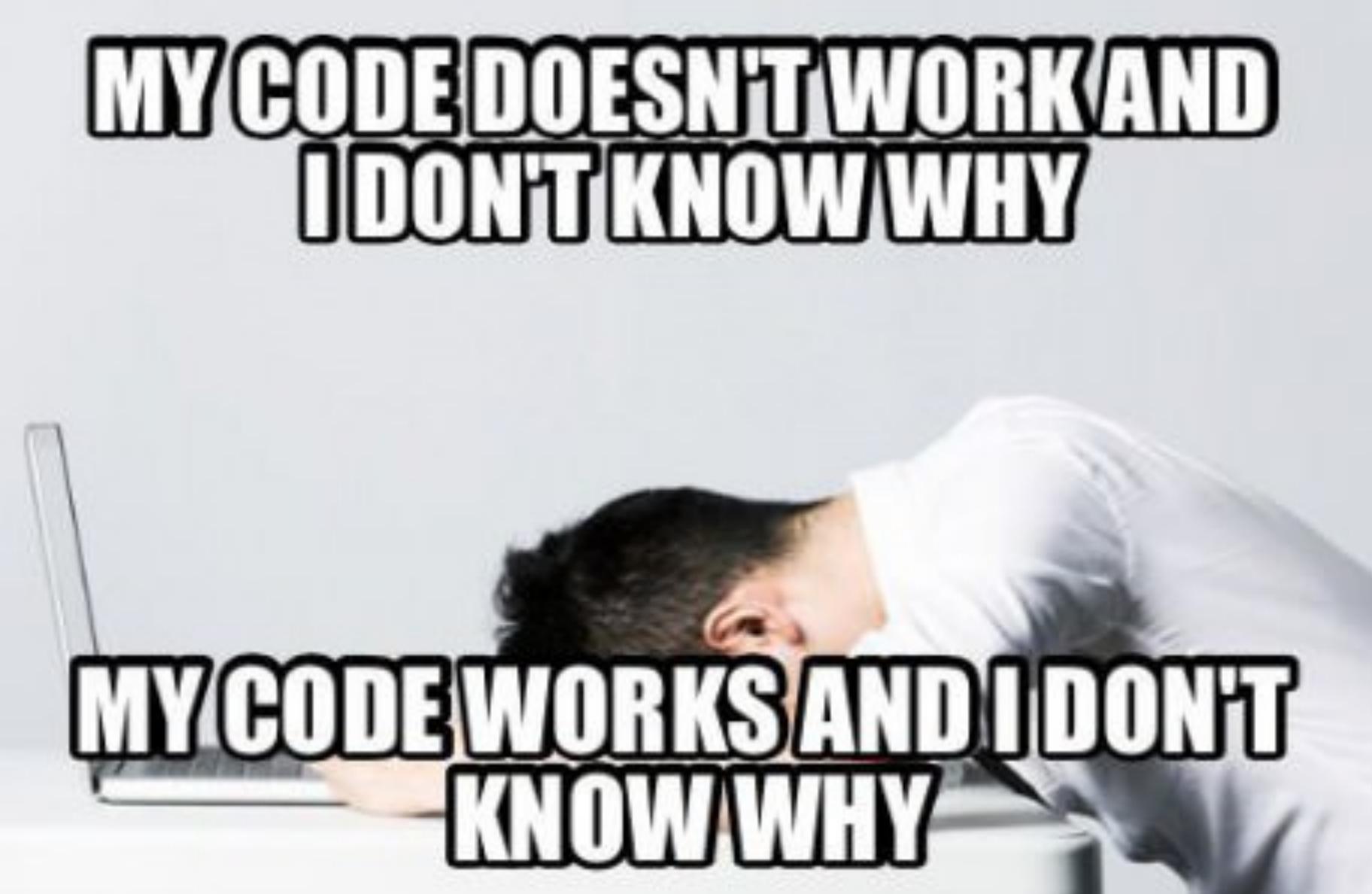
The Path of Learning

Nothing Comes Easy...

As students, you face three
HUGE obstacles!

Obstacle #1 – The Great Confusion

**MY CODE DOESN'T WORK AND
I DON'T KNOW WHY**

A black and white photograph of a person with dark hair, wearing a light-colored shirt, sitting at a desk. They are leaning forward with their head resting in their hands, appearing to be in deep thought or frustration. A laptop screen is visible on the left side of the frame.

**MY CODE WORKS AND I DON'T
KNOW WHY**

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.”

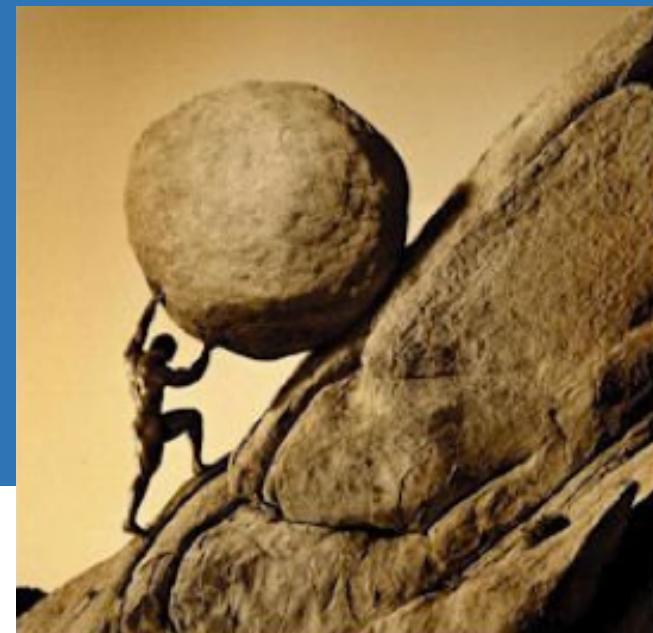
“What I’ve learned is that during this period of frustration is actually when people improve the most, and their improvements are usually obvious to an outsider. If you feel frustrated while trying to understand new concepts, try to remember that it might not feel like it, but you’re probably rapidly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

Throughout this course, always remember to:

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

Daily Schedule

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- Project Work

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

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

On the Modern Web

Full-Stack Development?



The “Magic” of YouTube

The screenshot shows the YouTube homepage with the URL <https://www.youtube.com> in the address bar. The search bar at the top contains the query "how to be awesome". Below the search bar, there is a list of suggested search terms and a "Subscribe" button with 131K subscribers. The main content area displays three video thumbnails under "TODAY Recommendations": "Angelina Jolie, Brad Pitt Discuss Marriage, New Film, Cancer Fig..." (8:53), "'Pretty Woman' Cast Reunites 25 Years Later | TODAY" (8:10), and "Amy Schumer On Body Image, Kardashians, Style (Full...)" (27:13). Below this, there is a section titled "Popular Videos - Movies & Walt Disney by #Movies" featuring three more video thumbnails: "24 Historical Inaccuracies IN DISNEY MOVIES" (7:23) with a circled character in the thumbnail, "10 Hidden Details In Disney Movies" (5:58), and "Walt Disney Movies 2015 - Animation Movies 2015 English..." (1:15:26).

how to be awesome|

how to be awesome

how to be awesome at everything

how to be awesome in school

how to be awesome at skateboarding

how to be awesome at agario

how to be awesome at basketball

how to be awesome at soccer

how to be awesome in middle school

how to be awesome kid president

how to be awesome in minecraft

Subscribe 131K

TODAY Recommendations

Angelina Jolie, Brad Pitt Discuss Marriage, New Film, Cancer Fig...
TODAY 8:53

'Pretty Woman' Cast Reunites 25 Years Later | TODAY
TODAY 8:10

Amy Schumer On Body Image, Kardashians, Style (Full...
TODAY 27:13

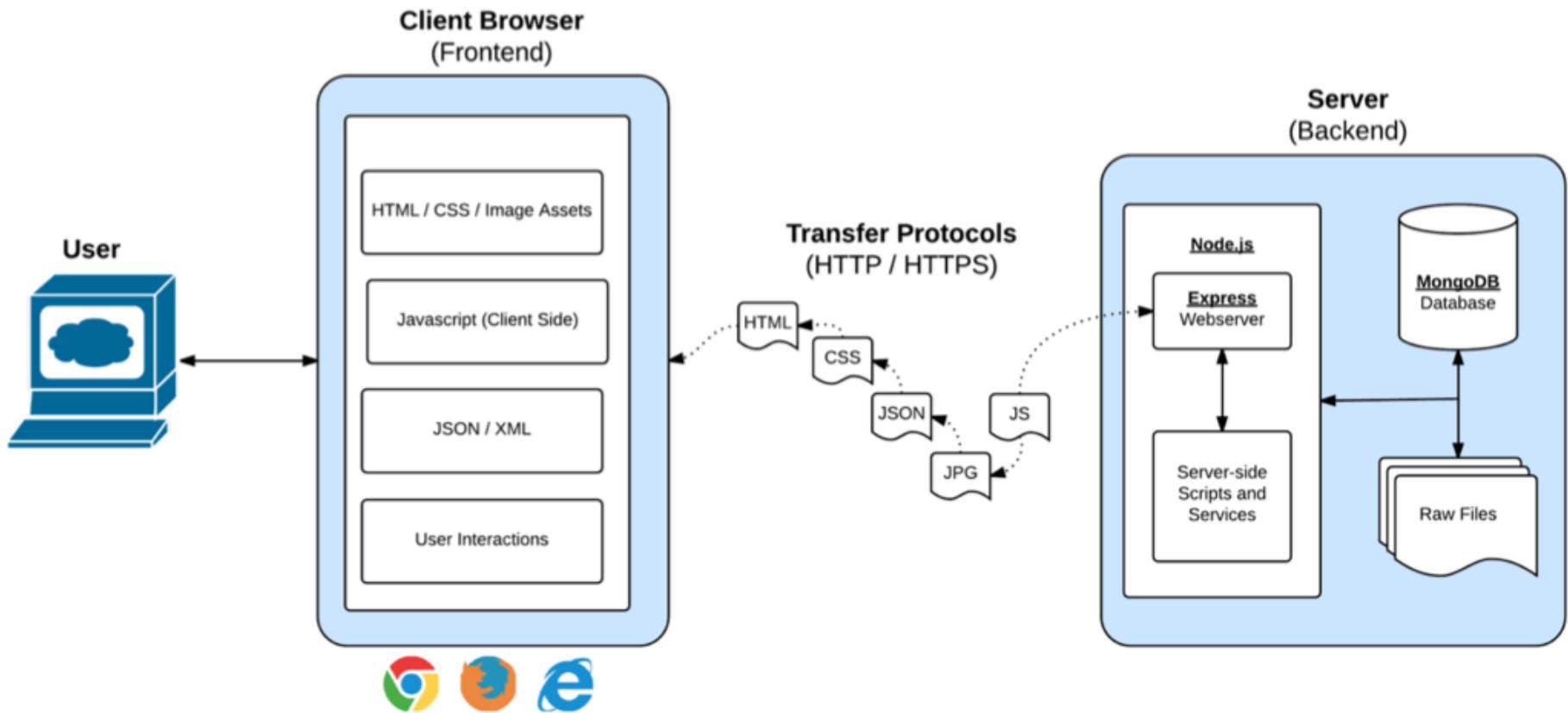
Popular Videos - Movies & Walt Disney by #Movies

24 Historical Inaccuracies IN DISNEY MOVIES - mental_floss Li...
mental_floss 7:23

10 Hidden Details In Disney Movies - Screen Rant
Screen Rant 5:58

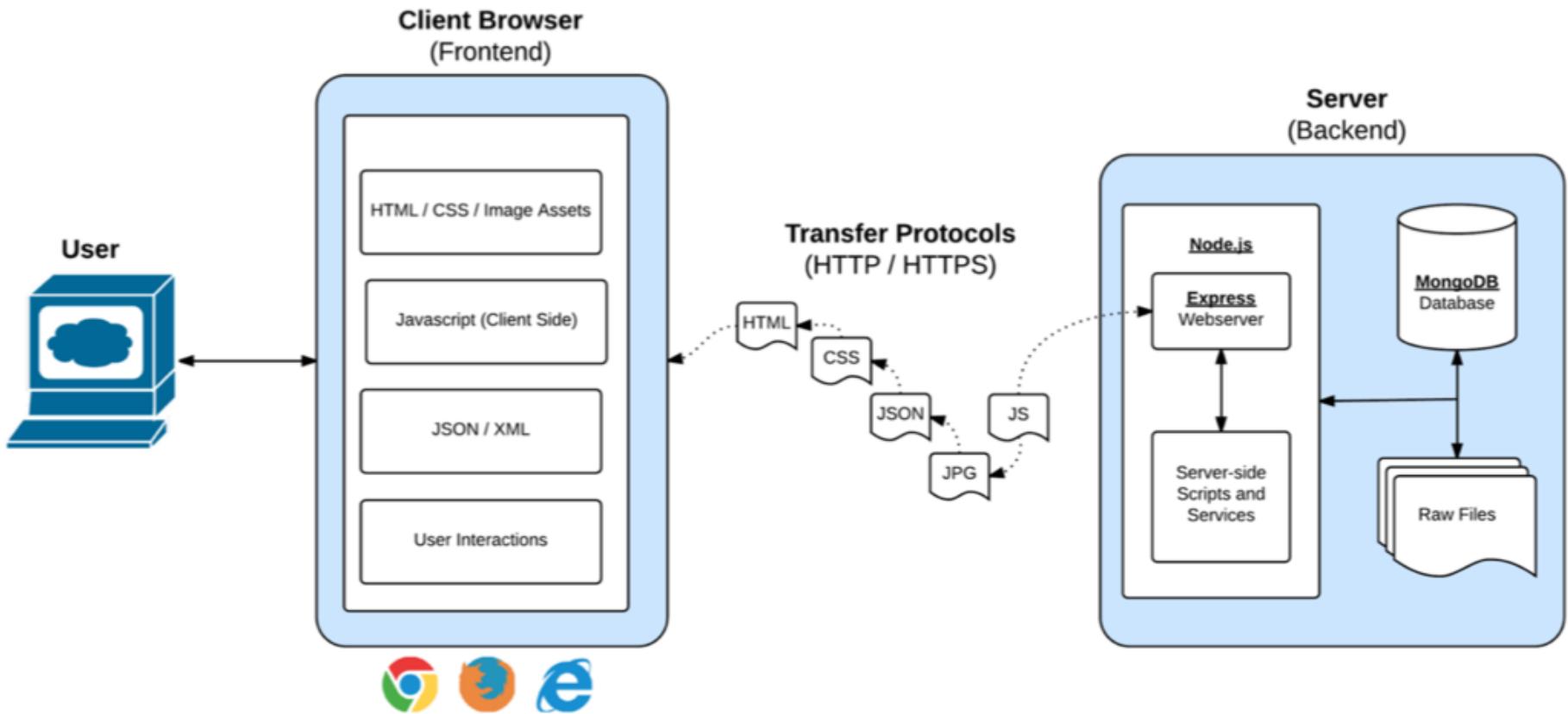
Walt Disney Movies 2015 - Animation Movies 2015 English...
Geroy Donothe 1:15:26

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

```
OSXDaily@hyrule:/$ ls -l
total 16053
drwxrwxr-x+ 112 root admin 3.7K Jan 29 16:49 Applications/
drwxrwxr-x  15 root admin 510B Jul 21 2011 Developer/
drwxrwxr-x   7 root admin 238B Aug  9 15:28 Incompatible Software/
drwxr-xr-x+  62 root wheel 2.1K Jan 29 13:47 Library/
drwxr-xr-x@  2 root wheel 68B Jun 20 2012 Network/
drwxr-xr-x+  4 root wheel 136B Jul 26 2012 System/
lrwxr-xr-x   1 root admin 60B Mar 10 2011 User Guides And Information@ ->
/Library/Documentation/User Guides and Information.localized
drwxr-xr-x   9 root admin 306B Jan 25 14:00 Users/
drwxrwxrwt@  4 root admin 136B Jan 29 13:56 Volumes/
drwxr-xr-x@  39 root wheel 1.3K Jan 29 13:47 bin/
drwxrwxr-t@  2 root admin 68B Jun 20 2012 cores/
dr-xr-xr-x   3 root wheel 4.3K Jan 29 13:56 dev/
lrwxr-xr-x@  1 root wheel 11B Jul 26 2012 etc@ -> private/etc
dr-xr-xr-x   2 root wheel 1B Jan 29 14:08 home/
-rw-r--r--@  1 root wheel 7.8M Aug 25 00:49 mach_kernel
dr-xr-xr-x   2 root wheel 1B Jan 29 14:08 net/
drwxr-xr-x@  4 root admin 136B Dec  2 14:44 opt/
drwxr-xr-x@  6 root wheel 204B Jul 26 2012 private/
drwxr-xr-x@  62 root wheel 2.1K Jan 29 13:47 sbin/
lrwxr-xr-x@  1 root wheel 11B Jul 26 2012 tmp@ -> private/tmp
drwxr-xr-x@  11 root wheel 374B Dec  2 14:45 usr/
lrwxr-xr-x@  1 root wheel 11B Jul 26 2012 var@ -> private/var
OSXDaily@hyrule:/$
```

INSTRUCTOR DEMO

*Instructor: Demo
(1-ConsoleCommands)*

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.

Assignment:

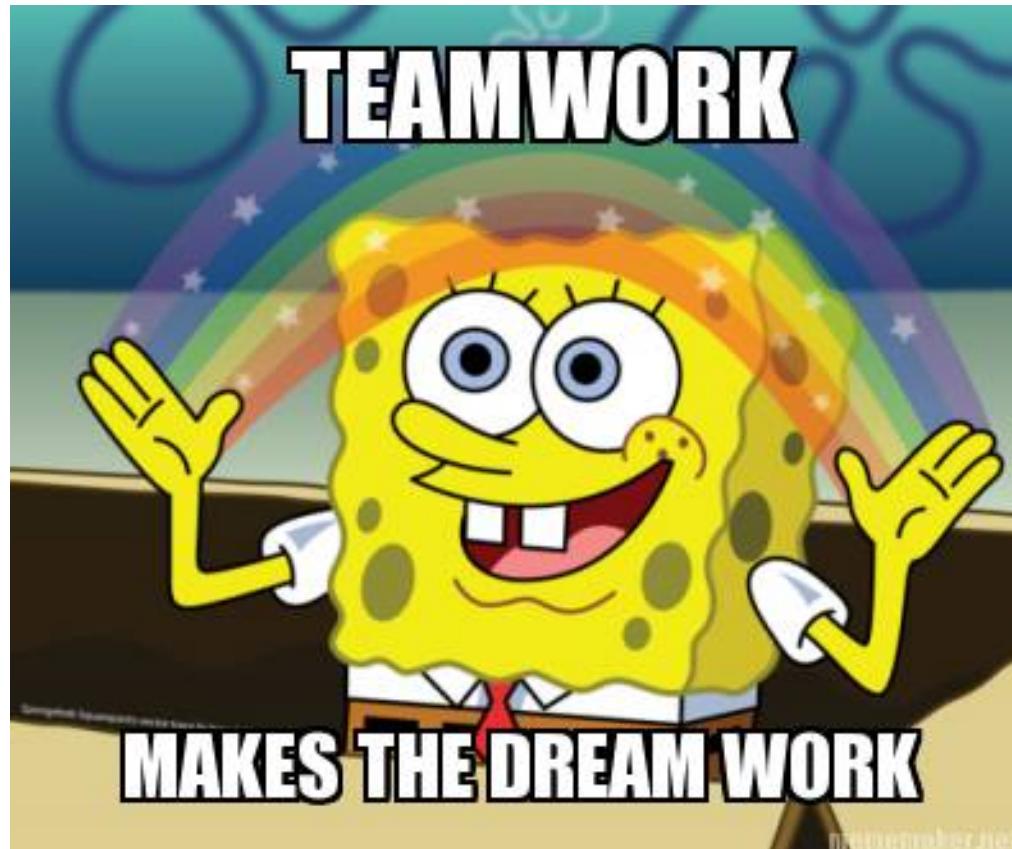
From the Terminal / Console and using only the command line, create:

- 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>



webpage.html

file:///Users/joshuagatcke/Desktop/webpage.html

Google

My First Web Page

Headings Are Great Fun

This is my first **paragraph** in my new *webpage*. This is going to be great. I am so excited I can hardly contain **myself**. Don't you just love paragraphs? I find them very useful.

Web Pages Are Exciting Too

Yes, that's right - web pages can be a lot of fun. Learning how to create web pages is easy and **entertaining**. This is my second *paragraph*. I hope you like it.

A screenshot of a Mac OS X desktop environment showing a web browser window. The title bar says "webpage.html". The address bar shows "file:///Users/joshuagatcke/Desktop/webpage.html". The search bar has "Google" in it. The main content area of the browser displays the text from the previous slide, including the heading "My First Web Page" and the paragraph "Headings Are Great Fun". Below that is another paragraph: "This is my first **paragraph** in my new *webpage*. This is going to be great. I am so excited I can hardly contain **myself**. Don't you just love paragraphs? I find them very useful.". Further down is another heading "Web Pages Are Exciting Too" followed by a paragraph: "Yes, that's right - web pages can be a lot of fun. Learning how to create web pages is easy and **entertaining**. This is my second *paragraph*. I hope you like it.".

- **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:

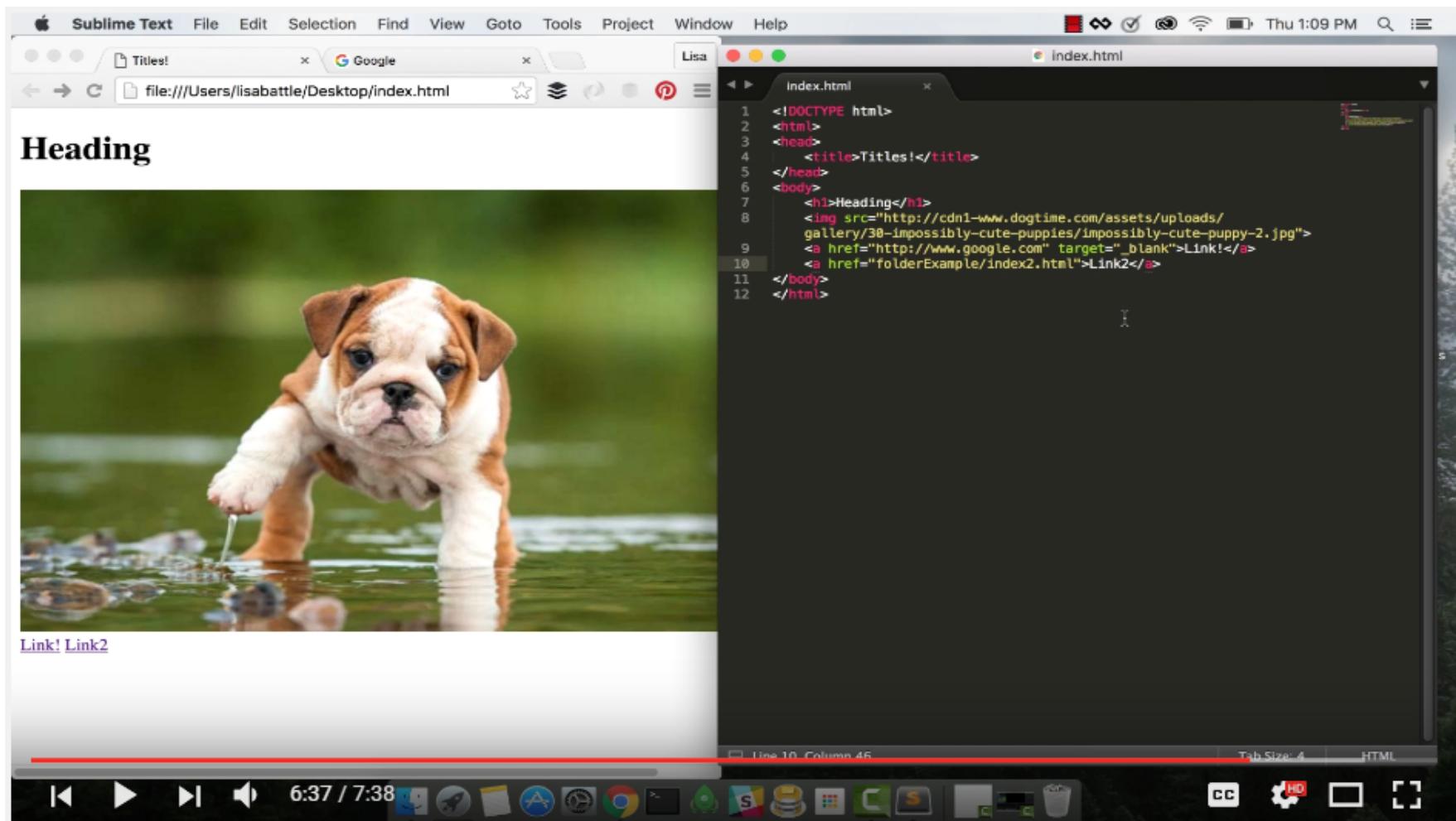
In a new HTML file, create the basic structure of an HTML document and include the following in it:

- 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:

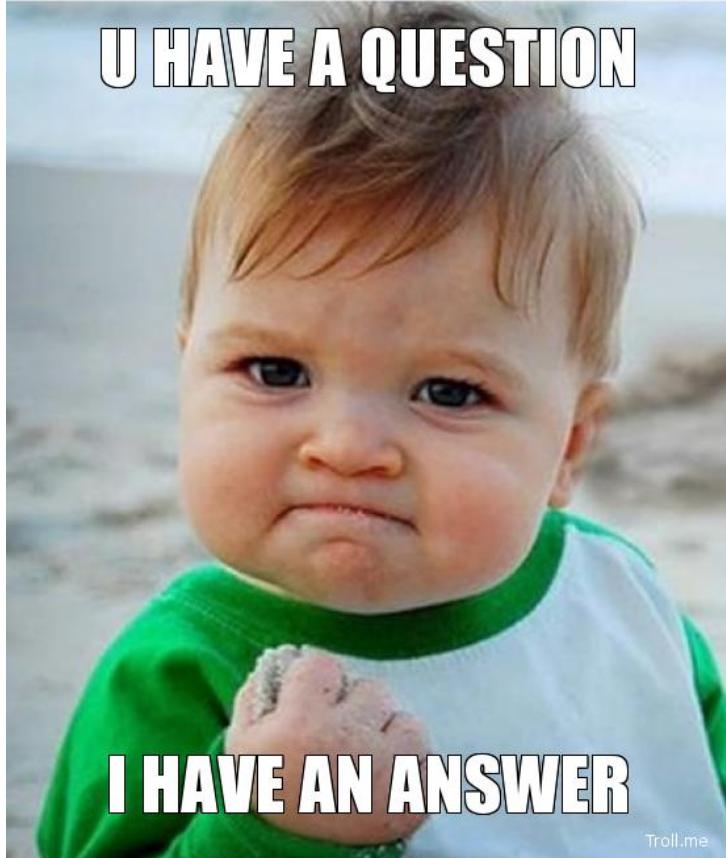
- Create an ordered list of steps to make a sandwich.
- Create an unordered list of 5 bands/musicians you like.
- Create a table with 2 columns (animal class and animal name) and 4 rows of animals.
- Use an alternate way of separating links without line breaks.
- Embed a YouTube video of your favorite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