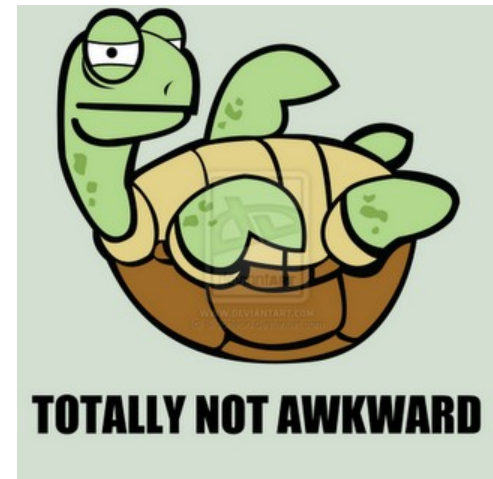


The Zen of Coding

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

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



**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.**”

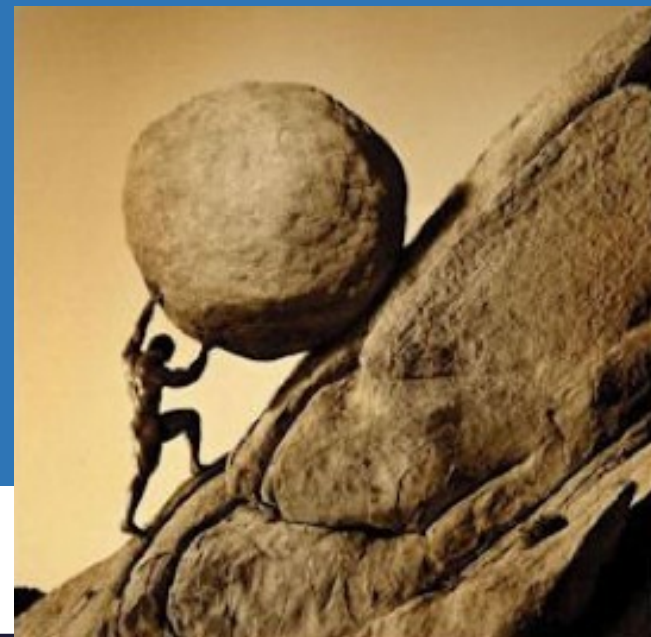
“What I’ve learned is that during this period of frustration is actually when people improve the most, and their improvements are usually obvious to an outsider. If you feel frustrated while trying to understand new concepts, try to remember that it might not feel like it, but you’re probably rapidly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

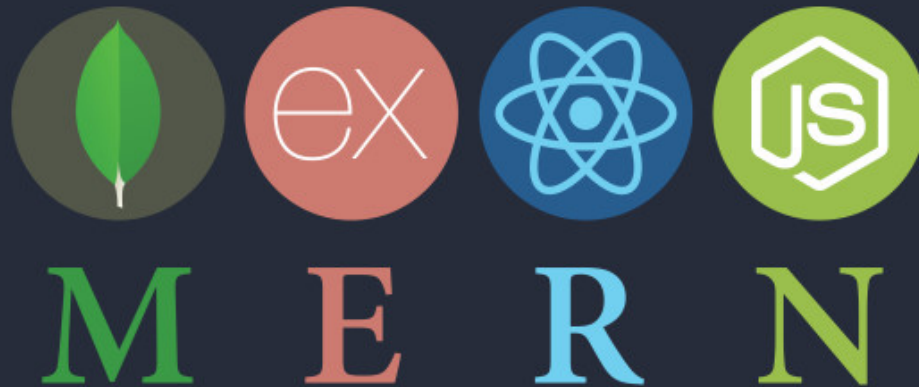
Self-Check

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

The screenshot shows the YouTube homepage in a web browser. The address bar displays <https://www.youtube.com>. The YouTube logo is in the top left. A search bar contains the text "how to be awesome", and a dropdown menu shows suggestions: "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", and "how to be awesome in minecraft". To the right of the search bar are buttons for "Upload" and "Sign in".

Below the search bar, the "TODAY Recommendations" section features three video thumbnails:

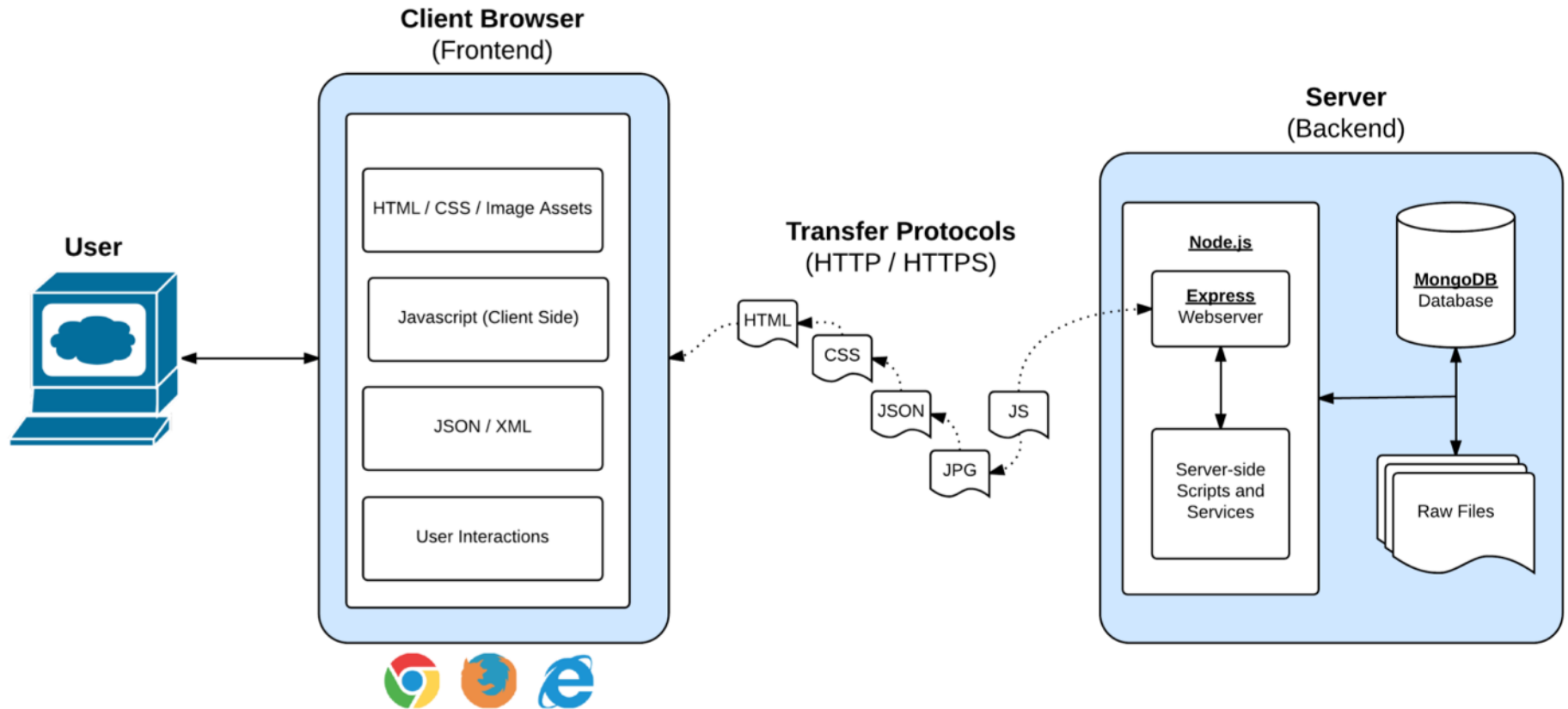
- Angelina Jolie, Brad Pitt Discuss Marriage, New Film, Cancer Fig...**
TODAY ✓
2,091,579 views • 2 months ago
- 'Pretty Woman' Cast Reunites 25 Years Later | TODAY**
TODAY ✓
1,491,399 views • 9 months ago
- Amy Schumer On Body Image, Kardashians, Style (Full...**
TODAY ✓
556,855 views • 3 months ago

A "Subscribe" button with a play icon and "131K" is visible next to the Amy Schumer video.

Below this is the "Popular Videos - Movies & Walt Disney by #Movies" section:

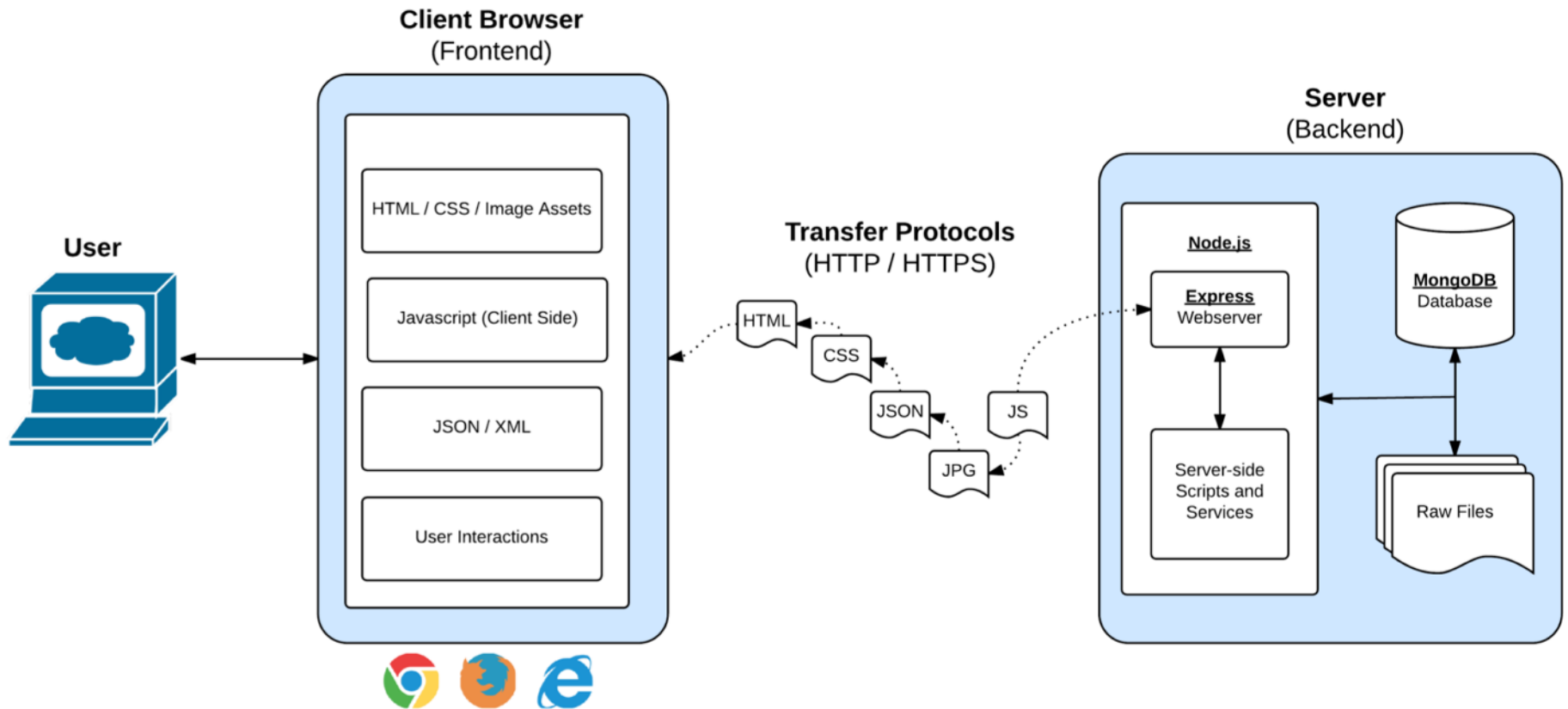
- 24 Historical Inaccuracies in Disney Movies - mental_floss Li...**
Mental Floss ✓
142,518 views • 3 days ago
- 10 Hidden Details In Disney Movies**
Screen Rant ✓
11,553,738 views • 5 months ago
- Walt Disney Movies 2015 - Animation Movies 2015 English...**
Geroy Donothe
186,964 views • 4 months ago

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

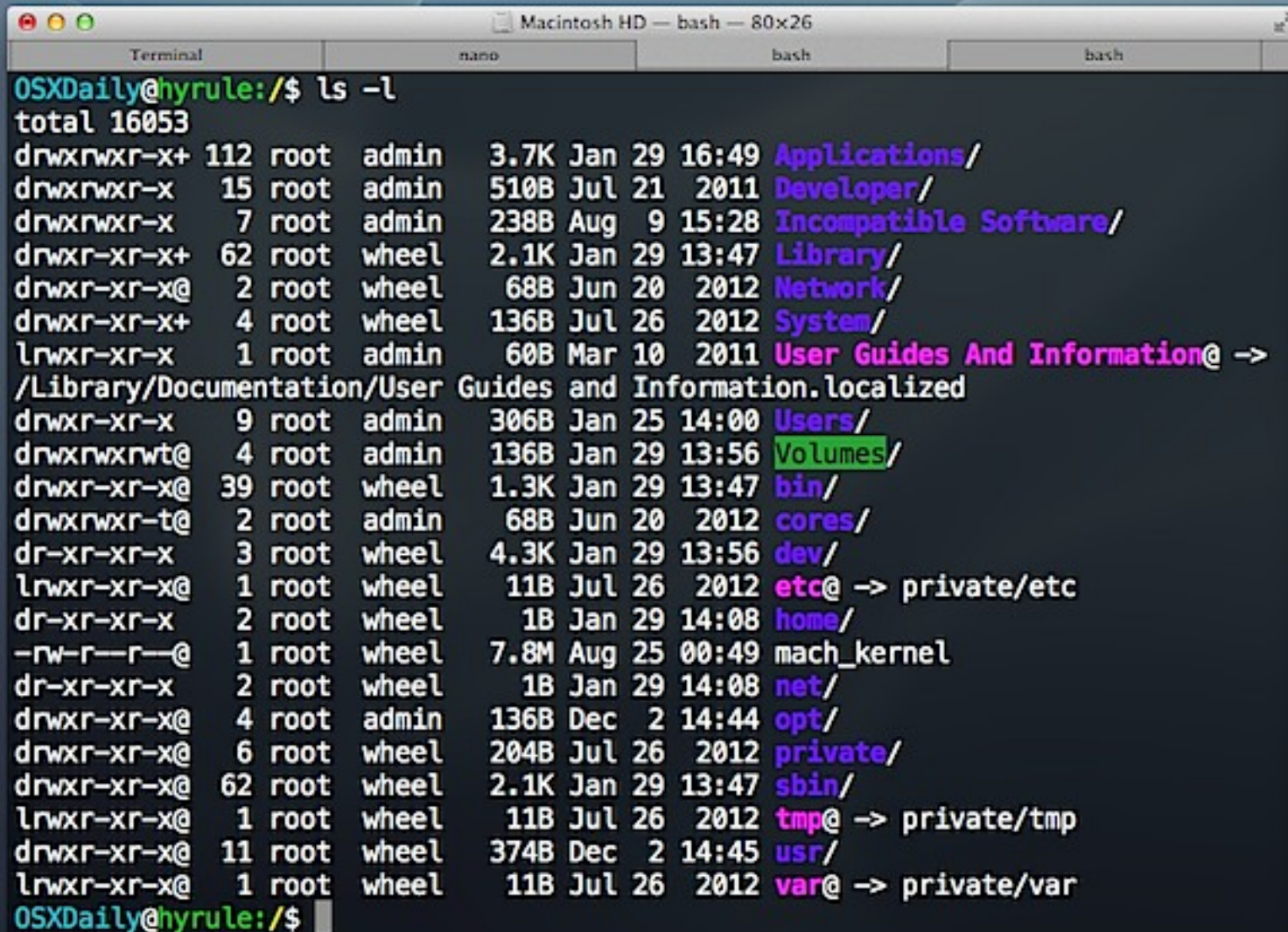
- Templating Engines
- Sessions
- Writing tests
- Node.js
- Express.js
- Creating APIs
- MVC
- User Authentication
- ORM (Sequelize)

CS Fundamentals

- Algorithms
- Design Patterns

Let's Get Crackin!

Intro to Console / Terminal



A screenshot of a macOS Terminal window titled "Macintosh HD — bash — 80x26". The window shows the output of the command `OSXDaily@hyrule:/$ ls -l`. The output is a long list of files and directories with their permissions, sizes, and timestamps. The files are color-coded: blue for directories, green for executables, and pink for symbolic links. The output is as follows:

```
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
(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:

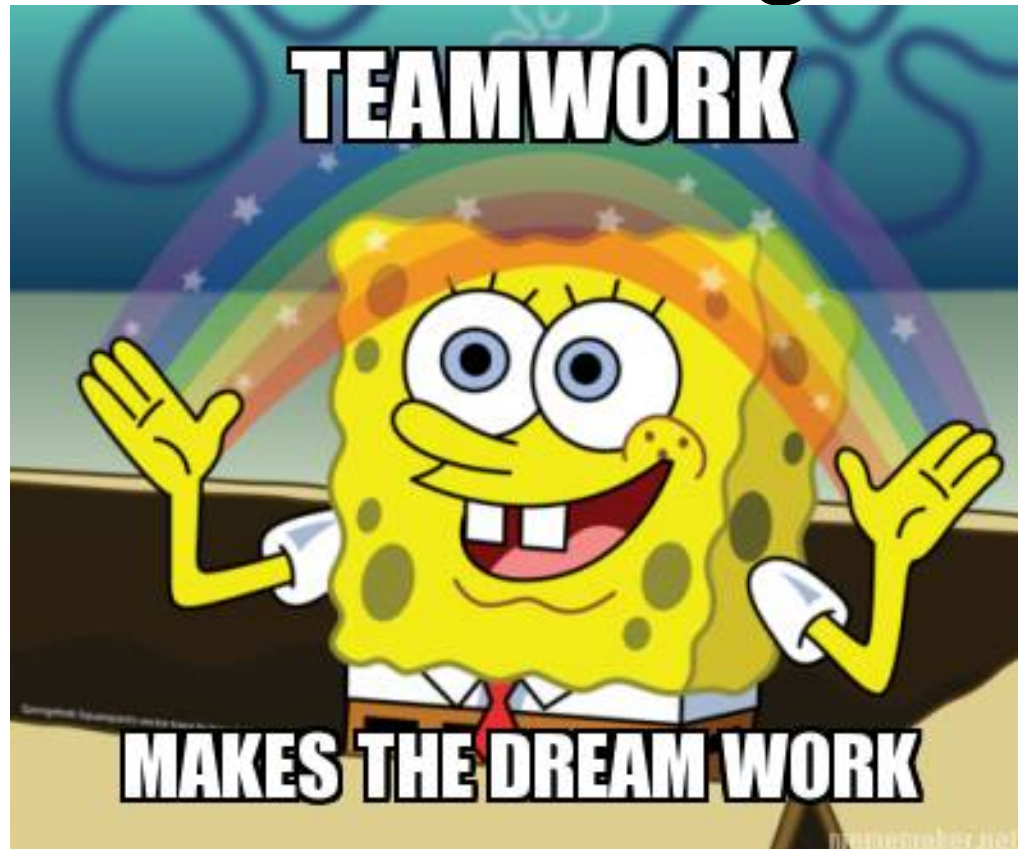
From the Terminal / Console and using only the command line, create:

- 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



- **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:

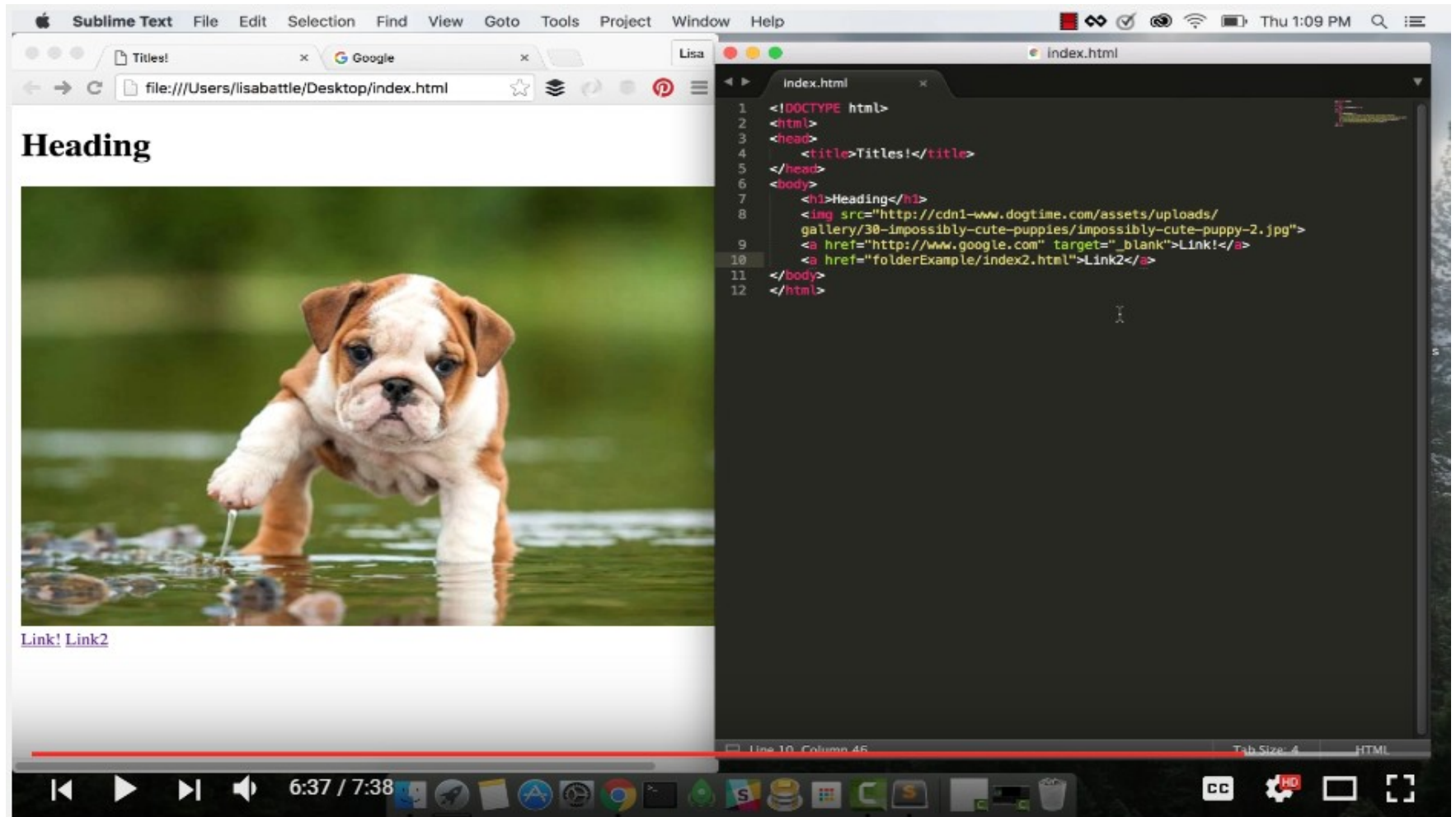
In a new HTML file, create the basic structure of an HTML document and include the following in it:

- 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:

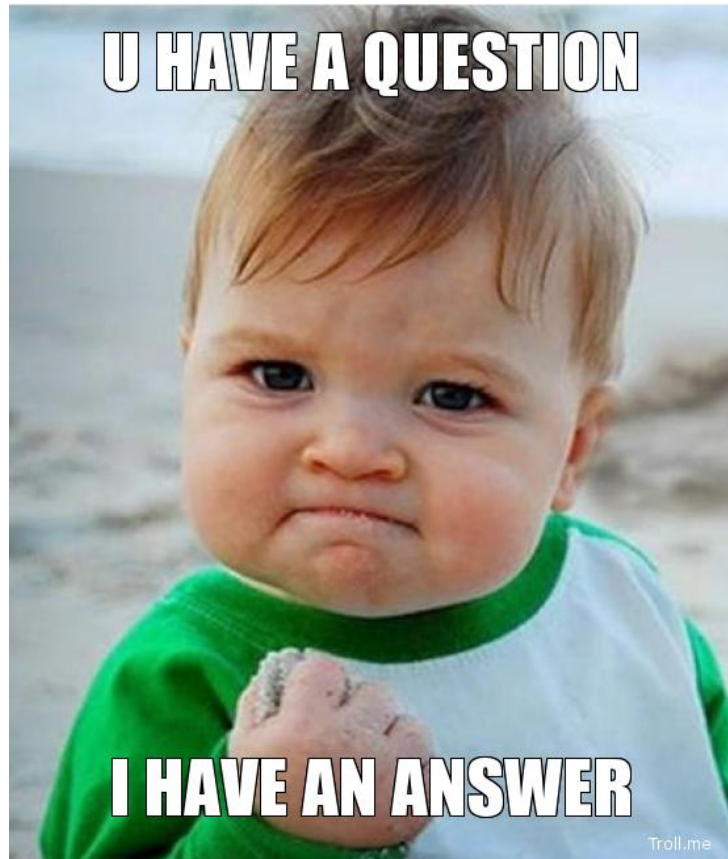
- Create an ordered list of steps to make a sandwich.
- Create an unordered list of 5 bands/musicians you like.
- Create a table with 2 columns (animal class and animal name) and 4 rows of animals.
- Use an alternate way of separating links without line breaks.
- Embed a YouTube video of your favorite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