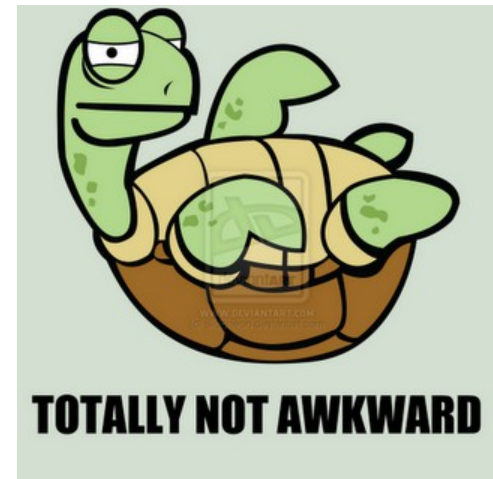


The Zen of Coding

The Coding Bootcamp

Quick Introductions! (30 seconds)

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



Instructor = ... ?

Your Name Here

- <insert education or experience tidbit>
- <insert education or experience tidbit>
- Over <#> years coding, (with plenty of experience being a n00b at it.)



Insert image
of you here

- <*personal fact*>
- Secretly, a <funny fact about yourself>

Some Cool Stuff I

Made

**SNAPSHOT OF SOMETHING
YOU MADE GOES HERE!**

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.

Support Team

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

**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



Nothing Comes

Easy...

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.**”

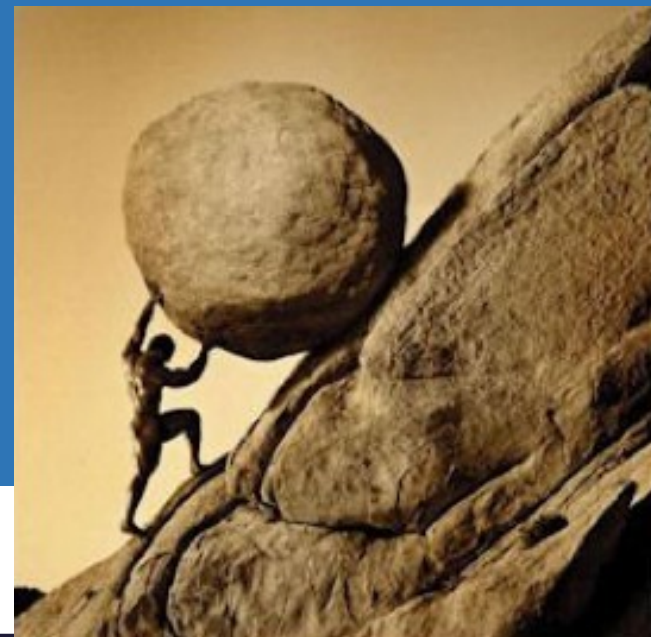
“What I’ve learned is that during this period of frustration is actually when people improve the most, and their improvements are usually obvious to an outsider. If you feel frustrated while trying to understand new concepts, try to remember that it might not feel like it, but you’re probably rapidly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

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

Advice for the

Throughout this course, always remember to:

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



Advice for the

Throughout this course, always remember to:

1. *Work Hard!!*
2. *Appreciate your successes*



Advice for the

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

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

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

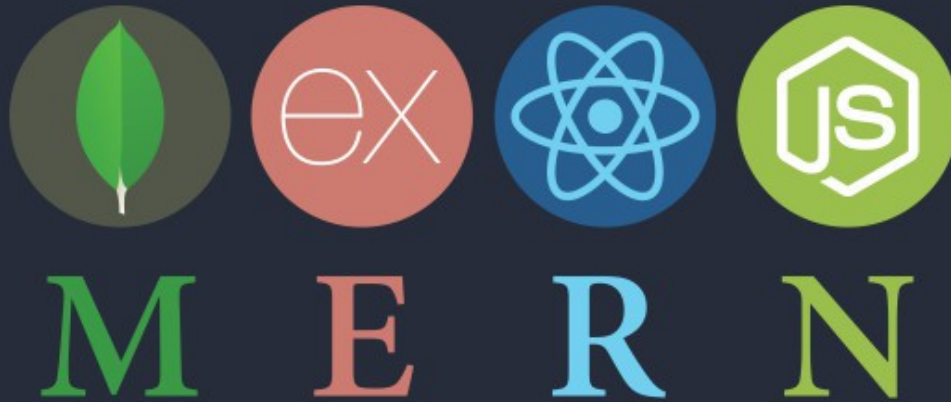
Self-Check

Let's do some quick checks of the following

- ✓ Visual Studio Code Check
- ✓ Git Bash / Terminal Check
- ✓ Node Check
- ✓ Git Check
- ✓ Heroku Check

On the Modern Web

Full-Stack Devel



The “Magic” of YouTube

The screenshot shows the YouTube homepage interface. At the top, the browser address bar displays <https://www.youtube.com>. The YouTube logo is on the left, and navigation links for 'Upload' and 'Sign in' are on the right. A search bar in the center contains the text 'how to be awesome', which has triggered a dropdown menu of 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'. Below the search bar, the 'TODAY Recommendations' section features three video thumbnails. The first thumbnail shows Brad Pitt and Angelina Jolie, with the title 'Angelina Jolie, Brad Pitt Discuss Marriage, New Film, Cancer Fig...' and 2,091,579 views. The second thumbnail shows a scene from 'Pretty Woman' with the title ''Pretty Woman' Cast Reunites 25 Years Later | TODAY' and 1,491,399 views. The third thumbnail shows Amy Schumer with the title 'Amy Schumer On Body Image, Kardashians, Style (Full...)' and 556,855 views. Below this, the 'Popular Videos - Movies & Walt Disney by #Movies' section displays three more thumbnails. The first is a 'LIST SHOW' titled '24 HISTORICAL INACCURACIES IN DISNEY MOVIES' by 'mental_floss' with 142,518 views. The second is '10 Hidden Details In Disney Movies' by 'Screen Rant' with 11,553,738 views. The third is 'Walt Disney Movies 2015 - Animation Movies 2015 English...' by 'Geroy Donothe' with 186,964 views.

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

TODAY Recommendations

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

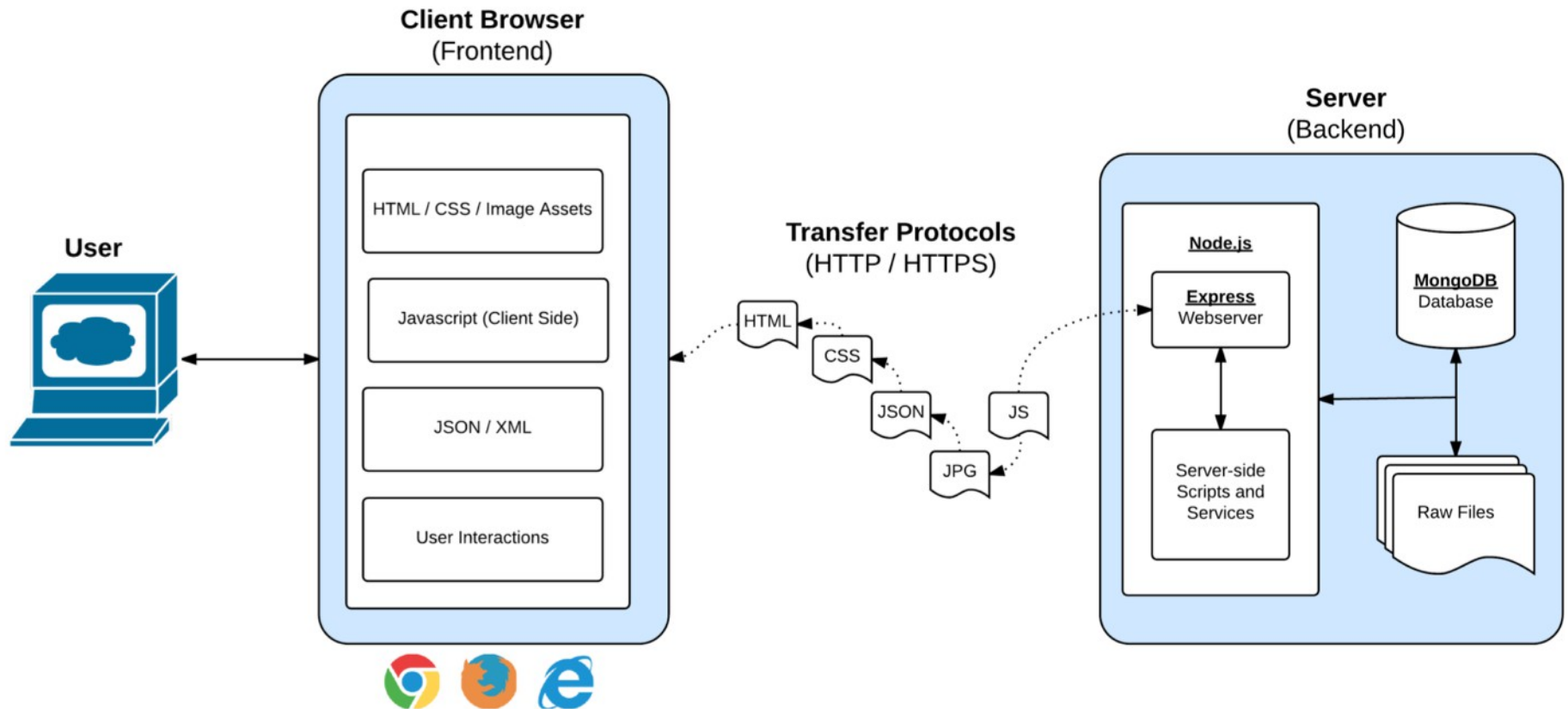
Popular Videos - Movies & Walt Disney by #Movies

24 HISTORICAL INACCURACIES IN DISNEY MOVIES
mental_floss
7:23
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 ✓
5:58
10 Hidden Details In Disney Movies
Screen Rant ✓
11,553,738 views • 5 months ago

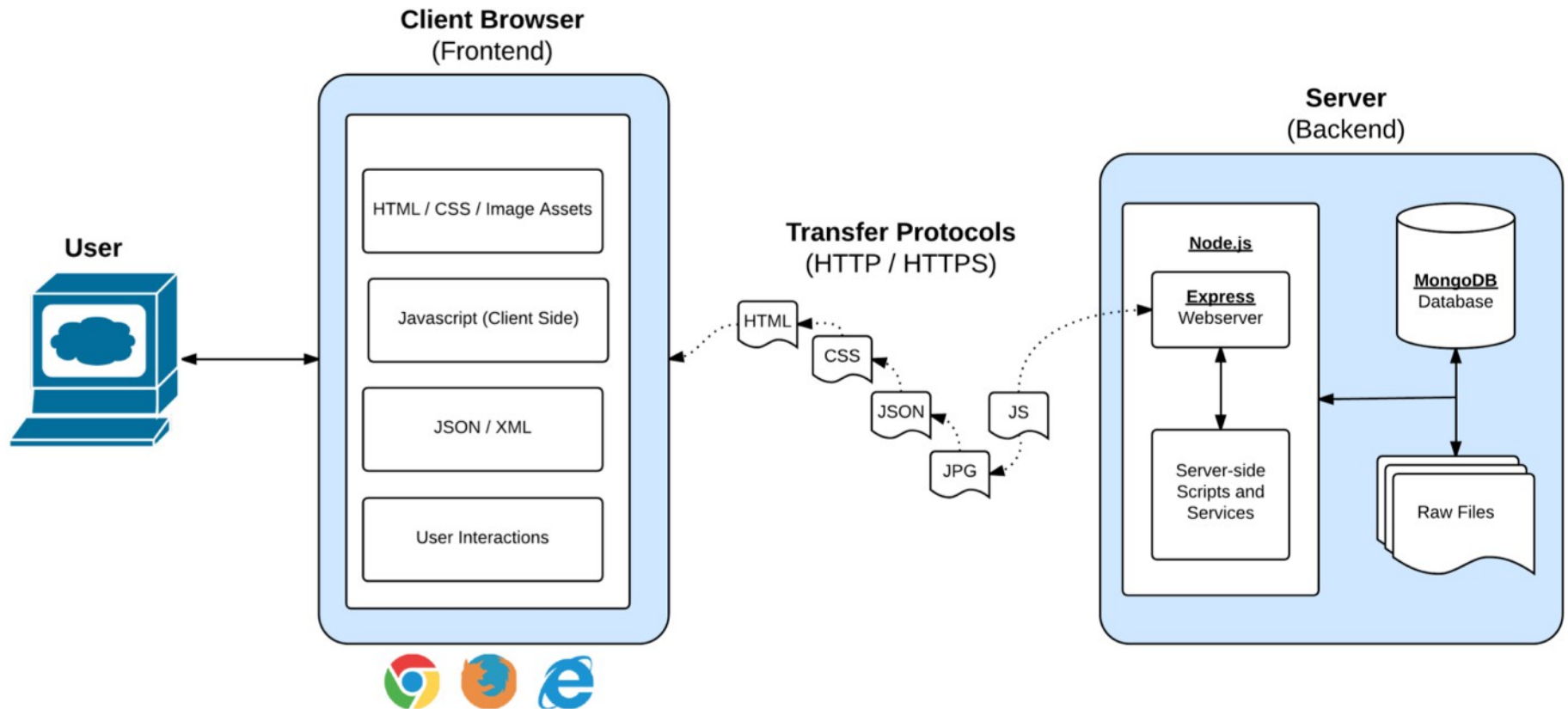
Walt Disney Movies 2015 - Animation Movies 2015 English...
Geroy Donothe
1:15:26
Walt Disney Movies 2015 - Animation Movies 2015 English...
Geroy Donothe
186,964 views • 4 months ago

Full-Stack



- 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



- **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

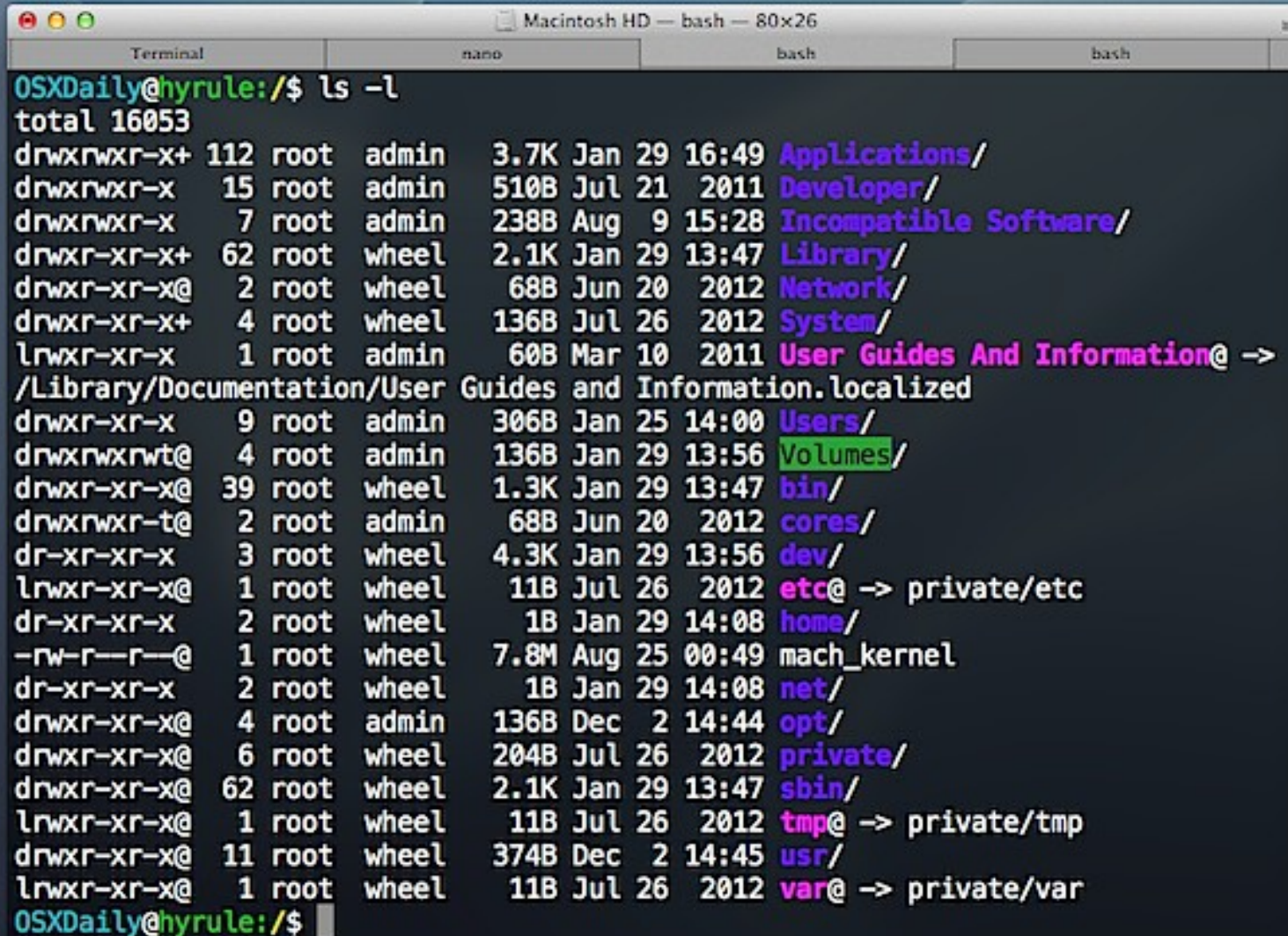
- Templating Engines
- Sessions
- Writing tests
- Node.js
- Express.js
- Creating APIs
- MVC
- User Authentication
- ORM (Sequelize)

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
(01-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.

Intro to Console

Discuss with

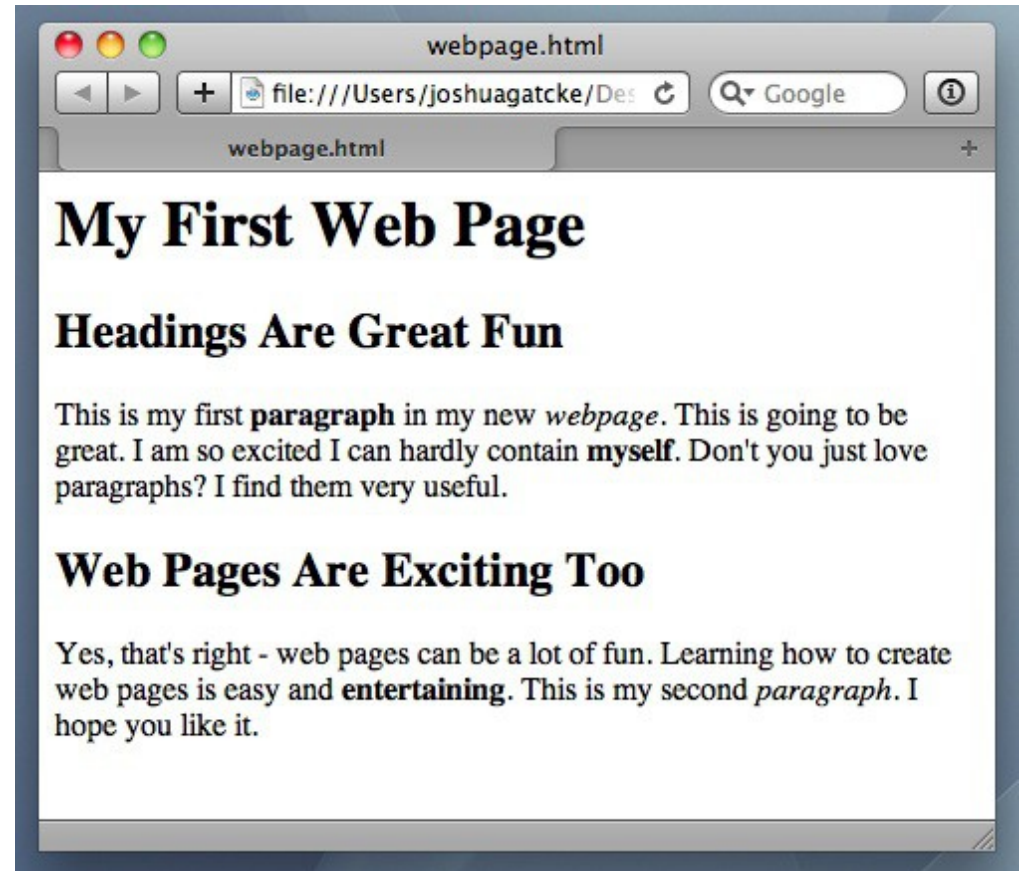
Nathan



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:

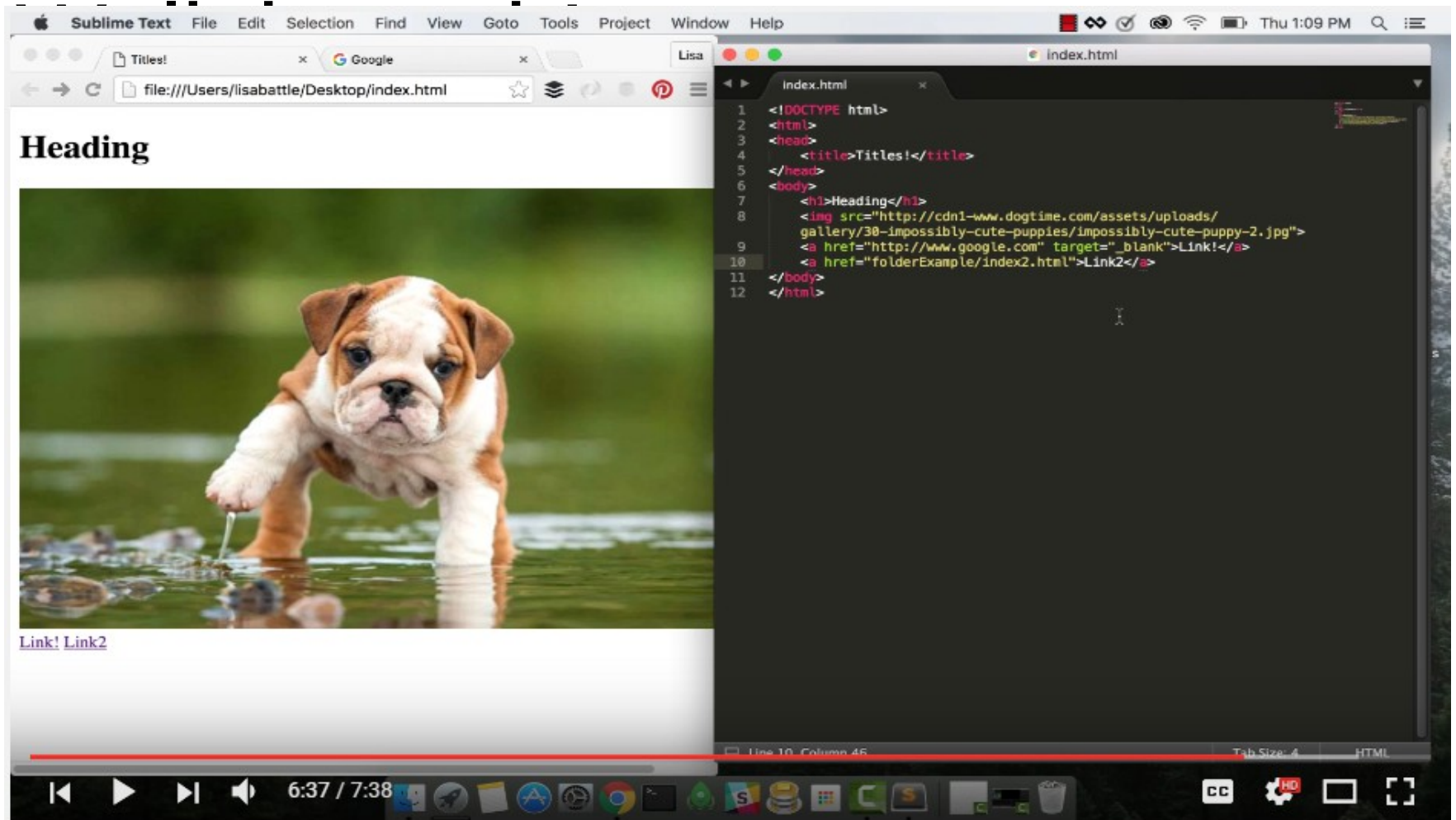
In a new HTML file, create the basic structure of an HTML document and include the following in it:

- 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:

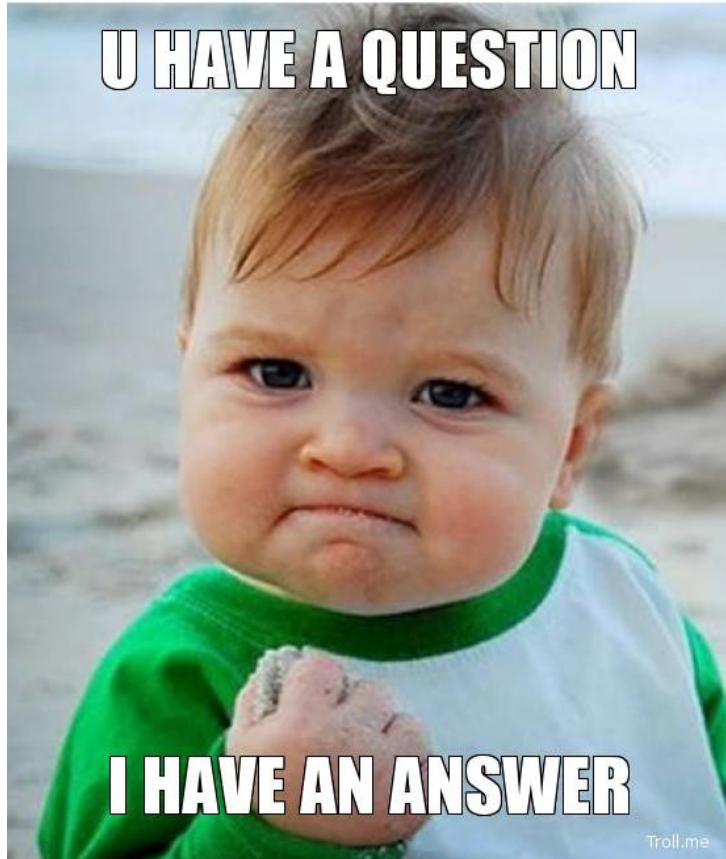
- Create an ordered list of steps to make a sandwich.
- Create an unordered list of 5 bands/musicians you like.
- Create a table with 2 columns (animal class and animal name) and 4 rows of animals.
- Use an alternate way of separating links without line breaks.
- Embed a YouTube video of your favorite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

YouTube Video



<https://www.youtube.com/watch?v=ieb6Svbc10E&index=1&list=PLgJ8UgkiorCnMLsUe>

`<title>` Intro to HTML `</title>`



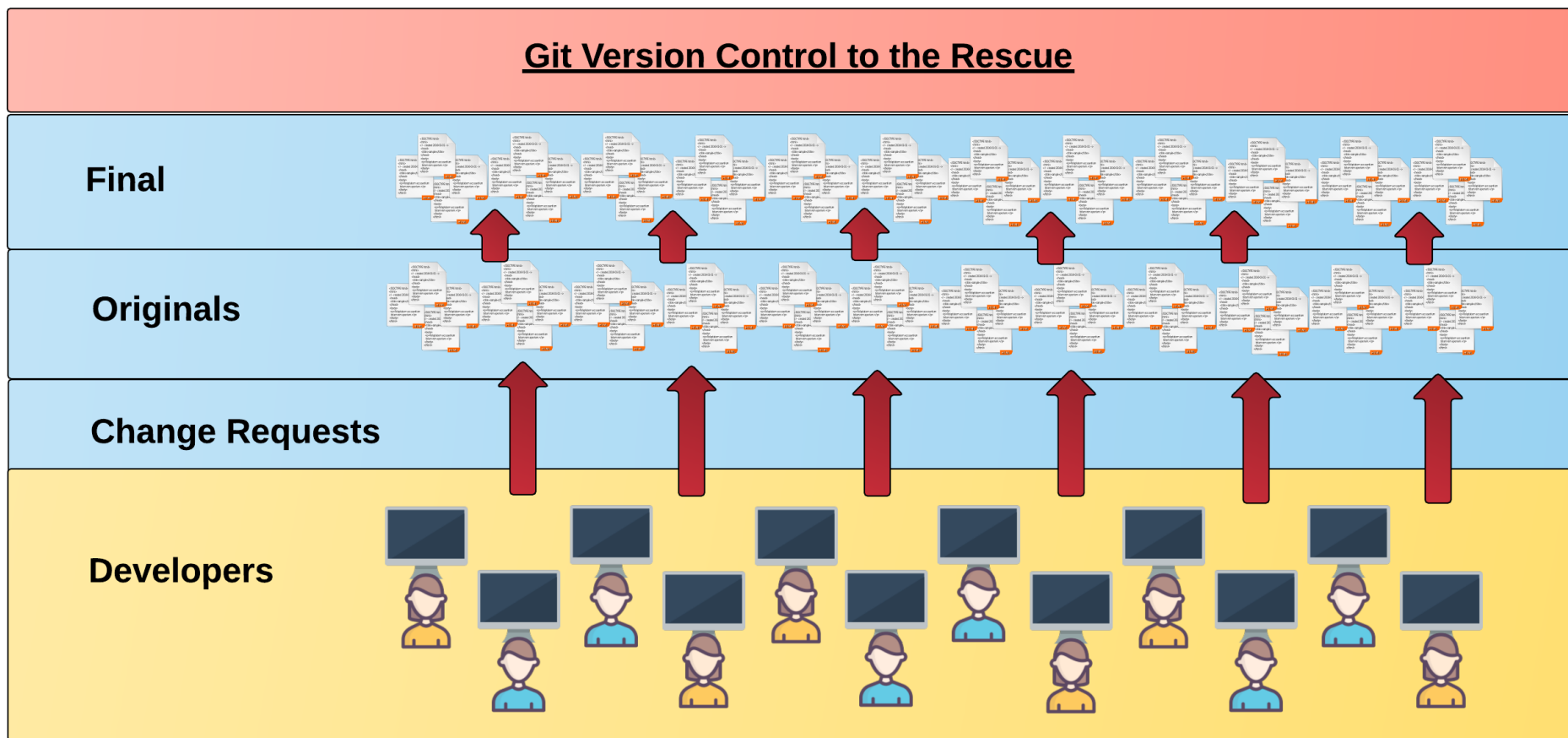
How'd it go?

LUNCH (30 Mins)

What / Why Git?

Collaborative Coding

Git Version Control to the Rescue



- Modern web development is highly collaborative.
- Teams are often extremely large and separated across the country — or planet.
- Apps sometimes comprise hundreds or even thousands of files.

The Team's Task

Task: Make a list of creative works you've written in the past

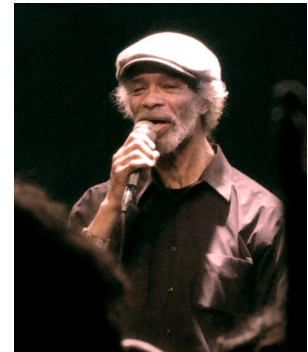
Programming Team:



Maya Angelou



Anne Sexton



Gil Scott Heron

Maya & Gil make their edits

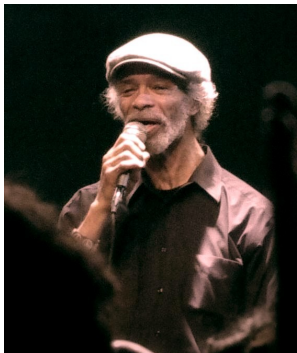
Programming Away...



Maya's Version



Programming Away...



Gil's Version



Different

On the Pulse of Morning

I Know Why the Caged Bird Sings

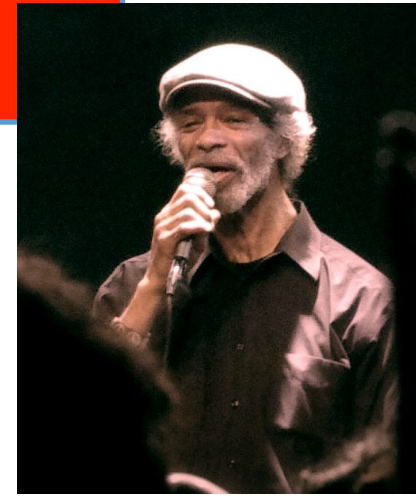
And Still I Rise

Different

Free Will

Pieces of a Man

The Revolution will not be Televised



Resolution



On the Pulse of Morning

I Know Why the Caged Bird Sings

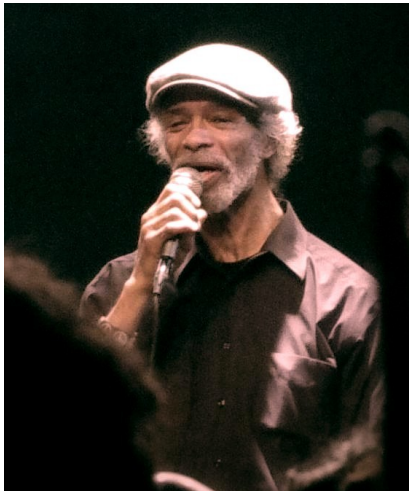
And Still I Rise

“Let’s settle on this...”

Poems

Albums

Songs



Free Will

Pieces of a Man

The Revolution will not be Televised

Anne writes her own stuff...



The Double Image

Heart's Needle

Baby Picture

Anne overwrites work of her teammates



Delete.
Delete.
Delete

~~~~

~~Poems~~

~~Albums~~

~~Songs~~

~~~~

>

The Double Image

45 Mercy Street

The Road Back

|>

The Group Project



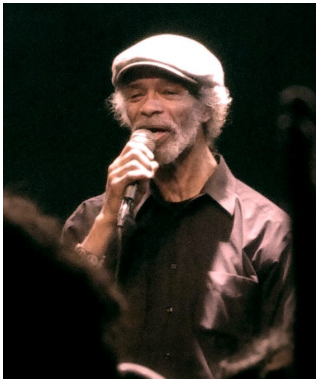
Lesson: You should use Version Control.

....and watch your teammates' work



Today we fret and pull
on wheels, ignore our regular loss
of time...

...or maybe we should just use git



Version Control

Git Version Control:

Provides a organized system for managing code for when multiple developers work on a project at the same time.

The Benefits of Git:

1. A process for resolving conflicts in code.
2. Version History.

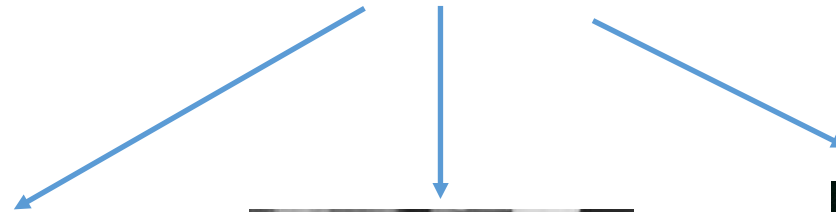
The Group Project

Master Branch



'Branch' = personal copy

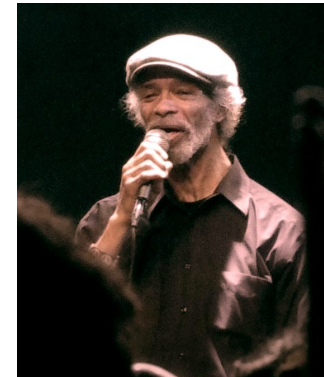
Personal branch



Maya's branch



Anne's branch



Gil's branch

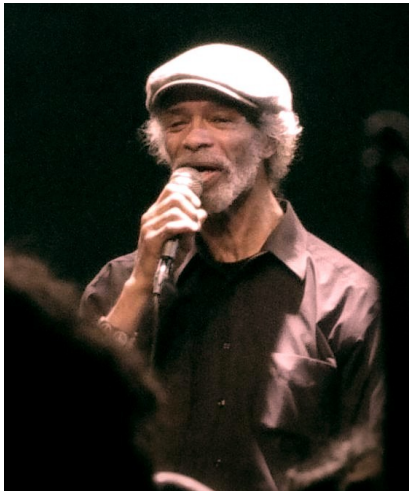
The team goes to



On the Pulse of Morning

I Know Why the Caged Bird Sings

And Still I Rise



Free Will

Pieces of a Man

The Revolution will not be Televised

Maya pushes first

Master Copy



1



Maya's Branch

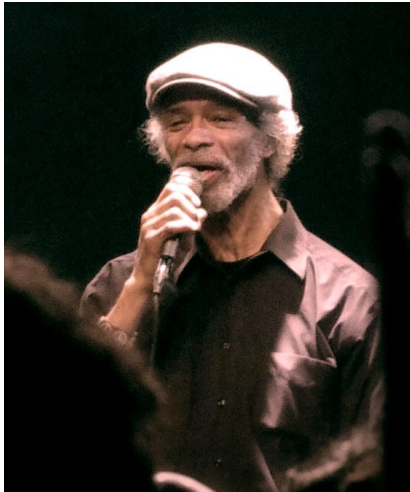
Maya **pushes (uploads)** her code changes into the main branch.

No code conflicts.



Gil's edits are ready

Rule: pull first, then push your changes



Ok

Gil pulls latest changes

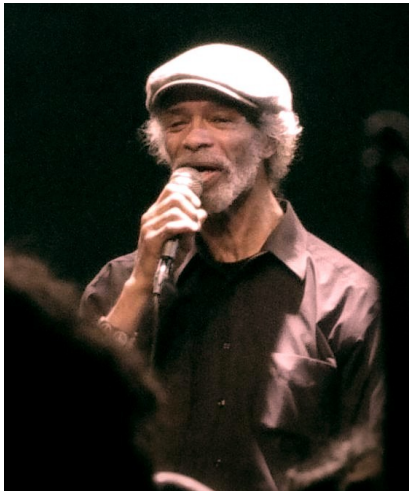
Master Copy



1



Gil's Branch

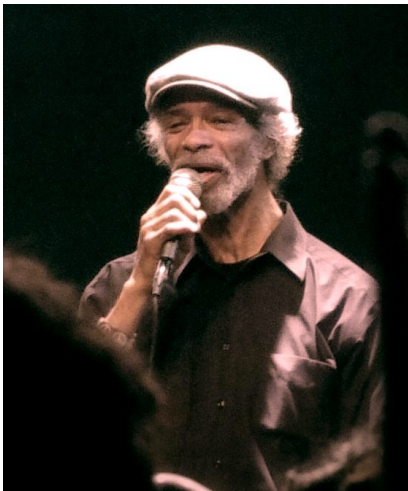


Gil conflicts with master branch

Master Branch



1



```
<li>On the Pulse of Morning</li>
<li>I Know Why the Caged Bird Sings</li>
<li>And Still I Rise</li>
<li>On the Pulse of Morning</li>
<li>I Know Why the Caged Bird Sings</li>
<li>And Still I Rise</li>
```

Git sees a conflict.

Kobe resolves

```
<li>On the Pulse of Morning</li>
<li>I Know Why the Caged Bird
Sings</li>
<li>And Still I Rise</li>
<li>On the Pulse of Morning</li>
<li>I Know Why the Caged Bird
Sings</li>
<li>And Still I Rise</li>
```

```
<ul>
  <li>Poems</li>
  <li>Albums</li>
  <li>Songs</li>
</ul>
```



Gil's Branch

Gil fixes and pushes

Master Branch



1



2

Gil **pushes (uploads)** his revision the main branch.

No code conflicts.



Gil's Branch

```
<ul>
  <li>Poems</li>
  <li>Albums</li>
  <li>Songs</li>
</ul>
```

Anne starts her work

Rule: pull first, then push your changes



*look into my face
and you will know that crimes
dropped upon me
as from a high building...*

...by which I mean, I broke the
rules.

Anne pushes

Master Branch



1



2



3

Anne dude **pushes (uploads)** her revision the main branch. No code conflicts.

Not what we want.



Anne's Branch

The Double Image

Heart's Needle

Baby Picture

If Anne had made a pull first...

Conflict!

The Double Image

Heart's Needle

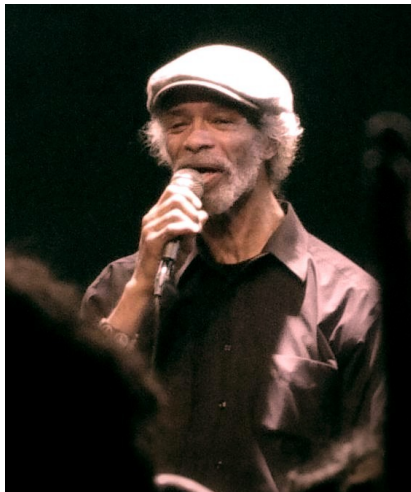
Baby Picture

Poems

Albums

Songs

The overwritten work is discovered



Git interface showing workspace, branches, and commit history.

Workspace: File status, History, Search.

Branches: avgrund_replace_jquery-ui, file_reorg, master (1↑ 1↓).

Tags:

Remotes: origin.

Stashes: WIP on master: 8cedcac...

Submodules:

Subtrees:

Commit History:

Graph	Description	Commit	Author	Date
Uncommitted changes				
origin/master	Conflict experiment: slight c...	6bc1e3a	Greg Sandell <gre...	Today, 2:56 PM
origin/HEAD	Conflict experiment: restore rogue...	11f99e0	Greg Sandell <gre...	Today, 2:55 PM
master	Conflict experiment: undo rogue changes	26eb29d	Greg Sandell <gre...	Today, 2:53 PM

test.html

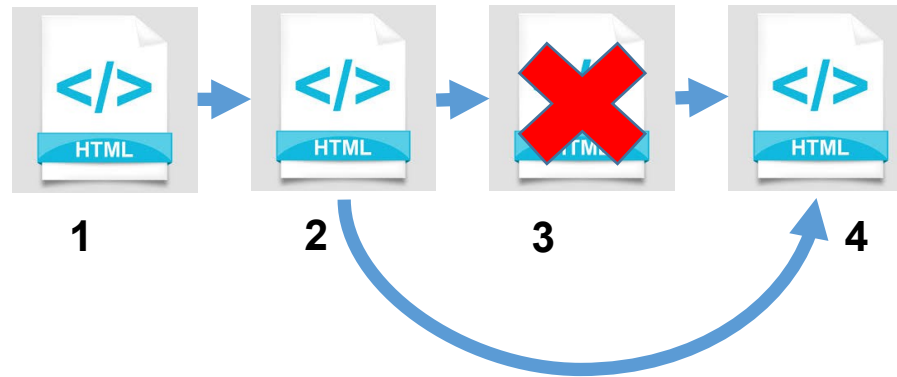
Hunk 1: Lines 1-10 Reverse hunk

```
1 1 <!doctype html>
2 2 <html>
3 3 <body>
4 4 - <ul>
5 5 - <li>Legislative</li>
6 6 - <li>Judicial</li>
7 7 - <li>Executive</li>
8 8 - </ul>
9 9 + <list>
10 10 + <li>Washington
11 11 + <li>Dudes in Robes</li>
12 12 + <li>Mr. Hot Shot</li>
13 13 + </list>
14 14 </body>
15 15 </html>
```

Roll Back



Main Branch



Maya **rolls back** the code to an earlier version.



Anne's Branch

The Group Project

Lesson:

You should use Version Control!

Quick Activity!

Suggested Time: 3 min

Turn to your neighbor, and have one of you explain to the other:

- **The concept of version control.**

Then the other should explain:

- **Two of the key advantages to using a version control system.**

So... What's this GitHub?

- GitHub is a Web-Based hosting service to store code online.
- It allows developers to **pull** (download) code or **push** (upload) code to the same **repository** (directory).
- It also allows developers to **view histories** of code changes and to **track issues**.



Pushing and Pulling



Pull Code

Push Code

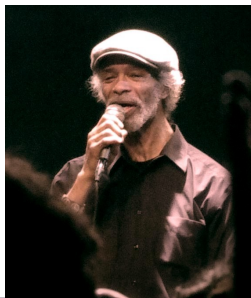
Pull Code

Pull Code

Push Code


Pull Code

Push Code






Get Started with Git

Instructor Git Demo!



[Pull requests](#) [Issues](#) [Gist](#)

[afhaque / DemoRepository](#) [Watch](#) 0 [Star](#) 0 [Fork](#) 0

[Code](#) [Issues](#) 0 [Pull requests](#) 0 [Wiki](#) [Pulse](#) [Graphs](#) [Settings](#)

This is Ahmed's Demo repository for his class! — [Edit](#)

1 commit


1 branch

0 releases


1 contributor

Branch: master [New pull request](#)

[New file](#) [Find file](#) [HTTPS](#) <https://github.com/afhaque> [Download ZIP](#)

 **afhaque** Initial commit Latest commit 2df88aa 4 minutes ago

[README.md](#) Initial commit 4 minutes ago

 **README.md**

DemoRepository

This is Ahmed's Demo repository for his class!

Basic Git Commands

At its most basic, these are the five git commands to get started:

1. **git clone**
2. **git add**
3. **git commit**
4. **git push**
5. **git pull**

Basic Git Commands

At its most basic, these are the five git commands to get started:

1. **git clone** – copies an entire repo (to begin).
2. **git add** – adds a file for inclusion in Git.
3. **git commit** – notes a change to the local repo.
4. **git push** – sends changes to hosting service.
5. **git pull** – downloads freshest version of repo.

> YOUR TURN!

Activity: Git Add, Commit, Push | **Suggested Time:** 20 min

Assignment:

Using GitHub and the Command Line:

- Create a new **public GitHub repository** and name it whatever you like. Be sure to check the box for “initialize this repository with a README.”
- Next, **clone** the repo to your local directory.
- Then create an HTML file inside the local directory.
- **Add, Commit, and Push** the code to GitHub.

Bonus:

- Find a partner in class, and **fork their** repository to your own GitHub account. Clone this forked repository to your local directory.
- Add, Commit, and Push the code back to your forked copy.
- Finally, submit a **pull request** to send your changes to your partner’s repo.

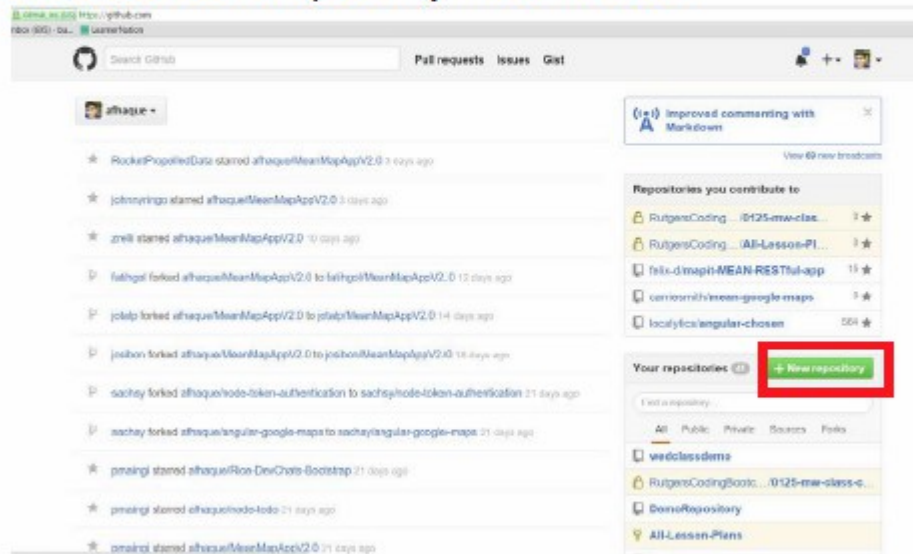
Still a Bit Lost?

Never Worry!

Steps to Uploading Your Code to GitHub

Step 1

Create a New Repository in GitHub.com



- **Follow this handy Guide!**
- Practice a few times on your own before our next class.

If You're Still Lost... Here's a (Free) Course

The screenshot shows the Code School website interface for the 'Try Git' course. At the top, the Code School logo and navigation links (Courses, Screencasts, Pricing) are visible, along with 'Create Free Account' and 'Sign in' buttons. The main banner features the GitHub logo and the text 'Try Git' with a 'Play Course for Free' button. Below the banner, a breadcrumb trail reads 'Paths > Git > Try Git', followed by 'Watch Videos' and 'Discuss Course' buttons. The 'COURSE DESCRIPTION' section states: 'Learn how to use Git by reviewing the basic concepts of Git version control. Try out this introductory course that was created with GitHub.' The 'COURSE OVERVIEW' section shows a 'tryGit' icon, 'LEVEL 1 | FREE LEVEL', and 'Discover Git 25 Challenges'. It also includes a brief description: 'Discover the basics of Git, including how to initialize a repo. Learn how to add, commit, and push your code to GitHub.' On the right, the 'ABOUT THE PROFESSORS' section introduces 'Olivier Lacan' and 'Gregg Pollack' with their photos and biographies.

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tryGit

Try Git

Play Course for Free

Paths > Git > Try Git

Watch Videos Discuss Course

COURSE DESCRIPTION

Learn how to use Git by reviewing the basic concepts of Git version control. Try out this introductory course that was created with GitHub.

COURSE OVERVIEW

tryGit

LEVEL 1 | FREE LEVEL

Discover Git 25 Challenges

Discover the basics of Git, including how to initialize a repo. Learn how to add, commit, and push your code to GitHub.

ABOUT THE PROFESSORS

Olivier Lacan

Olivier was an innocent French web designer when Rails for Zombies infected his brain. The course motivated him to learn to build what he previously could only design. Now set free by the eloquence of Ruby, he spends his time learning, teaching, and shipping code for Code School.

Gregg Pollack

Gregg is passionate about taking complex topics and teaching them efficiently. He's helped build Envy Labs, Starter Studio, and Code School. He also furthers education through BarCamp in Orlando, the Orlando Ruby Users Group, and the Orlando Tech Events newsletter.

<https://www.codeschool.com/courses/try-git>

Homework!

Homework “Due”:

This Week

By Next Class You Should:

- 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.
- Review the Git commands we learned and how to use them