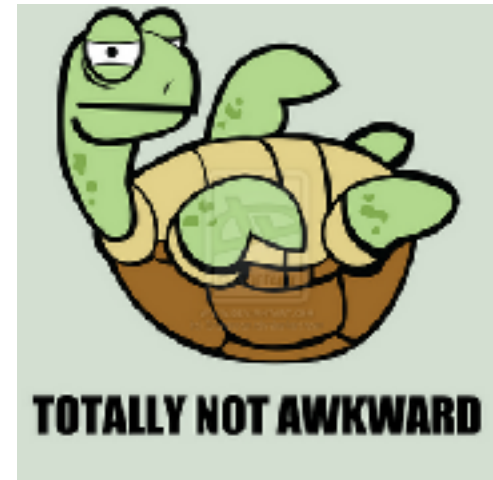


The Zen of Coding

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.

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**



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

Obstacle #2 – The Great Doubt



Obstacle #3 – The Great Distance



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.**”

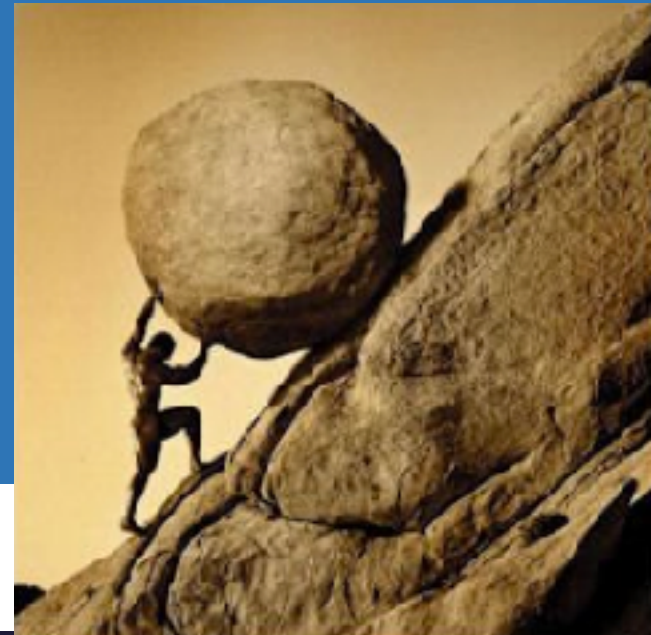
“What I’ve learned is that during this period of frustration is actually when people improve the most, and their improvements are usually obvious to an outsider. If you feel frustrated while trying to understand new concepts, try to remember that it might not feel like it, but you’re probably rapidly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

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

Advice for the 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

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 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 in the top 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". 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:

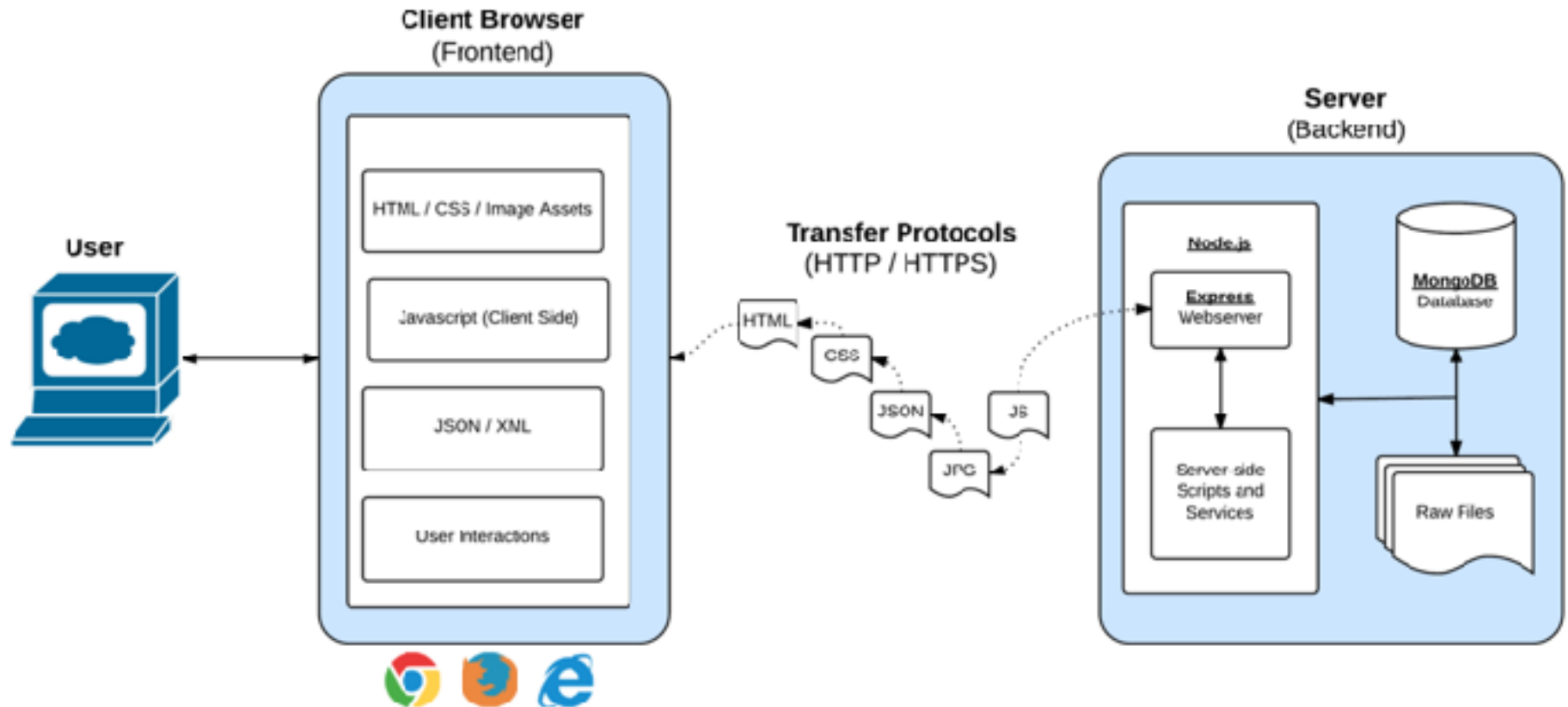
- Angellina Jolie, Brad Pitt Discuss Marriage, New Film, Cancer Fig...**
TODAY logo, 8:53 duration, 2,091,579 views • 2 months ago
- 'Pretty Woman' Cast Reunites 25 Years Later | TODAY**
TODAY logo, 8:10 duration, 1,491,149 views • 4 months ago
- Amy Schumer On Body Image, Kardashians, Style (Full...**
TODAY logo, 27:13 duration, 555,855 views • 3 months ago

A red "Subscribe" button with "131K" subscribers is visible next to the Amy Schumer video.

Below this is the "Popular Videos - Movies & Walt Disney by #Movies" section, featuring three video thumbnails:

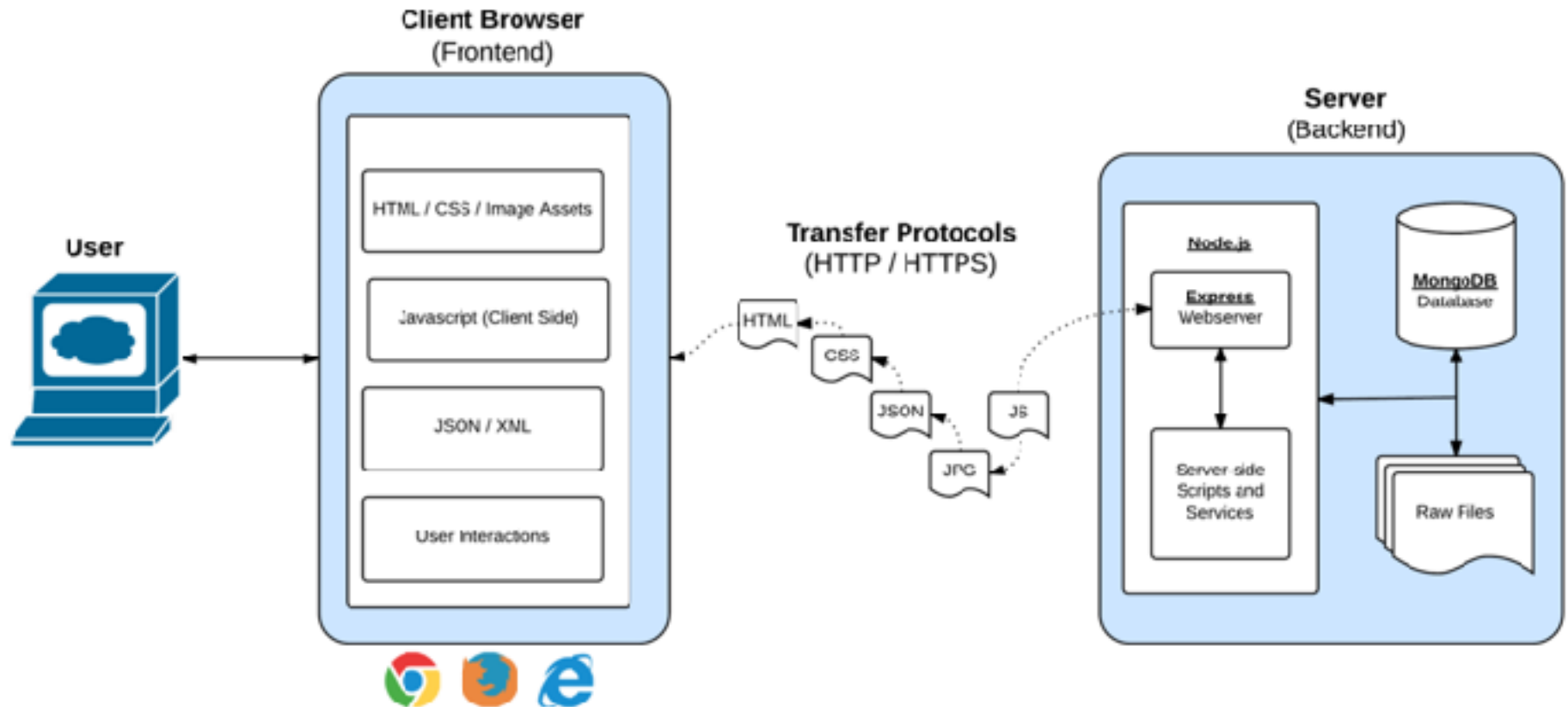
- 24 Historical Inaccuracies In Disney Movies - mental floss**
LIST SHOW 24, 7:23 duration, 142,518 views • 3 days ago
- 10 Hidden Details In Disney Movies**
SR logo, 5:58 duration, 11,661,738 views • 1 month ago
- Walt Disney Movies 2015 - Animation Movies 2015 English..**
1:15:26 duration, 165,064 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

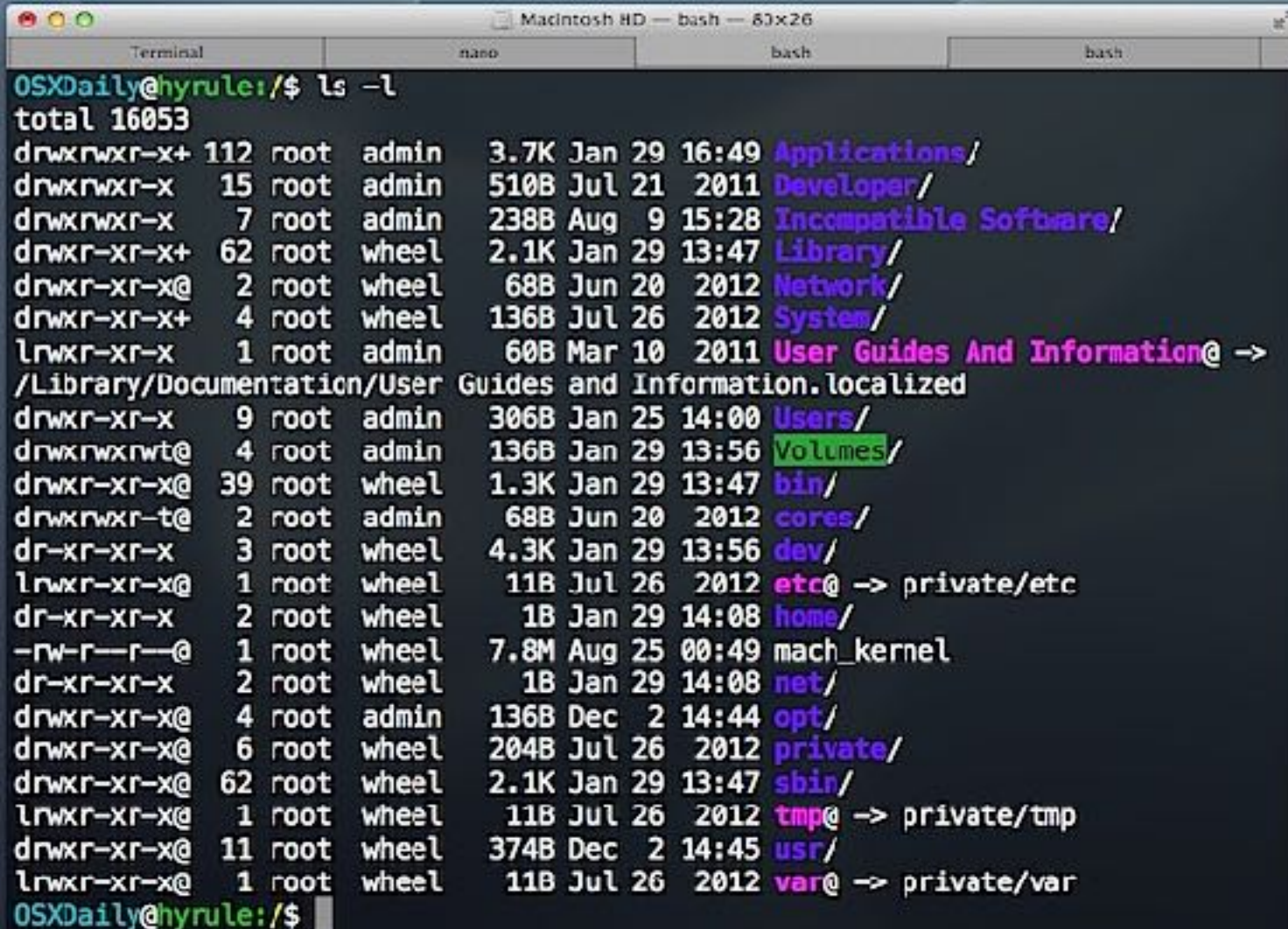
- Templating Engines
- Sessions
- Writing tests
- Node.js
- Express.js
- Creating APIs
- MVC
- User Authentication
- ORM (Sequelize)

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 magenta 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
(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.

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:

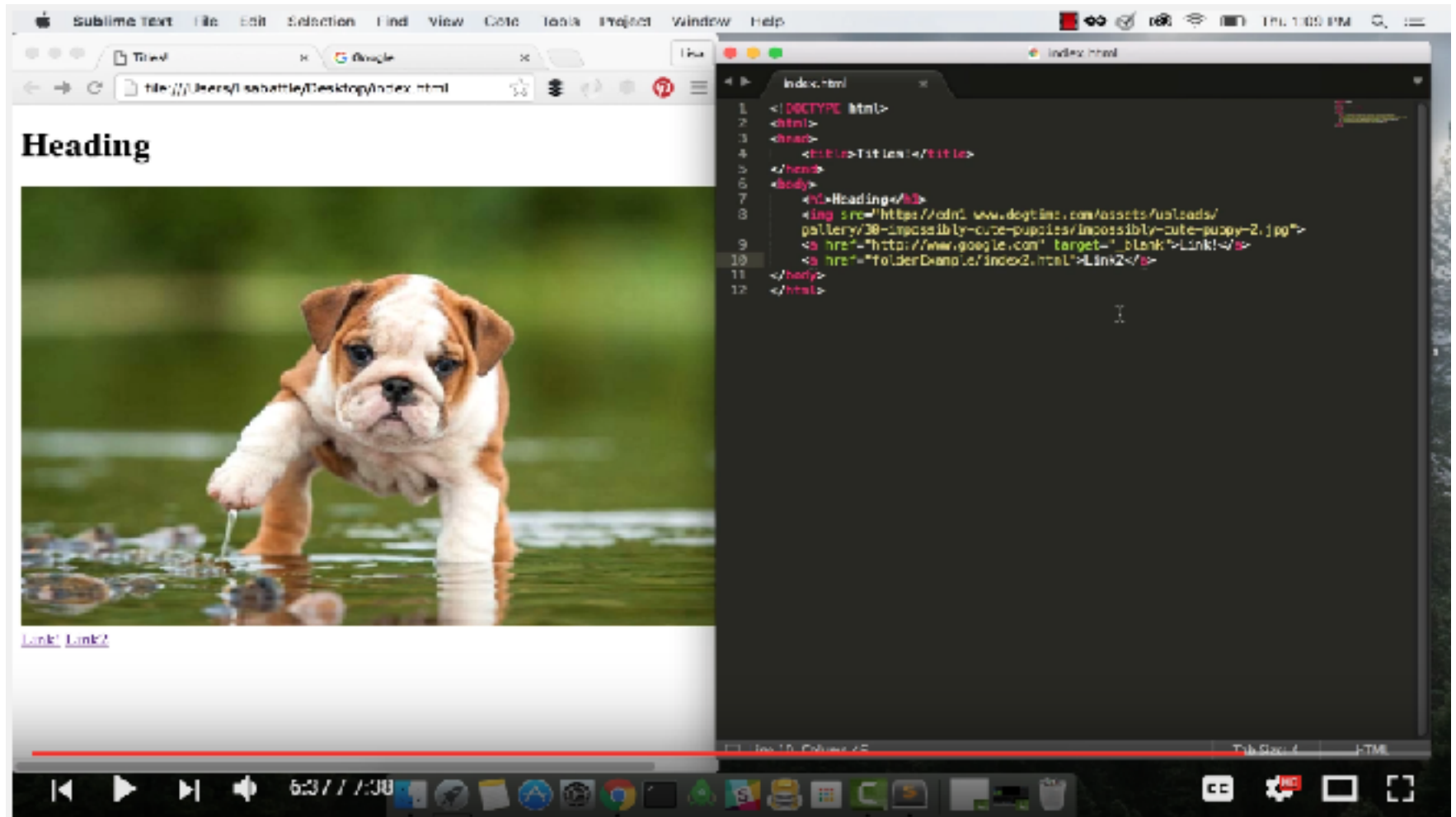
In a new HTML file, create the basic structure of an HTML document and include the following in it:

- 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:

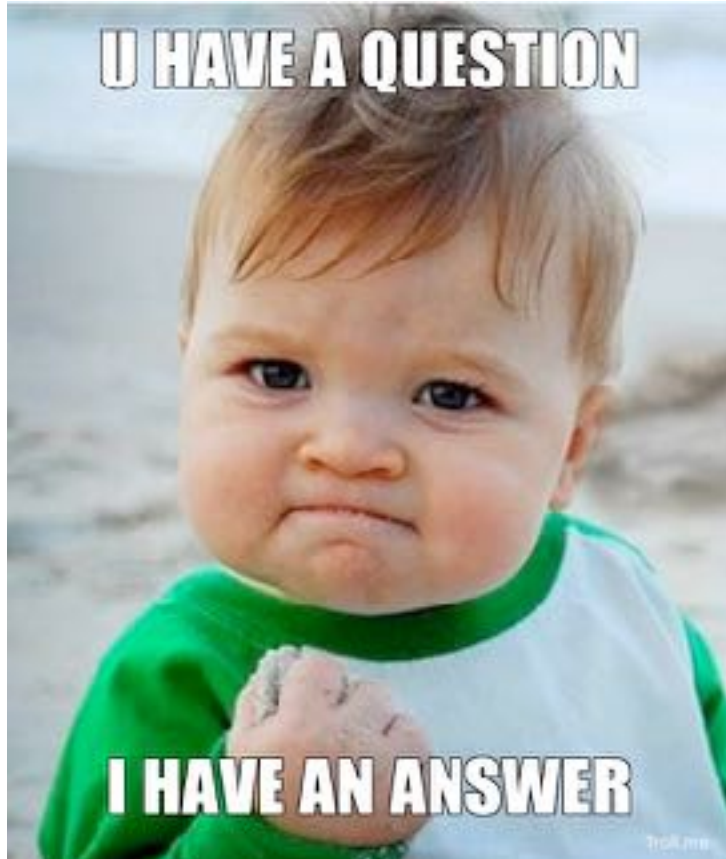
- Create an ordered list of steps to make a sandwich.
- Create an unordered list of 5 bands/musicians you like.
- Create a table with 2 columns (animal class and animal name) and 4 rows of animals.
- Use an alternate way of separating links without line breaks.
- Embed a YouTube video of your favorite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

YouTube Video Walkthrough!



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

<title> Intro to HTML </title>

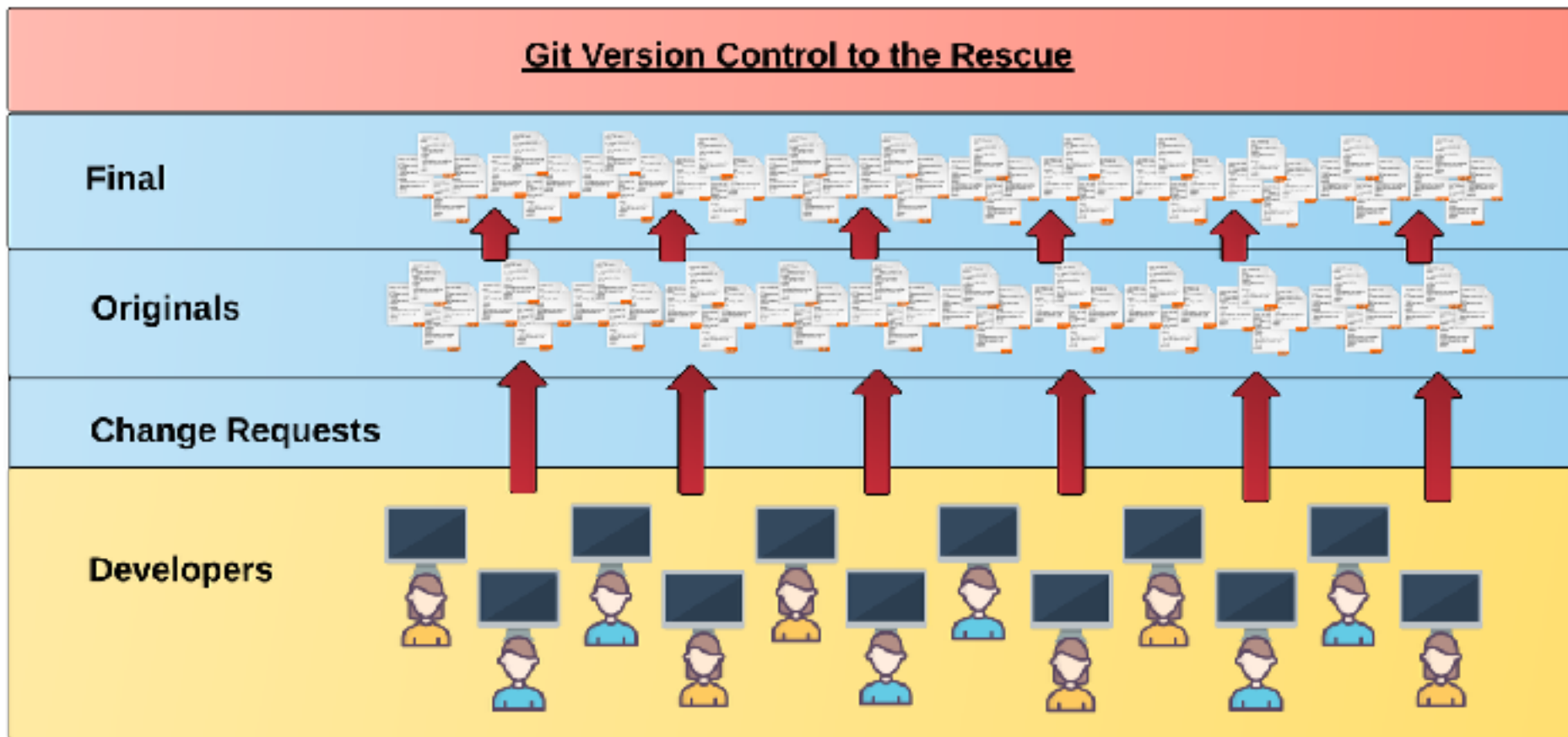


How'd it go?

LUNCH (30 Mins)

What / Why Git?

Collaborative Coding



- 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 pa

Programming Team:



Maya Angelou



Anne Sexton



Gil Scott Heron

Maya & Gil make their edits



Programming Away...

Maya's Version



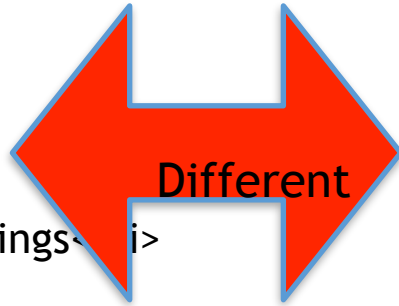
Programming Away...

Gil's Version

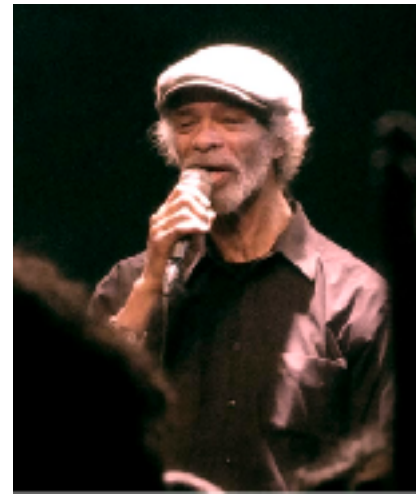


Different Solutions

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

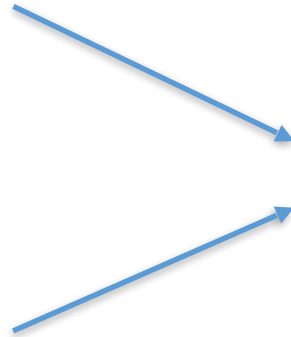


Resolution



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

“Let’s settle on this...”



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



```
<ul>  
  <li>Free Will</li>  
  <li>Pieces of a Man</li>  
  <li>The Revolution will not be Televised</li>  
</ul>
```

Anne writes her own stuff...



The Double Image

Heart's Needle

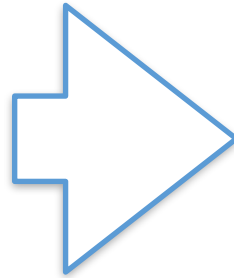
Baby Picture

Anne overwrites work of her teammates...



**Delete. Delete.
Delete. 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 work



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

No code conflicts.



Maya's Branch



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



On the Pulse of Morning
I Know Why the Caged Bird Sings
And Still I Rise
On the Pulse of Morning
I Know Why the Caged Bird Sings
And Still I Rise

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

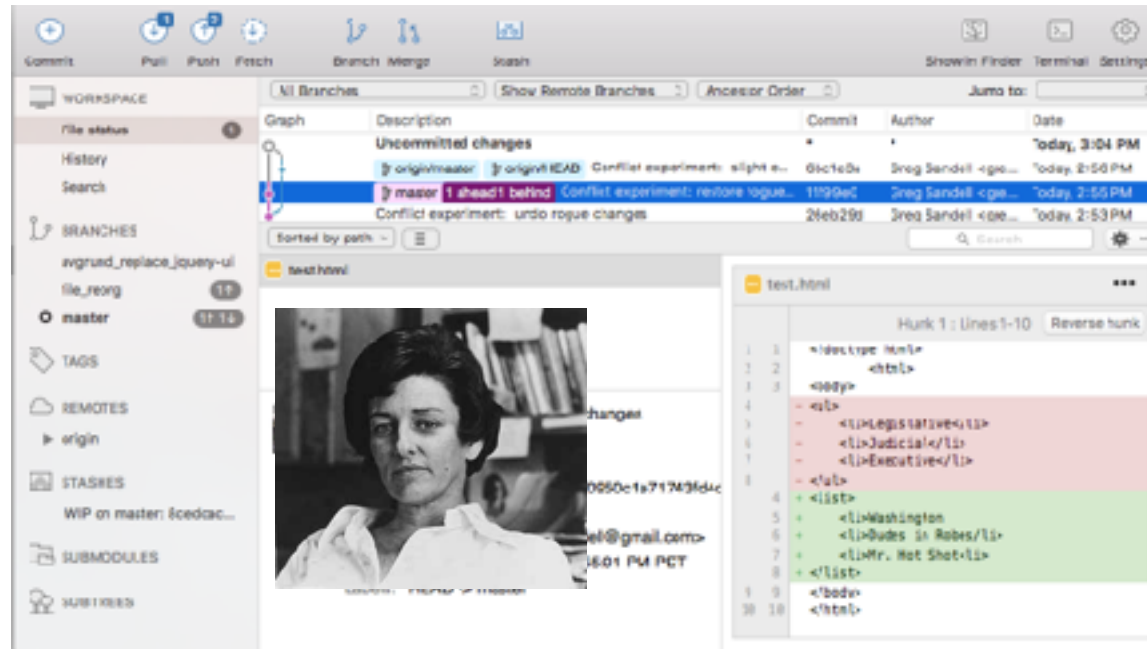
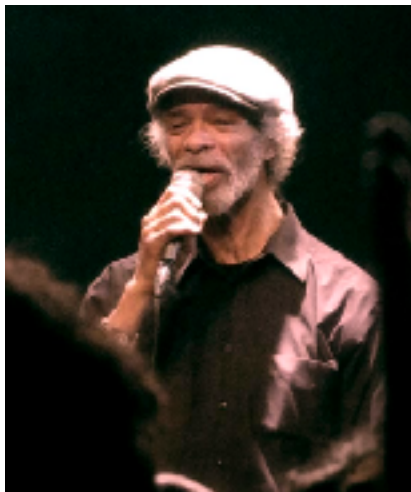
Baby Picture

Poems

Albums

Songs

The overwritten work is discovered



The screenshot shows the Git GUI application interface. The top toolbar includes buttons for Commit, Pull, Push, Fetch, Branch, Merge, and Stash. The left sidebar shows the workspace with file status, history, search, branches (including master), tags, remotes, stashes, submodules, and subtrees. The main area displays a commit graph with a table of commits. The selected commit is highlighted in blue.

Graph	Description	Commit	Author	Date
	Uncommitted changes	*	*	Today, 3:04 PM
	original master	0b1e0a	Greg Sandell <gs...>	Today, 2:56 PM
	original HEAD	1199e0	Greg Sandell <gs...>	Today, 2:56 PM
	Conflict experiment: slight e...	2feb29	Greg Sandell <gs...>	Today, 2:53 PM
	Conflict experiment: restore rogue...			
	Conflict experiment: undo rogue changes			

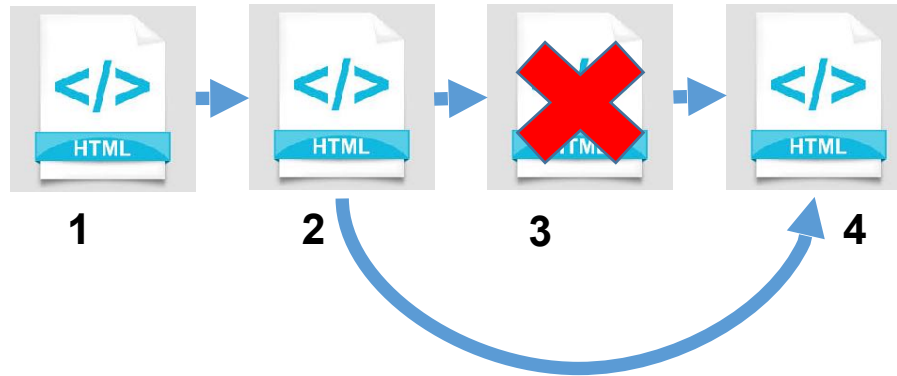
The diff view on the right shows the changes in test.html. The diff is divided into two hunks: a red hunk (lines 1-3) and a green hunk (lines 4-8). The red hunk shows the removal of a list of legislative, judicial, and executive branches. The green hunk shows the addition of a list of locations: Washington, Judea in Robes, and Mr. Hot Shot.

```
1 1 <doctype html>
2 2 <html>
3 3 <body>
4 4 <div>
5 5 <div>
6 6 <div>
7 7 <div>
8 8 </div>
9 9 </div>
10 10 </body>
11 11 </html>
```

Roll Back



Main Branch



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



Anne's Branch

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**.

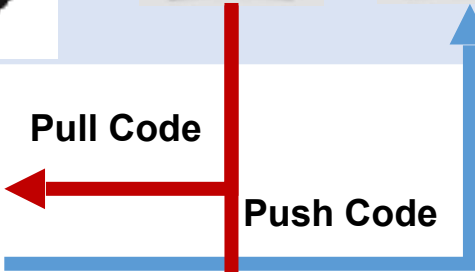


Pushing and Pulling to GitHub



Pull Code

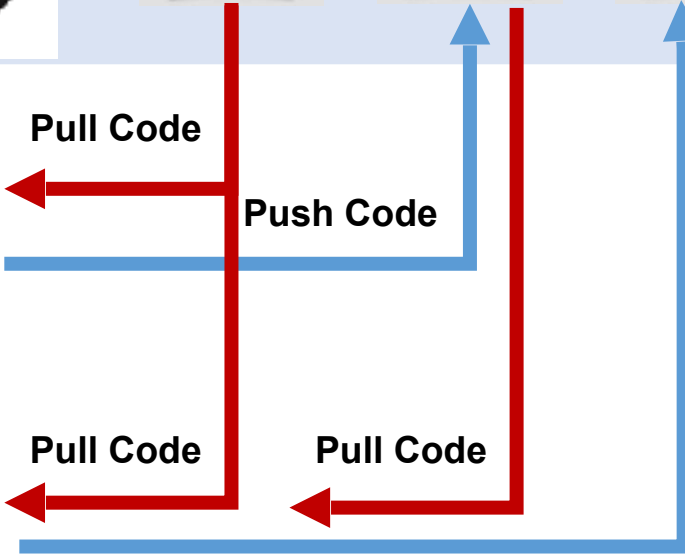
Push Code



Pull Code

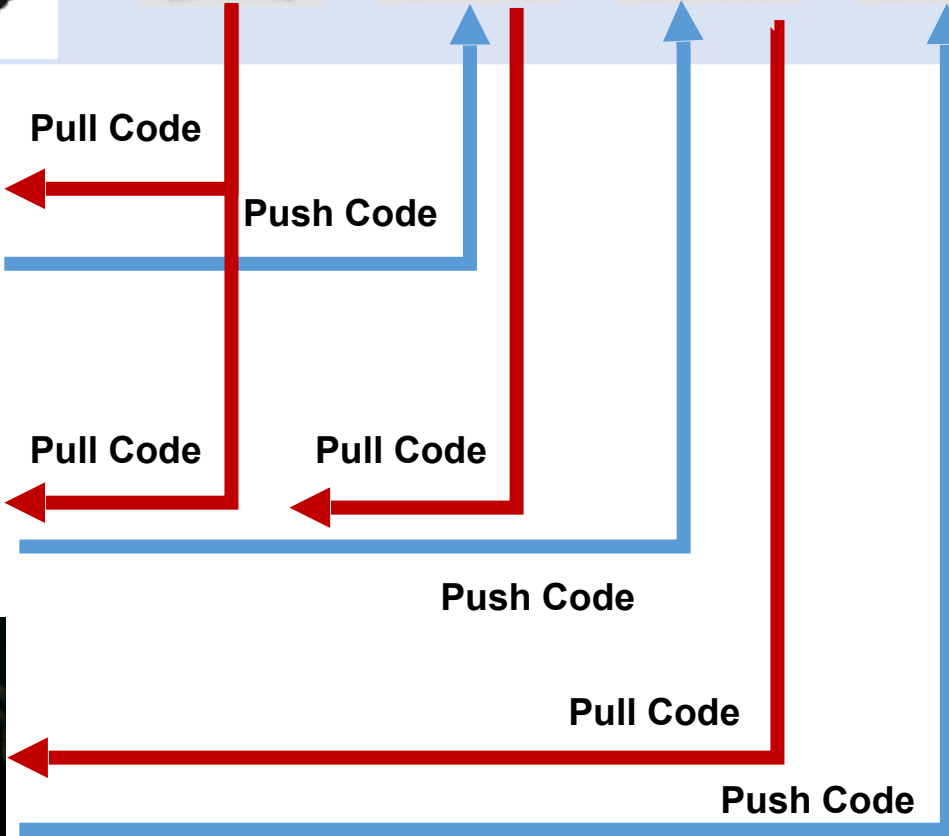
Pull Code

Push Code



Pull Code

Push Code



Get Started with Git

Instructor Git Demo!

The screenshot shows the GitHub interface for a repository named 'DemoRepository' by user 'afhaque'. At the top, there's a navigation bar with 'Pull requests', 'Issues', and 'Gist' links. Below this, the repository name is displayed along with 'Watch', 'Star', and 'Fork' buttons, each with a count of 0. A secondary navigation bar includes 'Code', 'Issues (0)', 'Pull requests (0)', 'Wiki', 'Pulse', 'Graphs', and 'Settings'. The main content area starts with a description: 'This is Ahmed's Demo repository for his class! — Edit'. Below this, statistics show '1 commit', '1 branch', '0 releases', and '1 contributor'. A row of buttons includes 'Branch: master', 'New pull request', 'New file', 'Find file', 'HTTPS' with a URL, and 'Download ZIP'. A commit history section shows a single commit by 'afhaque' titled 'Initial commit' from 4 minutes ago. Below the commit, a file named 'README.md' is listed. The bottom section features the repository name 'DemoRepository' in a large font, followed by the same description text.

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 2d436aa 4 minutes ago

README.md Initial commit 4 minutes ago

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:

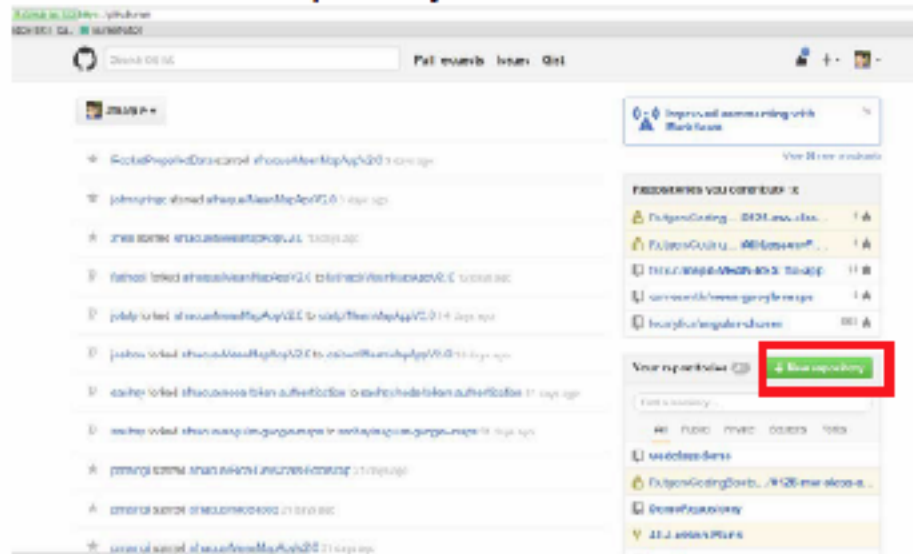
- Find a partner in class, and **fork their** repository to your own GitHub account. Clone this forked repository to your local directory.
- Add, Commit, and Push the code back to your forked copy.
- Finally, submit a **pull request** to send your changes to your partner’s repo.

Still a Bit Lost? Never Worry!

Steps to Uploading Your Code to GitHub

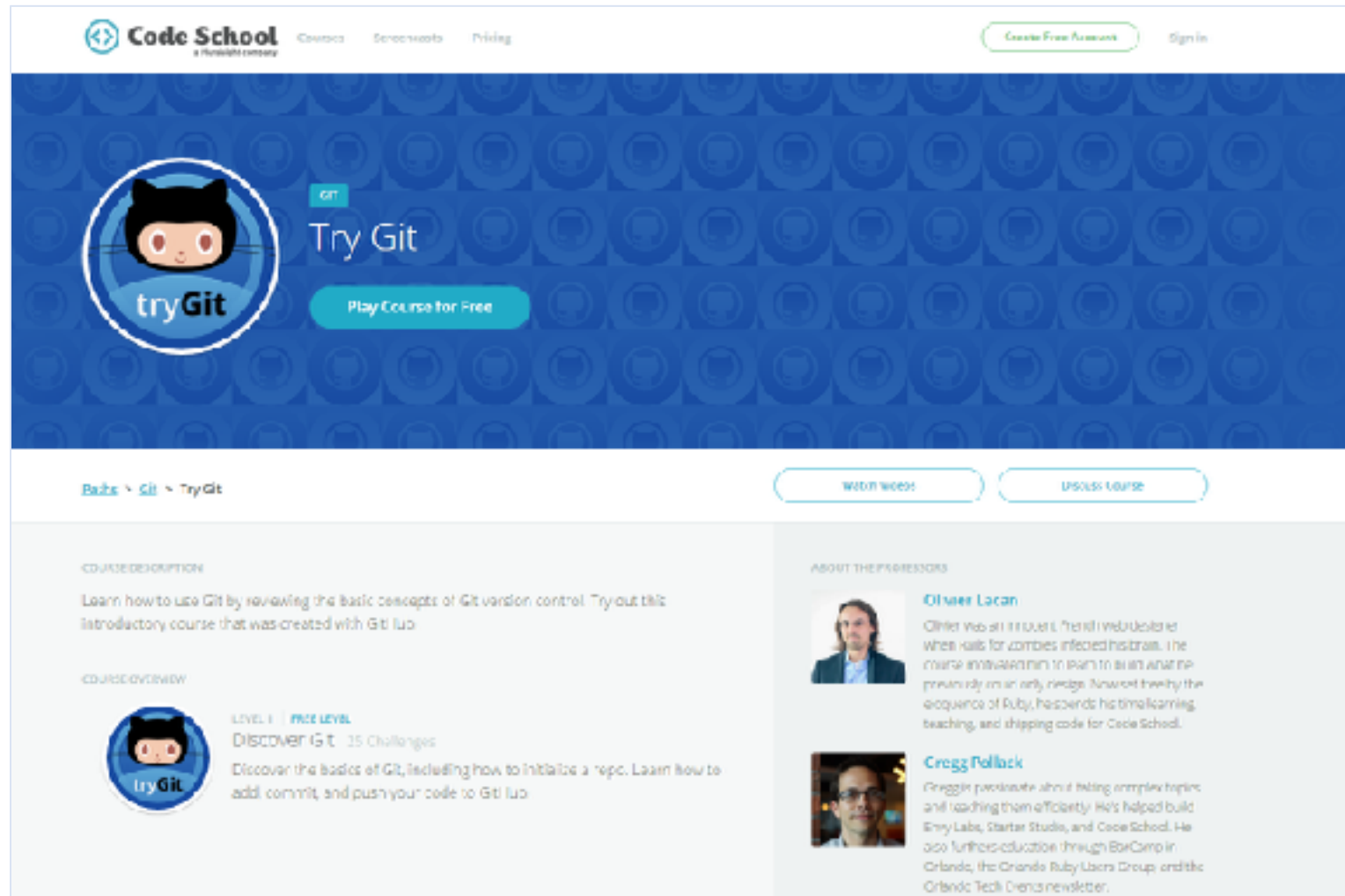
Step 1

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. The header includes the Code School logo, navigation links for Courses, Screenshots, and Pricing, and buttons for 'Create Free Account' and 'Sign In'. The main banner features the GitHub logo with 'tryGit' text and a 'Try Git' button, with a 'Play Course for Free' button below it. The breadcrumb trail reads 'Bazis > Git > TryGit'. Two tabs, 'WITH WEBS' and 'UNLESS COURSE', are visible. The 'COURSE DESCRIPTION' section states: 'Learn how to use Git by reviewing the basic concepts of Git version control. Tryout this introductory course that was created with Git Lupa.' The 'COURSE OVERVIEW' section shows a 'tryGit' icon, 'LEVEL 1 | FREE LEVEL', and 'DISCOVER Git 15 Challenges'. It describes the course as a discovery of Git basics, including how to initialize a repo, learn how to add, commit, and push your code to Git Lupa. The 'ABOUT THE PROFESSORS' section lists two instructors: Oliver Loran, who has an interest in zombies and helped build the course, and Cregg Pollack, who has experience with Ruby and helped build the course.

Code School
a modern way to learn

Courses Screenshots Pricing

Create Free Account Sign In

tryGit
on
Try Git
Play Course for Free

Bazis > Git > TryGit

WITH WEBS UNLESS COURSE

COURSE DESCRIPTION

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

COURSE OVERVIEW

tryGit

LEVEL 1 | FREE LEVEL
DISCOVER Git 15 Challenges

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

ABOUT THE PROFESSORS

Oliver Loran

Oliver has an interest in zombies and helped build the course introduction in part to learn what he previously learned in his previous work. He's also the co-creator of Ruby, he spends his time learning, teaching, and shipping code for Code School.

Cregg Pollack

Cregg specializes in helping complex topics and teaching them efficiently. He's helped build Emy Labs, Starter Studio, and Code School. He also further education through BarCamp in Orlando, the Orlando Ruby Users Group, and the Orlando Tech Docs 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