

# ***Git'n Pro with HTML/CSS***

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**The Coding Bootcamp**

# It's Okay!

How do I do this  
again?



Flickr: welcometolearn

# ***Admin Items***

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# Where to Get Help

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- **Practice, Practice, Practice:** Work Individually or in Groups
- **Review In Class Material (Exercises and Slides):**  
<https://upenn.bootcampcontent.com/upenn-bootcamp/UPENN201901FSF5>
- **Re-Watch Class Videos:**  
<https://www.bootcampspot.com/login>
- **In Class Office Hours:** 45 minutes before class, 30 minutes after
- **One-on-One Sessions:** By Announcement through SSM
- **Contact Student Success:** Anytime!

# Homework #1 - Assignment

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- **Also, at this point everyone should have access to the class content and homework repository.**

<https://upenn.bootcampcontent.com/upenn-bootcamp/UPENN201901FSF5>

- **Homework Assignment #1 is due next week, 2/9**

# ***Today's Class!***

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# Today's Objectives

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- Students will understand the importance of Git Version Control and of how to use it.
- Students will create GitHub Repositories, push code into them, and share with class.
- Students will make more HTML documents.
- Students will learn to properly use basic HTML tags.
- Students will implement basic CSS styling to HTML documents.

# Know Thyself

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## **If you are a *complete* beginner to HTML/CSS and Coding:**

- Continue getting comfortable with HTML.
- Be able to completely write a basic HTML document (like in last class).
- Understand what CSS is, what it's for, and how it works with HTML.
- *Be able to use Git and GitHub to upload code.*

## **If you've had past exposure and felt comfortable with the last lesson:**

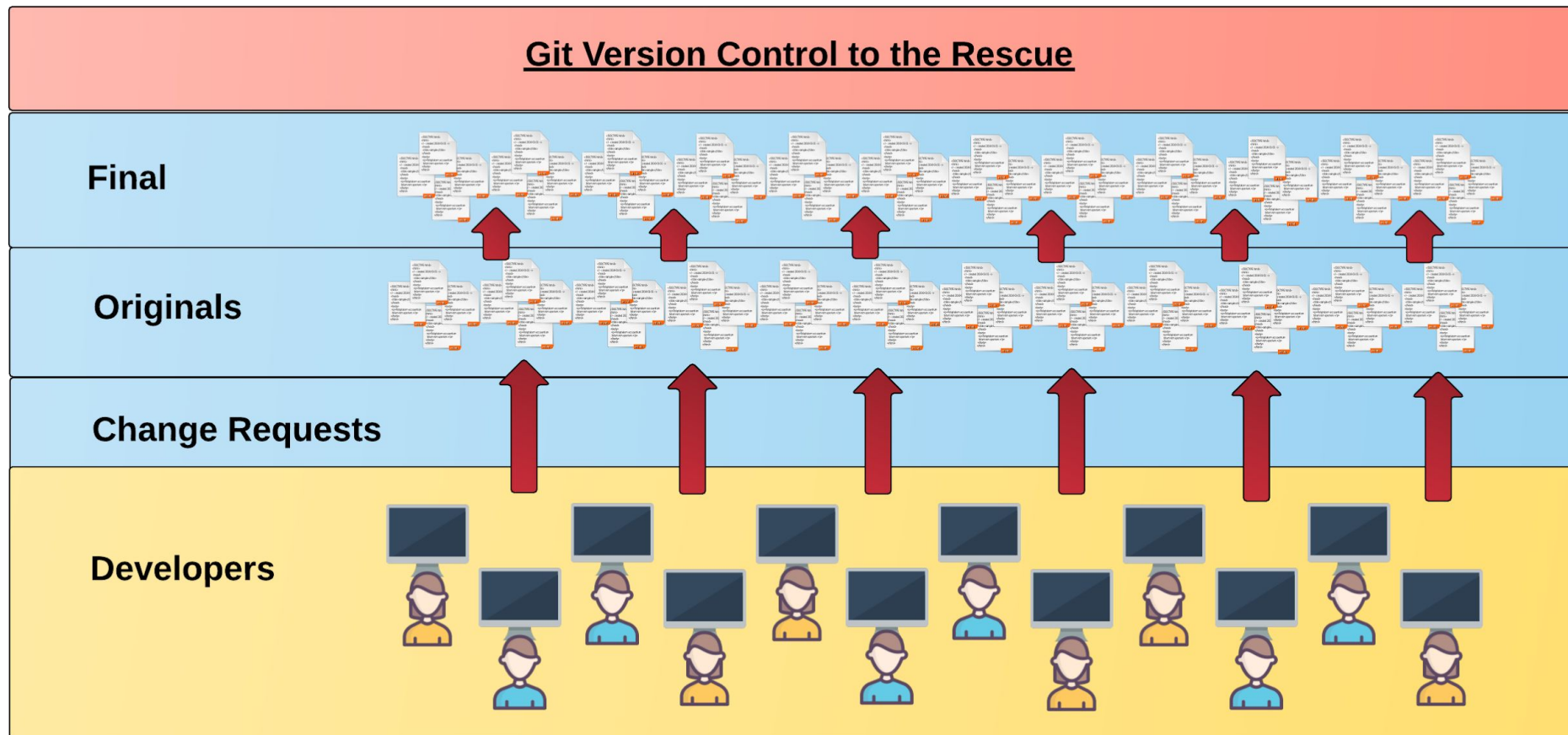
- Aim to build up your skills. Clear up any questions or confusions about HTML.
- Become knowledgeable about a wider range of HTML and CSS tags.
- Be able to selectively apply CSS to specific HTML elements.
- *Be able to use Git and GitHub to upload code.*



# ***What / Why Git?***

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# 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

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

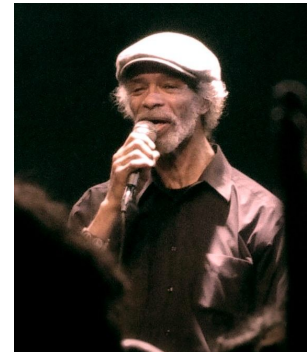
Programming Team:



Maya Angelou



Anne Sexton



Gil Scott Heron

# Maya & Gil make their edits

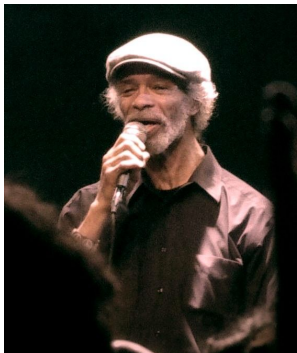
Programming Away...



**Maya's Version**



Programming Away...



**Gil's Version**



# Different Solutions

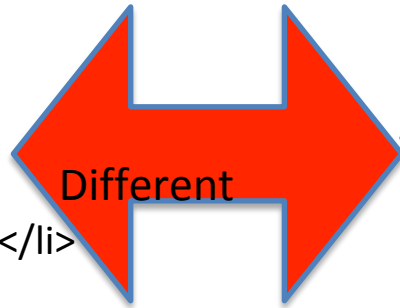
<ul>

<li>On the Pulse of Morning</li>

<li>I Know Why the Caged Bird Sings</li>

<li>And Still I Rise</li>

</ul>



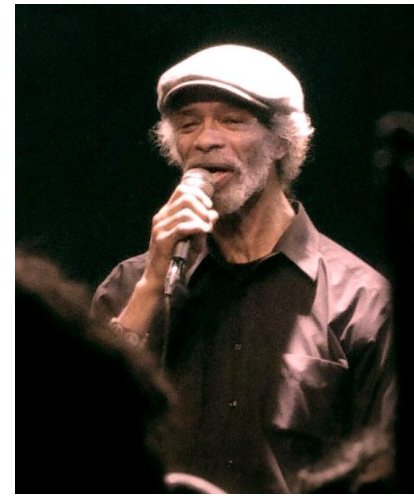
<ul>

<li>Free Will</li>

<li>Pieces of a Man</li>

<li>The Revolution will not be Televised</li>

</ul>



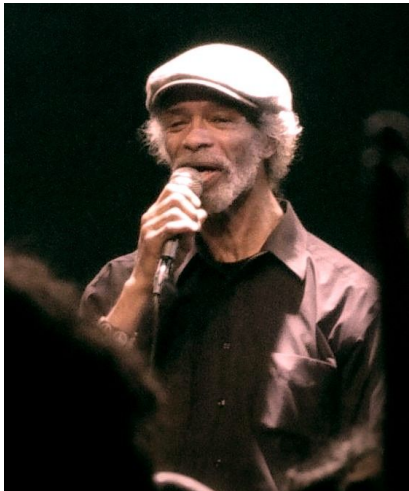
# Resolution



```
<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...

---



<ul>

<li>The Double Image</li>

<li>Heart's Needle</li>

<li>Baby Picture</li>

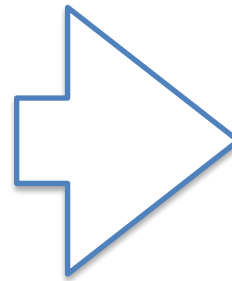
</ul>

# Anne overwrites work of her teammates...



**Delete. Delete.  
Delete. Delete.  
Delete. Delete**

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



<ul>  
<li>The Double Image</li>  
<li>45 Mercy Street</li>  
<li>The Road Back</li>  
</ul>



# The Group Project



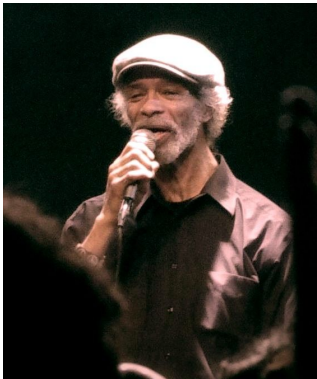
## Lesson: You should use Version Control.

....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

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## **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.

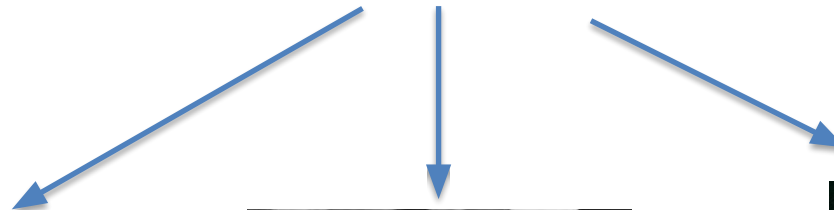
# The Group Project

Master Branch



*'Branch' = personal copy*

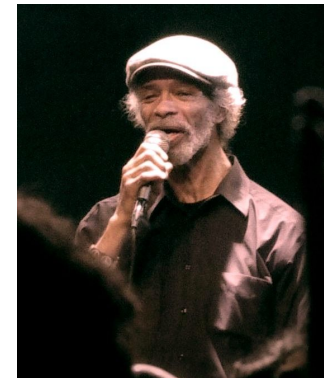
Personal branch



Maya's branch



Anne's branch

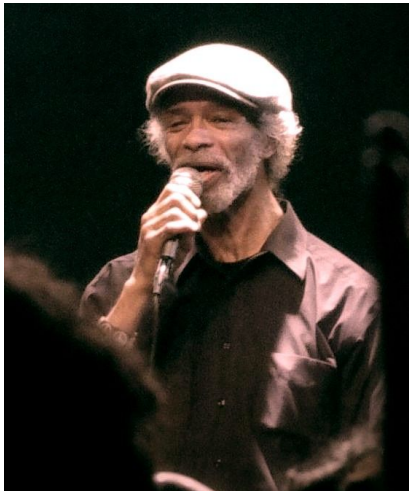


Gil's branch

# The team goes to work



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



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

# Maya pushes first

## Master Copy



1

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

**No code conflicts.**



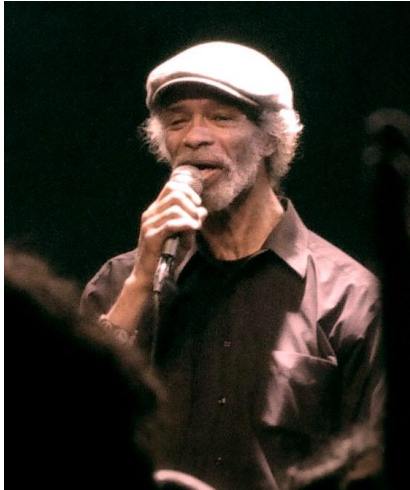
## Maya's Branch



## Gil's edits are ready

---

Rule: pull first, then push your changes



Ok

# Gil pulls latest changes

---

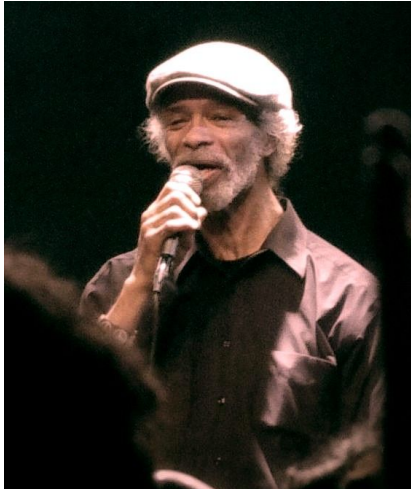
Master Copy



1



Gil's Branch

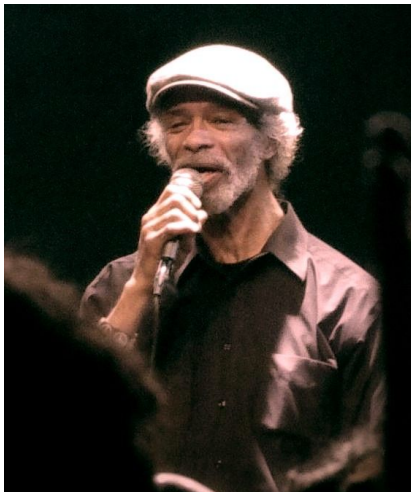


# Gil conflicts with master branch

## Master Branch



1



<li>On the Pulse of Morning</li>  
<li>I Know Why the Caged Bird Sings</li>  
<li>And Still I Rise</li>  
<li>Free Will</li>  
<li>Pieces of a Man</li>  
<li>The Revolution will not be Televised</li>

Git sees a conflict.



# Gil 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

<ul>

<li>The Double Image</li>

<li>Heart's Needle</li>

<li>Baby Picture</li>

</ul>

# If Anne had made a pull first...

---

## Conflict!

<ul>

<li>The Double Image</li>

<li>Heart's Needle</li>

<li>Baby Picture</li>

</ul>

<ul>

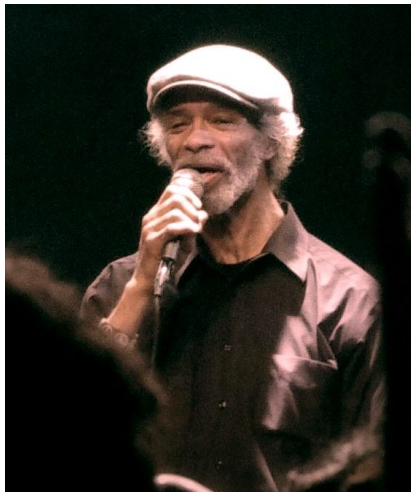
<li>Poems</li>

<li>Albums</li>

<li>Songs</li>

</ul>

# The overwritten work is discovered



Git interface showing workspace, branches, and commit history.

**Workspace:** File status, History, Search, avgrund\_replace\_query-ui, file\_reorg, master (1↑ 1↓), TAGS, REMOTES (origin), STASHES (WIP on master: 8cedcac...), SUBMODULES, SUBTREES.

**Graph:** Uncommitted changes, origin/master, origin/HEAD, master (1 ahead 1 behind), Conflict experiment: restore rogue..., Conflict experiment: undo rogue changes.

**Commit History:**

Commit	Author	Date
6bc1e3a	Greg Sandell <gre...>	Today, 2:56 PM
11f99e0	Greg Sandell <gre...>	Today, 2:55 PM
26eb29d	Greg Sandell <gre...>	Today, 2:53 PM

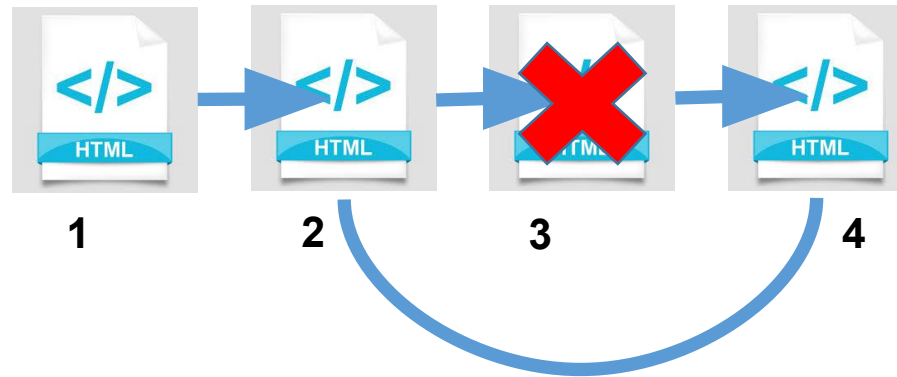
**test.html**

```
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>
```

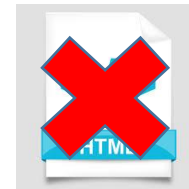
# Roll Back



## 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.

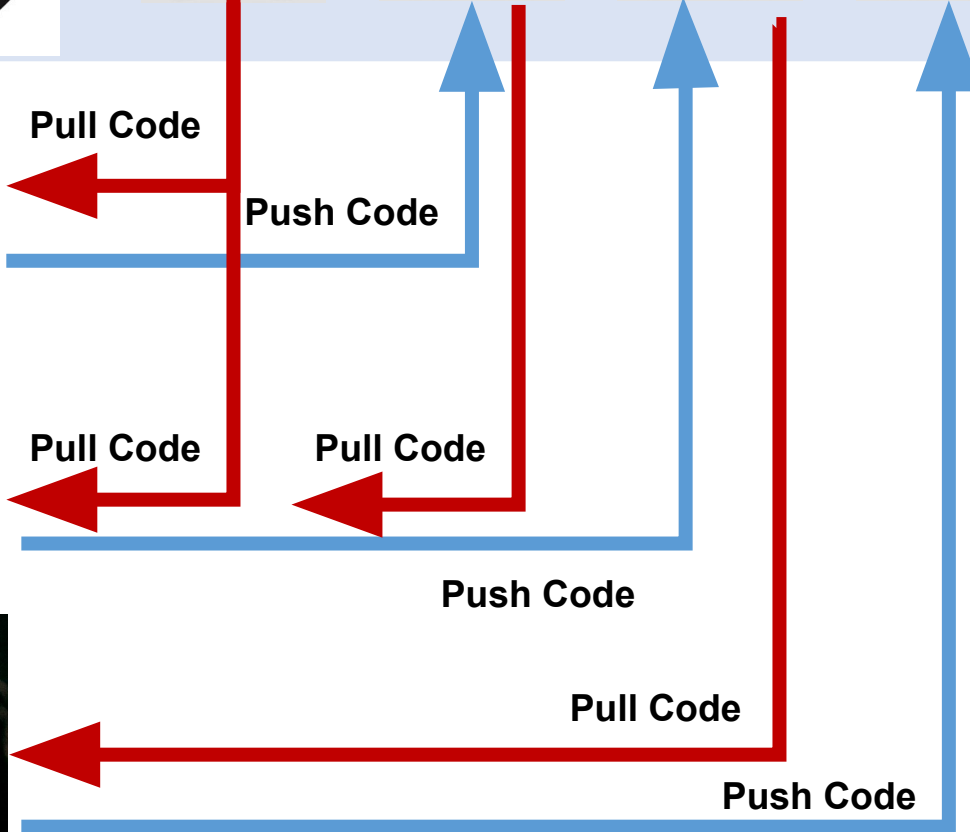
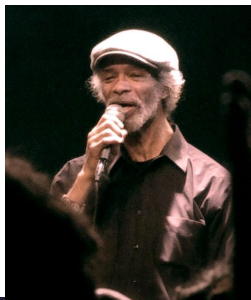
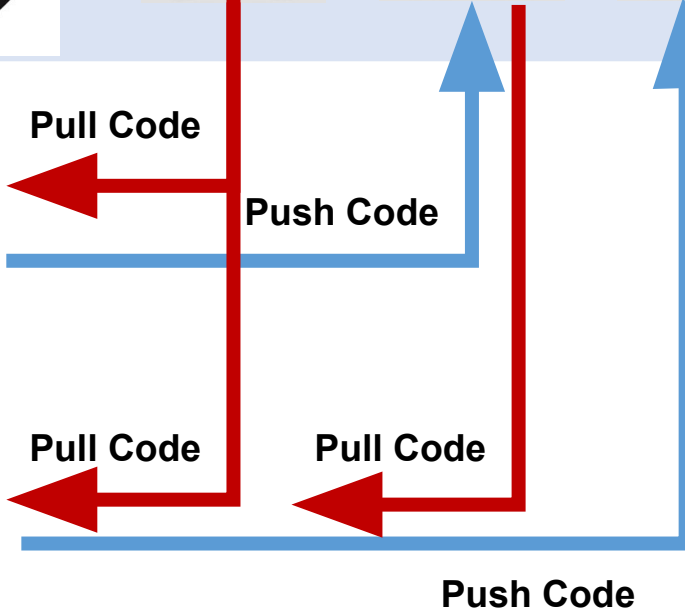
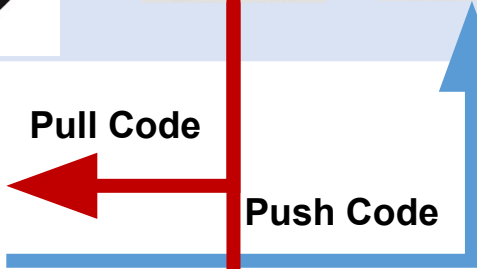
# So... What's this GitHub?

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- 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






# ***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.

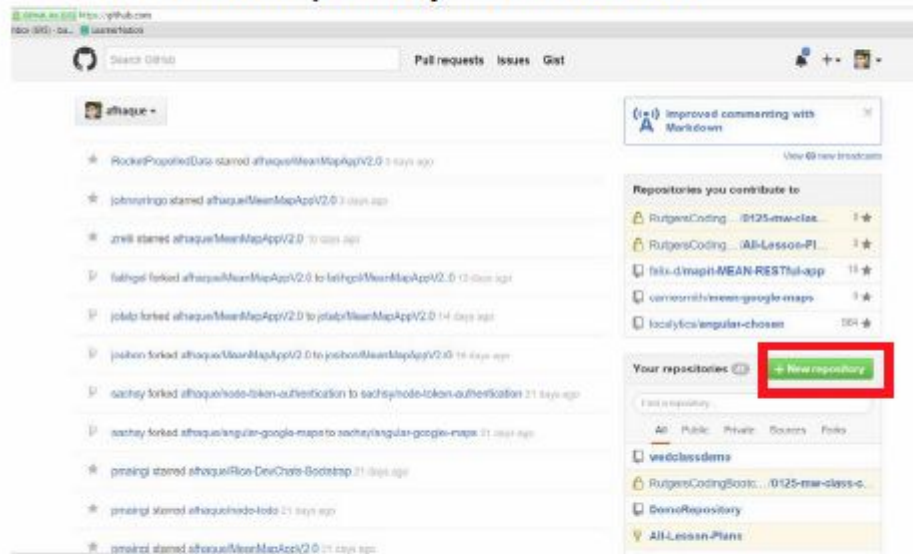


# Still a Bit Lost? Never Worry!

## 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

 **Code School**  
a Pluralsight company

CoursesScreencastsPricing

Create Free AccountSign in



tryGit

GIT

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.

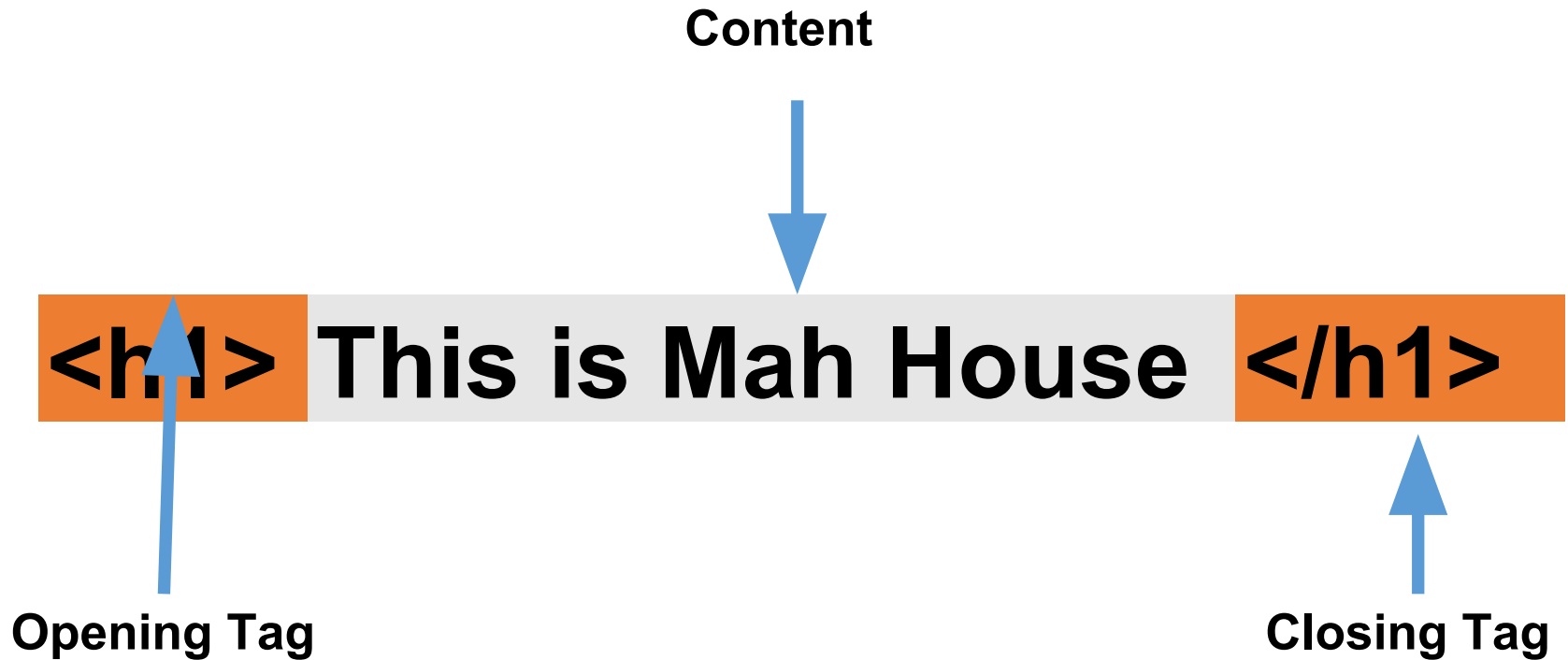
<https://www.codeschool.com/courses/try-git>

# ***HTML Round 2***

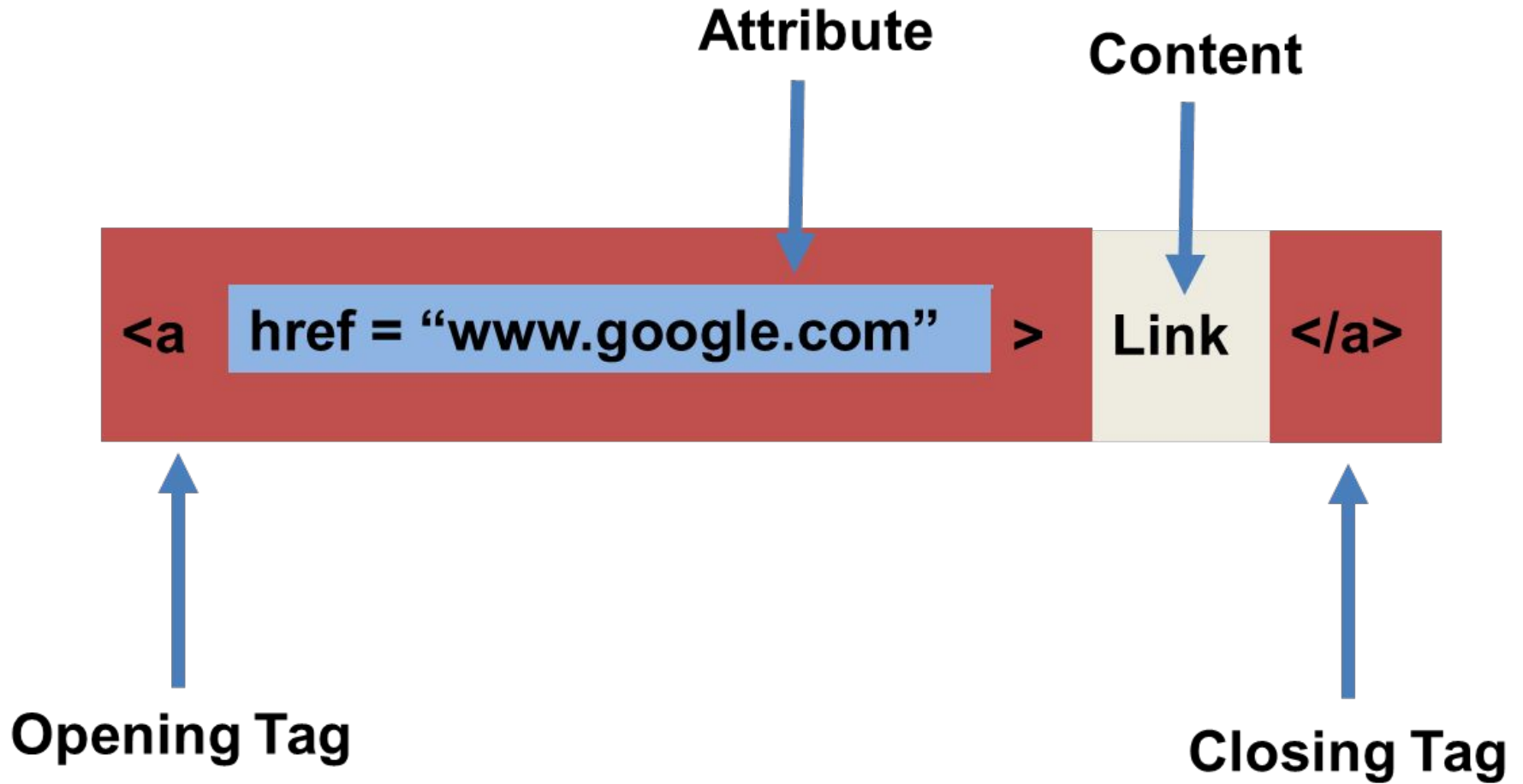
---

# HTML Syntax (Basic)

---

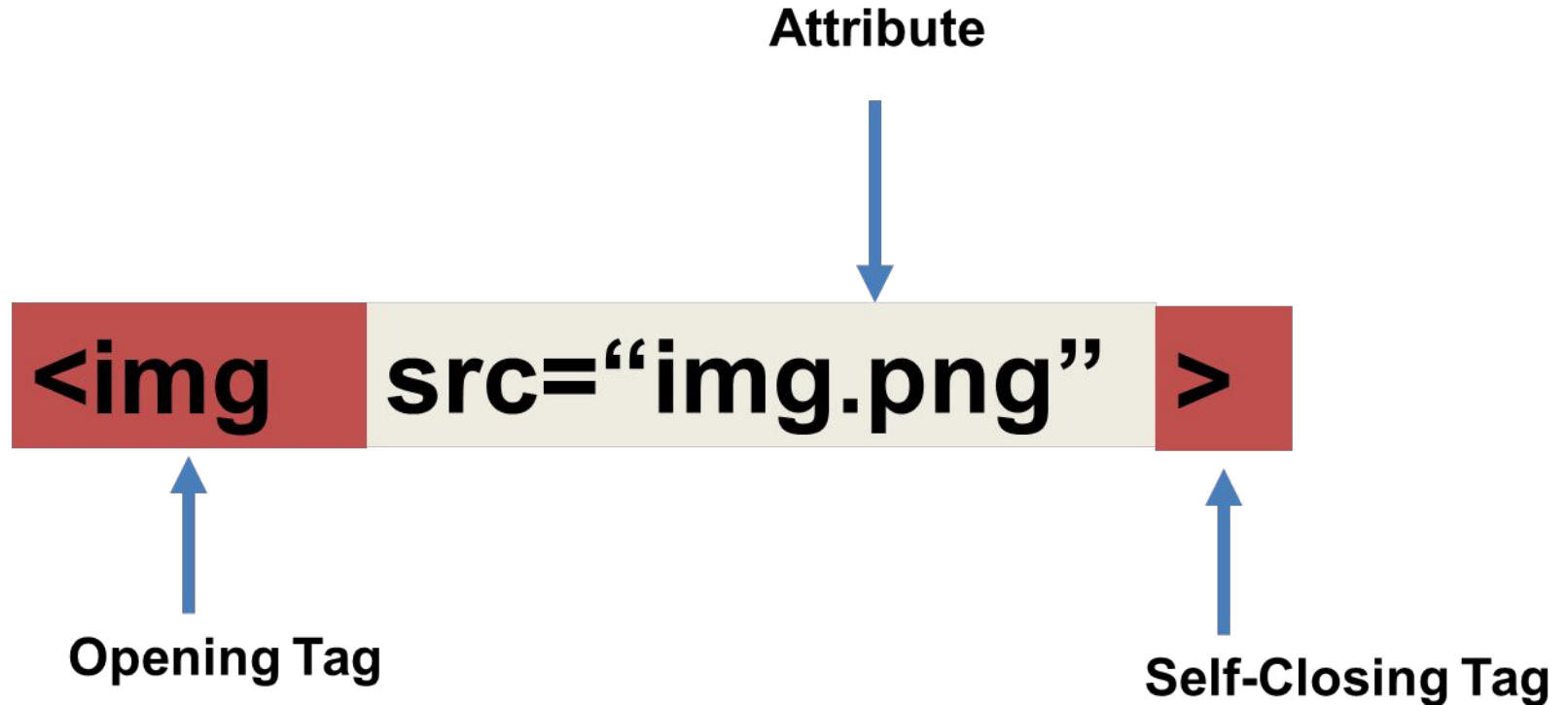


# HTML Syntax (with Attribute)



# Tricky Tags (Self-Closing)

---



# Important Common Tags

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## Headings:

- `<h1> </h1>` - Heading 1 (Largest Heading)
- `<h2> </h2>` - Heading 2 (Next Largest Heading)
- `<h3> </h3>` - Heading 3
- ...

## Containers:

- `<html> </html>` - Wraps the entire page
- `<head> </head>` - Wraps the header of the page
- `<body> </body>` - Wraps the main content
- `<div> </div>` - Logical Container \*\*\*
- `<p> </p>` - Wraps individual Paragraphs

## Others:

- `<strong>` (bold), `<em>` (emphasis)
- `<img>` (images), `<a href>` (links), `<li>` (list items), `<title>` (title), `<br>` (line break), `<table>` (tables), `<!-- -->` (comments)

# Less Common Tags

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- All HTML Tags are listed here: <http://www.w3schools.com/tags/>
- Don't try to memorize them! Simply refer back to documentation as needed.
- Other tags:
  - <video> for Videos
  - <audio> for Audio files
  - <embed> for Embedded files
  - <code> for including computer code
  - <header> for headers
  - <nav> for navigation bars
  - <footer> for footers



# HTML for Forms

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## Common UI (User Interface) Form Elements:

- **<form>** - Creates a form section in HTML
- **<input>** - Input boxes
- **<label>** - Labels for boxes
- **<button>** - Button
- **<textarea>** - Large textbox

# HTML for Forms

```
<!DOCTYPE html>
<html>
<body>

<form>
  First name:<br>
  <input type="text" name="firstname">
  <br>
  Last name:<br>
  <input type="text" name="lastname">
</form>

<p>Note that the form itself is not visible.</p>

<p>Also note that the default width of a text input field is 20 characters.</p>

</body>
</html>
```

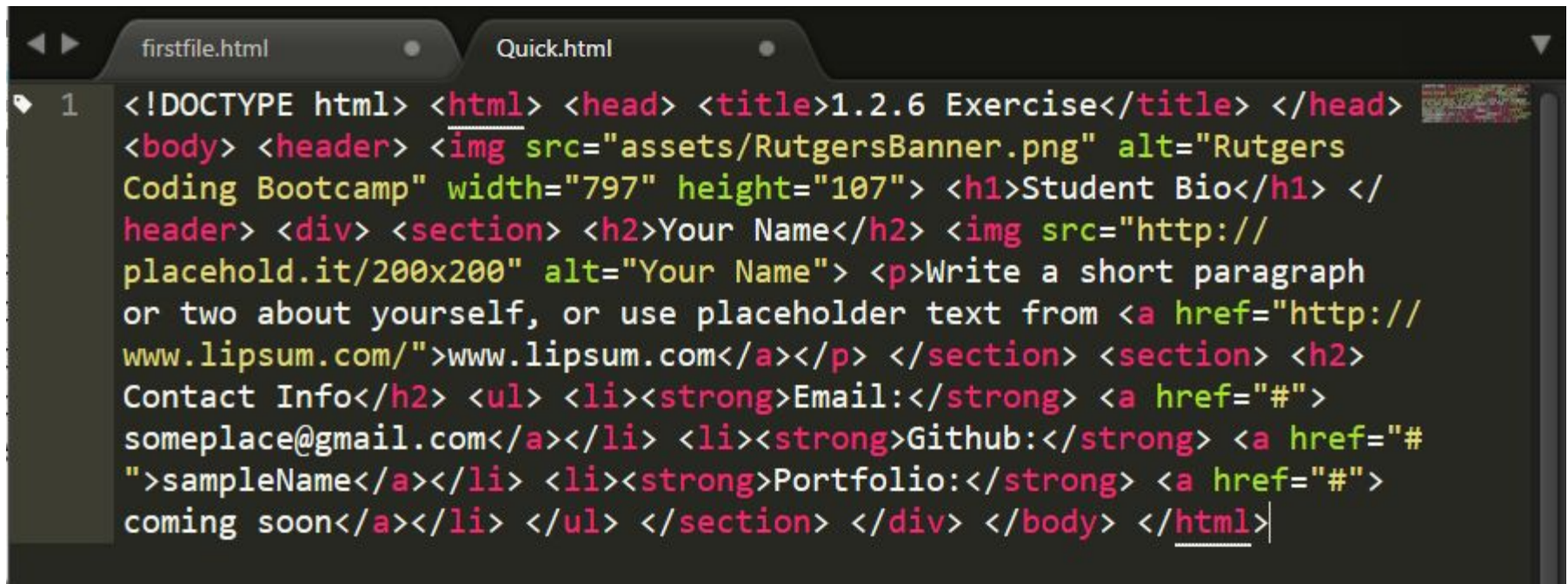
First name:

Last name:

Note that the form itself is not visible.

Also note that the default width of a text input field is 20 characters.

# On Ugly HTML

A screenshot of a code editor with two tabs: 'firstfile.html' and 'Quick.html'. The 'Quick.html' tab is active, showing HTML code with poor indentation and formatting. The code is as follows:

```
<!DOCTYPE html> <html> <head> <title>1.2.6 Exercise</title> </head>
<body> <header>  <h1>Student Bio</h1> </
header> <div> <section> <h2>Your Name</h2>  <p>Write a short paragraph
or two about yourself, or use placeholder text from <a href="http://
www.lipsum.com/">www.lipsum.com</a></p> </section> <section> <h2>
Contact Info</h2> <ul> <li><strong>Email:</strong> <a href="#">
someplace@gmail.com</a></li> <li><strong>Github:</strong> <a href="#"
">sampleName</a></li> <li><strong>Portfolio:</strong> <a href="#">
coming soon</a></li> </ul> </section> </div> </body> </html>
```

- Don't do this... Use proper indentation and sectioning.
- Readable code is easier to maintain.
- Invest time to get better about this now. It will pay dividends!

### Assignment

In this activity, you'll create a student bio using HTML. You will then add, commit, and push your completed HTML to GitHub for the world to see.

Additional instructions, sent via Slack.

# > YOUR TURN!

## Student Bio

Your Name



Write a short paragraph or two about yourself, or use placeholder text from [www.lipsum.com](http://www.lipsum.com)

## Contact Info

- Email: [someplace@gmail.com](mailto:someplace@gmail.com)
- Github: [sampleName](#)
- Portfolio: [coming soon](#)

***CSS Stylin'***

---

# HTML / CSS Definitions (\*yawn\* unimportant)

- **HTML:** Hypertext Markup Language – (Content)
- **CSS:** Cascading Style Sheets – (Appearance)
- **HTML/CSS are the “languages of the web.”** Together they define both the content and the aesthetics of a webpage – handling everything from the layouts, colors, fonts and content placement. (JavaScript is the third – handling logic, animation, etc.)



# HTML / CSS Analogy

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## HTML Alone

- Like writing papers in “Notepad.”
- Can only write unformatted text.



## HTML / CSS

- Like writing papers in Microsoft Word.
- Can format text, page settings, alignment, etc. based on “highlighting” and menu options.





# Basic HTML Page

```
<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="UTF-8">
  <title>My First Website!</title>
</head>

<body>

  <h1>Awesome Header</h1>
  <h2>Smaller Awesome Header</h2>
  <h3>Even Smaller Header</h3>

  <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor
    incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud
    exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.</p>
  

  <h3>Menu Links</h3>
  <ul>
    <li><a href="http://www.google.com">Google</a></li>
    <li><a href="http://www.facebook.com">Facebook</a></li>
    <li><a href="http://www.twitter.com">Twitter</a></li>
  </ul>

</body>
</html>
```

# Basic HTML Page - Result

## Awesome Header

### Smaller Awesome Header

#### Even Smaller Header

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Quidem consequatur unde aut dolores odio hic, accusamus recusandae ipsam illum enim voluptatibus obcaecati totam tempora eum quod sapiente. Corporis, quidem, culpa?



#### Menu Links

- [Google](#)
- [Facebook](#)
- [Twitter](#)

# Basic HTML Page - Result

## Awesome Header

### Smaller Awesome Header

#### Even Smaller Header

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Quidem consequatur unde aut dolores odio hic, accusamus recusandae ipsam illum enim voluptatibus obcaecati totam tempora eum quod sapiente. Corporis, quidem, culpa?



#### Menu Links

- [Google](#)
- [Facebook](#)
- [Twitter](#)

# Hella Boring...

# Enter CSS

```
26 <style>
27   h1 {
28     font-size: 60px;
29     text-align: center;
30     margin-bottom: 15px;
31     text-decoration: underline;
32     background-color: black;
33     color: white;
34   }
35
36   h2 {
37     font-size: 40px;
38     text-align: center;
39     margin-top: 15px;
40     margin-bottom: 15px;
41   }
42
43   h3 {
44     font-size: 20px;
45     text-align: center;
46     margin-top: 15px;
47   }
48
```

```
49   img {
50     display: block;
51     margin-left: auto;
52     margin-right: auto;
53   }
54
55   p {
56     text-align: center;
57     font-size: 20px;
58     font-weight: bold;
59   }
60
61   ul {
62     text-align: center;
63     font-size: 35px;
64     list-style-position: inside;
65     border-style: solid;
66     border-width: 5px;
67   }
68 </style>
```

## Awesome Header

### Smaller Awesome Header

#### Even Smaller Header

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Quidem consequatur unde aut dolores odio hic, accusamus recusandae ipsam illum enim voluptatibus obcaecati totam tempora eum quod sapiente. Corporis, quidem, culpa?

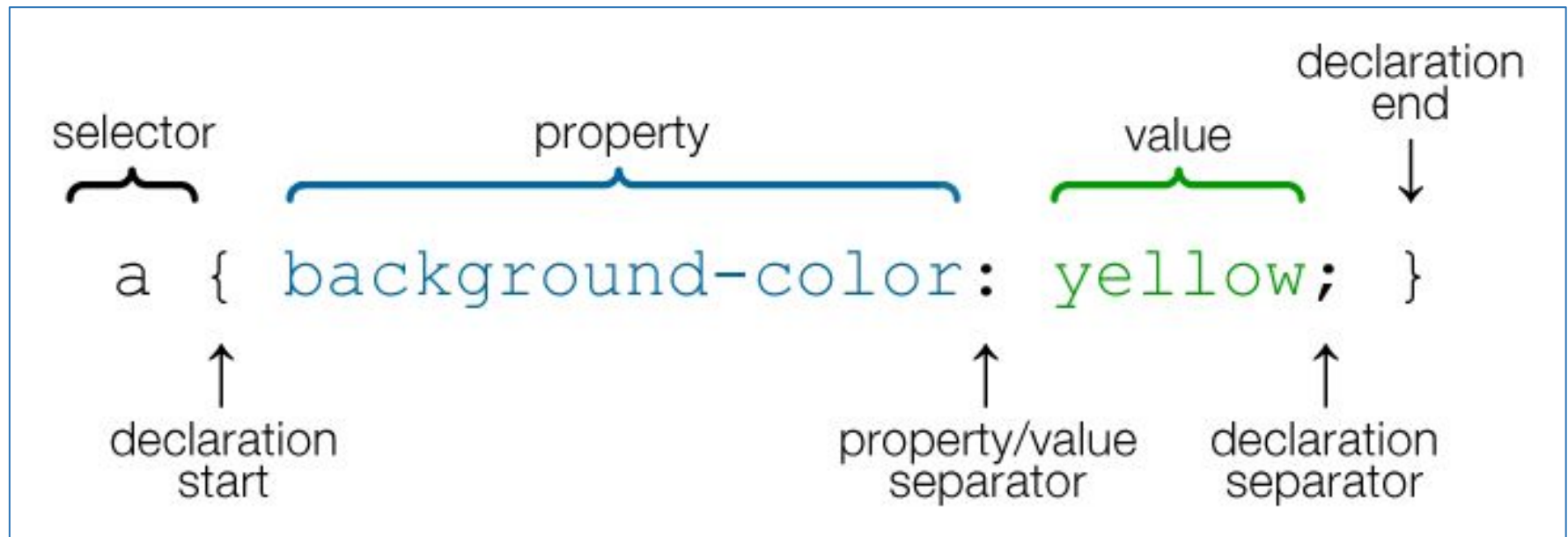


#### Menu Links

- Google
- Facebook
- Twitter

# CSS Syntax

- CSS works by hooking onto **selectors** added into HTML using **classes** and **identifiers**.
- Once hooked, we apply **styles** to those HTML elements using CSS.



# CSS Example

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- In the below example the “Header” would be turned blue and MUCH larger because of the CSS.
- We can incorporate an element’s class or ID to apply a CSS style to a particular part of the document.
  - Just remember to include the necessary symbol before the CSS: “.” for class, “#” for ID.

## Example (HTML):

```
<p class="bigBlue">Header</p>
```

## Example (CSS):

```
.bigBlue  
{  
  font-size: 100px;  
  color: blue;  
}
```



# Key CSS Attributes

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## Font / Color:

- **color:** Sets color of text.
- **font-size:** Sets size of the font.
- **font-style:** Sets italics.
- **font-weight:** Sets bold.

## Alignment / Spacing:

- **padding (top/right/bottom/left):** Adds space between element and its own border.
- **margin (top/right/bottom/left):** Adds space between element and surrounding elements.
- **float:** Forces elements to the sides, centers, or tops.

## Background:

- **background-color:** sets background color.
- **background-image:** sets background image.



# Powerful Duo

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Believe it or not, HTML / CSS is all you need to develop a vivid, full-blown website.

## ***Instructor: Demo***

*(quickexample\_internalcss.html | 2-BasicCSS)*

## > YOUR TURN!

Activity: 3-HTML\_CSS\_Layout | Suggested Time: 20 min

---

### Assignment

In this activity, you'll upgrade your previous HTML bio-page using CSS style rules. Once you're done, commit and push up your changes to GitHub.

We'll send you additional instructions via Slack.

# > YOUR TURN!

## Student Bio

### Your Name

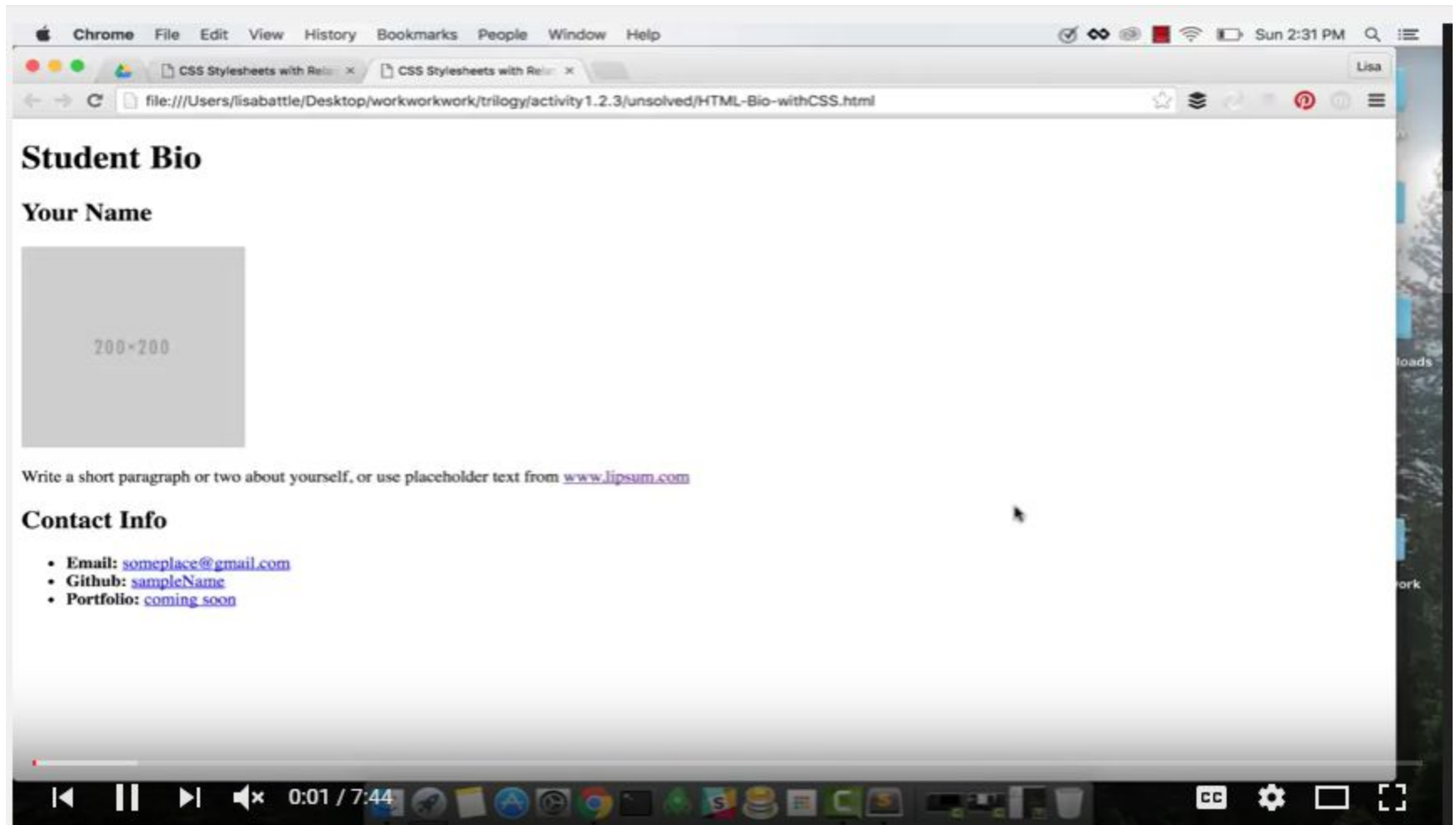


Write a short paragraph or two about yourself, or use placeholder text from [www.lipsum.com](http://www.lipsum.com)

### Contact Info

- Email: [someplace@gmail.com](mailto:someplace@gmail.com)
- Github: [sampleName](#)
- Portfolio: [coming soon](#)

# Video Walkthrough!!

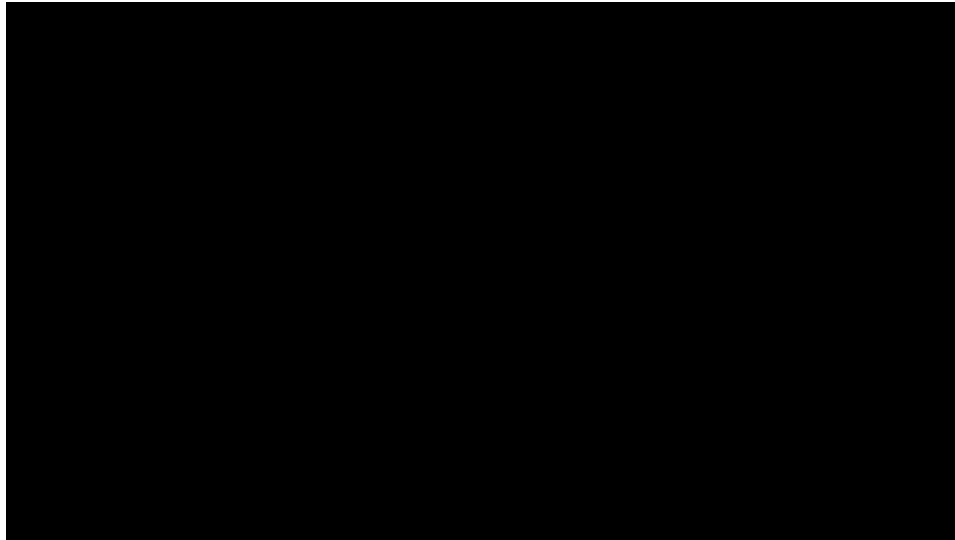


<https://www.youtube.com/watch?v=kMBinXTCrXI&list=PLgJ8UgkiorCnMLsUevoQRxH8t9bt7ne14&index=2>

# Still a Bit Confused?

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Remember! We've got video guides for key activities like that last one.



If you feel like you are EVER falling behind, use those online walkthroughs to help catch back up. They are made to be easy to understand.

Still having trouble? Shoot your instructor or one of your TAs a message!  
We are here to help you out in whatever way we can!

# ***Recap + Questions***

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