

GitHub

Essentials of Web Design
CSCI 1210

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Code Repositories

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Code Repositories

In revision control systems, a **repository** is a data structure which stores a set of files and directories structure

The whole set of information in the repository may be duplicated on every user's system (or may be maintained on a single server)

Since a project can involve a lot of people, often in different locations, repositories (repos) provide a way to work asynchronously (at different times) on the various parts of the project

Helps prevent one team member's changes from overwriting another's and/or breaking the working copy

Code Repositories

Some of the metadata that a repository contains includes, among other things:

- A historical record of changes in the repository
- A set of commit objects
- A set of references to commit objects, called *heads*

Code Repositories

Repos can be architected in several ways

Probably the most popular is a central repository, from which team members can download the entire code base to their local machine, work on it, and upload their changes

Any conflicts that occur (and conflicts DO occur!) can more easily be resolved by comparing changes – or concurrent changes – to earlier versions of the code

Code Repositories

Versioning is the KEY

Projects are usually developed incrementally

- Create a basic working version

- Add to repo

- Develop features and updates

- Add, test

Code Repositories

Versioning is the KEY

If a change breaks something, versioning allows developers to 'roll back' to the last working version

Then

Figure out what went wrong

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Code Repositories

We will be using GitHub for our semester projects

There are several steps (following) that have to be completed

The responsibility for creating and maintaining the repo is the Team Leader's

Each team member will create a (free) GitHub account, if you don't already have one

The Team Lead will create the repo and ensure that all team members can contribute

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GitHub

Create a (free) GitHub Account

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Sign up for an account

<https://github.com/>



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Sign up for an account

Join GitHub

Create your account

Username *

csci1210-webStars ✓

Email address *

ramseyjw@etsu.edu ✓

Password *

Make sure it's at least 15 characters OR at least 8 characters including a number and a lowercase letter.
[Learn more.](#)

Email preferences

☐ Send me occasional product updates, announcements, and offers.

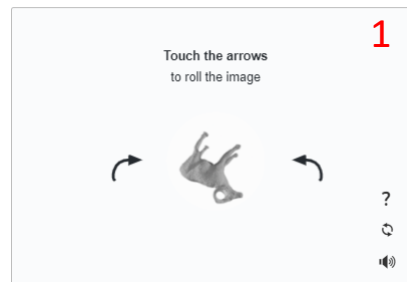
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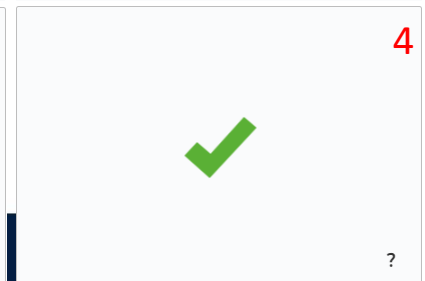
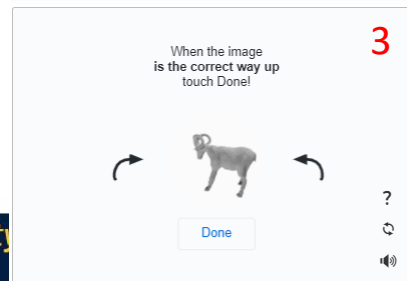
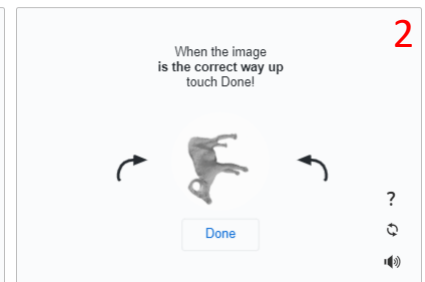
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Sign up for an account

Verify your account



Verify your account



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Sign up for an account

Almost done, **@csci1210-webStars!** To complete your GitHub sign up, we just need to verify your email address: **ramseyjw@etsu.edu.**

Verify email address



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Sign up for an account

Choose a plan

Individual Pick the plan that's right for you, personally.	Team Choose a plan to help your team grow and collaborate.
 Free \$0 USD	 Pro \$7 USD Per month
The basics of GitHub for every developer	Pro tools for developers with advanced requirements
Choose Free	Choose Pro

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Sign up for an account

Welcome to GitHub

Woohoo! You've joined millions of developers who are doing their best work on GitHub. Tell us what you're interested in. We'll help you get there.




How much programming experience do you have?

<p>None</p> <p>I don't program at all</p>	<p>A little</p> <p>I'm new to programming</p>
<p>A moderate amount</p> <p>I'm somewhat experienced</p>	<p>A lot</p> <p>I'm very experienced</p>

WHATEVER

What do you plan to use GitHub for?

(Select up to 3)

 <p>Learn to code</p>	 <p>Learn Git and GitHub</p>	 <p>Host a project (repository)</p>
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Sign up for an account



Please verify your email address

Before you can contribute on GitHub, we need you to verify your email address.
An email containing verification instructions was sent to ramseyjw@etsu.edu.

Didn't get the email? [Resend verification email](#) or [change your email settings](#).

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Sign up for an account

Team Leads will create the repository

Other team members, see below

Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere? [Import a repository.](#)

USE YOUR TEAM NAME FOR THE REPO NAME

Owner: csci1210-webStars

Repository name: webStars ✓

Great repository names are short and memorable. Need inspiration? How about `crispy-telegram`?

Description (optional): Semester project for CSCI 1210

☒ **Public**
Anyone can see this repository. You choose who can commit.

☐ **Private**
You choose who can see and commit to this repository.

Skip this step if you're importing an existing repository.

☒ **Initialize this repository with a README**
This will let you immediately clone the repository to your computer.

Add .gitignore: None Add a license: None ⓘ

Create repository

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Sign up for an account

jack-ramsey / codeMonsters

Unwatch 1 Star 0 Fork 0

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

No description, website, or topics provided.
[Manage topics](#)

1 commit 1 branch

Branch: master New pull request

0 releases 1 contributor

Create new file Upload files Find file Clone or download

GitHub Actions

Create workflows to automatically build, test and deploy your code, triage your issues, publish packages, and more.

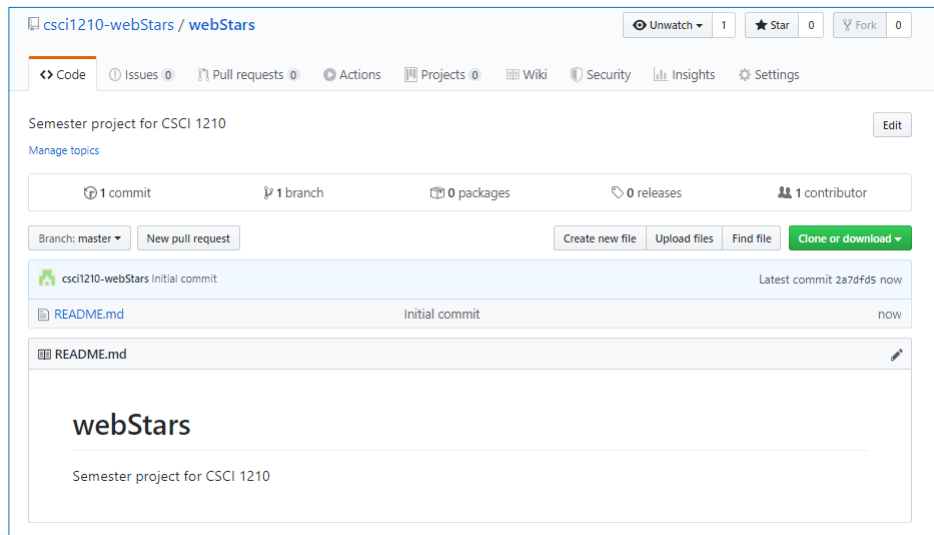
[Set up Actions](#) [Dismiss](#)

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GH Landing Page



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GitHub

GitHub can be complex, but there is a desktop application that makes things pretty easy

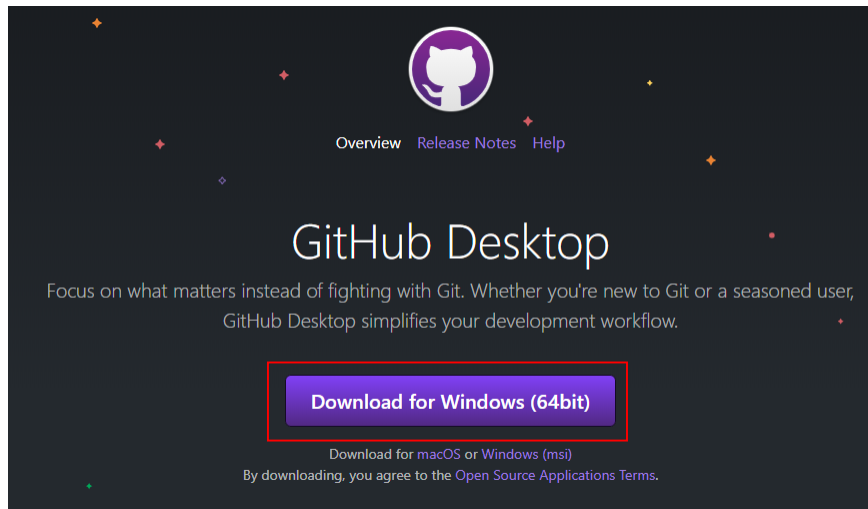
[GitHub Desktop](https://desktop.github.com/)
<https://desktop.github.com/>

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<https://desktop.github.com/>



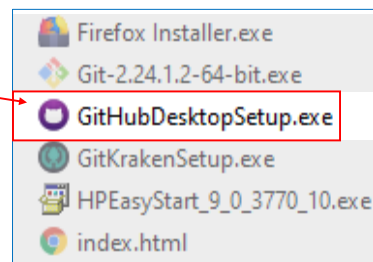
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FILE EXPLORER

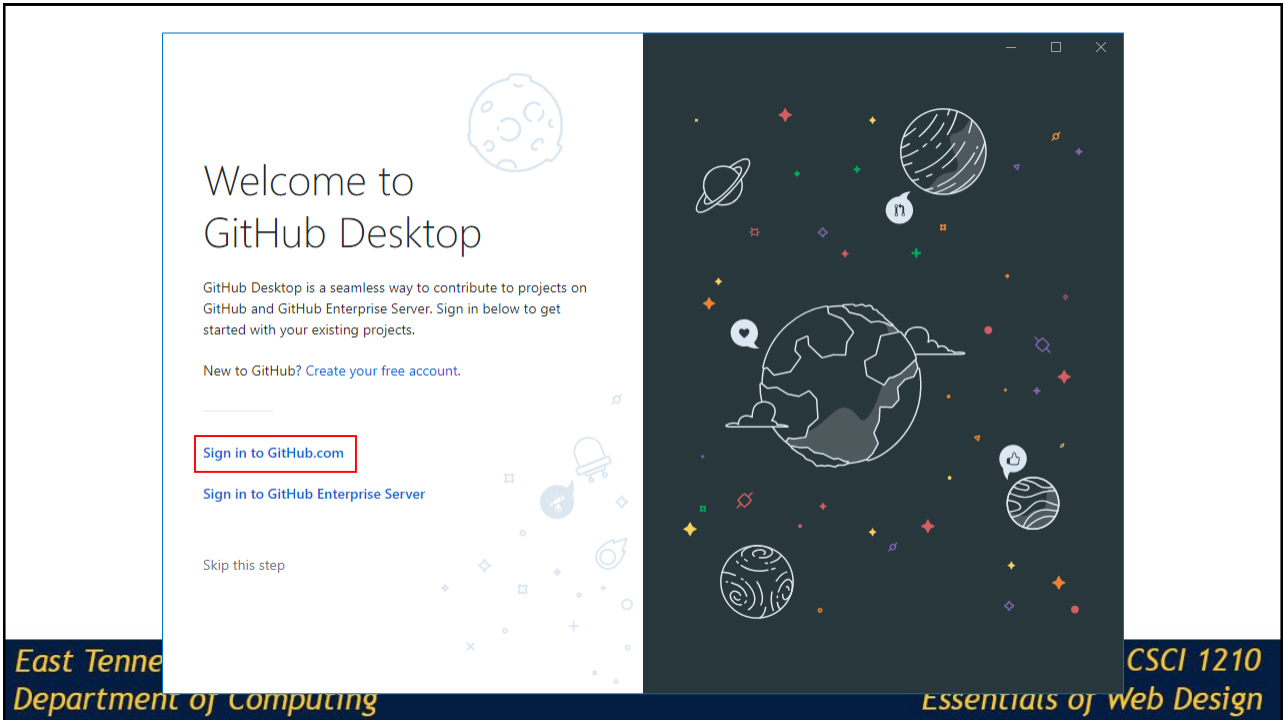
DOUBLE-CLICK



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USE YOUR NEW GITHUB ACCOUNT ID / PW, NOT YOUR TEAM'S

Sign in to GitHub.com

Username or email address

Password

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Configure Git

This is used to identify the commits you create. Anyone will be able to see this information if you publish commits.

Name
Jack Ramsey

Email
ramseyjw@etsu.edu

[Continue](#) [Cancel](#)

Example commit
Fix all the things
Jack Ramsey committed 30 minutes ago

Make GitHub Desktop better!

Would you like to help us improve GitHub Desktop by periodically submitting [usage stats](#)?

☐ Yes, submit periodic usage stats

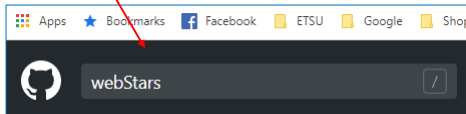
[Finish](#) [Cancel](#)

Let's get started!

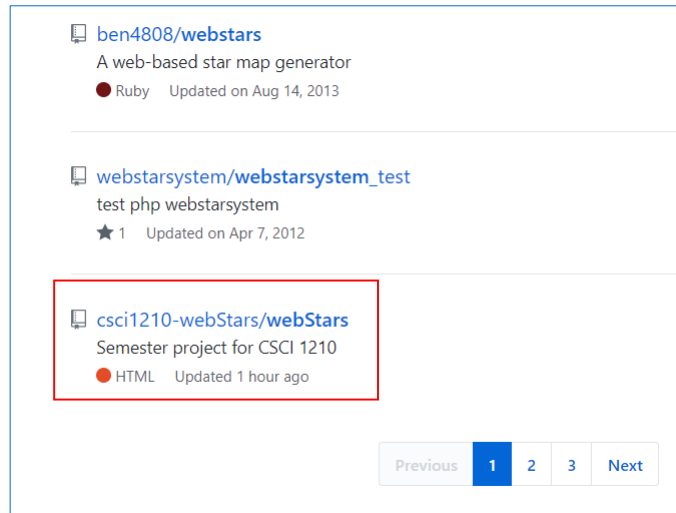
Add a repository to GitHub Desktop to start collaborating

- Create a tutorial repository...
- Clone a repository from the Internet...
- Create a New Repository on your hard drive...
- Add an Existing Repository from your hard drive...

SEARCH ON GITHUB FOR YOUR TEAM'S REPO



ALTERNATIVELY, THE TEAM LEAD, ONCE THE REPO IS CREATED, CAN DISTRIBUTE THE URL TO THE REST OF THE TEAM

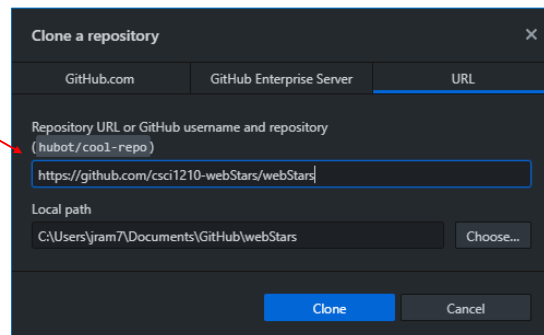


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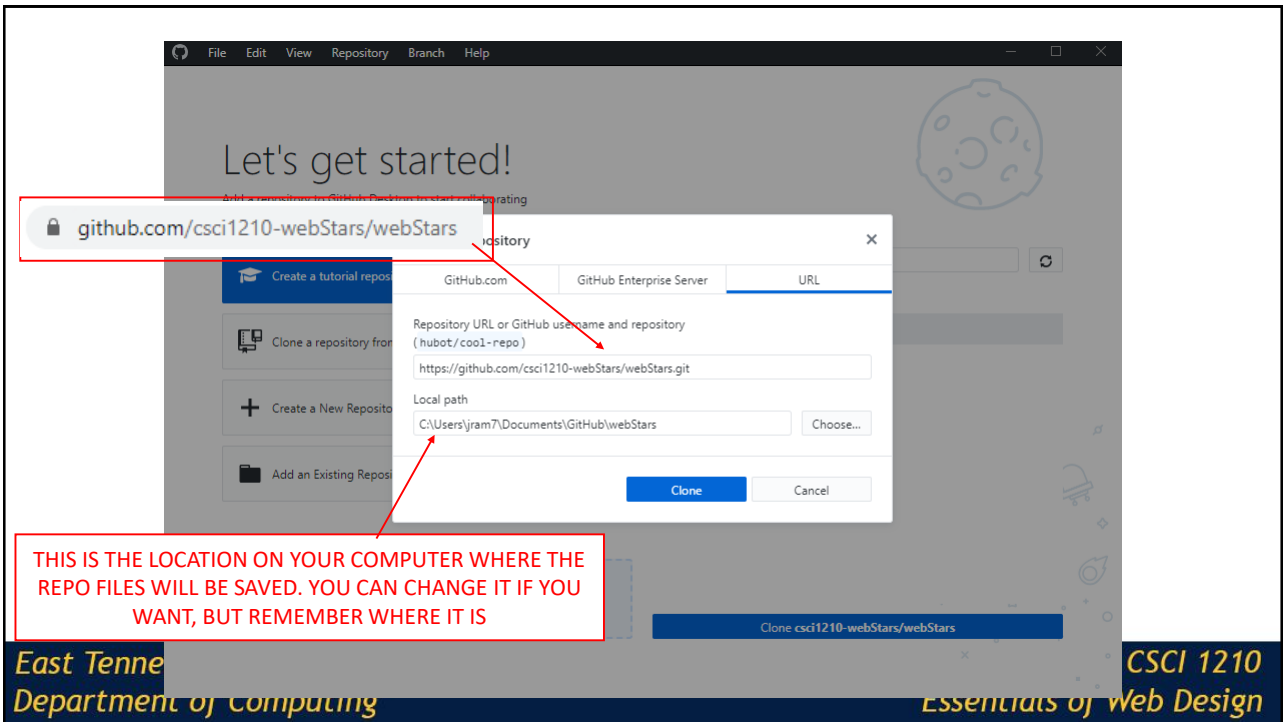
github.com/csci1210-webStars/webStars



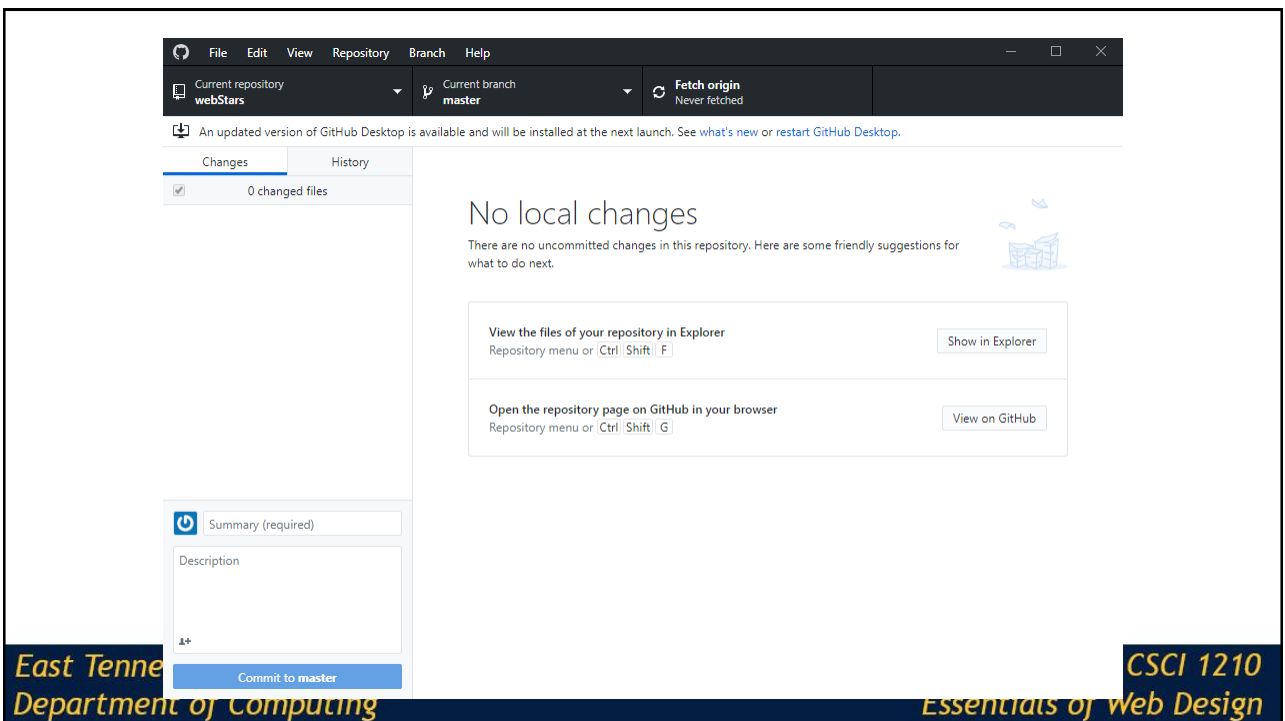
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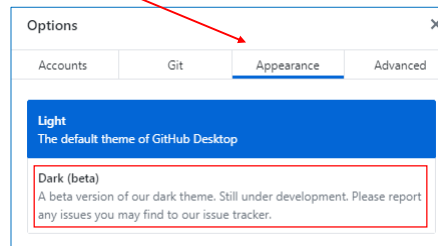


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IN CASE YOU'RE WONDERING WHY MY SCREENSHOTS ARE DARK WHILE YOUR DISPLAY IS WHITE, CLICK FILE->OPTIONS

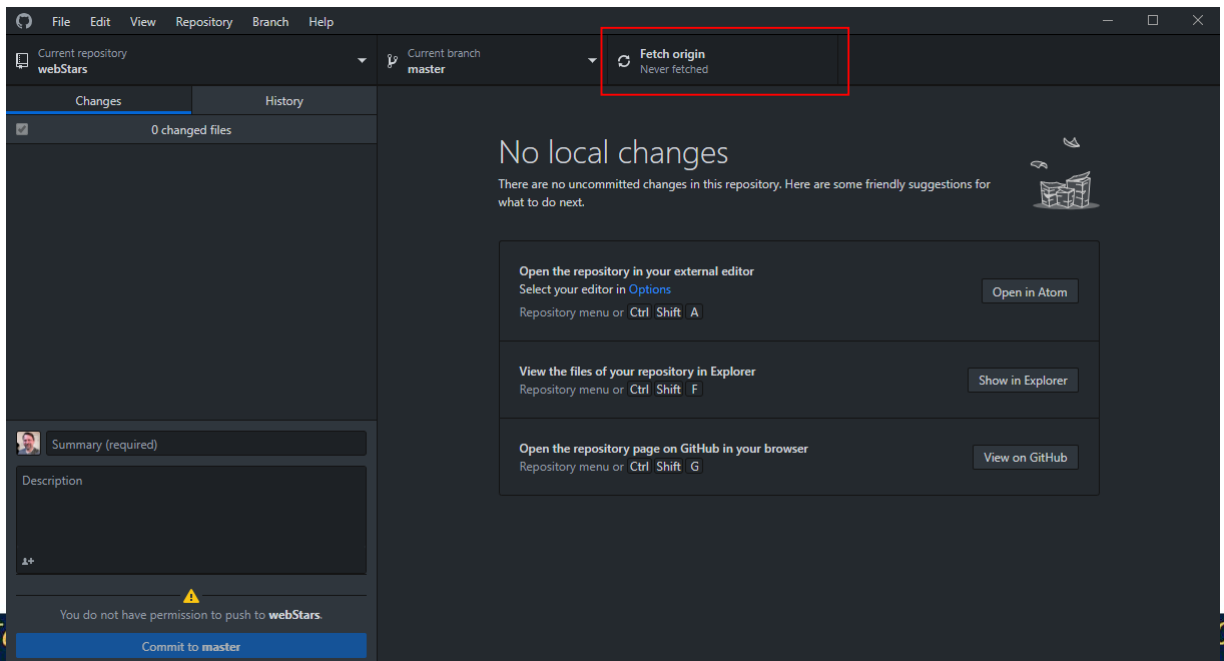


THIS IS PURELY A MATTER OF PREFERENCE

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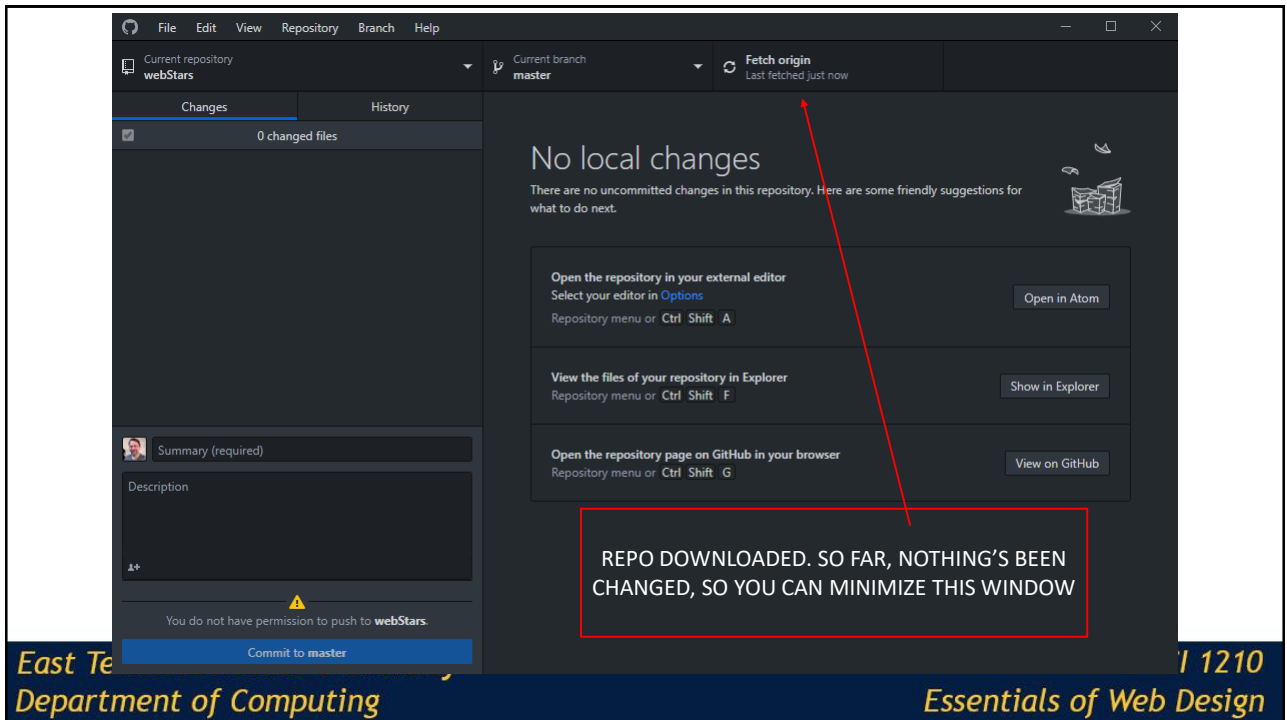
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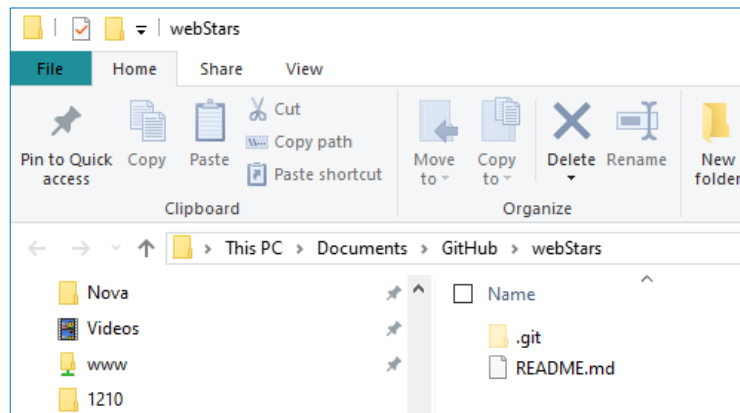
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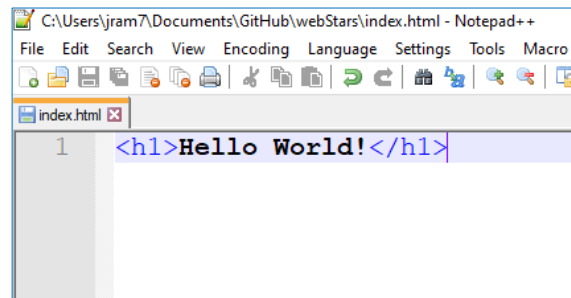


FILE EXPLORER

This is your local copy of the repo, where you'll create, modify, and save files as you work. You could use a flash drive



TESTING – CREATE A FILE

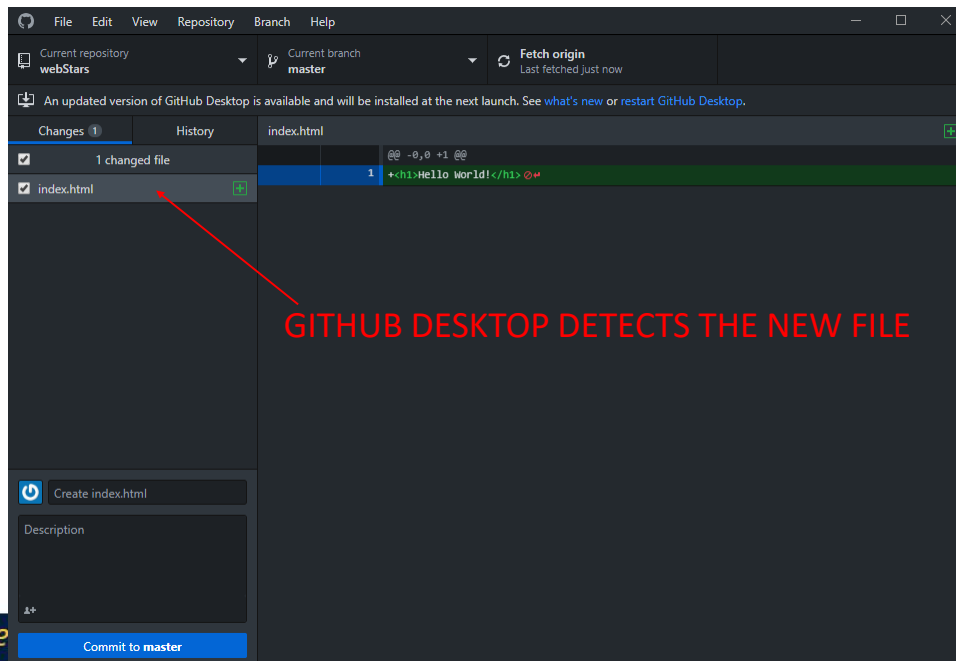


SAVE IT TO YOUR LOCAL DIRECTORY

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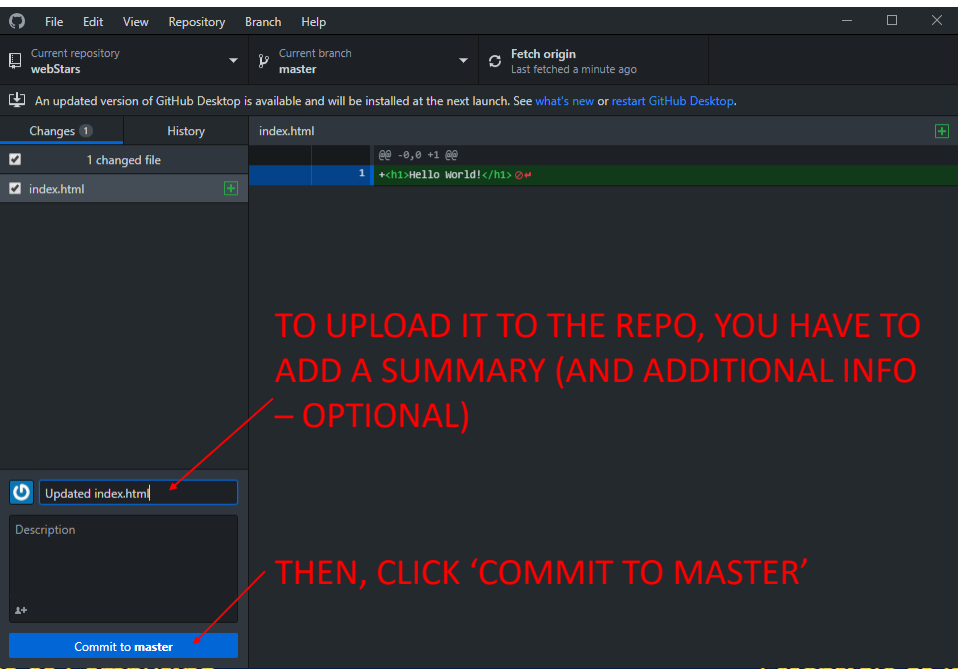
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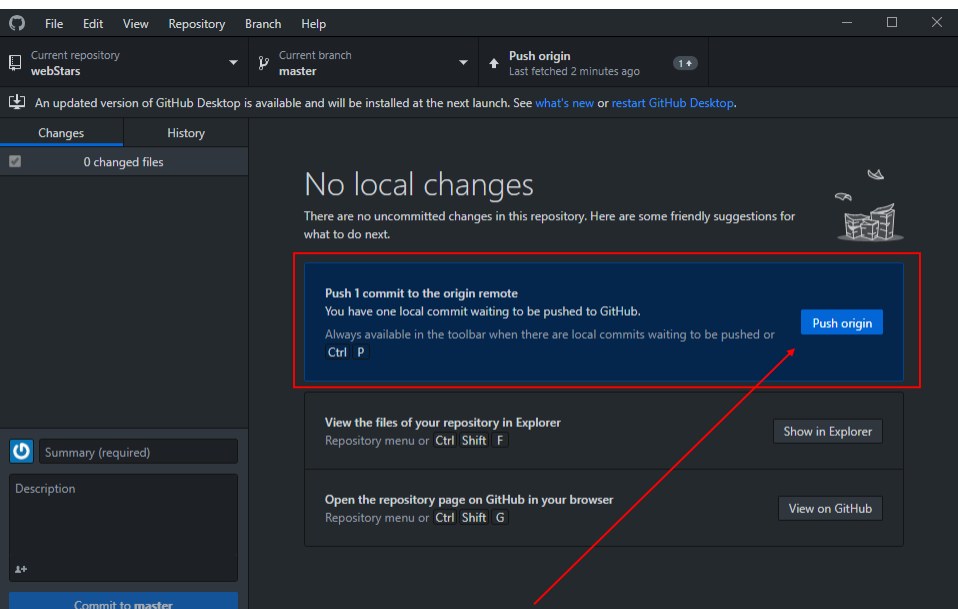
TO UPLOAD IT TO THE REPO, YOU HAVE TO ADD A SUMMARY (AND ADDITIONAL INFO – OPTIONAL)

THEN, CLICK 'COMMIT TO MASTER'

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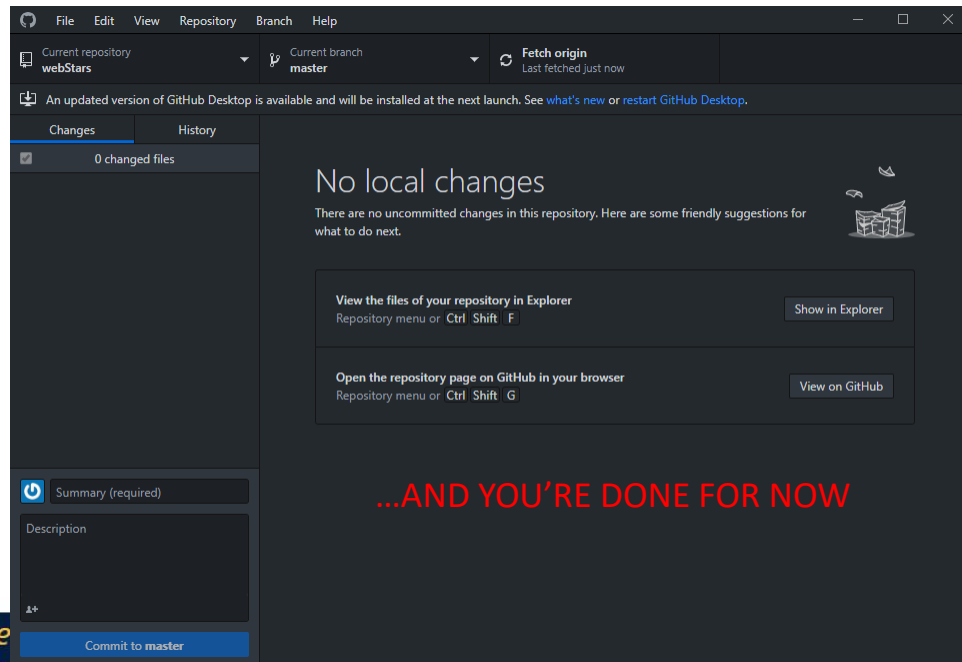


THEN, PUSH THE CHANGES TO THE REPO

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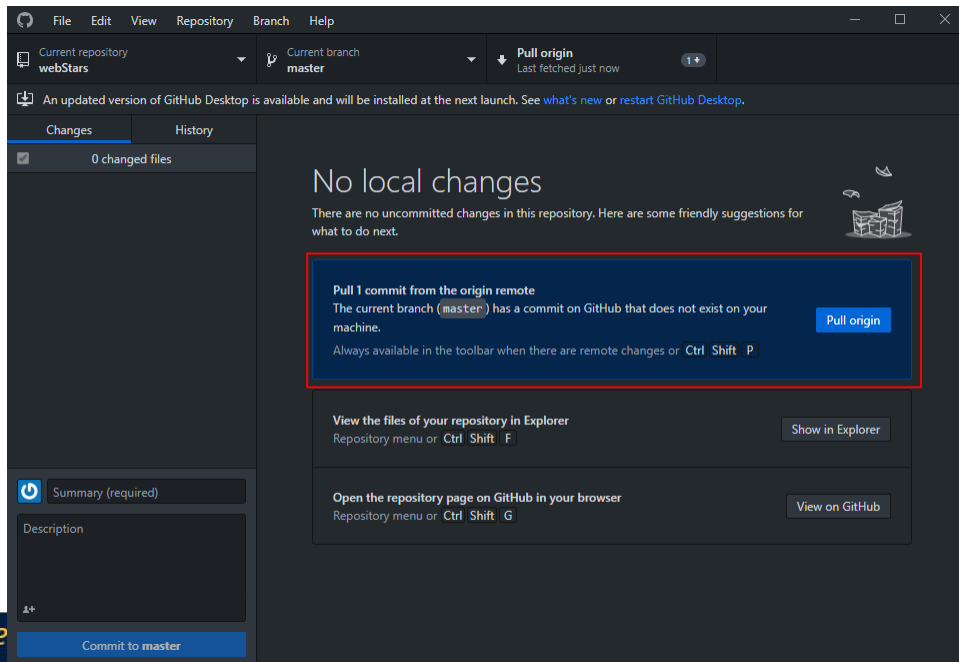
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When you go back to do more work...

Someone else on your team may have made changes and/or additions and uploaded them to the repo

So, first thing you have to do is pull a new copy of the repo to your computer

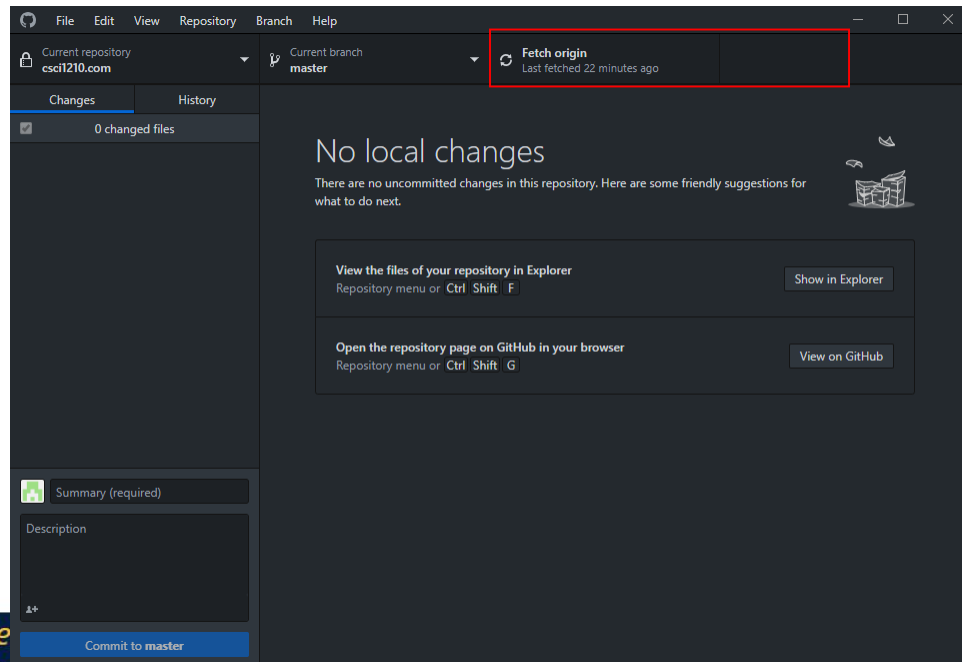


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When you go back to do more work...

If you don't see the 'pull prompt,' pull anyway:

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So, one of your teammates made a change...

```

1 <h1>Hello World!</h1>
2
3 <p>
4   I'm one of your team mates. I just made some changes and uploaded them!
5 </p>
6

```

The changes will be reflected in your local copy
after you've pulled them

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You can use comments to communicate with your team

```

1  <h1>Hello World!</h1>
2
3
4  <p>
5      I'm one of your team mates. I just made some changes and uploaded them!
6      <!-- Jack: add some more content here -->
7  </p>
8
9      I made some more changes...
10 </p>
11

```

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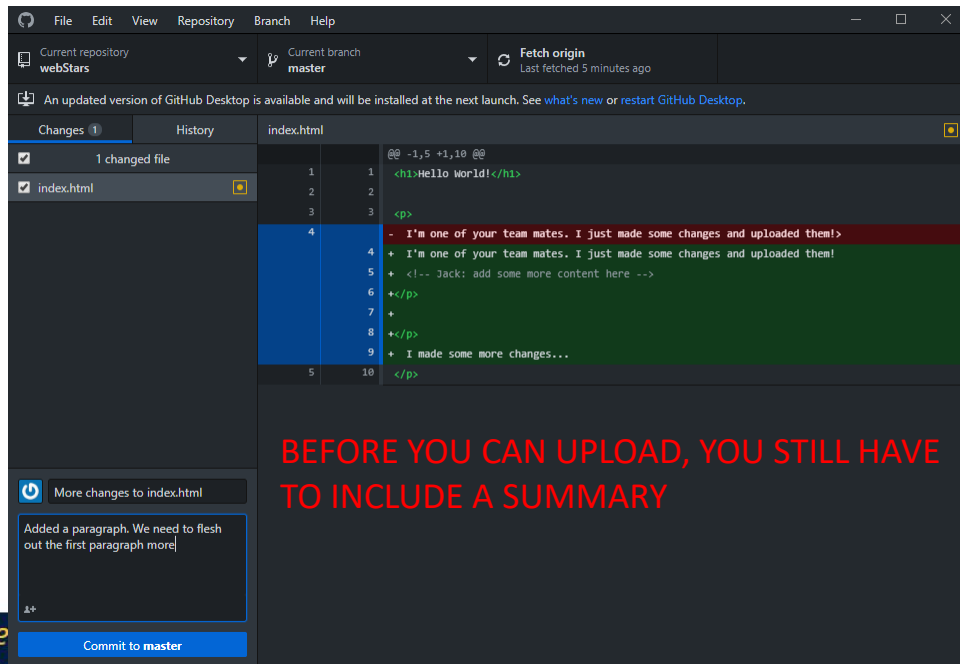
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GITHUB SHOWS YOU THE CHANGES THAT WERE MADE

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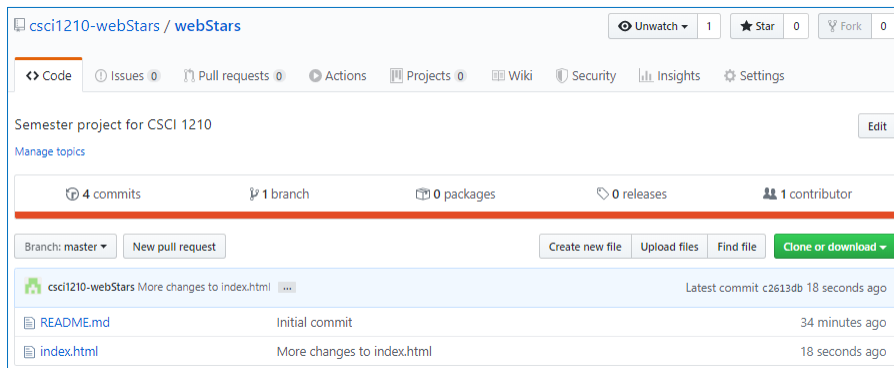


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ON THE GITHUB WEBSITE, YOU CAN VIEW THE FILES
AND HISTORY OF THE PROJECT

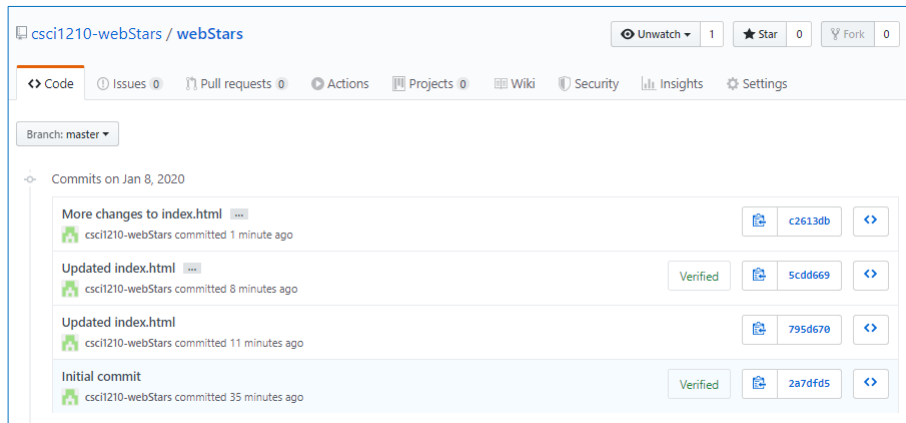


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VIEW EACH COMMIT – THIS IS WHY THE SUMMARIES ARE REQUIRED; TO TRACK CHANGES



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```

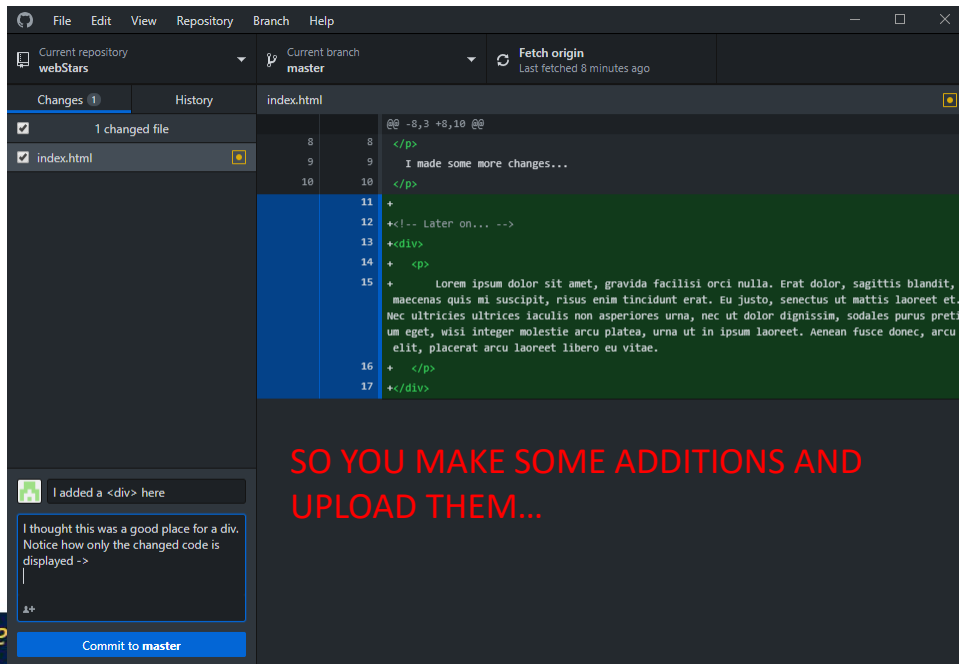
1 <h1>Hello World!</h1>
2
3 <p>
4   I'm one of your team mates. I just made some changes and uploaded them!
5   <!-- Jack: add some more content here -->
6 </p>
7
8 </p>
9   I made some more changes...
10 </p>
11
12 <!-- Later on... -->
13 <div>
14   <p>
15     Lorem ipsum dolor sit amet, gravida facilisi orci nulla. Erat dolor,
16     sagittis blandit, maecenas quis mi suscipit, risus enim tincidunt erat. Eu
17     justo, senectus ut mattis laoreet et. Nec ultricies ultrices iaculis non
18     asperiores urna, nec ut dolor dignissim, sodales purus pretium eget, wisi
19     integer molestie arcu platea, urna ut in ipsum laoreet. Aenean fusce donec,
20     arcu elit, placerat arcu laoreet libero eu vitae.
21   </p>
22 </div>

```

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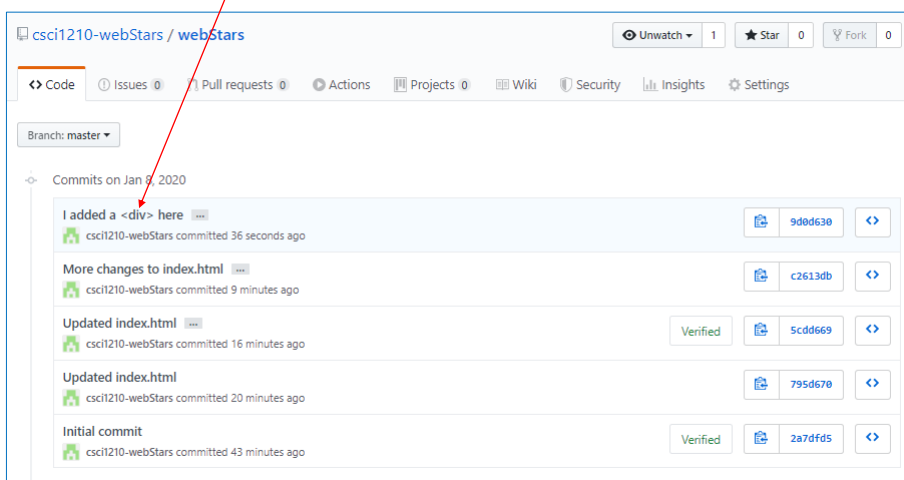


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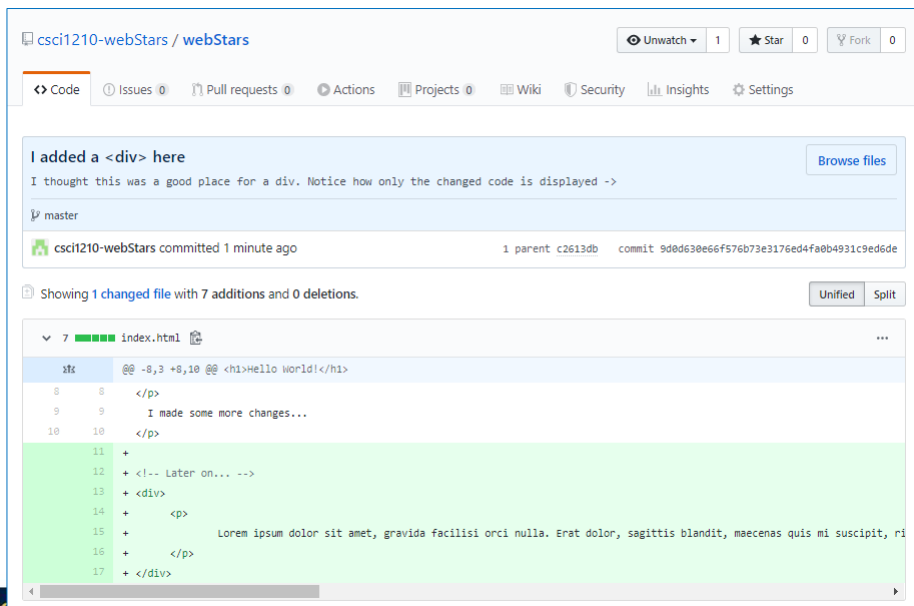
YOU CAN VIEW THE DETAILS OF EACH COMMIT BY
CLICKING IT



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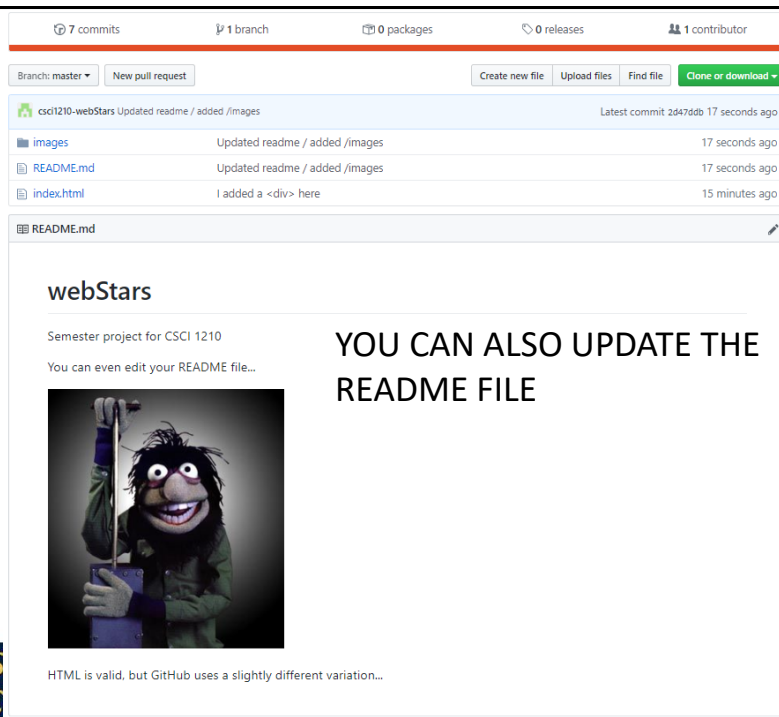
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Code Repositories

This chart shows the workflow you'll follow when working on your project. It's important to remember that once you've made changes, they have to be uploaded to the repository so everyone will be able to access your work



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