Git, GitHub, and Jupyter

In-class exercise

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Let's set up a workflow for your in-class project.

Creating a GitHub repository

Have *one* member of your group create a repository. This person will be the owner. *

* The owner doesn't have any special responsibilities, so don't worry.

Overview | Repositories 12 | Projects | Packages | Stars 2

Ty Janoski

tyfolino · he/him

Pinned

climkern Public

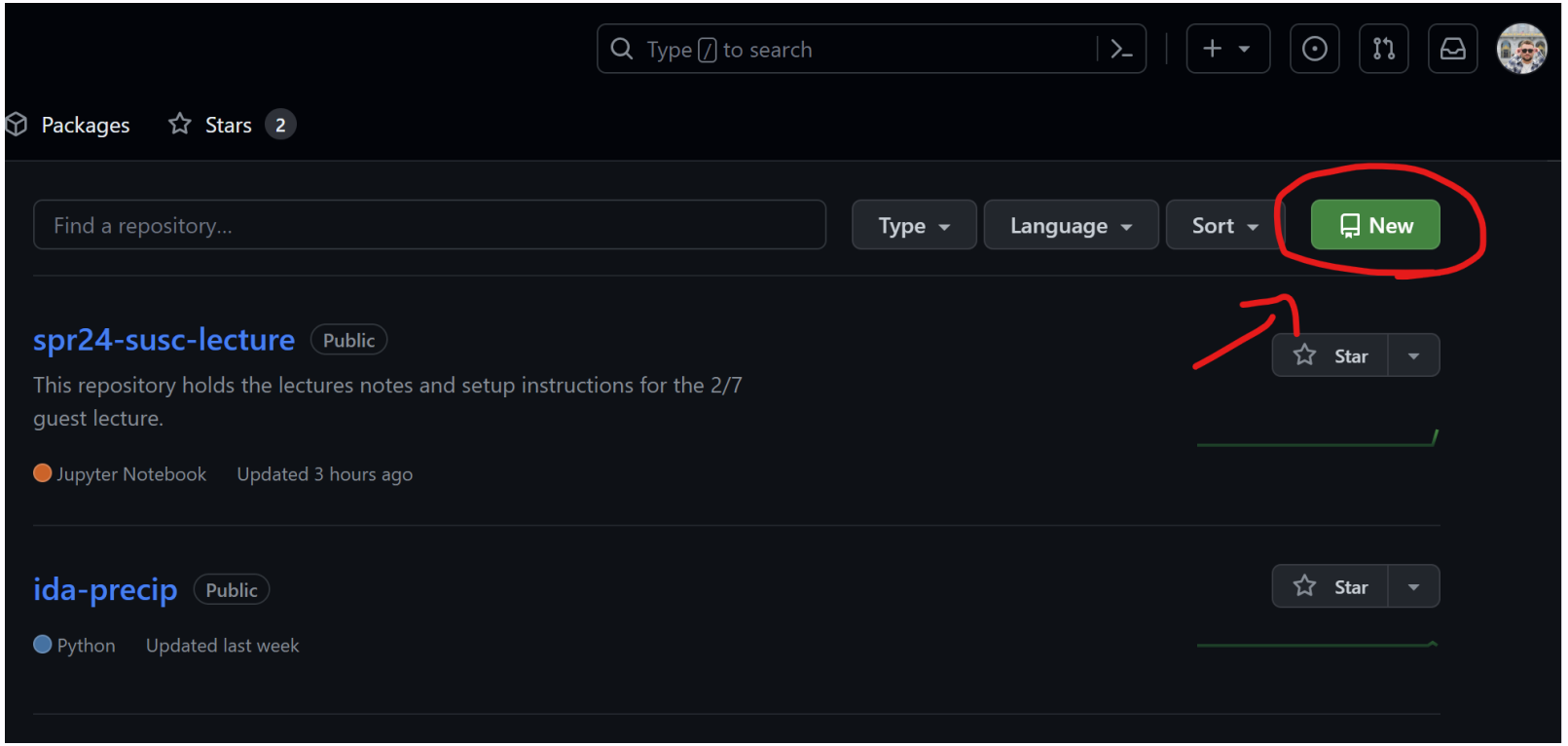
Python package for easily computing clima
kernels.

Python 1

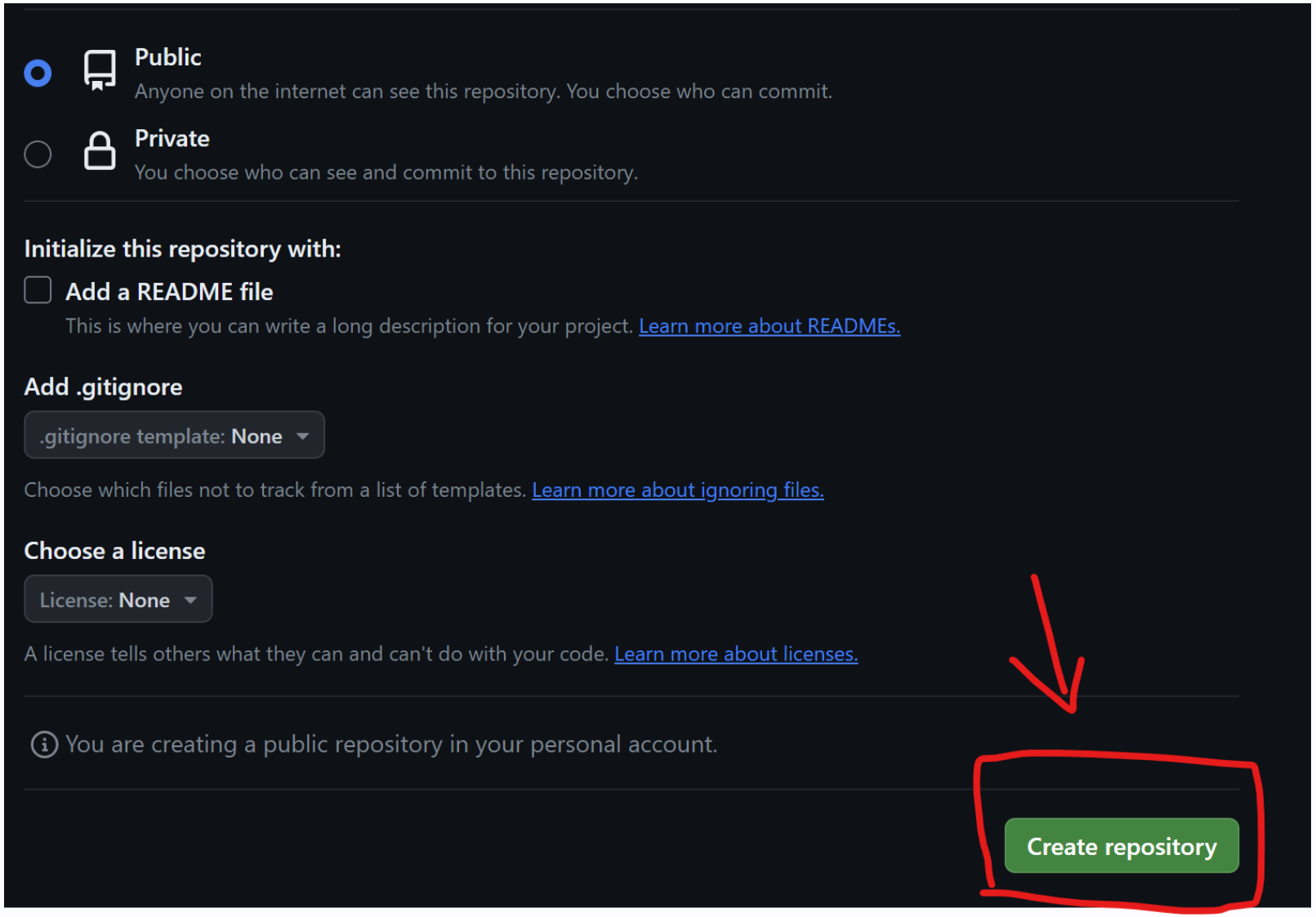
CESM_timing Public

store timing files for CESM simulations

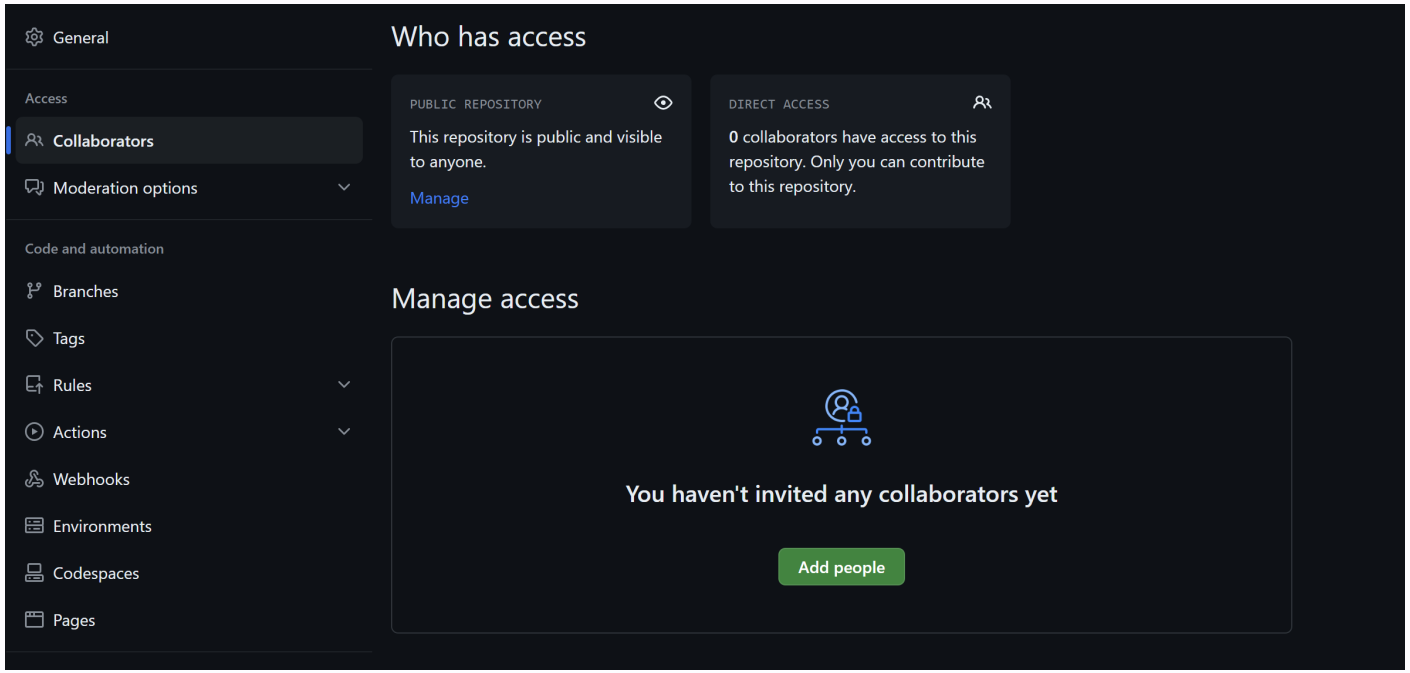
132 contributions in the last year


Type / to search
Packages
Stars 2
Find a repository...
Type
Language
Sort
New
spr24-susc-lecture
Public
This repository holds the lectures notes and setup instructions for the 2/7 guest lecture.
Jupyter Notebook
Updated 3 hours ago
Star
ida-precip
Public
Python
Updated last week
Star

- Pick a name for your repository, like `SUSC`.
- Give it a short description.
- Leave it public.
- You can skip the `README`, `.gitignore`, and license for now.


Public
Anyone on the internet can see this repository. You choose who can commit.
Private
You choose who can see and commit to this repository.
Initialize this repository with:
Add a README file
This is where you can write a long description for your project. Learn more about READMEs.
Add .gitignore
.gitignore template: None
Choose which files not to track from a list of templates. Learn more about ignoring files.
Choose a license
License: None
A license tells others what they can and can't do with your code. Learn more about licenses.
You are creating a public repository in your personal account.
Create repository

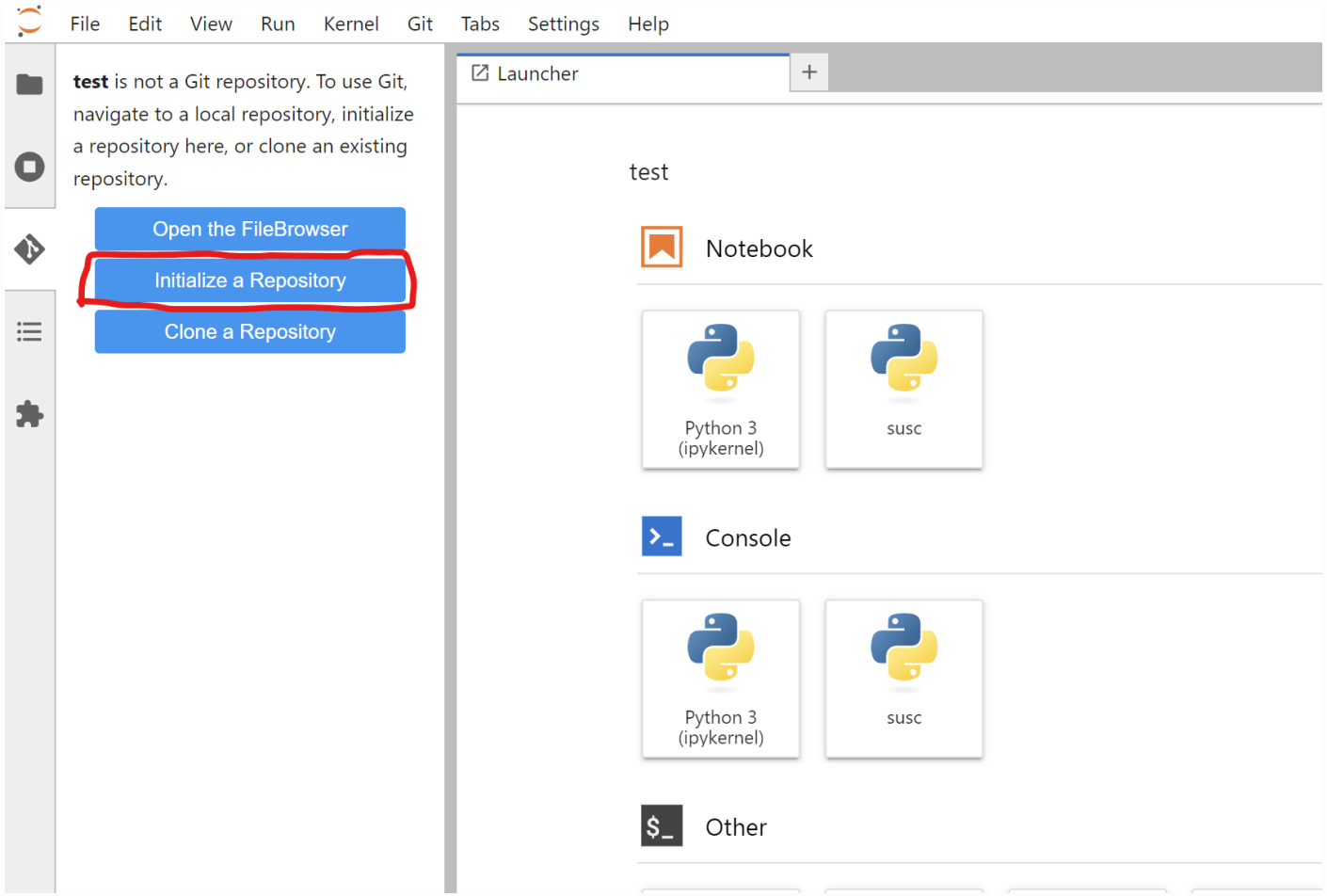
Invite your group members as collaborators



Create a new folder on your computer where your Jupyter Notebook for this class will live.

Make sure you can navigate to it using JupyterLab!

Initialize a new repository



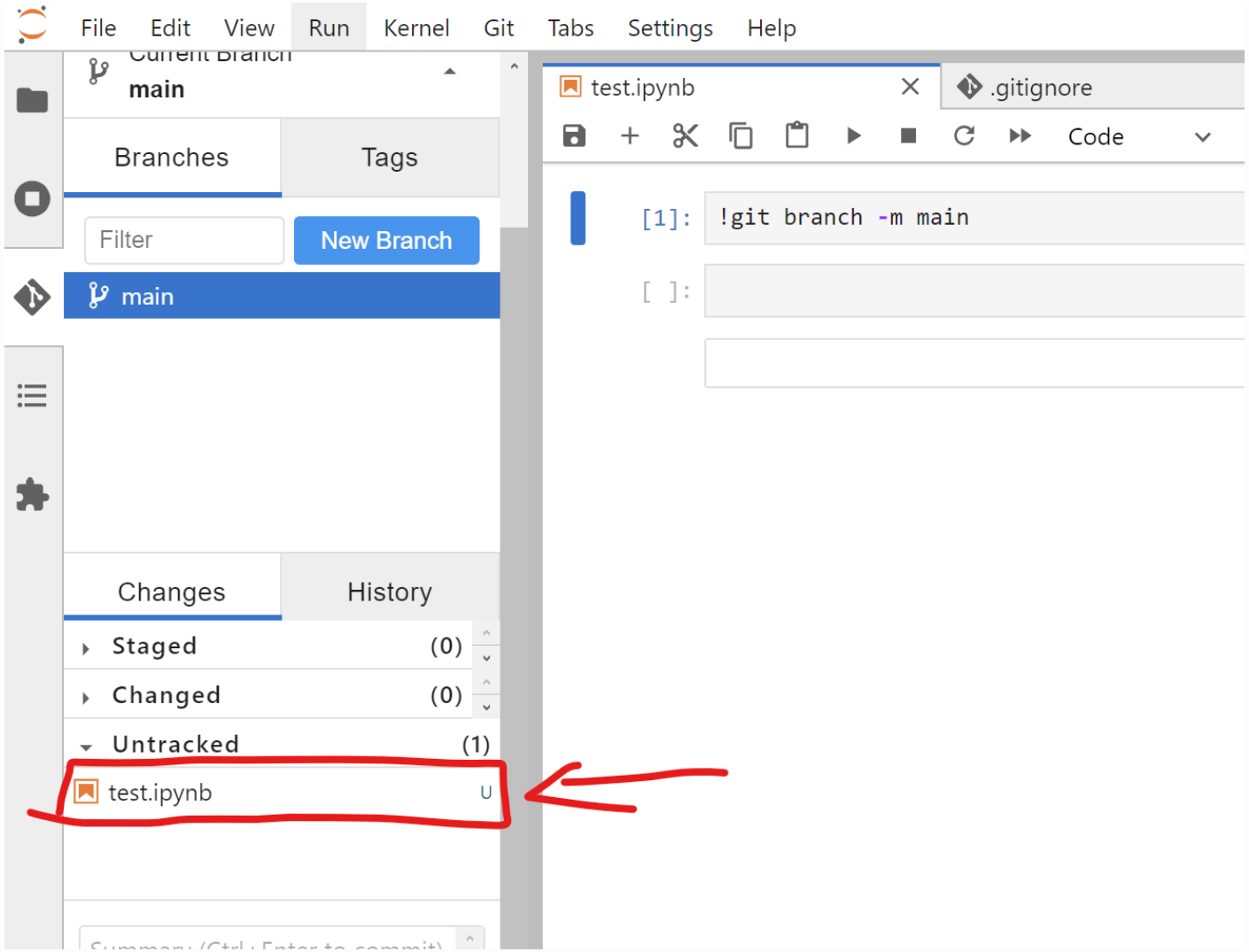
Create a new notebook

- When selecting the kernel, make sure it is `susc`
- In your first cell, run this code:

```
!git branch -m main
!git config --global user.name "First Last"
!git config --global user.email "your-github-email@example.com"
```

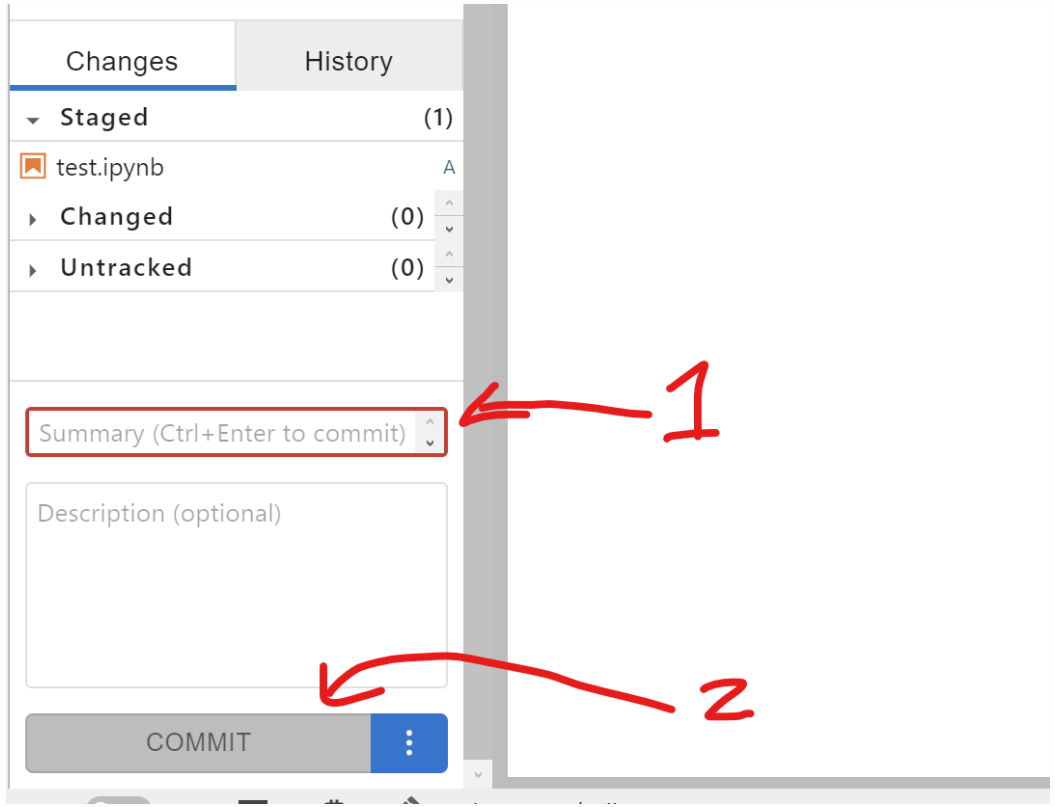
Add your notebook

Hit the plus sign.



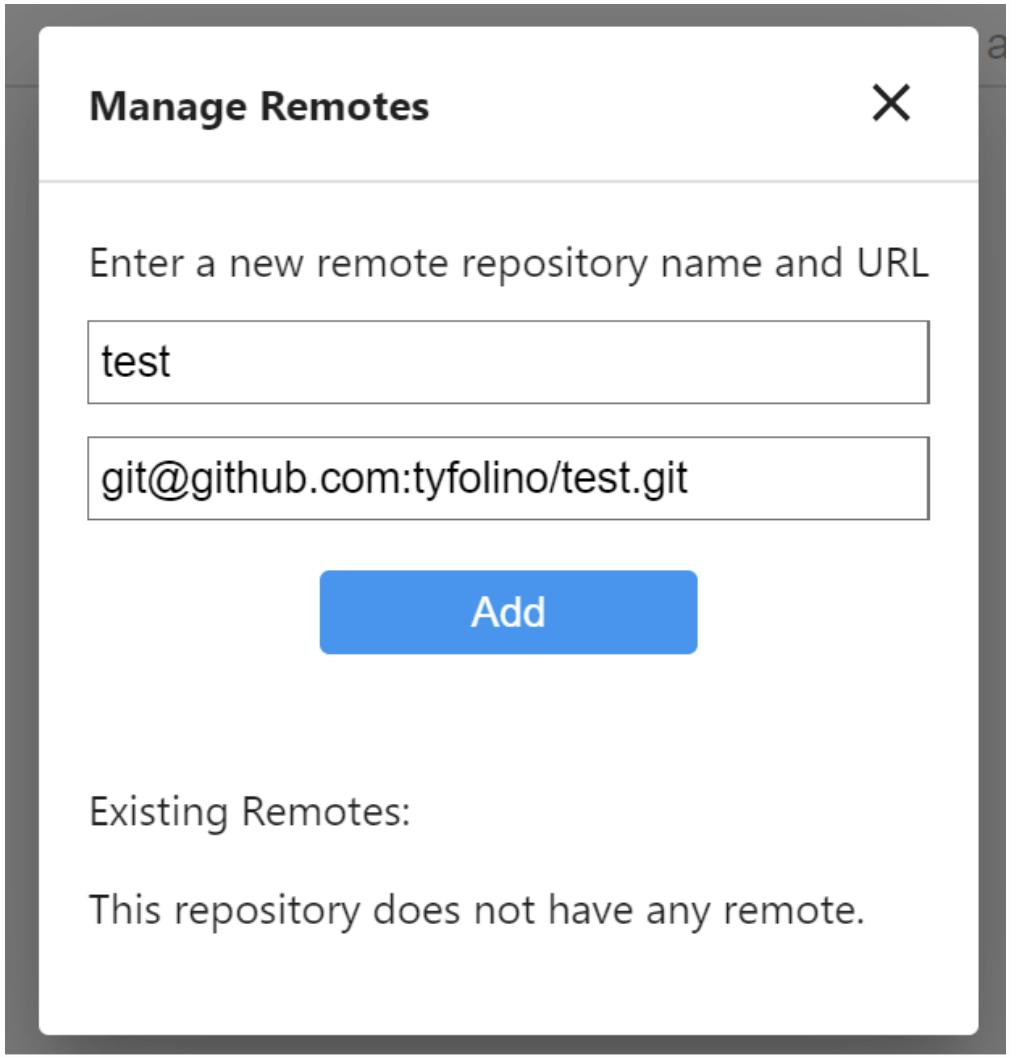
Commit the changes

An example summary is " `added my first file` "

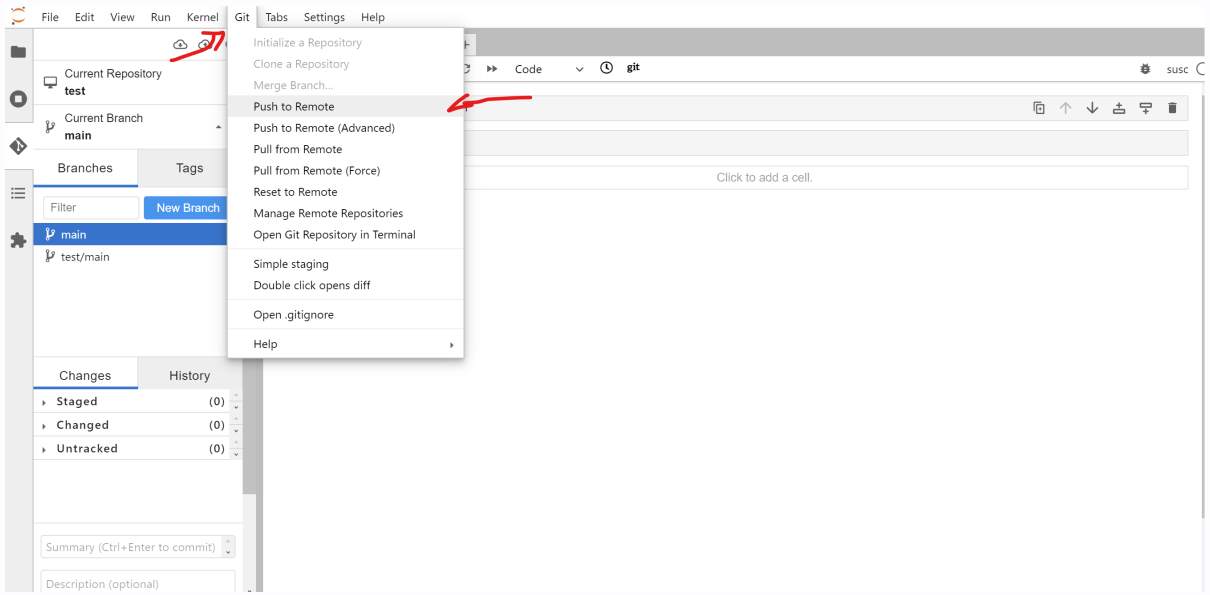


Connect to remote repository

In the top menu bar, git -> manage remote



Push to GitHub



In case people are having authentication issues...

Authentication to remote repository hosts

If you are seeing errors similar to `[E yyyy-mm-dd hh:mm:ss ServerApp] 500 POST /git/<clone|push|pull|status>` on the console which is running the JupyterLab server, you probably need to set up a credentials store for your local Git repository.

This extension tries to handle credentials for HTTP(S) connections (if you don't have set up a credential manager). But not for other SSH connections.

A note for windows users.

> For Windows users, it is recommended to install git for windows. It will automatically set up a credential manager.
> In order to connect to a remote host, it is recommended to use SSH.

SSH protocol

Here are the steps to follow to set up SSH authentication (skip any that is already accomplished for your project):

1. Create a SSH key
2. Register the public part of it to your Git server:
    - GitHub

3. Tell your local Git repository to connect to remote via ssh

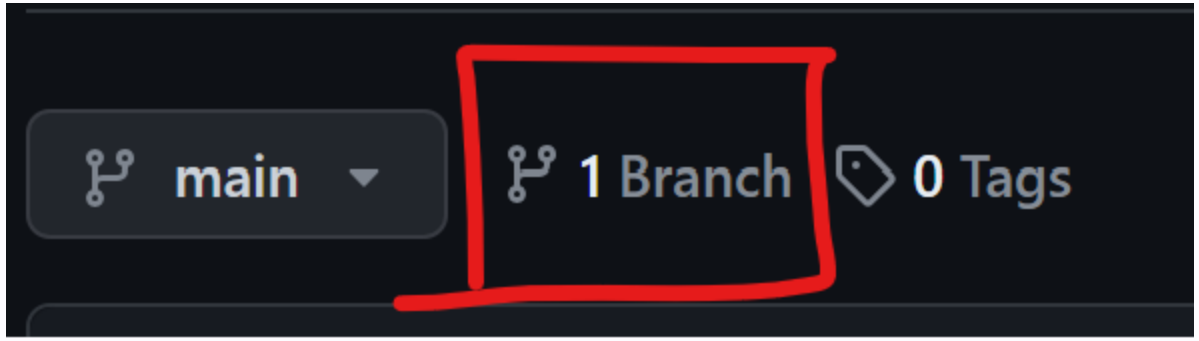
You should now be able to pull and push committed changes to and from your remote repository using the respective buttons on the top of the extension's panel.

If it worked, refresh your GitHub repository page and see your file there now!

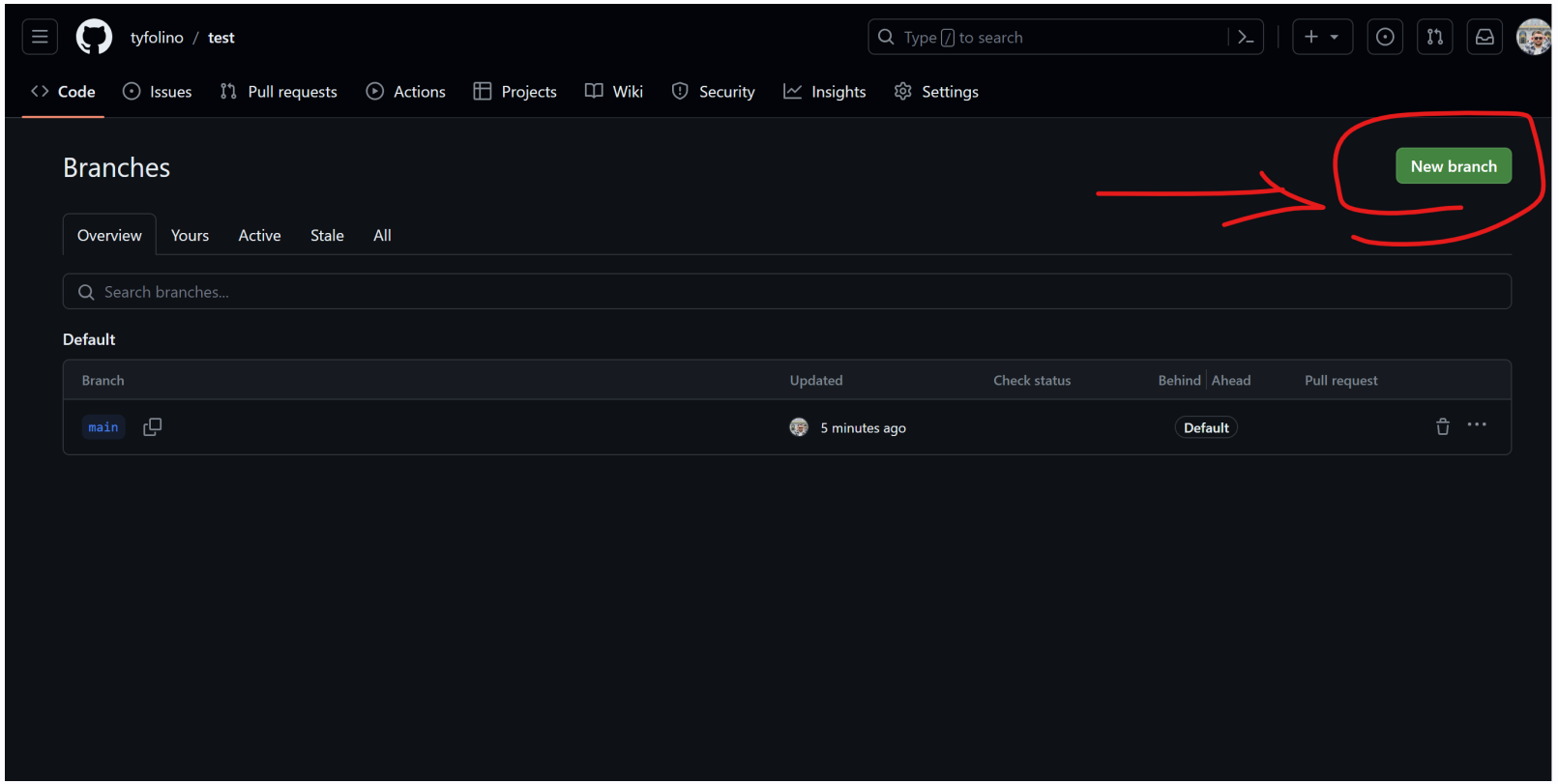
Now it's time for branches.

Create a new branch for each group member.

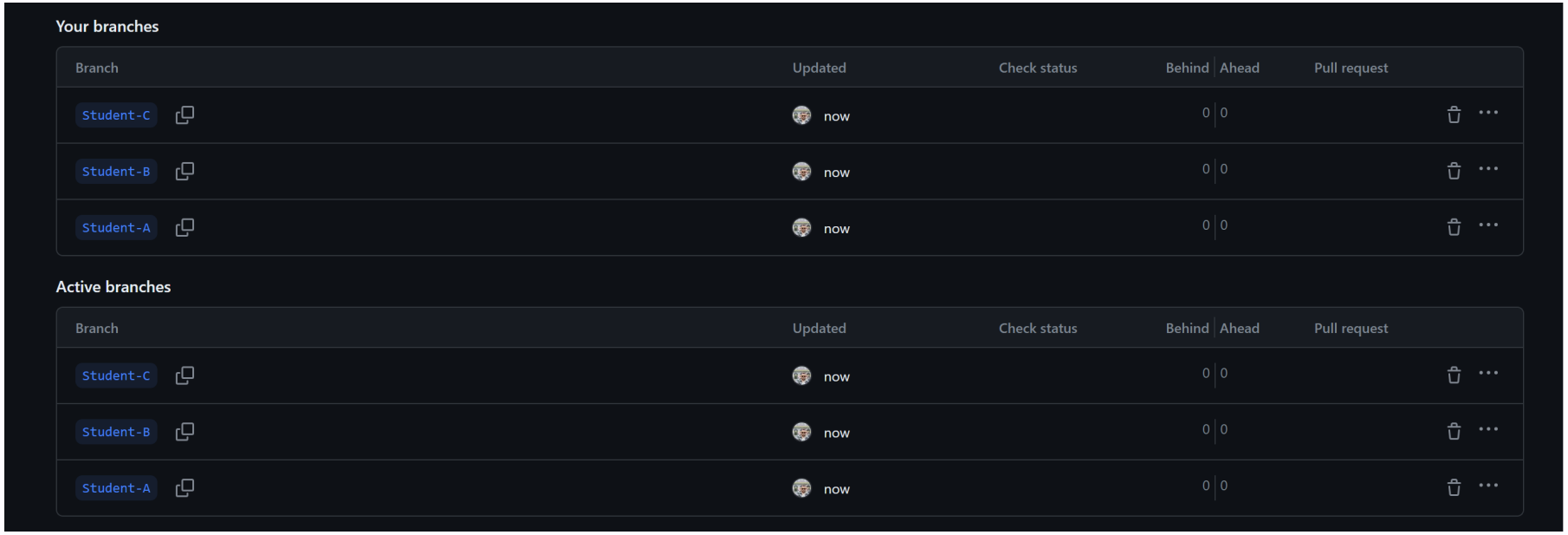
Click on branches.



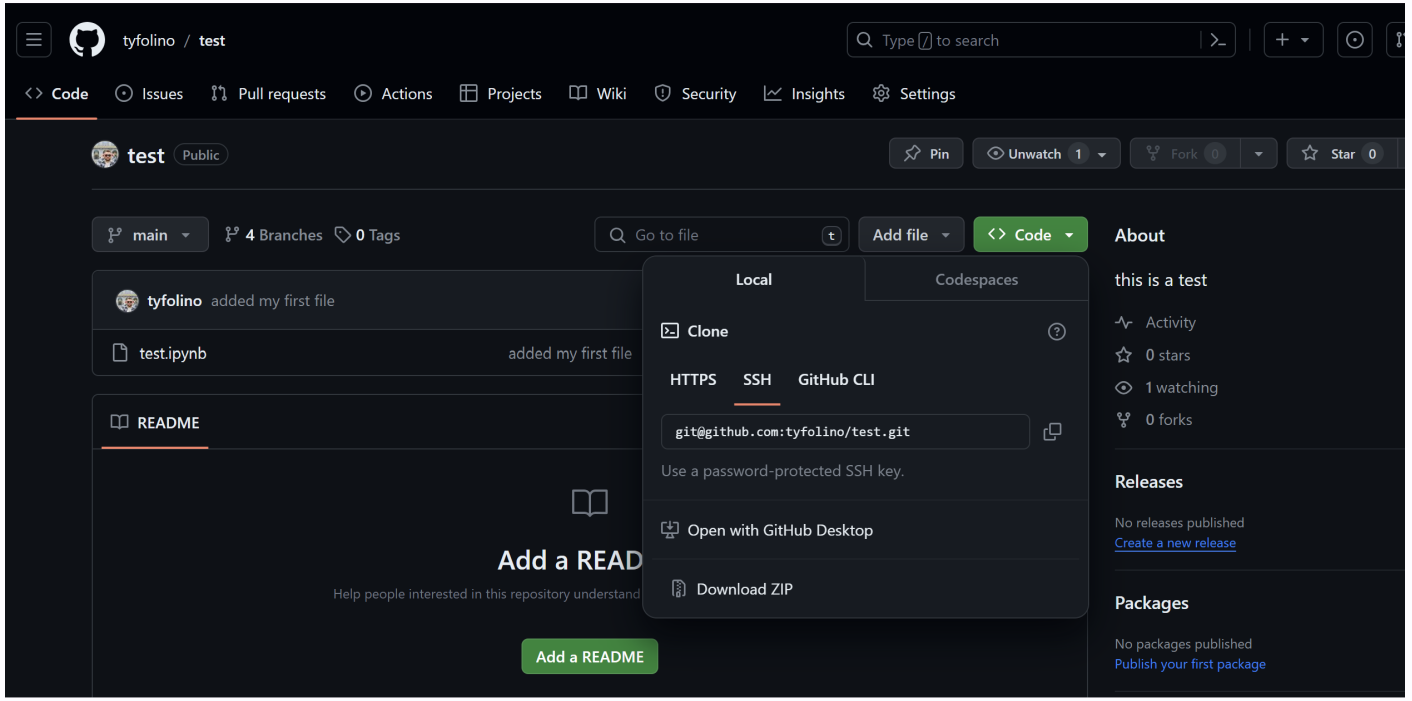
Make a new branch.



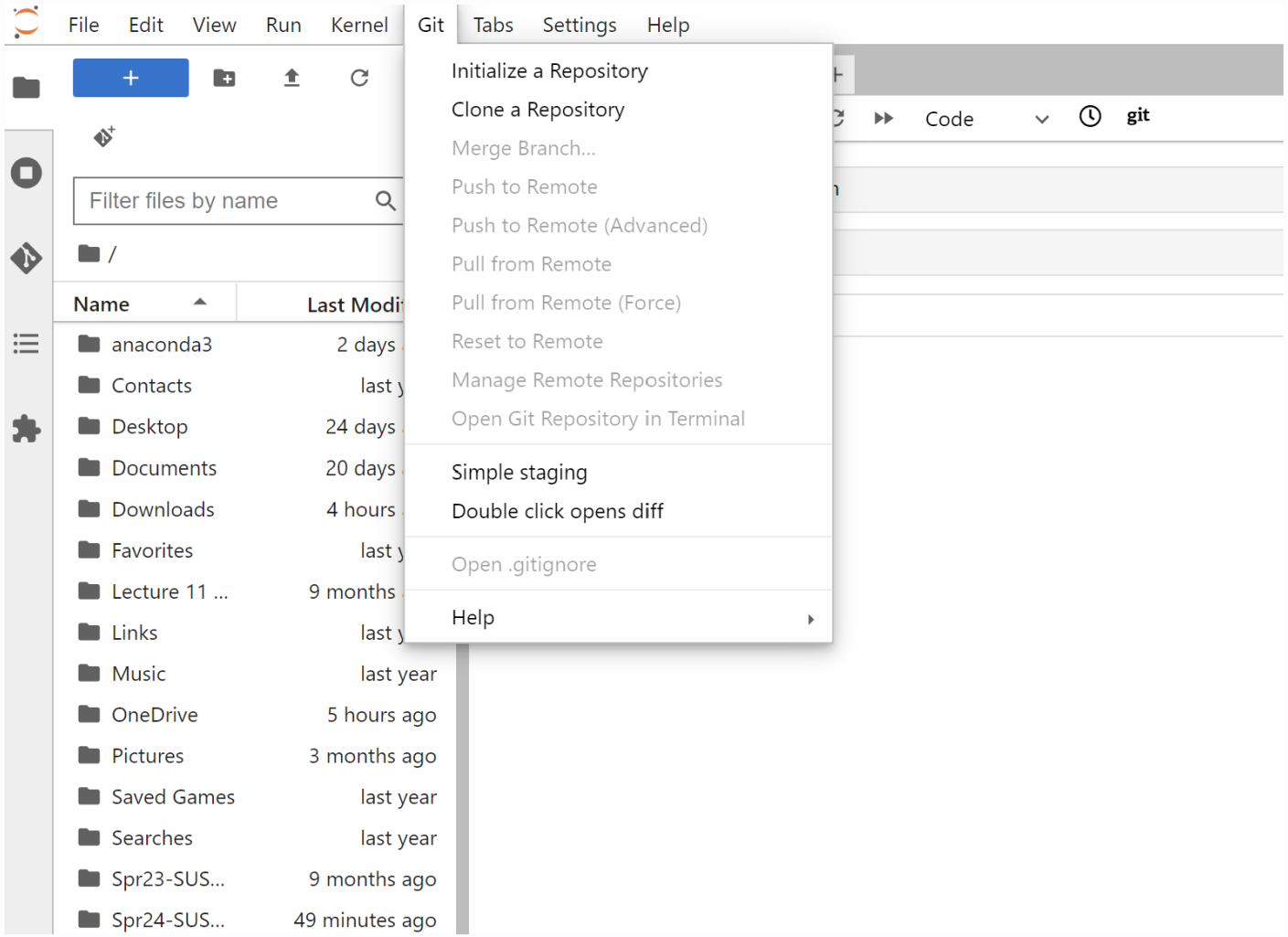
Create branches for each group member including the owner!



Now, the other members can clone the repository.

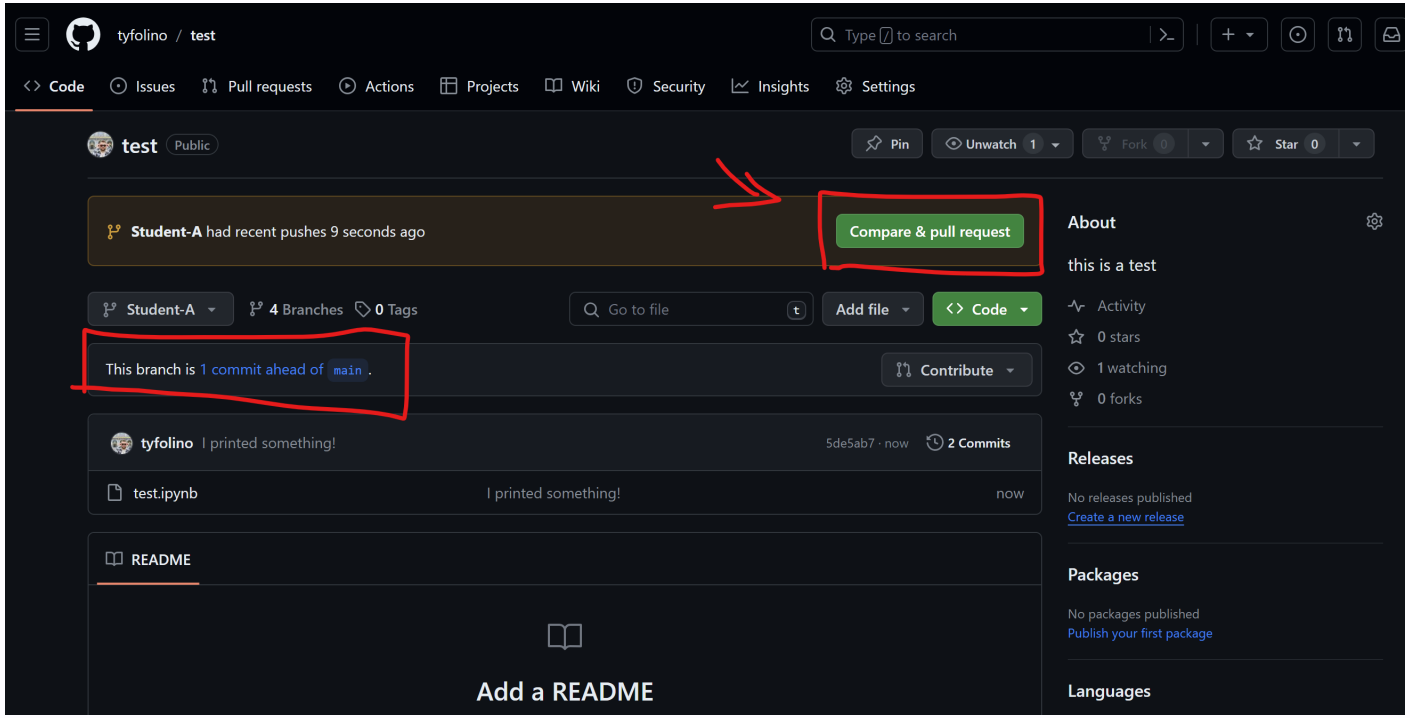


Paste the git link into the `git clone` dialog box

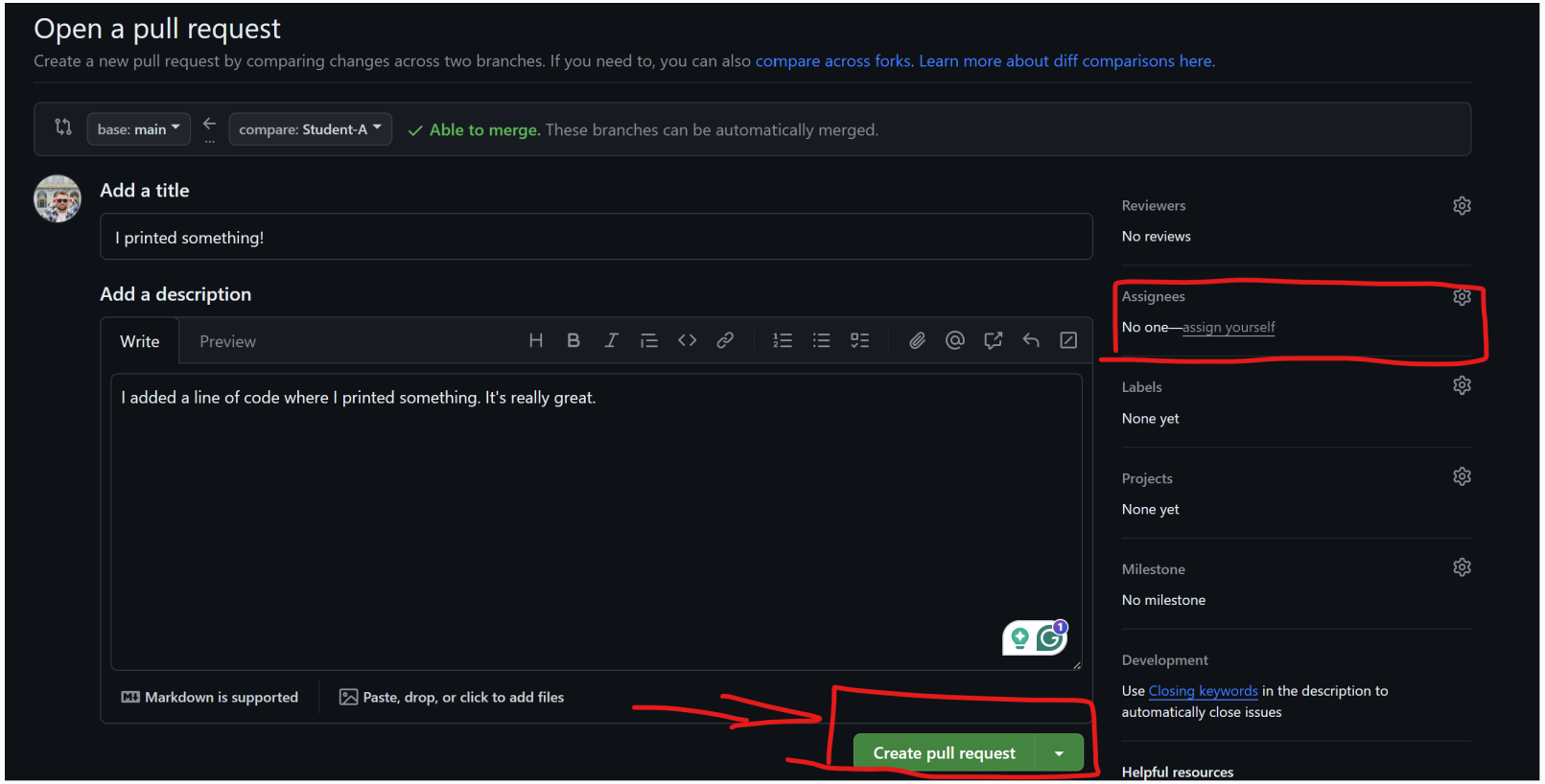


When you work on this group project, make sure you are in *your* branch!

When you are ready to merge your changes into the `main` branch, make a pull request.



Open a pull request



Merge pull request