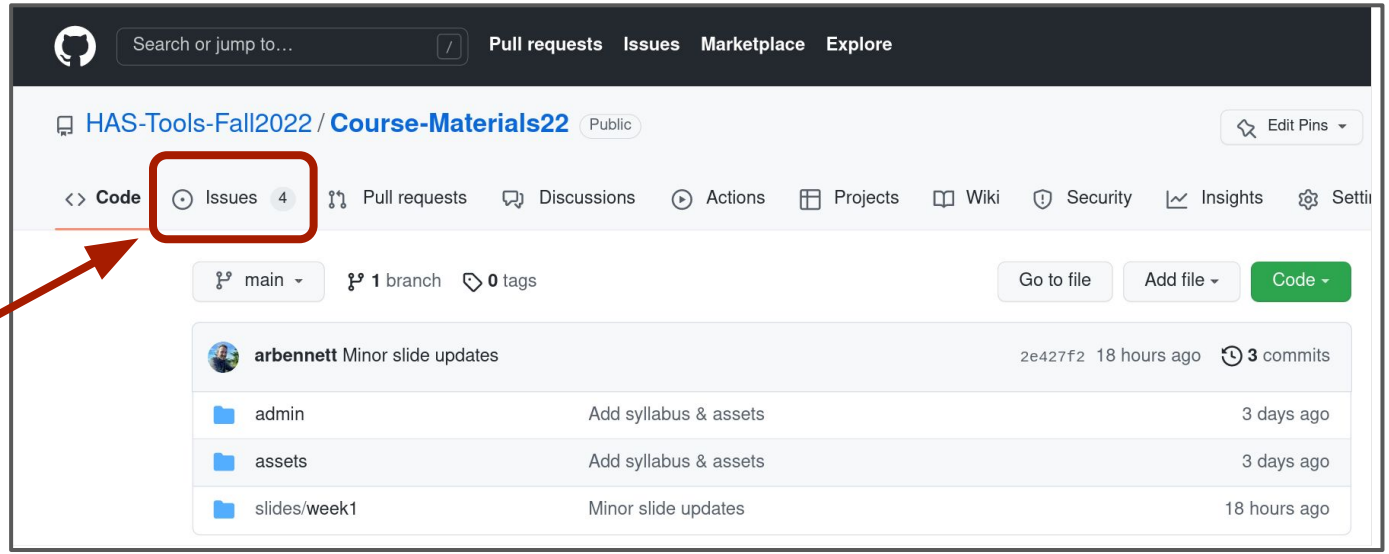
HAS_Tools_Pt2

08/25/2022

Let's use github issues to track our progress on software installs

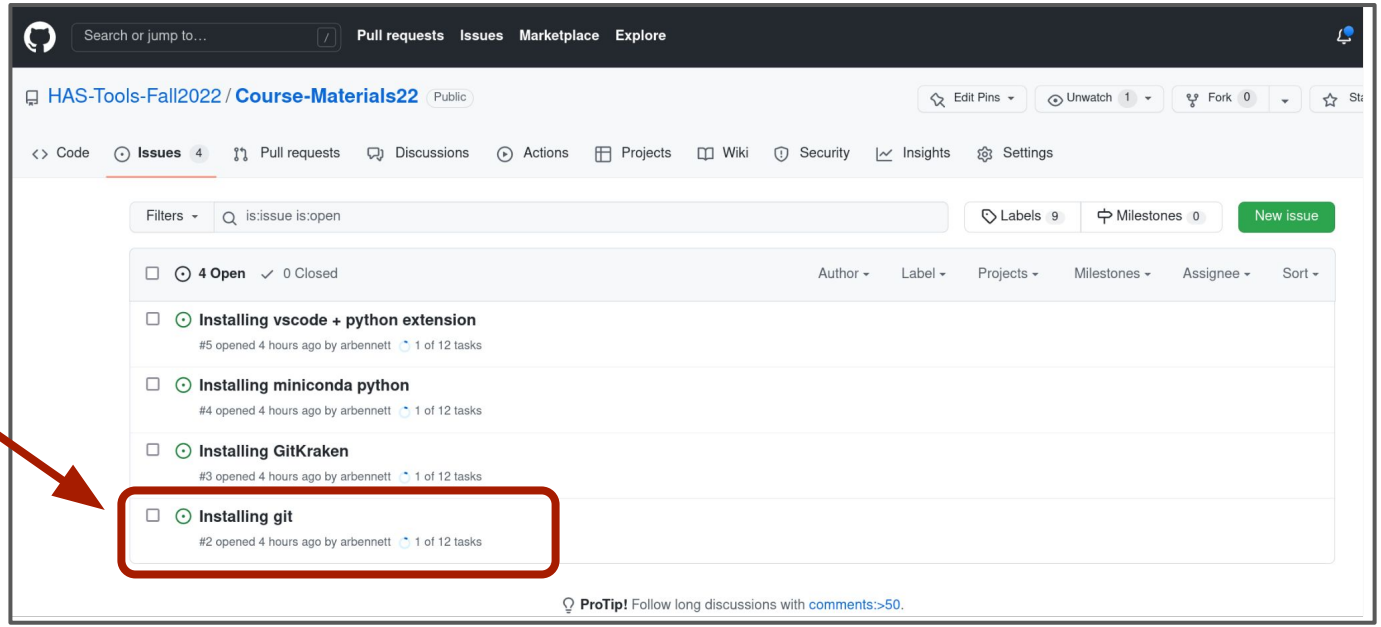
Go to this tab



https://github.com/HAS-Tools-Fall2022/Course-Materials22/issues

Let's use github issues to track our progress on software installs

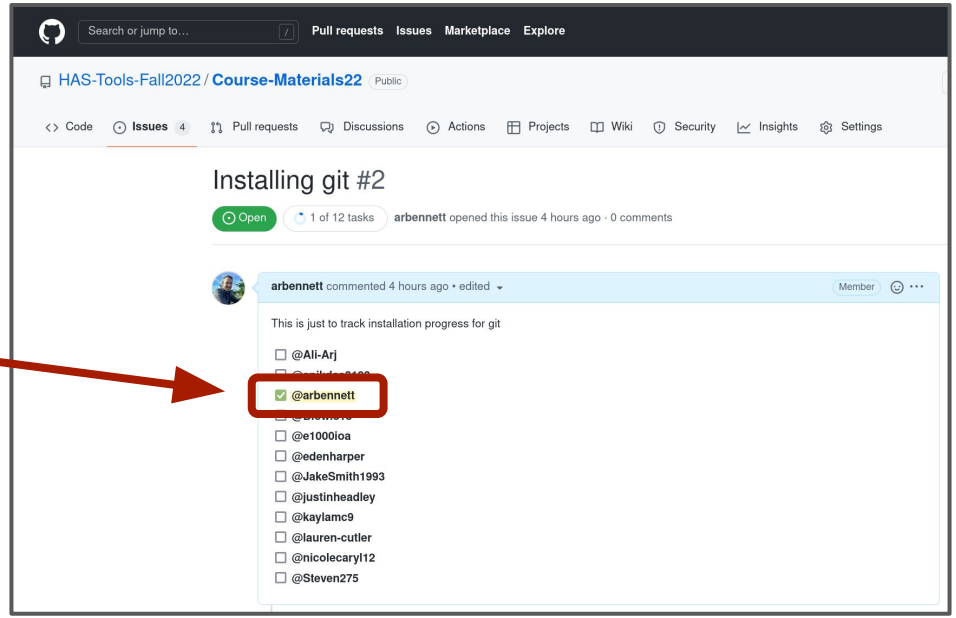
Start by opening up the "installing git" issue



https://github.com/HAS-Tools-Fall2022/Course-Materials22/issues

Let's use github issues to track our progress on software installs

Once you've got git installed, just check yourself off!



https://github.com/HAS-Tools-Fall2022/Course-Materials22/issues

Let’s see how far we can get…
Installing Git

- But, let’s try to “git” it installed. Go to https://git-scm.com/
- Try to cluster into groups of Windows, MacOS, and (if existing) linux users and walk through steps together

Let’s see how far we can get…
Installing GitKraken

- GitKraken just makes git easier to use.
- Let’s all install it from here: https://www.gitkraken.com/
- Once installed let’s log in via our GitHub credentials.
- You should be able to “clone” the class resources at this point
- Depending on time I might return to this later.

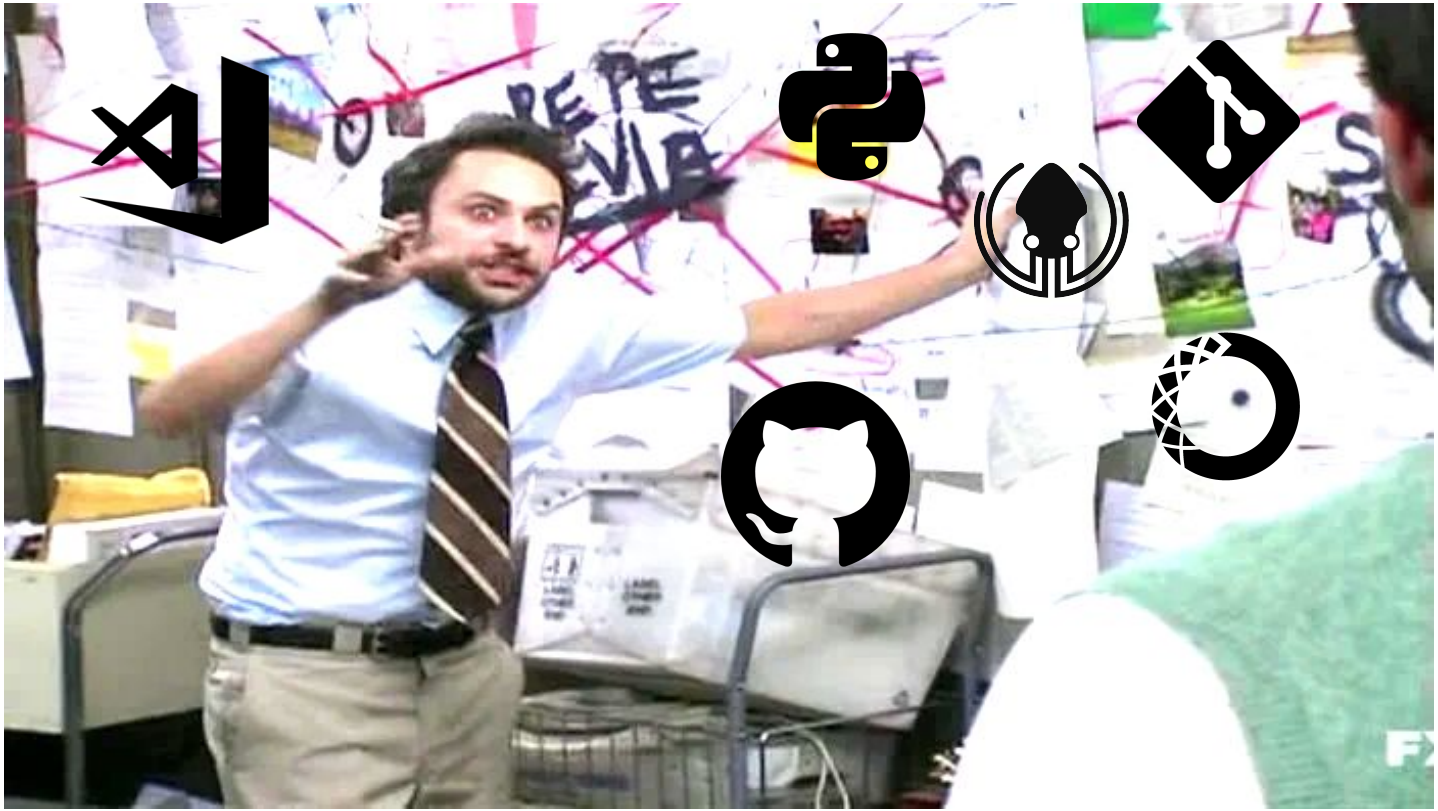
Let's see how far we can get...
Installing python

- For now, we'll be using the anaconda python ecosystem.
- Let's all try to download it via miniconda: https://docs.conda.io/en/latest/miniconda.html
- Try to cluster into groups of Windows, MacOS, and (if existing) linux users and walk through steps together

Let's see how far we can get...
Installing vscode

- VSCode is a code editor. If you already have something else you know how to use, feel free to stick to it
- Basic download instructions here: https://code.visualstudio.com/
- Once you have it installed, boot things up, and install the python extension. We will probably walk through this together.

Okay, so how do all these pieces fit together?

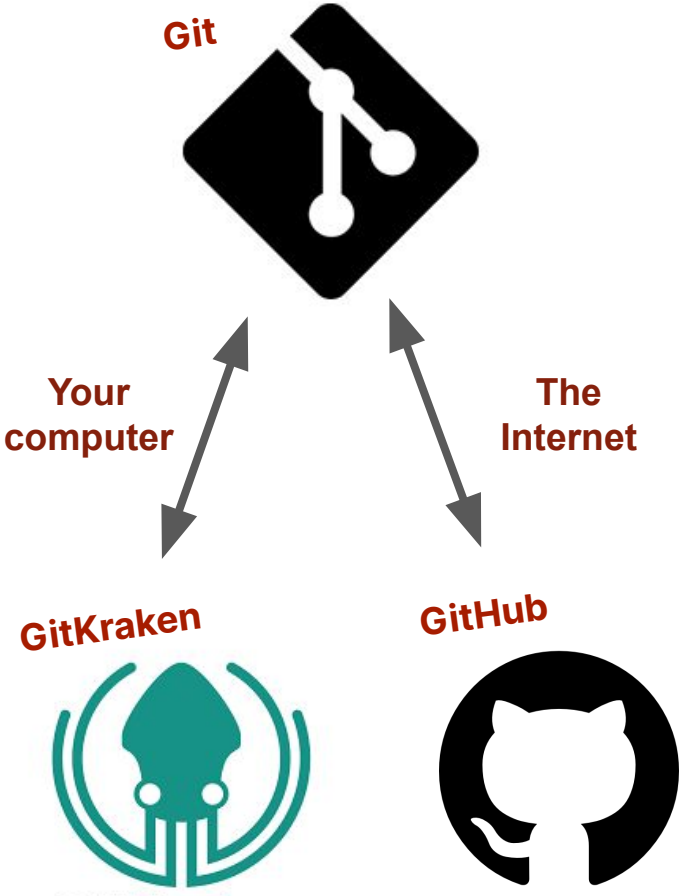


git

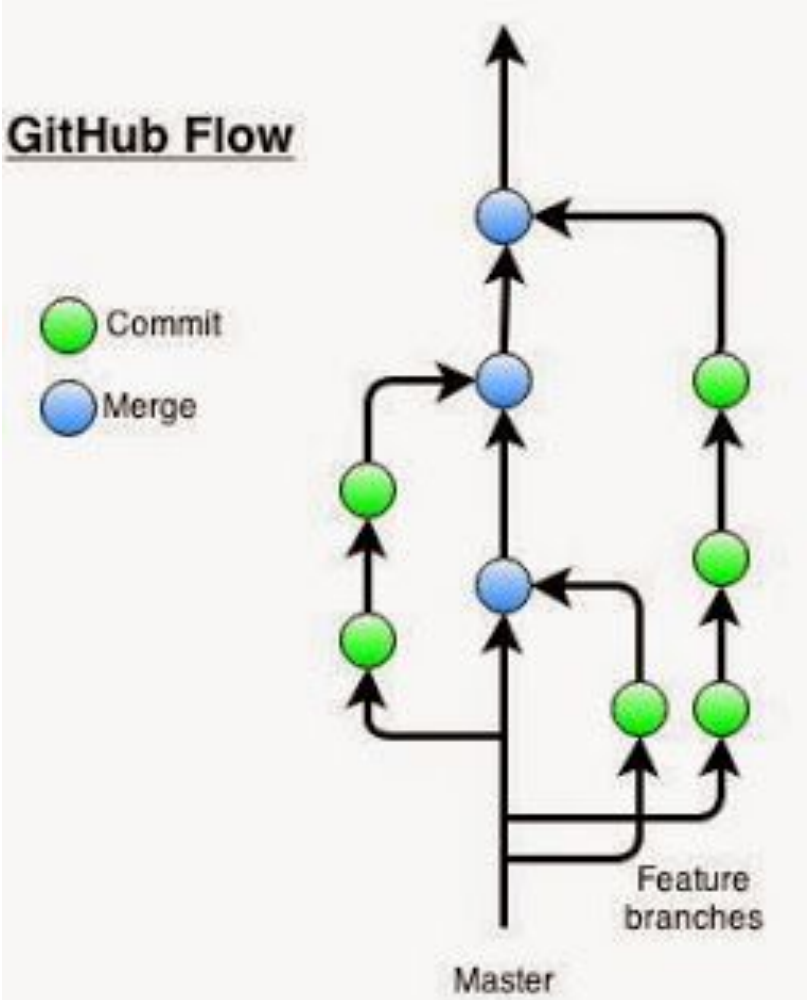
git kraken

github

Let's finally talk about git.

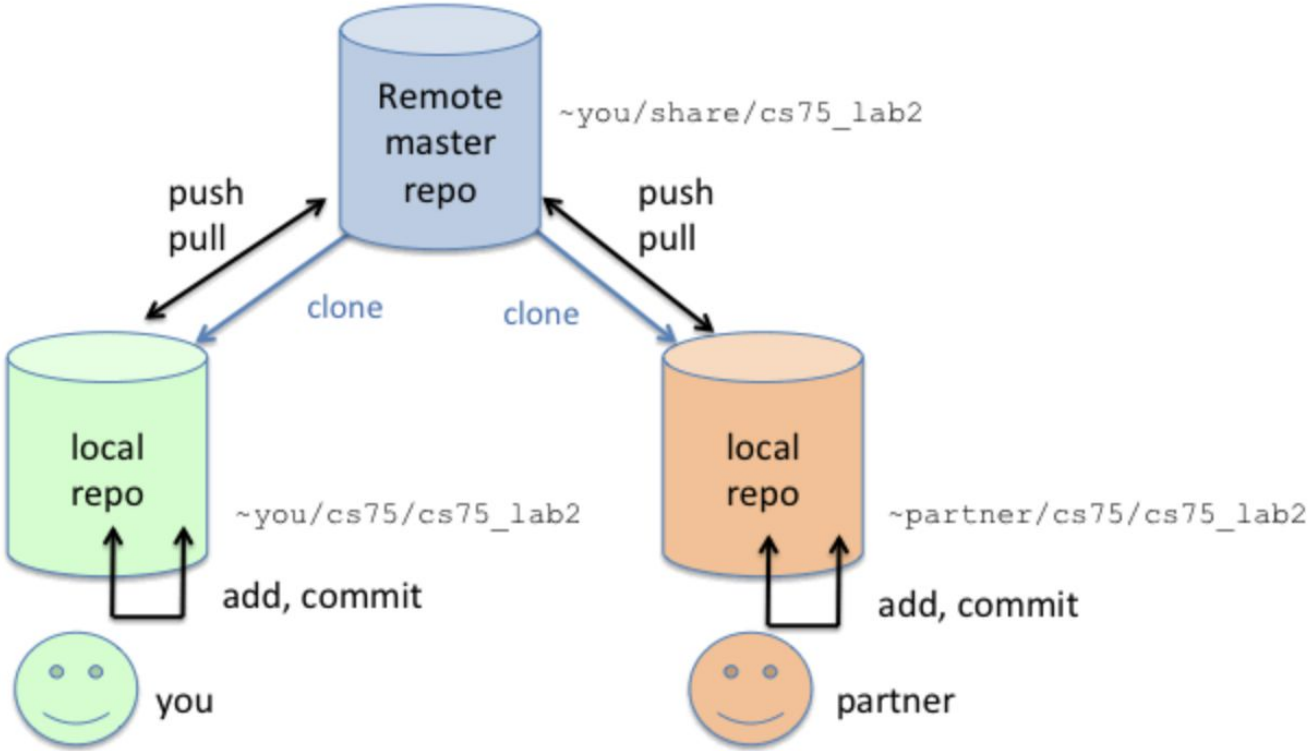


GitHub is a version control system. It allows teams to work collaboratively on the same pieces of code (like track changes for word but much more sophisticated)



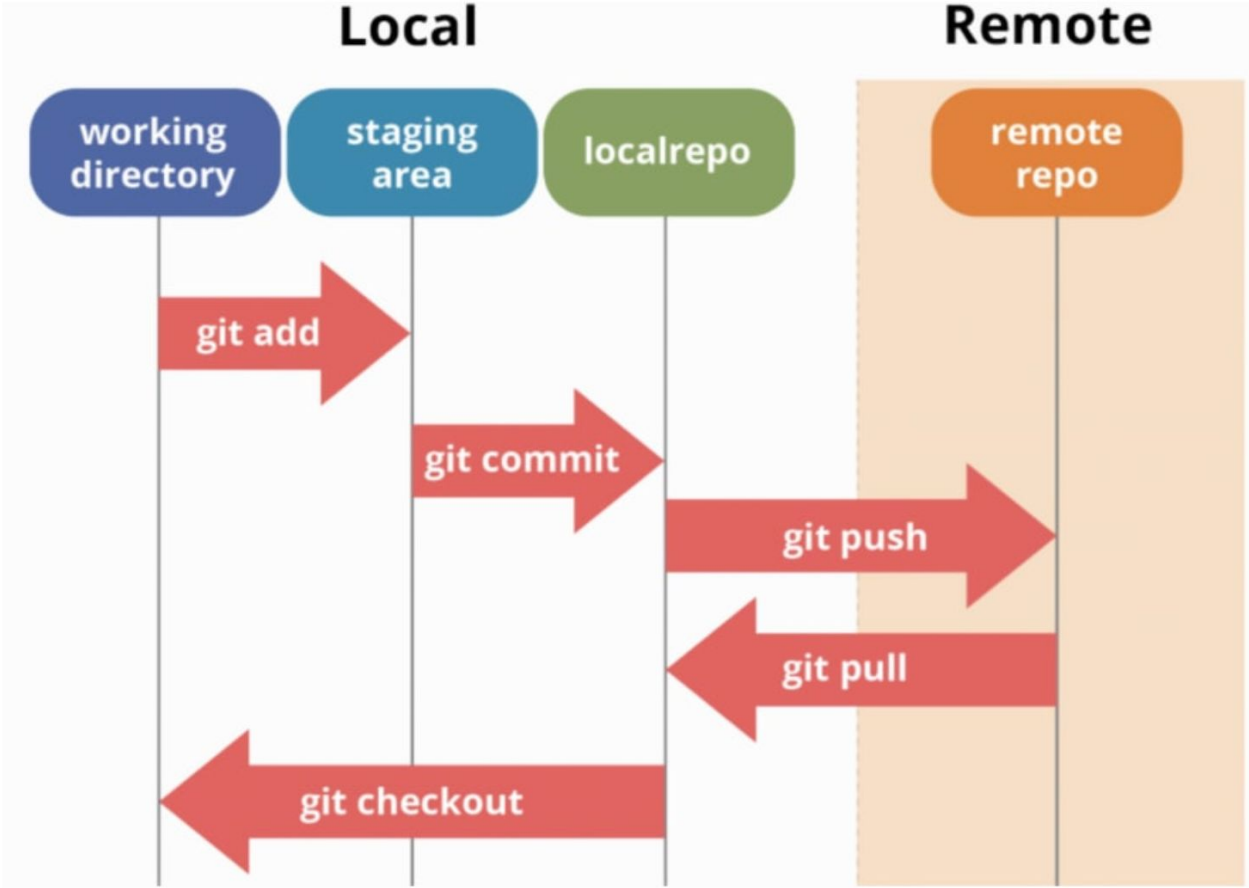
https://www.endpoint.com/blog/2014/05/02/git-workflows-that-work

Local and remote version-controlled repositories



https://www.cs.swarthmore.edu/~newhall/unixhelp/git_create.php

GitHub workflow



https://dev.to/mollynem/git-github--workflow-fundamentals-5496

https://www.reddit.com/r/git/comments/99ul9f/git_workflow_diagram_showcasing_the_role_of/

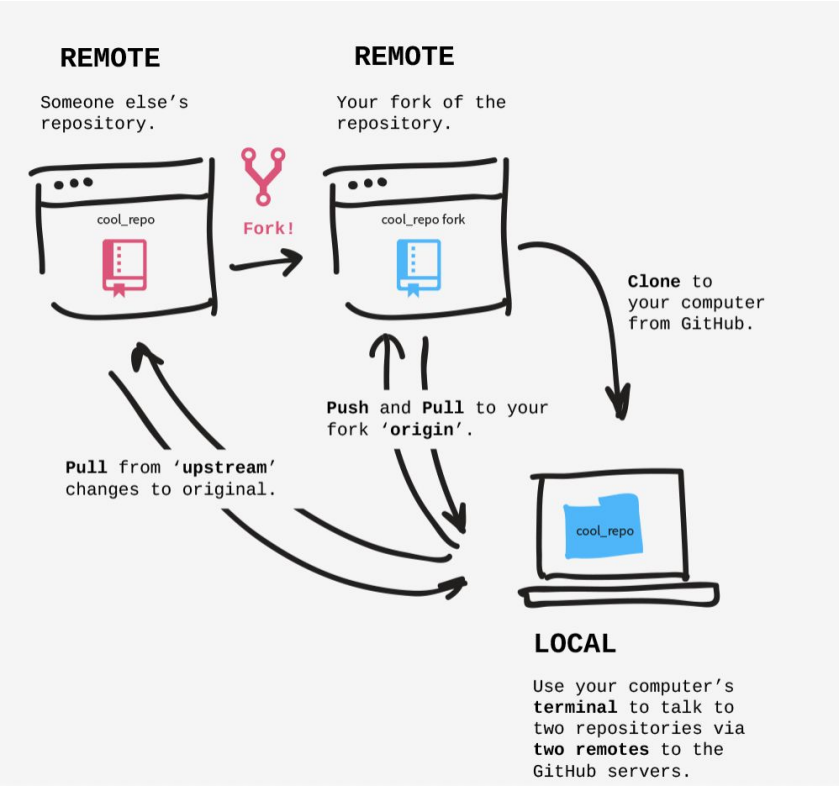
workflow

your local repository consists of three "trees" maintained by git. the first one is your `Working Directory` which holds the actual files. the second one is the `Index` which acts as a staging area and finally the `HEAD` which points to the last commit you've made.

Copied from: http://rogerdudler.github.io/git-guide/

Cloning vs Branching vs Forking

- Cloning is you making a local copy of a repository
- Branching makes a separate pathway, but with all of the same contributors & access privileges
- If you Fork first then you have your own version of the repository remotely that you can pull and push changes to
- For this class we will just clone and maybe branch

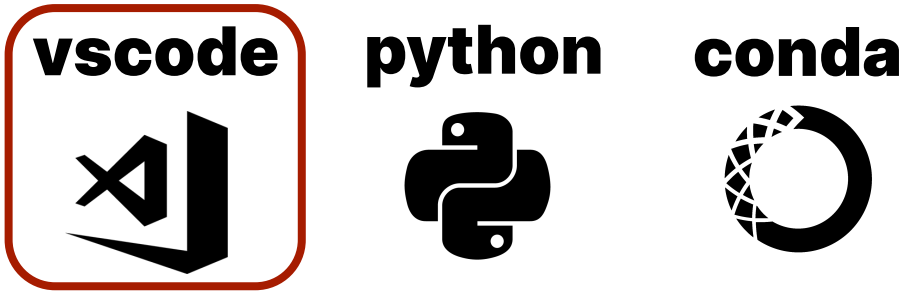


http://jlord.us/git-it/challenges/forks_and_clones.html

Alright, so that's all good and we all know git now

Alright, so that's all good and we all know git now

We'll walk through an example in a minute



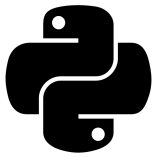
VSCode is the code editor that we will use in this class.

It can be used for many programming languages and supports a ton of extensions to help your coding experience.

It can also be used to help run your code and visualize data.

vscode

python



conda

Python is really two things. There is the code you write which uses Python syntax (just a mapping between what the text is and what the computer does when the code is run)

And there is the Python interpreter, which translates the code you write and actually makes the computer do something

Finally, conda is a tool for managing software environments (think of these like slide templates)

Brief pause for high level questions

Now back to our git example. Demo time!