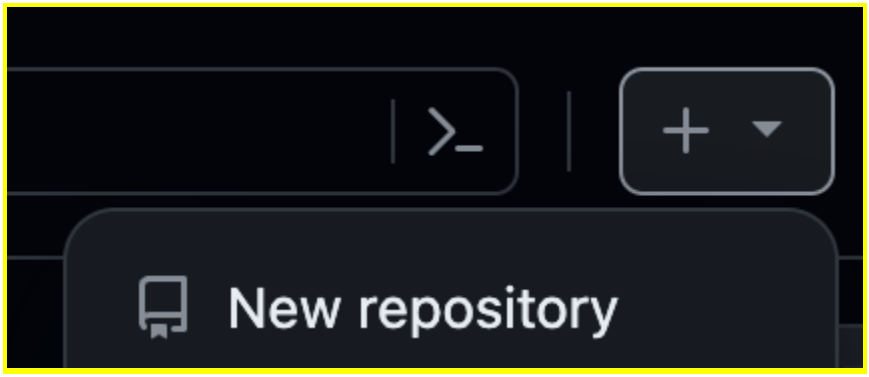
This document will walk you through how to get your computer set up to interact with GitHub. We will not do a ton of work with GitHub in this course, but you will be expected to know the basics. There can be a lot of weirdness with this depending on your particular operating system and setup, which is what we give you a couple of weeks before you have to use git.

Overview: ALL repos you want to have a local copy of need cloned. You do that by running git clone <ssh url that starts with git@github> If it is our class repo, you will be able to only pull from it. You cannot push to it. However, you should be able to push to and pull from the repo where you will store your assignments. In order to push, you have to setup an ssh key to authenticate to the remote GitHub server.

1. Create an account and repo for your coursework at github.com
    a. Once you have created a free account, select the plus sign in the top right corner to create a new repo. I suggest calling it <your name>_csci_1070



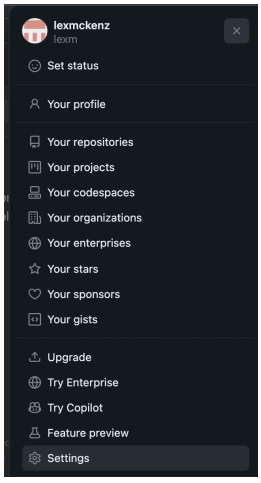
2. Generate an ssh key to security authenticate your local machine to GitHub by running the following command: ssh-keygen
   Do not add a passphrase or new location for your ssh key when prompted. It should look close to below:

```
lex@Alexiss-MBP ~ % ssh-keygen
Generating public/private rsa key pair.
Enter file in which to save the key (/Users/lex/.ssh/id_rsa):
Created directory '/Users/lex/.ssh'.
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /Users/lex/.ssh/id_rsa
Your public key has been saved in /Users/lex/.ssh/id_rsa.pub
The key fingerprint is:
SHA256:RVVkv/rL7XwVNu2PEfeldXuCm8yyO7rUwUKqDoQg0mY lex@Alexiss-MBP.attlocal.net
The key's randomart image is:
+---[RSA 3072]----+
|          ...o+  |
| .         .   . . |
|+ E      . .     o|
|++     o o    .+B|
|. .    . S o  ..BB|
| .    .    o .. =.=|
|  . .    . .o + ++|
|   o    .  o = +.+|
|    .    ooo=   =*|
+----[SHA256]-----+
```

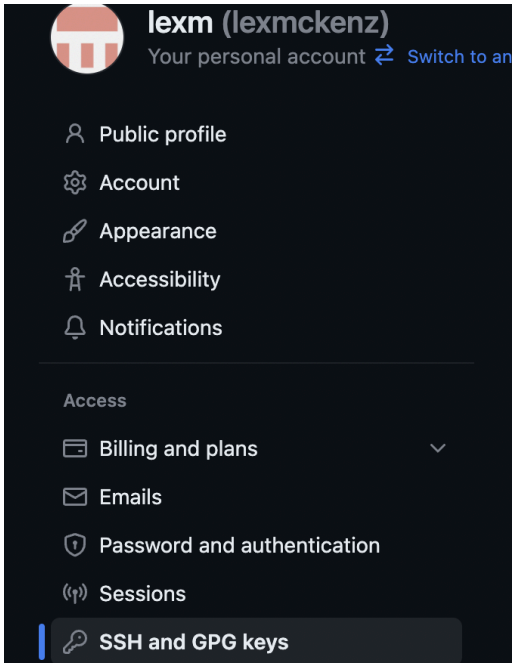
3. cat the public key that creates a handshake between your machine and github by running cat <path to your ssh public key>. Note that your public key ends in .pub

```
lex@Alexiss-MBP ~ % cat /Users/lex/.ssh/id_rsa.pub
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABgQDC9azk4NWs1I52xCYgQMaDkWwb2m+V5JtS1C+VrG2x
yuKk7WlAJNWgj9+UuBKxNiv1QKeI2pptiRlY9MgzkSYXMQZy73/6B6Nbm9+lT8wru8AK0QWk1R8IL9ap
w8JYQjvSA6VHrV4SbEcEKDR1c68+WCSvCdj5jff9ih02PRB37q2VApssN+gkk77KYWpbF6Rp2HwINeuq
```

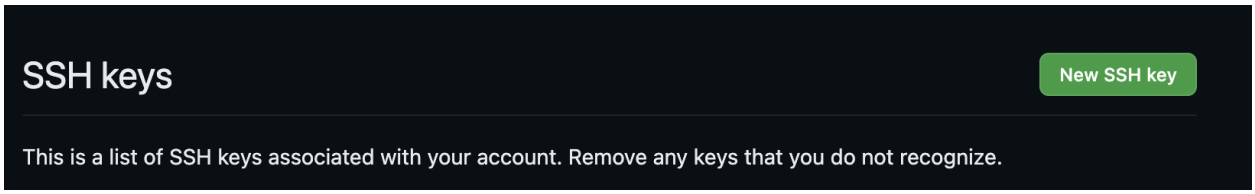
4. Copy the full key that is returned in the terminal/gitbash.
5. Go to github.com and select your picture in the top right-hand corner. You should see a dropdown that looks as below. Select “settings”



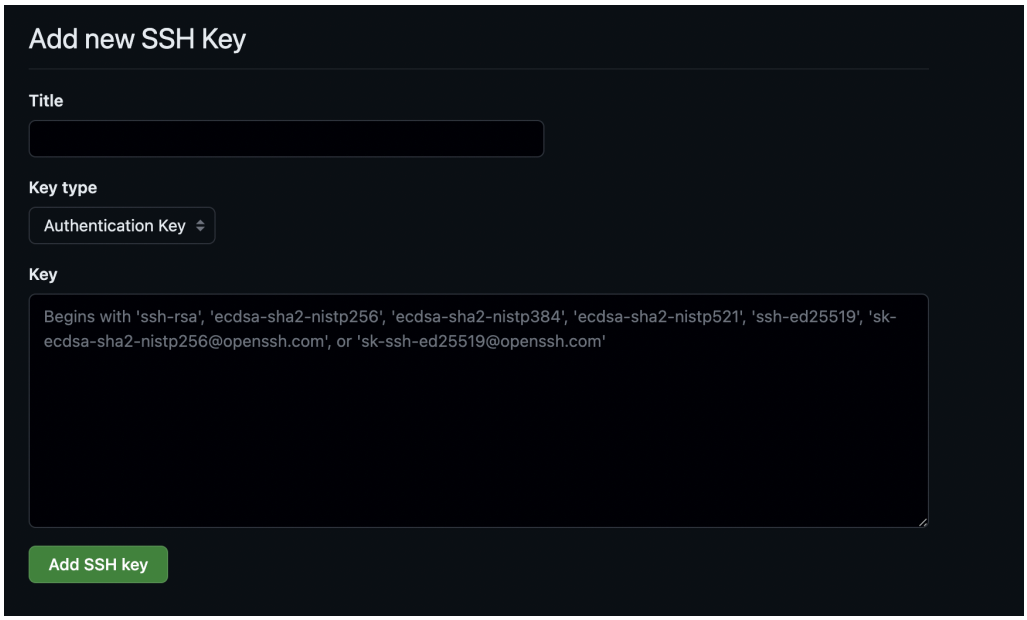
6. Once you get to settings it should look like as below. Select “SSH and GPG keys”



7. Then, select “New SSH key”



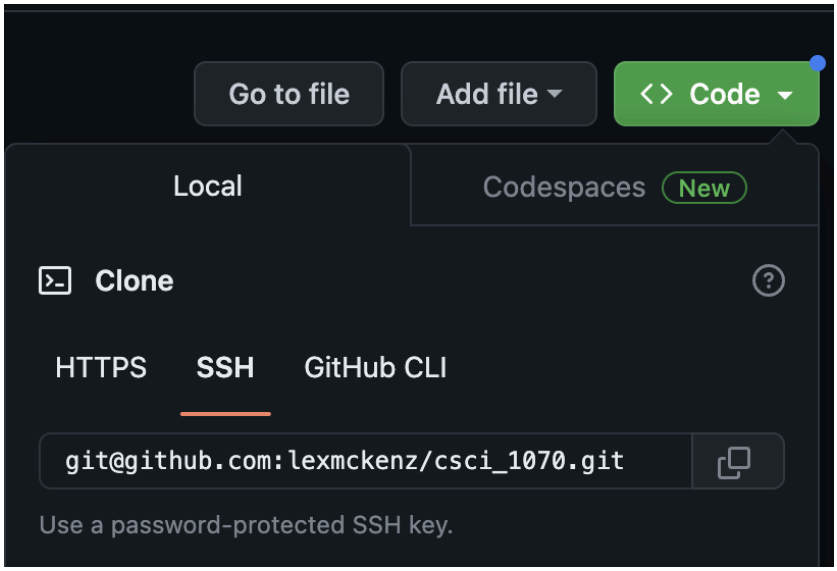
8. Fill out the details with the id_rsa.pub file text you copied in Step 3. Please note that you can title the SSH key whatever you want. I would title it something about the machine you’re connecting to. “My laptop”, “my computer lab account”, etc. If you have issues, you likely made a mistake here. So, please re-copy your public key!



9. Make a change to your repo and push the change to verify. A basic pattern I use a lot is:
    - git status to see what files were changed
    - If I like all the changes indicated, I will run git add .
        - The . at the end represents adding all changes to GitHub
    - If I do not like all the changes, I will run git add <name of the file I want to add>
    - git commit -m “<a message about what my changes are>”
    - git push to push your changes from local (your local copy) to the GitHub remote. After this, you should see the changes you want to in your repo in github.com

Common issues:

- Your remote URL is wrong. Run git remote -v . if your URLs start with HTTPS you will need to switch them to the SSH remote. You can find that by going to your repo, selecting the big green Code button, and switching to the SSH tab.



    - To update your remote URL, run git remote set-url and add the right url. You can also delete the wrong ones.
- When in doubt, you can delete a previous local copy of a repo (MAKE SURE YOU MOVE WHAT YOU WANT OUT OF THE DIRECTORY FIRST) and reclone it using the ssh URL, which starts with git@github.com