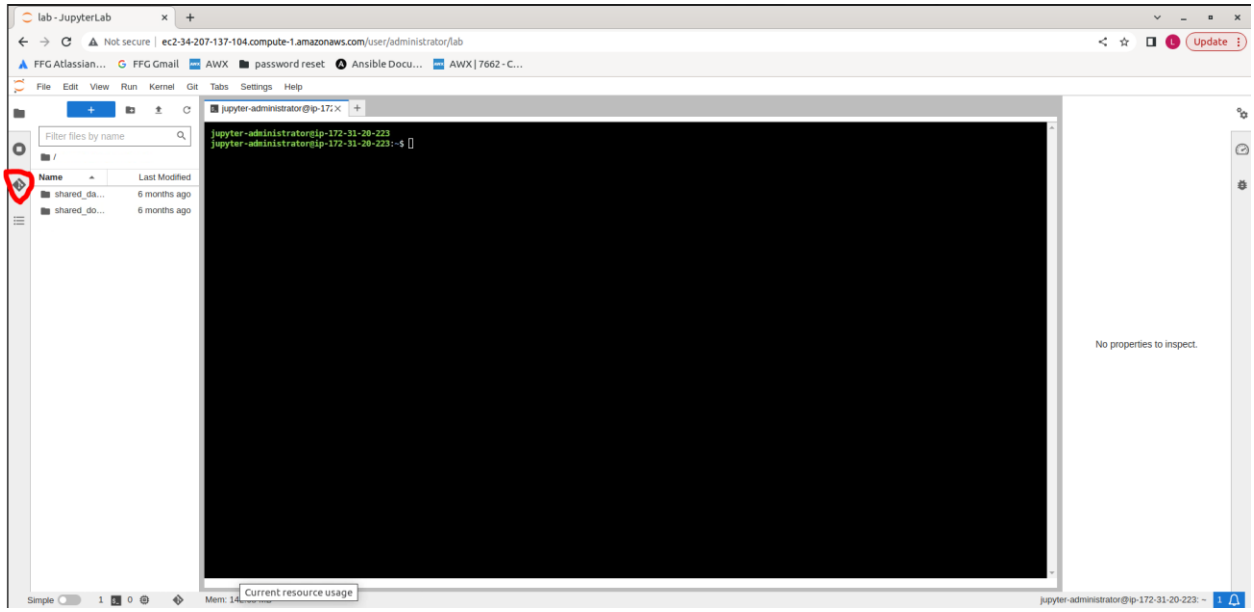
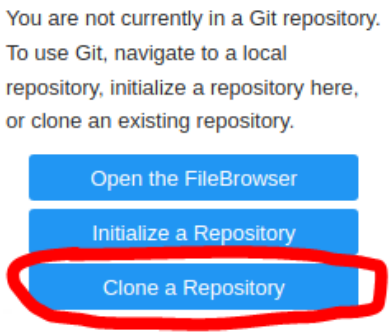
**Using GIT with JupyterHub:**

**A.** Git Clone:

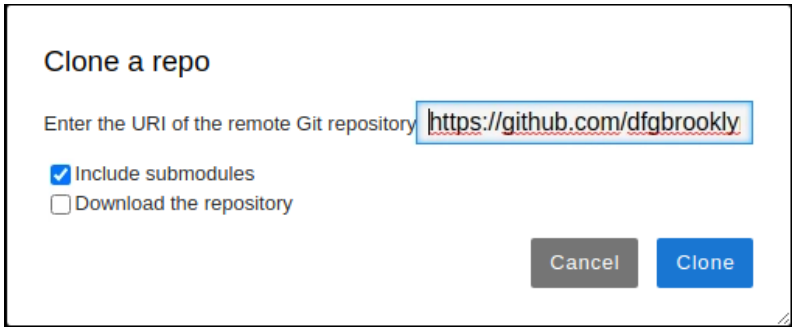
1. Press the GIT icon in JupyterLabs:



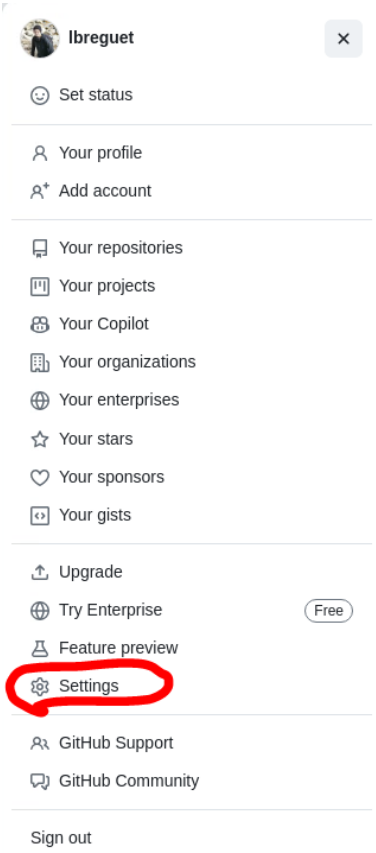

2. Press **Clone a Repository**:



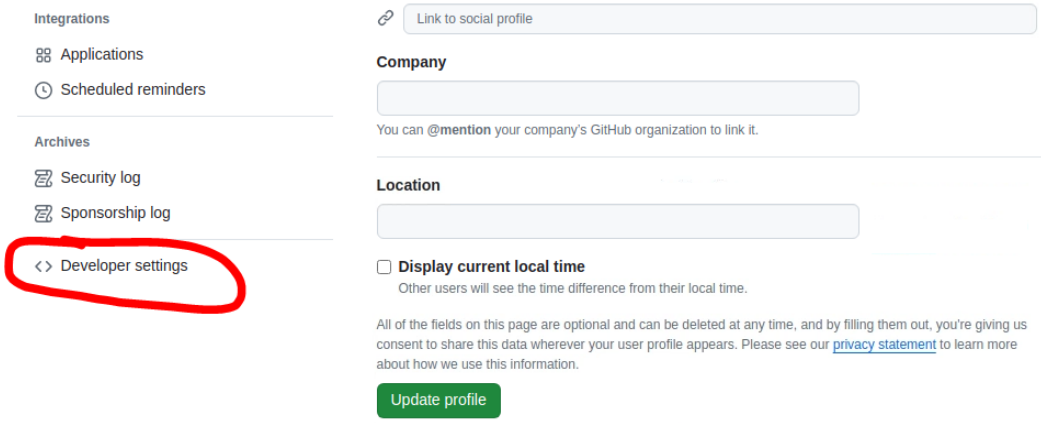

3. Paste the https link to your repo and press **Clone**:



4. In this next window you need to generate a **Personal Access Token** from Github, so go to Github and go to **Settings** located when clicking your profile photo:

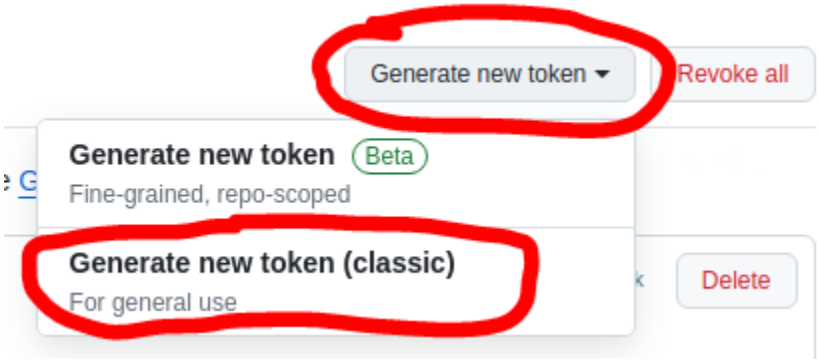



5. Scroll to the last item on the sidebar and click **Developer Settings**:

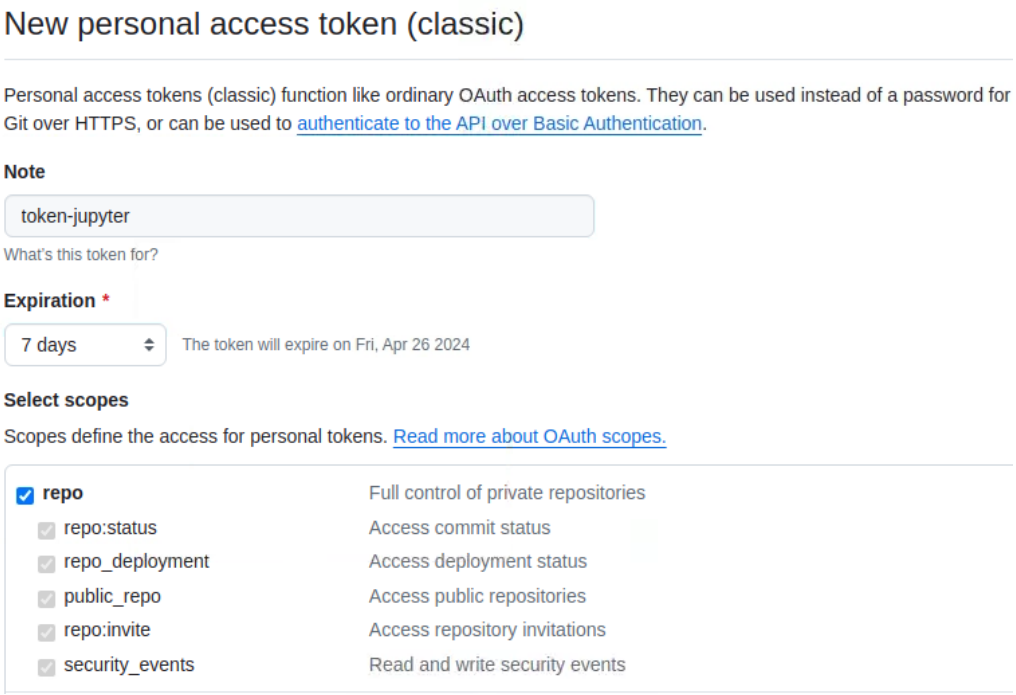



6. Click on **Personal Access Tokens** and then on **Tokens (Classic)**:

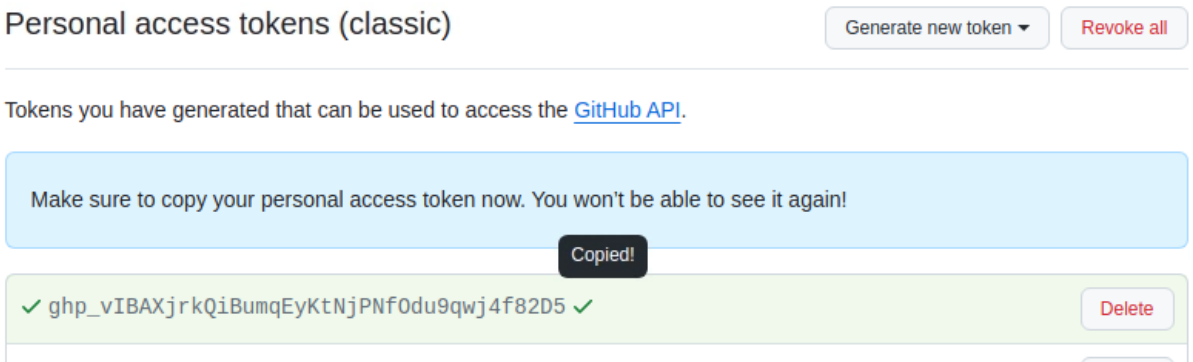
7. At the top, click on **Generate new token** and then click on **Generate new token (classic)**:



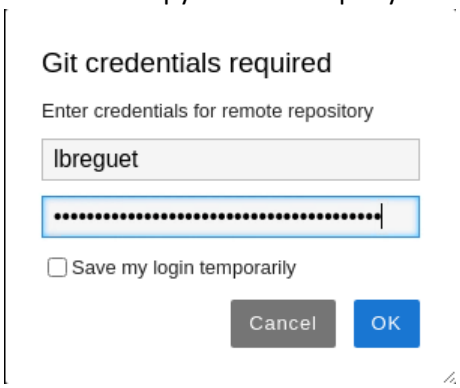

8. Give your token an arbitrary name and give it full repo access:



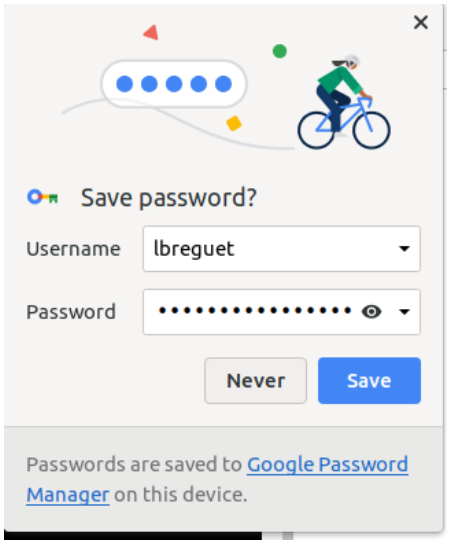

9. Scroll all the way to the bottom and press **Generate Token**
10. Copy the new token (save in a text file):



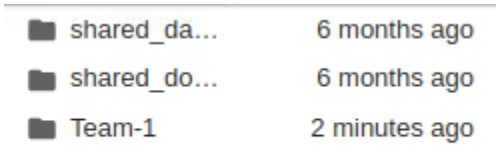
11. Go back to JupyerLab and input your Github username, paste your token, and press **OK**:




12. Save the credentials to our browser, it make it easier to use git commands for later:

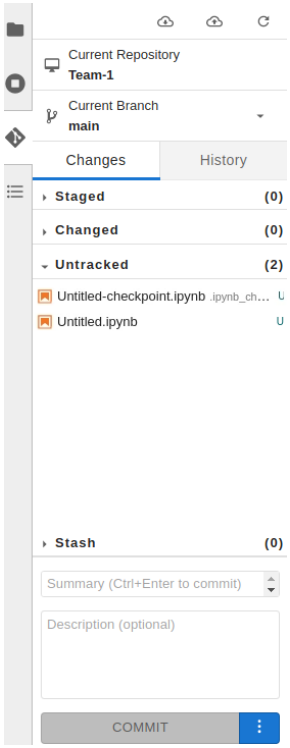



13. The repo has been cloned:

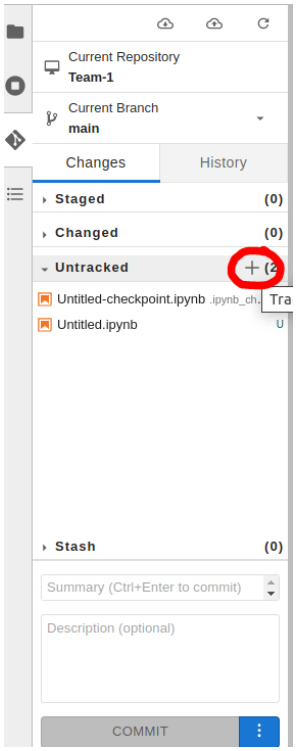


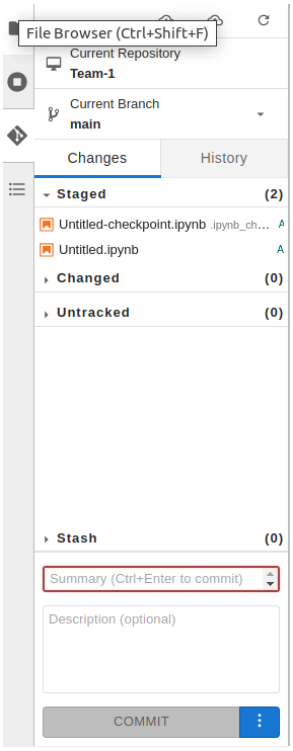
B. Committing:

1. After making a change, go to the git icon, you'll notice a version control dashboard:

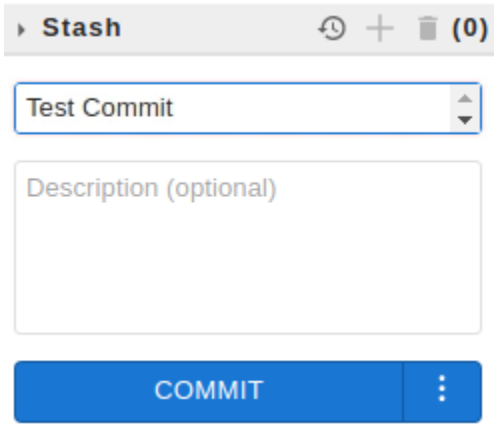



2. Hover over **Untracked** and press the **+** sign:

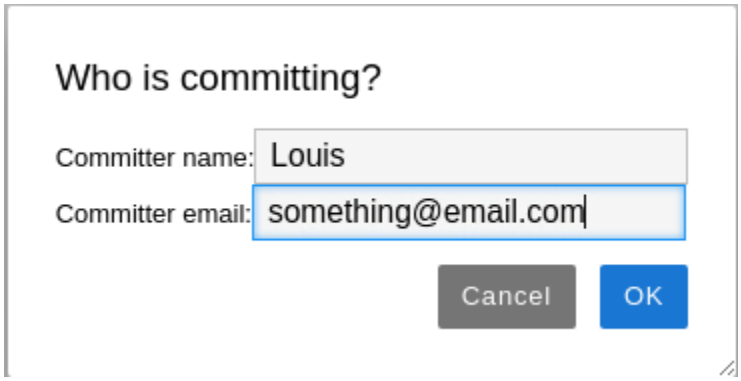


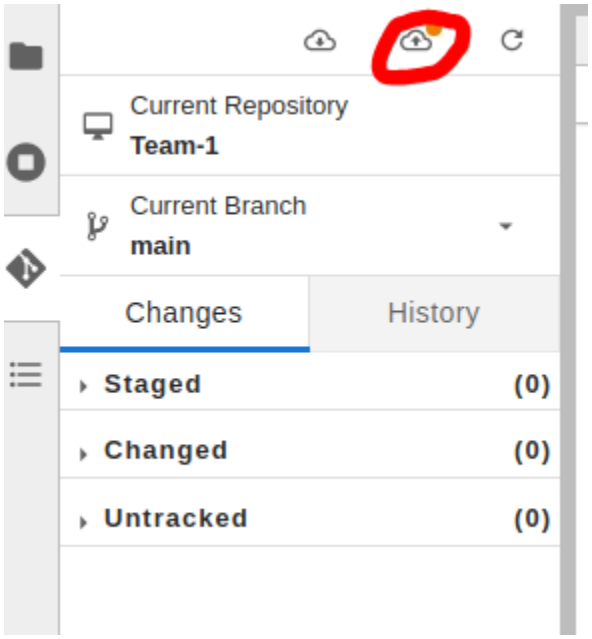
3. Type a summary of your changes at the bottom then press **Commit**:




4. Input your name and your Github email and press **Ok**:

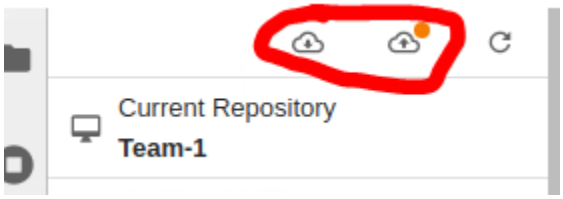



5. There will now be an icon with an orange dot indicating to push to your repo:

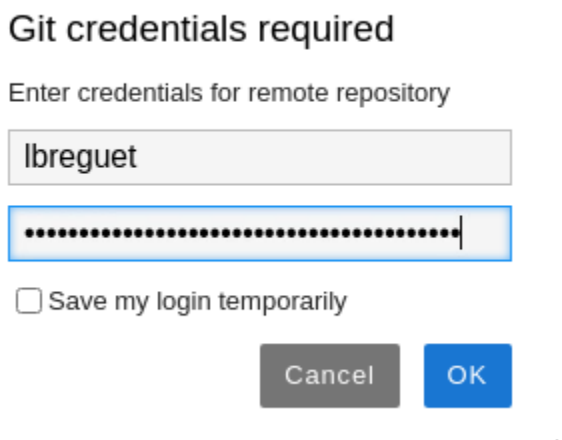


C. Pushing and Pulling:

1. Periodically, you will have to push your changes and pull your teammates changes from your repo. The cloud with the arrow pointing down is the **git pull** command while the other cloud with the arrow pointing up is the **git push** command:




2. Both pushing and pulling utilize the same UI behavior, so get that Personal Access Token we generated earlier handy. Input your credentials and press **OK**:




3. You will get a success message on the bottom right if everything was successful: