Lab: GitHub and Jupyter

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To begin this lab session I set up a GitHub account. I followed the provided tutorial and created an account, as well as downloaded Git to my computer. I took some time to explore the interface, which is completely new to me. I then created a repository as instructed, including a brief description of the lab up to that point in the README file. My next step was to begin the Jupyter Notebook/Lab tutorial. This began by installing first pip, then Jupyter Notebook and Jupyter Lab. I successfully followed the steps to limit JupyterLab’s indexing, and then ran both the Lab and the Notebook and explored them a bit. My next step was to create my first notebook, following the lab instructions. I named it appropriately and included both the Markdown cell and the Code cell. I saved the file and uploaded it to my GitHub repository, and double checked that the repository was public. You will find that link here: <https://github.com/devinyl9/jupyter-exploration>

Nearly all the concepts and tools introduced to me in this lab were new to me. I am at the beginning of my concurrent programming in Python class and generally new to computer science so I am learning a lot as I go. From what I have come to understand through experience and research is that GitHub is a cloud-based hosting platform that allows developers to upload, document and share code for software development. What makes GitHub such a ubiquitous platform for both personal and professional coders is “version control” which is a system that allows multiple developers to work on the same projects at the same time while also tracking changes made to the source code. From what I can tell, this is important because it creates a full history of the code and all the changes made to it so that other developers can use it at various points of development and code can be reverted to previous versions, among other reasons. I also took some time to research Jupyter Notebook, which I have come to understand is an open source application that allows users to create and share documents such as live code. It is an “interactive computing” environment, which I understand to mean that it allows developers to run and test small amounts of code in “cells” and get an immediate result. This makes it an excellent platform for testing, troubleshooting and experimenting with code.

During this lab my greatest challenge was my lack of knowledge and understanding. I didn’t really run into any technical issues, aside from spending a bit of time trying to figure out how to download pip. I only just installed Python a few days ago so this is all very new to me. I am grateful for the information in your lecture, as well as my favorite resources for learning totally new concepts: YouTube and Claude. I leaned on these resources to walk me through the processes and concepts in this lab that I didn’t understand at first.