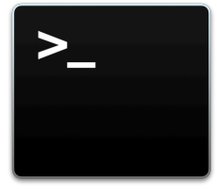
Working Remotely for CS134

What You Need

- Text editor for writing programs
  - Ideal: **Atom**, the application we have been using so far

- **Python3** for executing programs
  - via Terminal in Mac
  - via Command prompt in Windows



- **Git** for submitting work and downloading starters
  - If using Atom, can commit/push/pull as usual

- **VPN client CiscoAnyConnect** to log on to the CS server **evolene**
  - Information on downloading available at

https://oit.williams.edu/help-guides/wifi-and-wired-connections/vpn/

VPN (Virtual Private Network)

- Very important step, get it installed now!

VPN (Virtual Private Networking)

Williams VPN

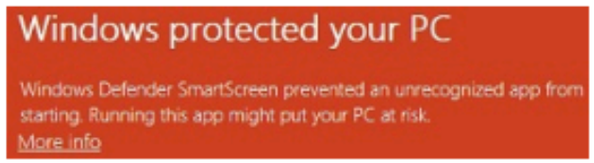
Running the VPN client allows you to establish a secure connection to the college network. Your computer acts as though it were here on campus. Among other things this allows a keyserver connection to run Williams licensed software from off-campus. The VPN connection is limited to Faculty, Staff and Students who are doing academic or administrative work.

- **macOS X:**
  In the Applications folder open "Self Service" and run the Cisco AnyConnect VPN client. Once installed you'll need to enter the Server Address:

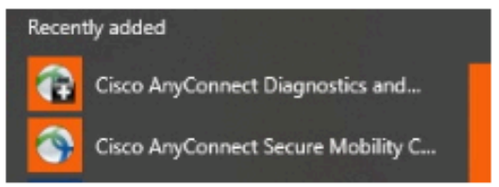
  ssl-vpn.williams.edu *(this is a one time entry)*

  - You will then be presented with a login screen. Use your short username and the password you use for email. If you have any questions call the HelpDesk: 413-597-4090 or email: itsupport@williams.edu.

- **Windows:**
  Download the VPN client, called Cisco AnyConnect, from the software download site. When you run it you will be warned that this is an unknown application



  - This is OK! Click the More info link and choose Run Anyway. You will be prompted at least one more time as to whether you want to install the software. Keep clicking Allow.
  - You will have to reboot. After rebooting you will have the Cisco AnyConnect Secure Mobility Client in your program list from the Start menu.



  - When you first run it enter the Server Address:

    ssl-vpn.williams.edu (*This is a one time entry)*

  - You will then be presented with a login screen. Use your short username and the password you use for email.

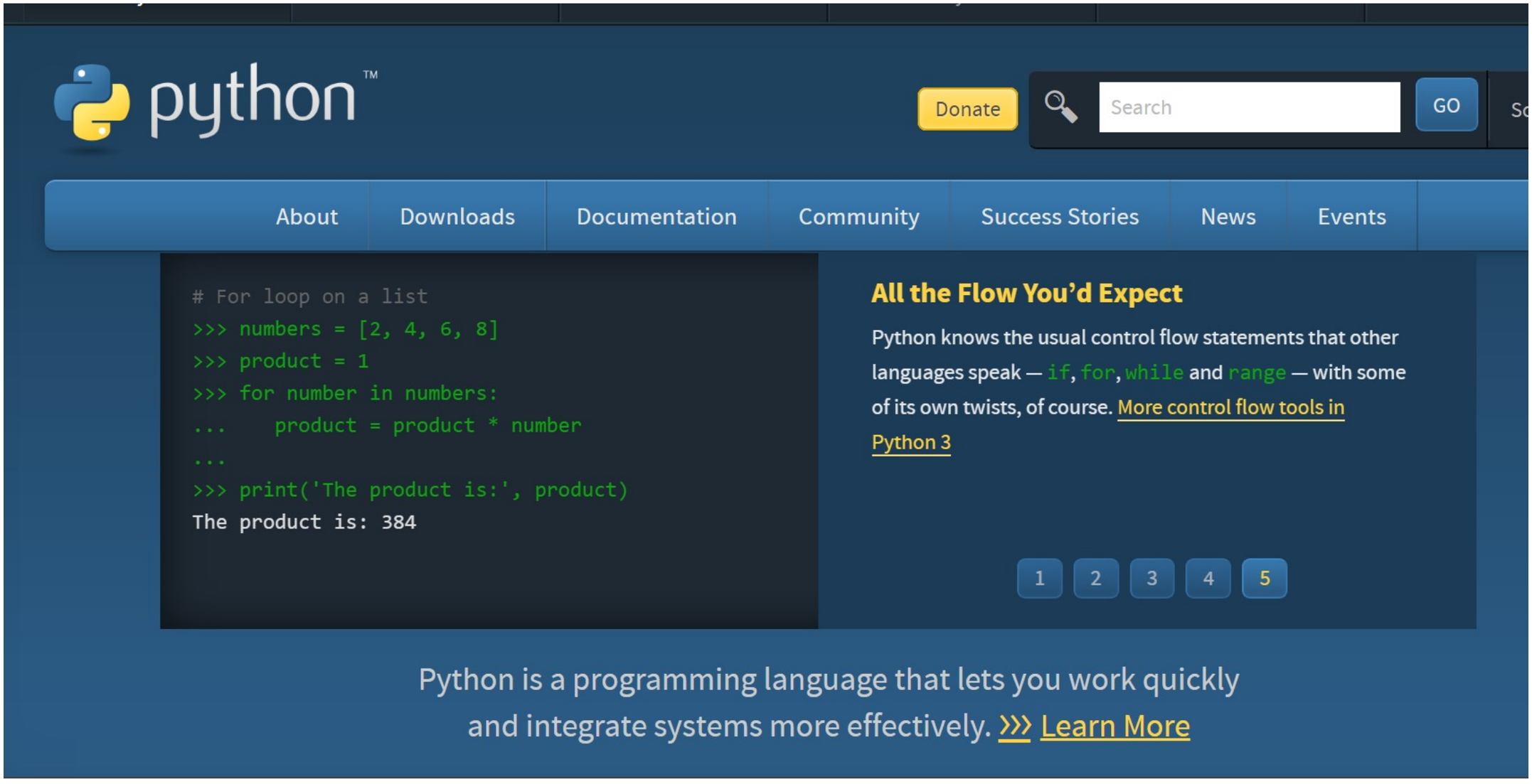
Getting Set Up: Windows

Windows Commands vs Unix

Commands on Mac		Equivalent on Windows
(list contents of directory)	`ls` ⟷	`dir`
(change directory)	`cd` ⟷	`cd`
(make directory)	`mkdir` ⟷	`mkdir`
(move to root)	`cd /` ⟷	`cd \`

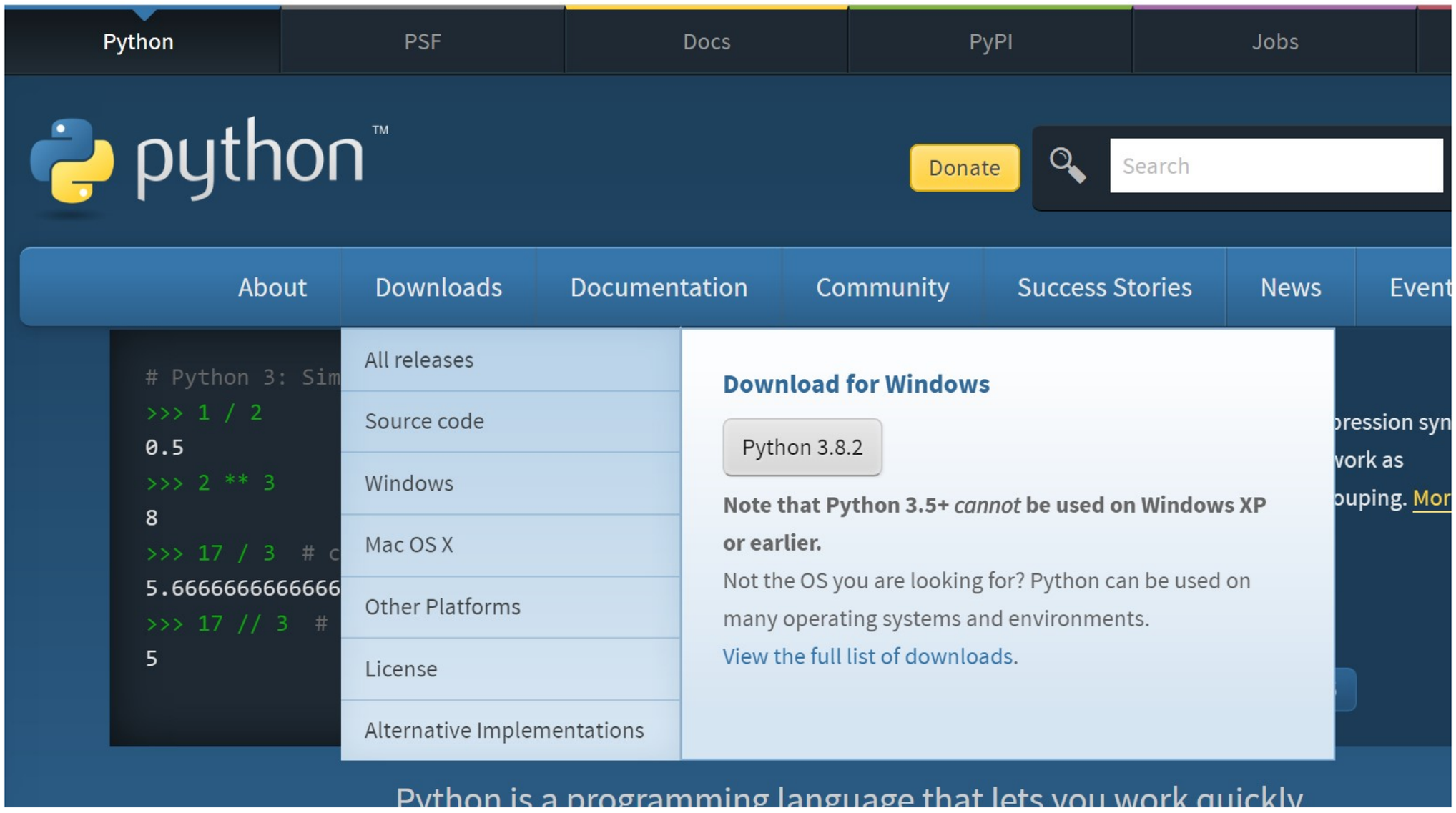
Python3 Setup: Windows

- Log on to www.python.org



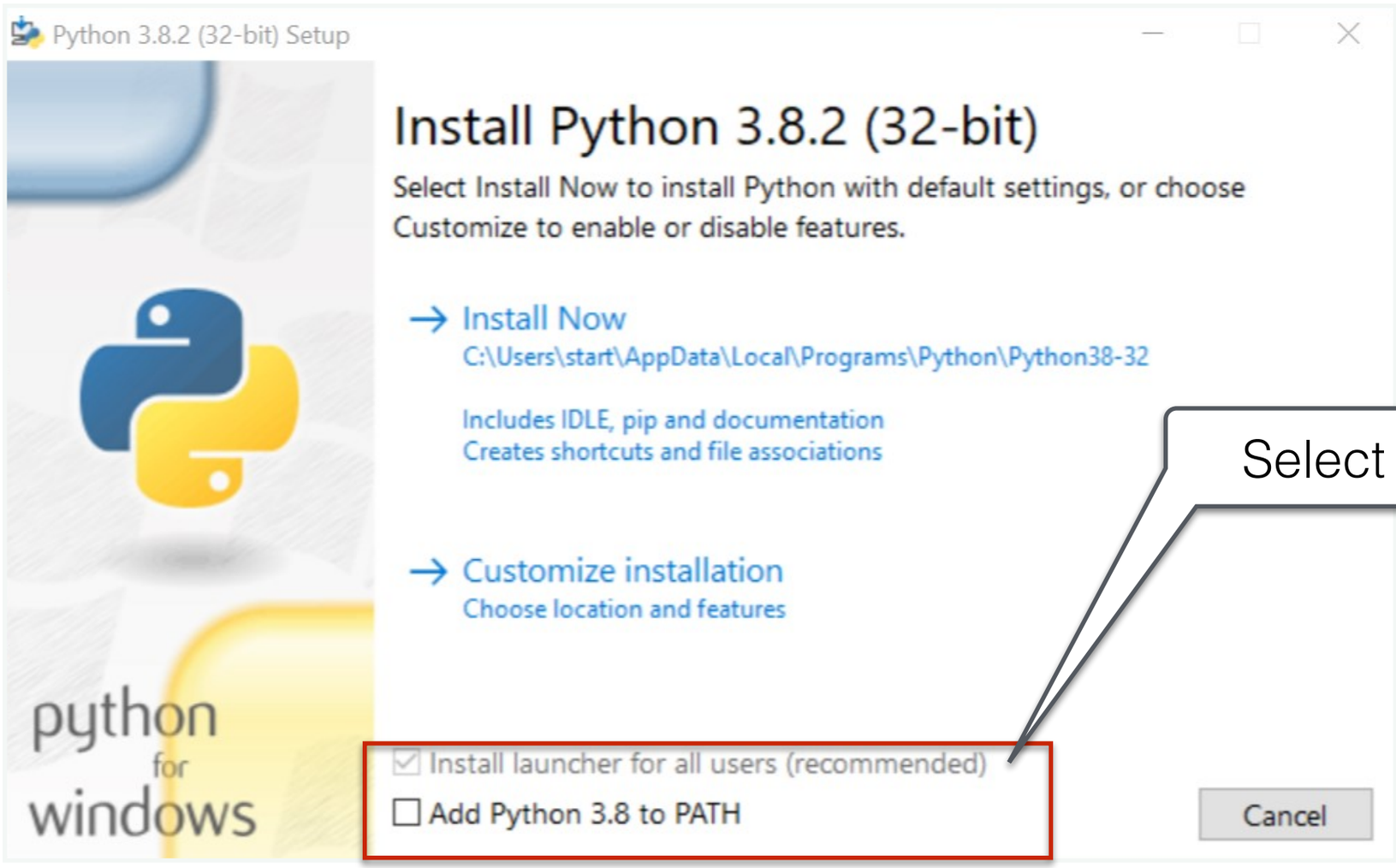
Python3 Setup: Windows

- Go to Downloads -> Download Python 3.8.2 for Windows



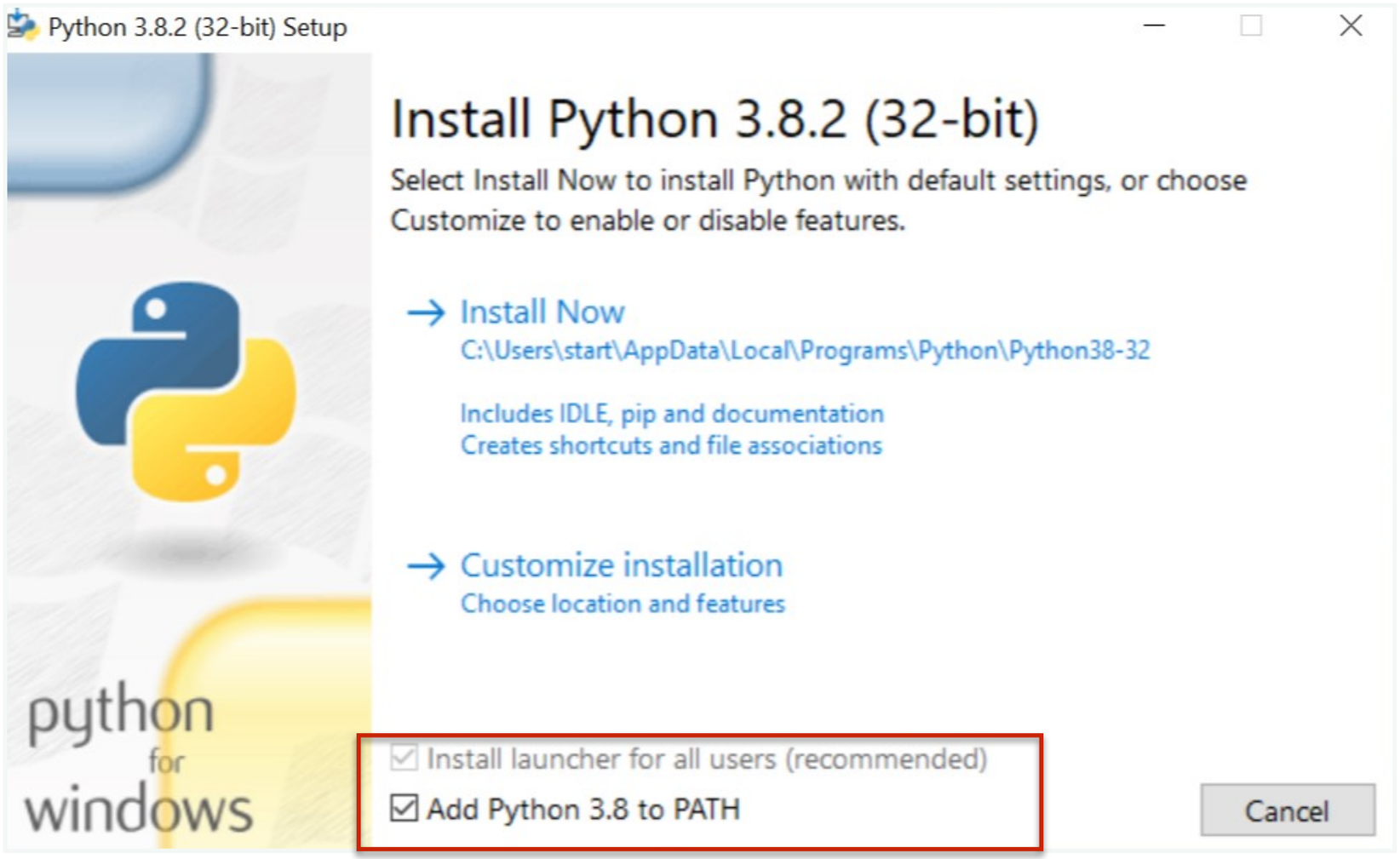
Python3 Setup: Windows

- The executable will download automatically and afterwards show the following pop up for installation



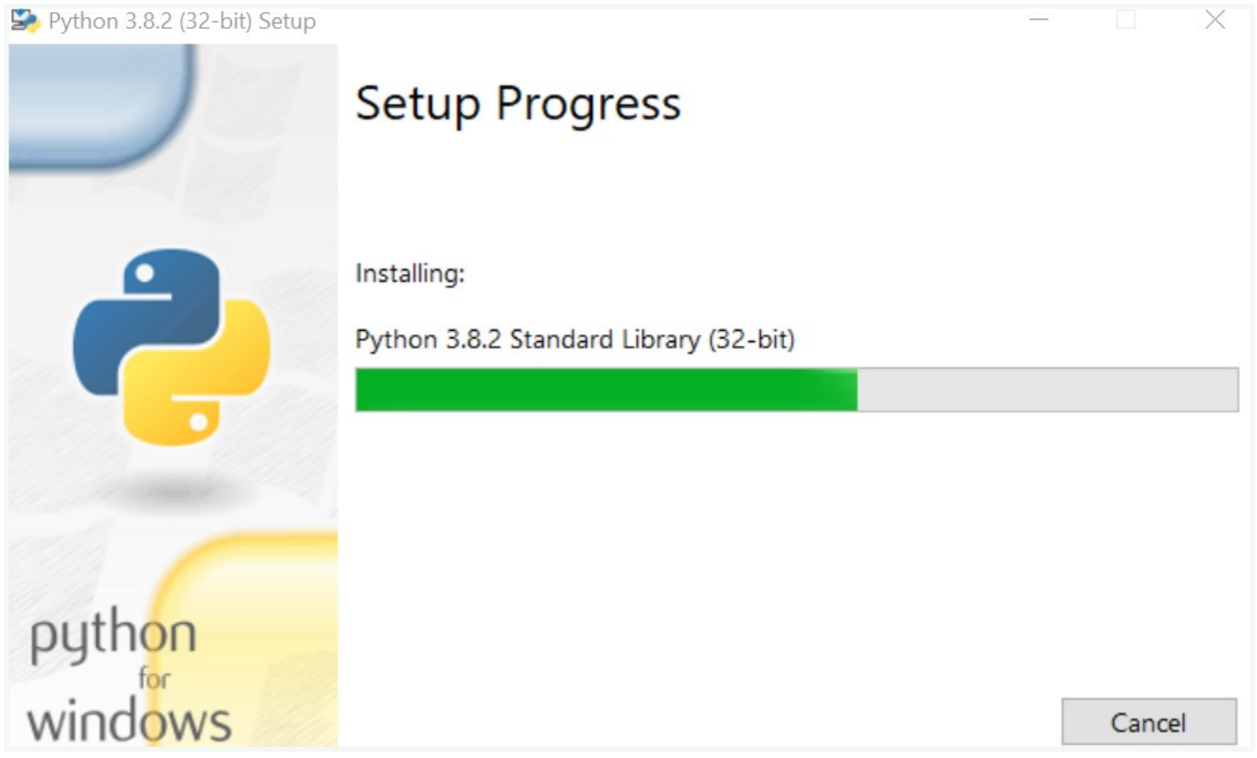
Python3 Setup: Windows

- Make sure to select the Add Python 3.8 to PATH option



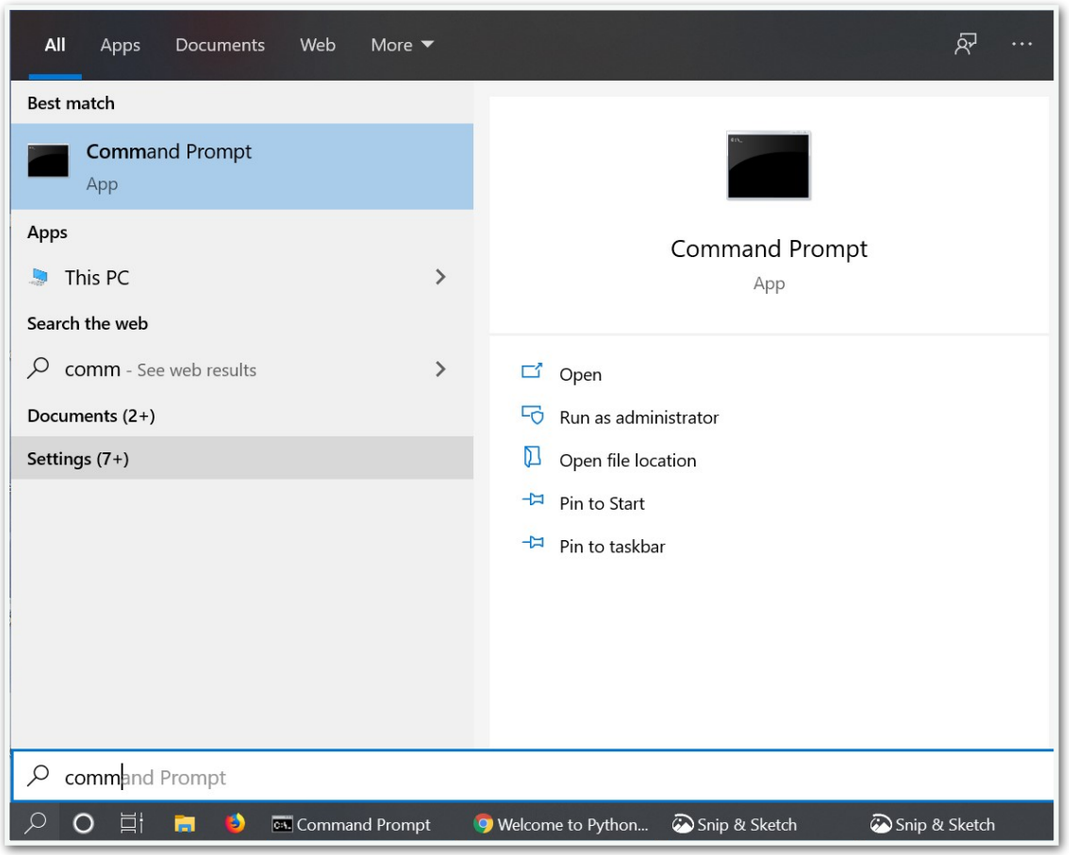
Python3 Setup: Windows

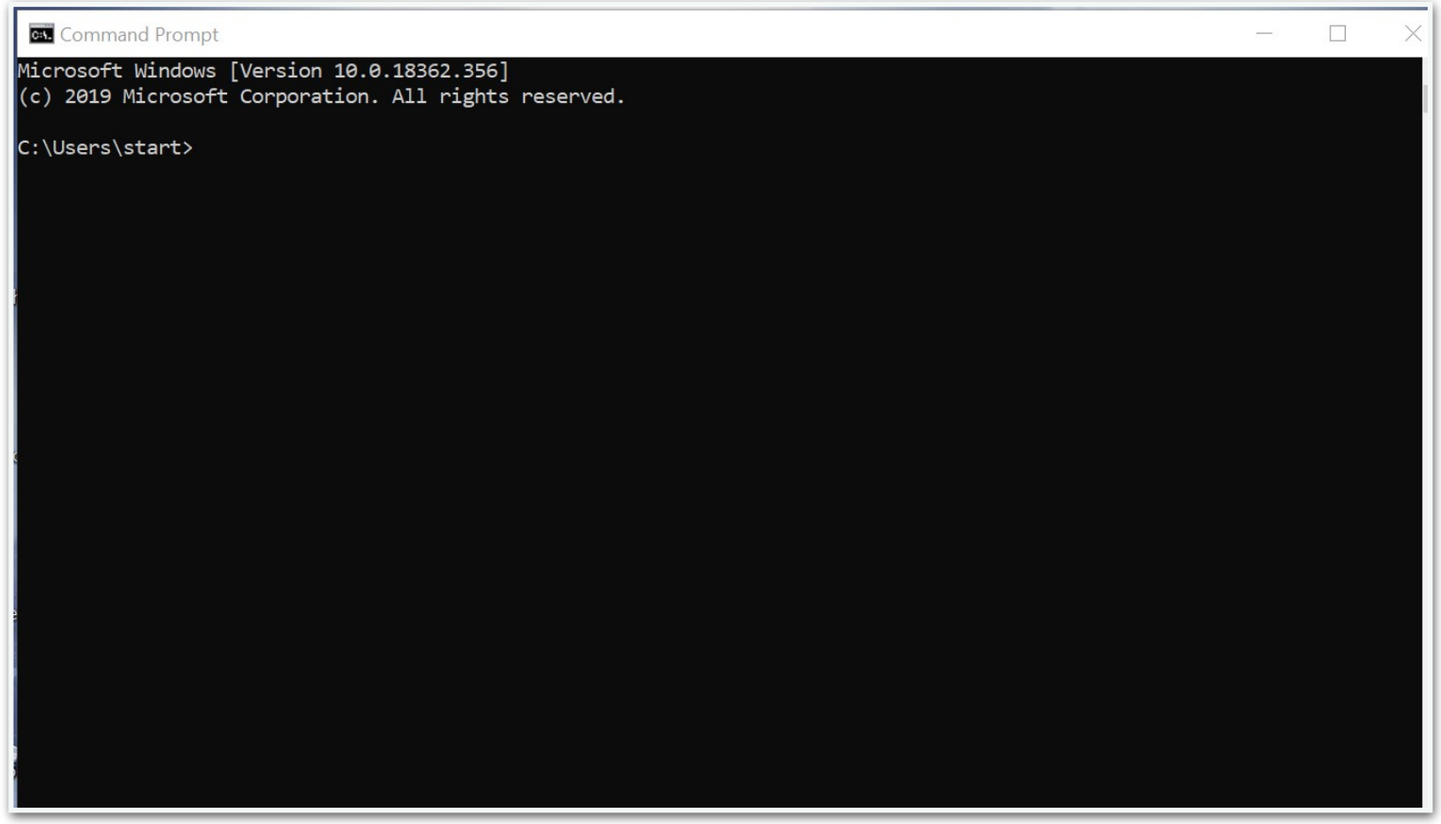
- Wait for installation to finish



Python3 Setup: Windows

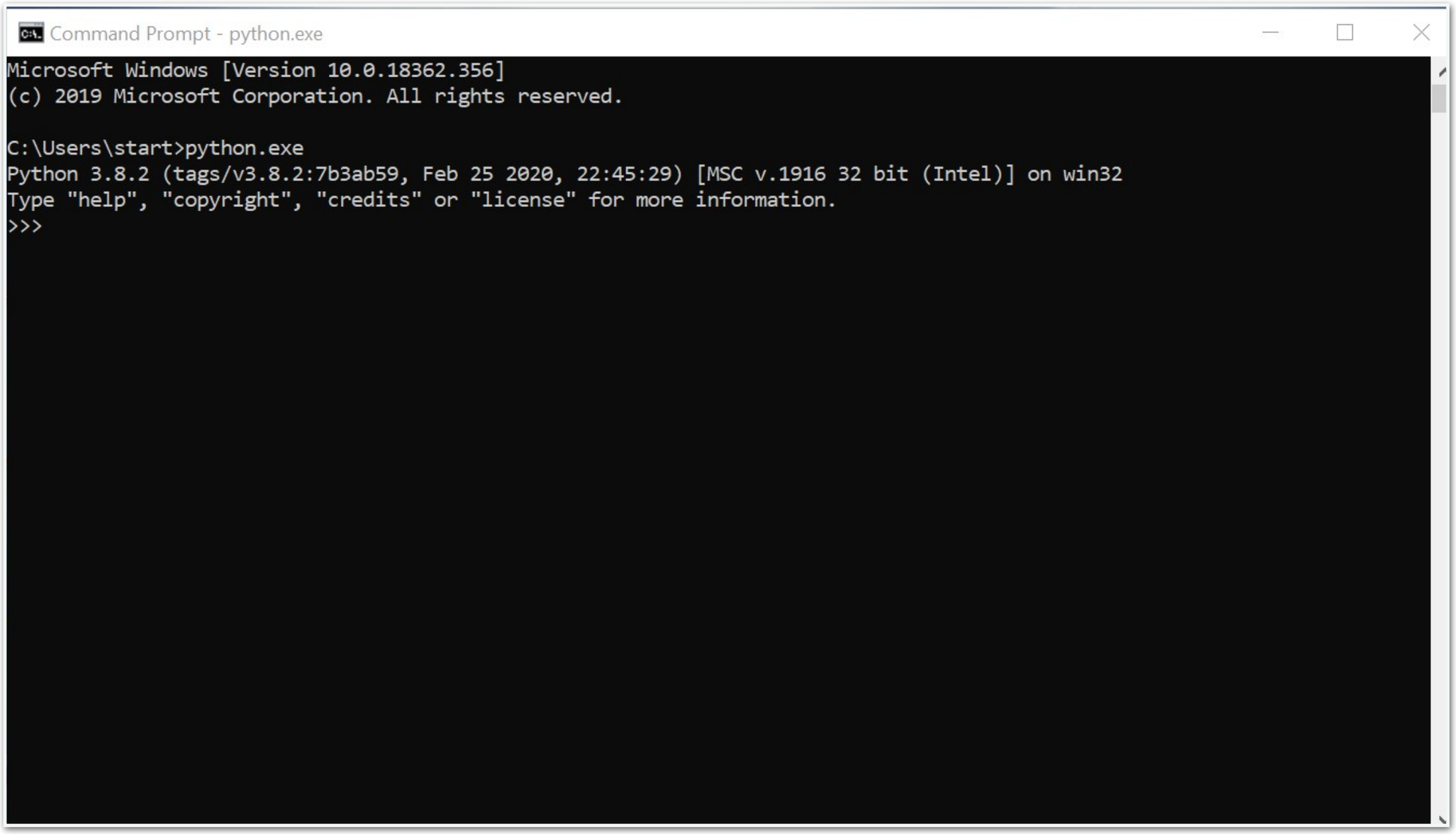
- Launch command prompt from start menu





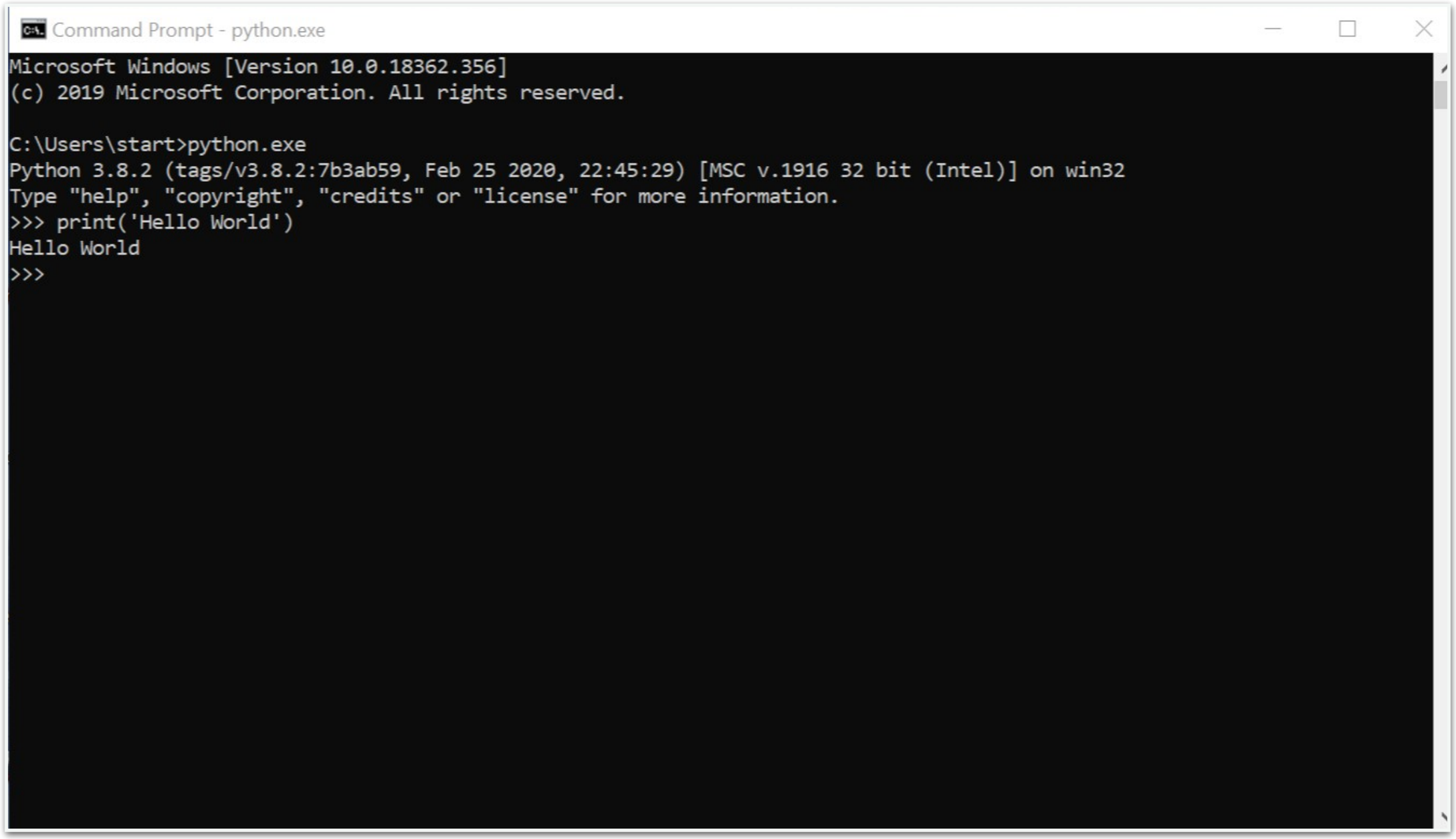
Python3 Setup: Windows

- Type and enter **python.exe** to launch interactive python



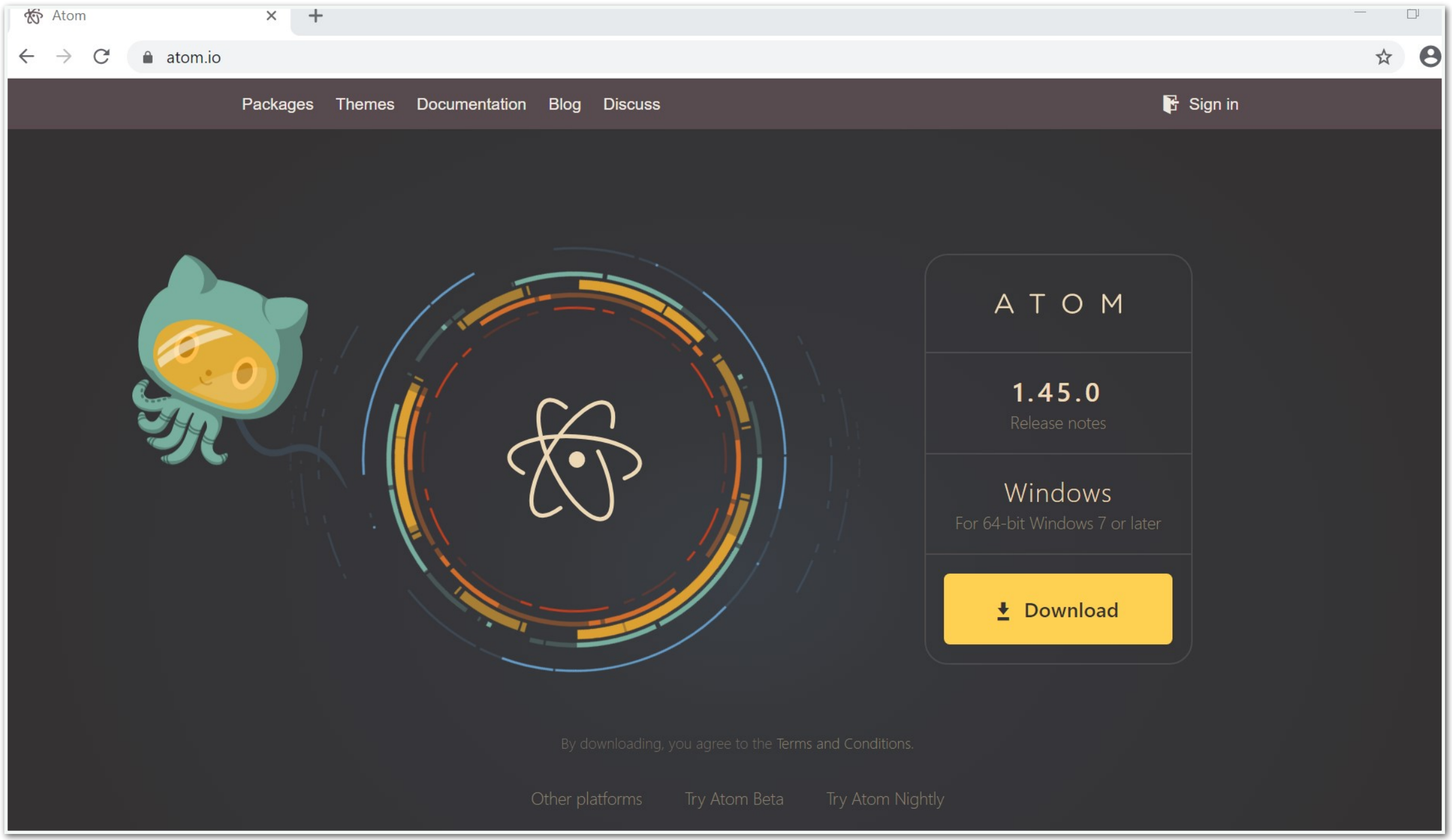
Python3 Setup: Windows

- Print “`Hello World`” to celebrate!



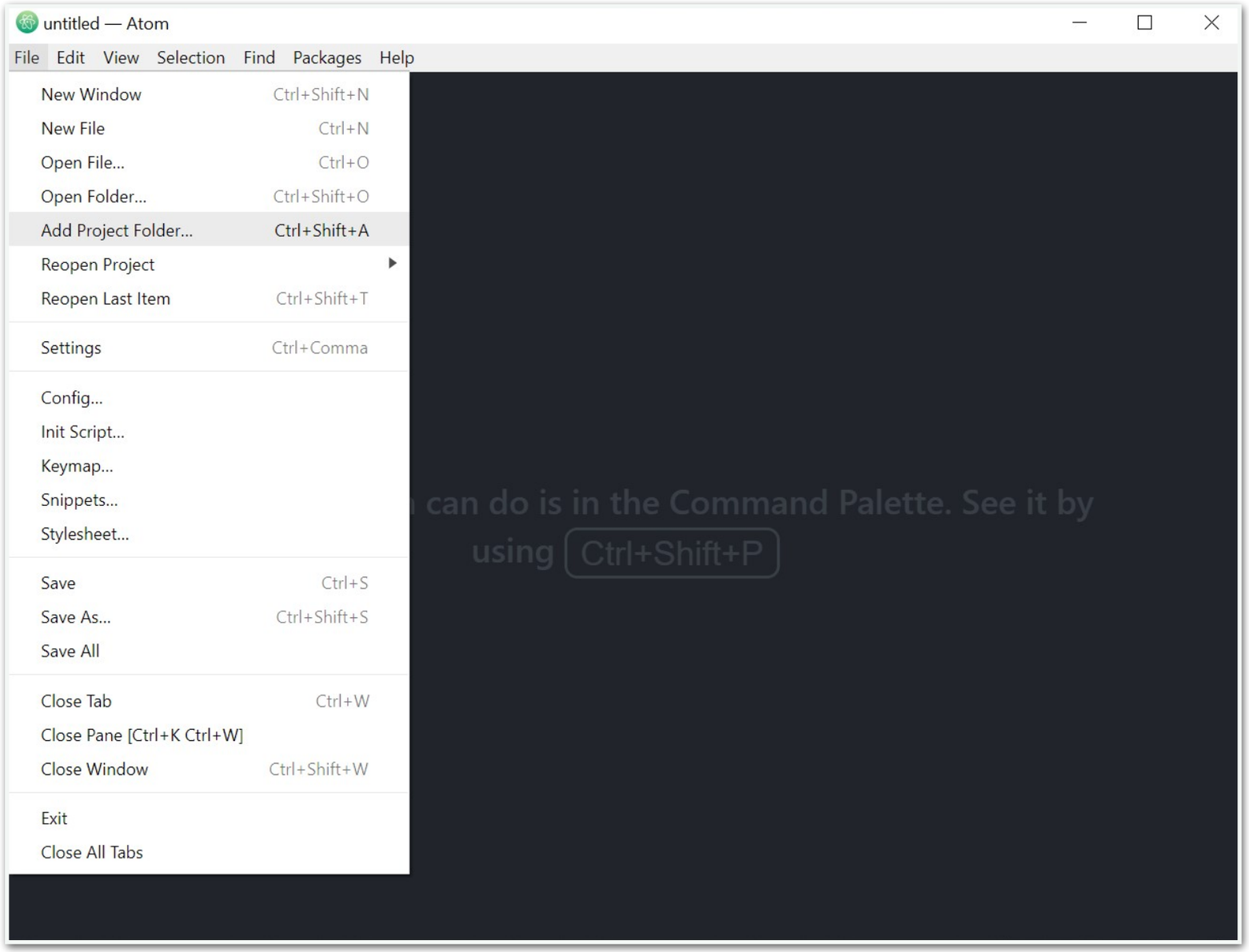
Atom Setup: Windows

- Go to http://atom.io and click on Download for Windows



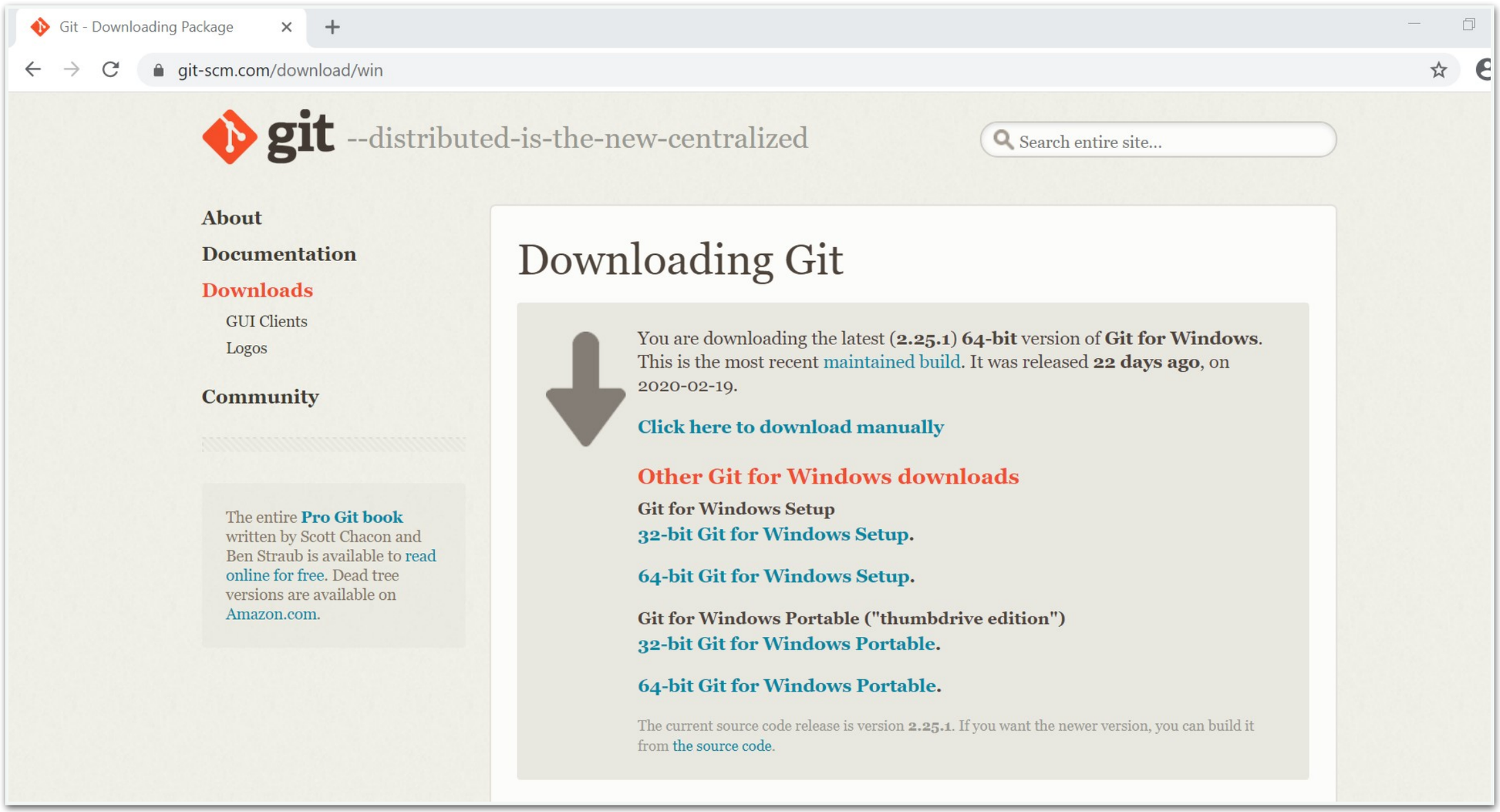
Atom Setup: Windows

- After it is done downloading, it will launch the application which can be used as as have in the lab



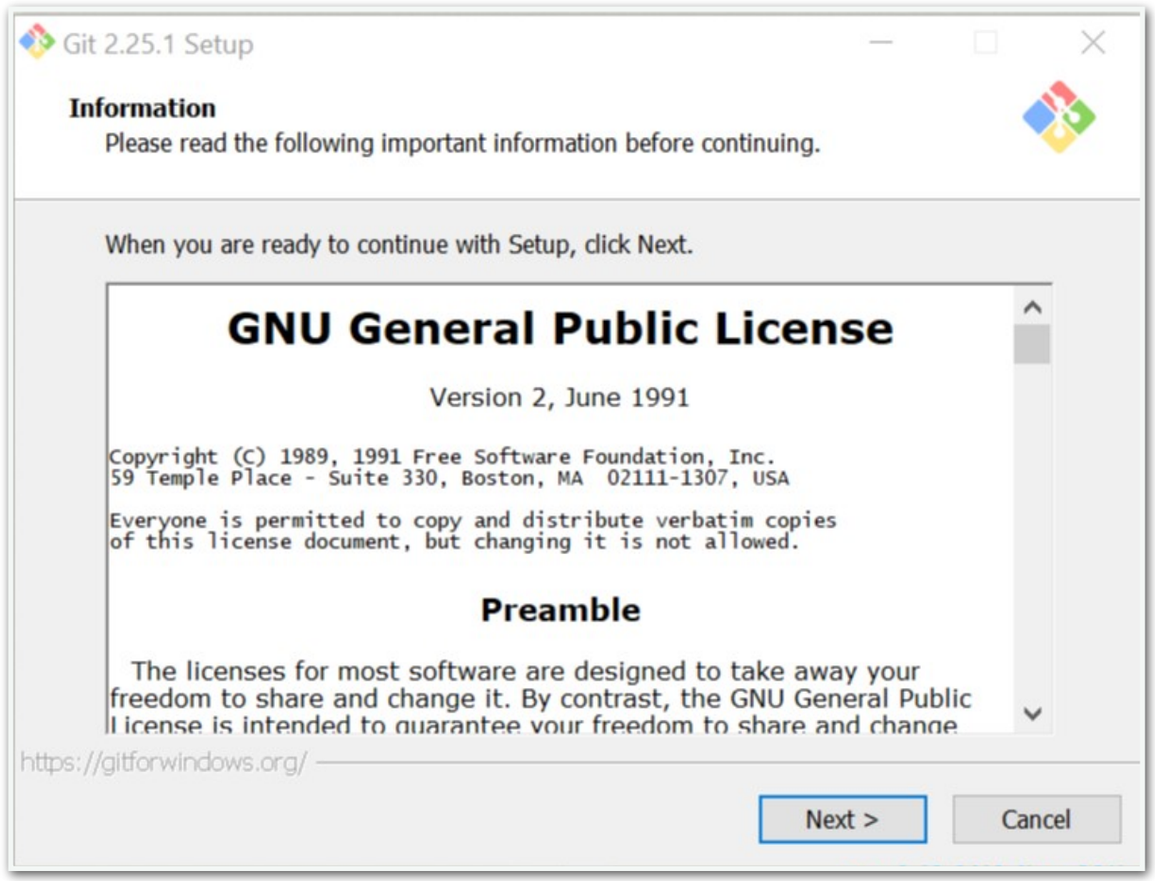
Git Setup: Windows

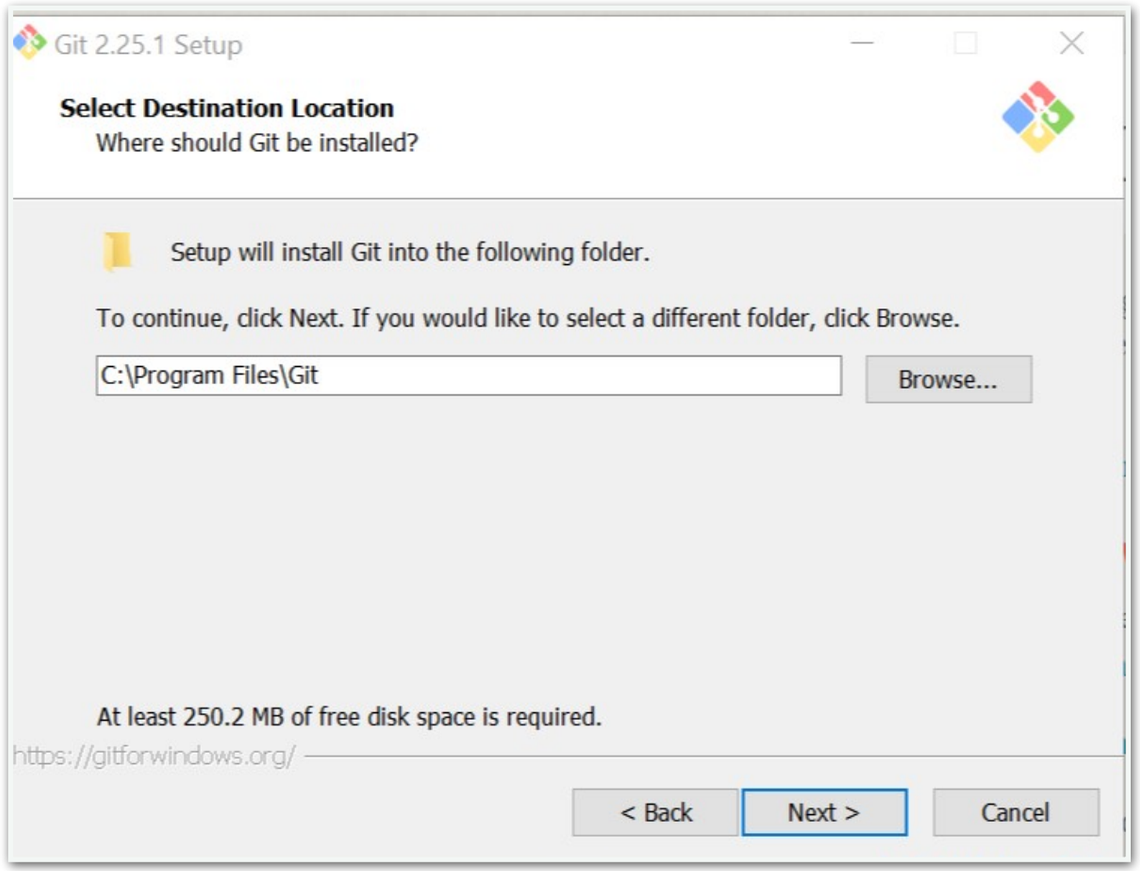
- Go to www.git-scm.com/download/win and click on the download link



Git Setup: Windows

- The installer will launch through the installation setup





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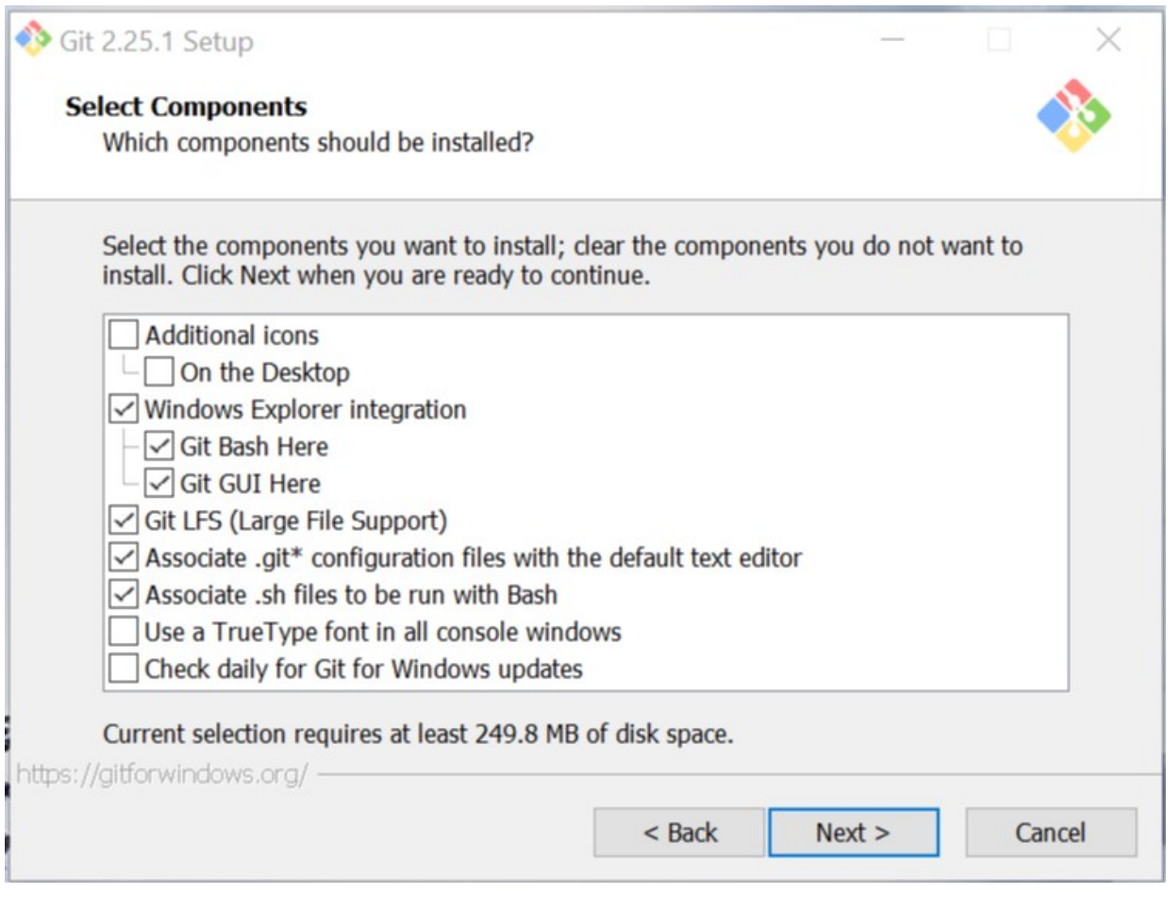
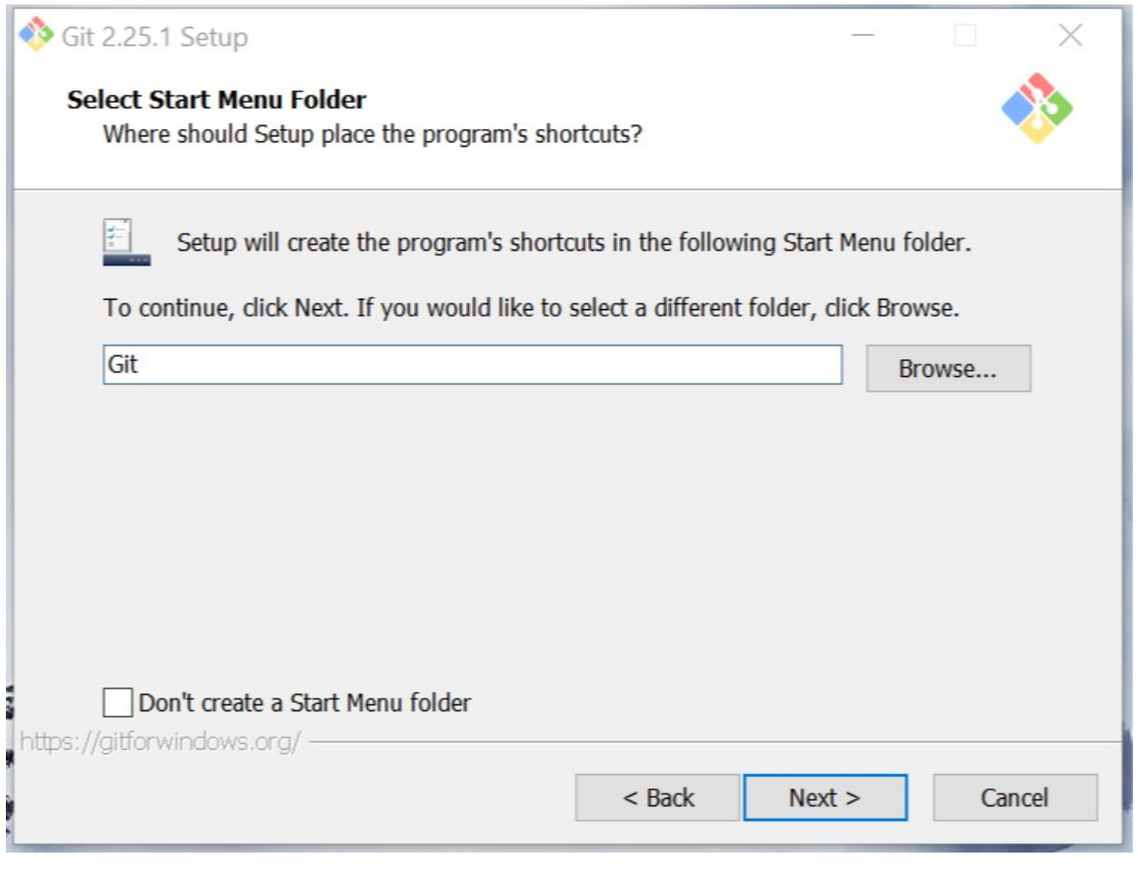
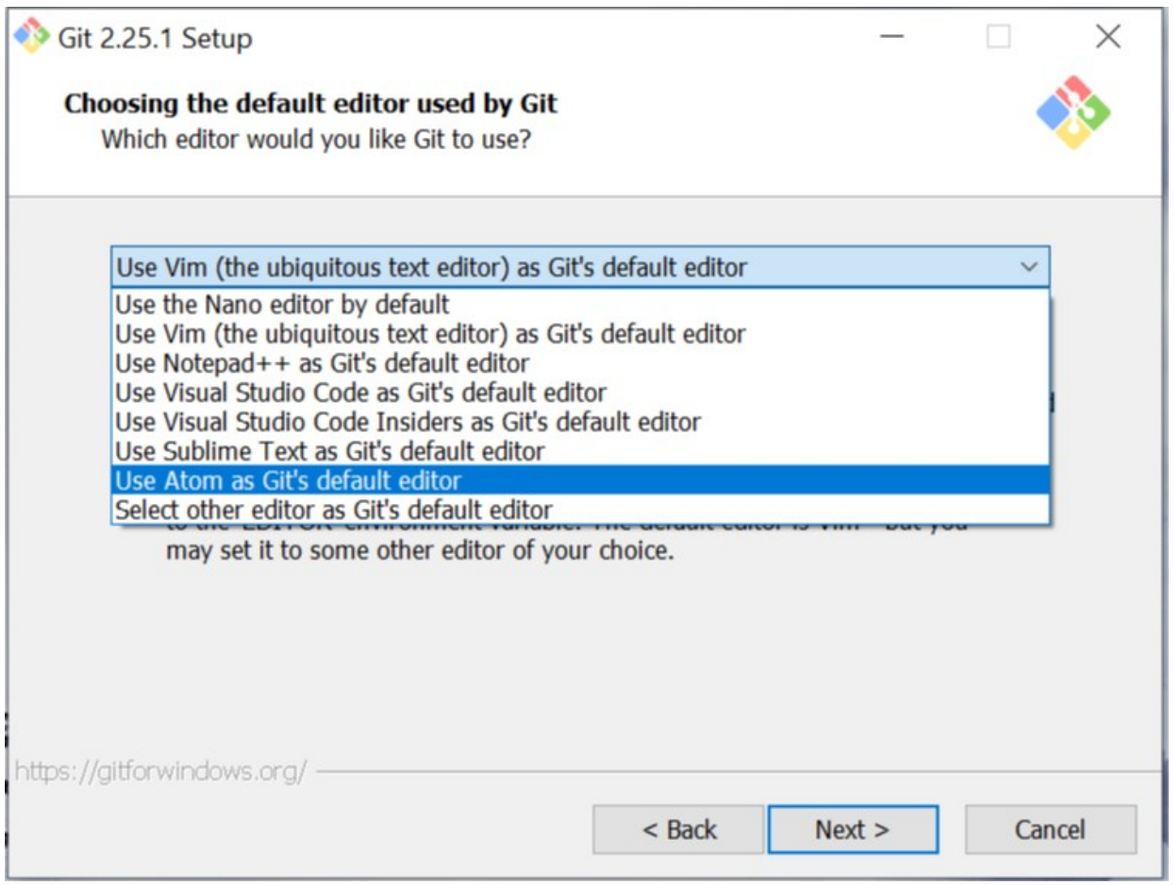
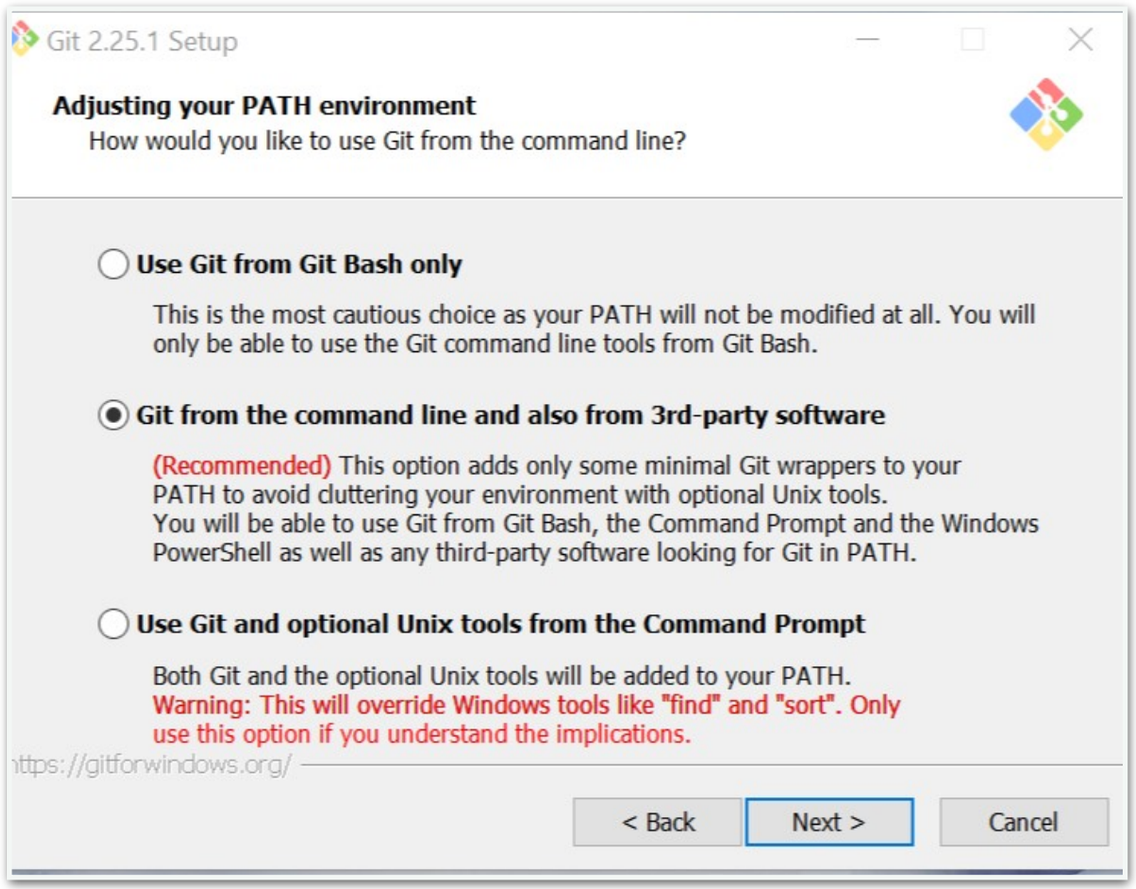




Git Setup: Windows

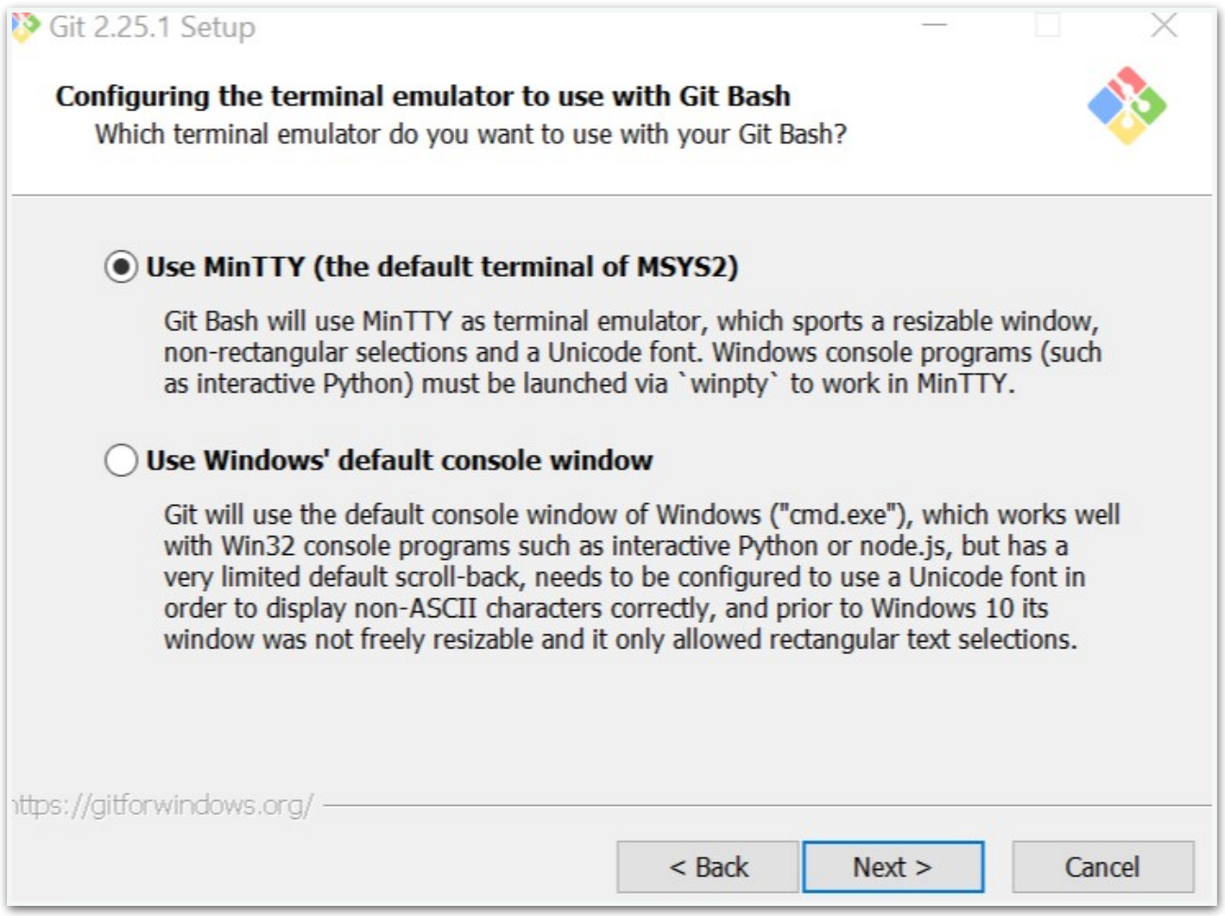
- Select Atom as Git's default editor
- Select git from command line and also 3rd-part software

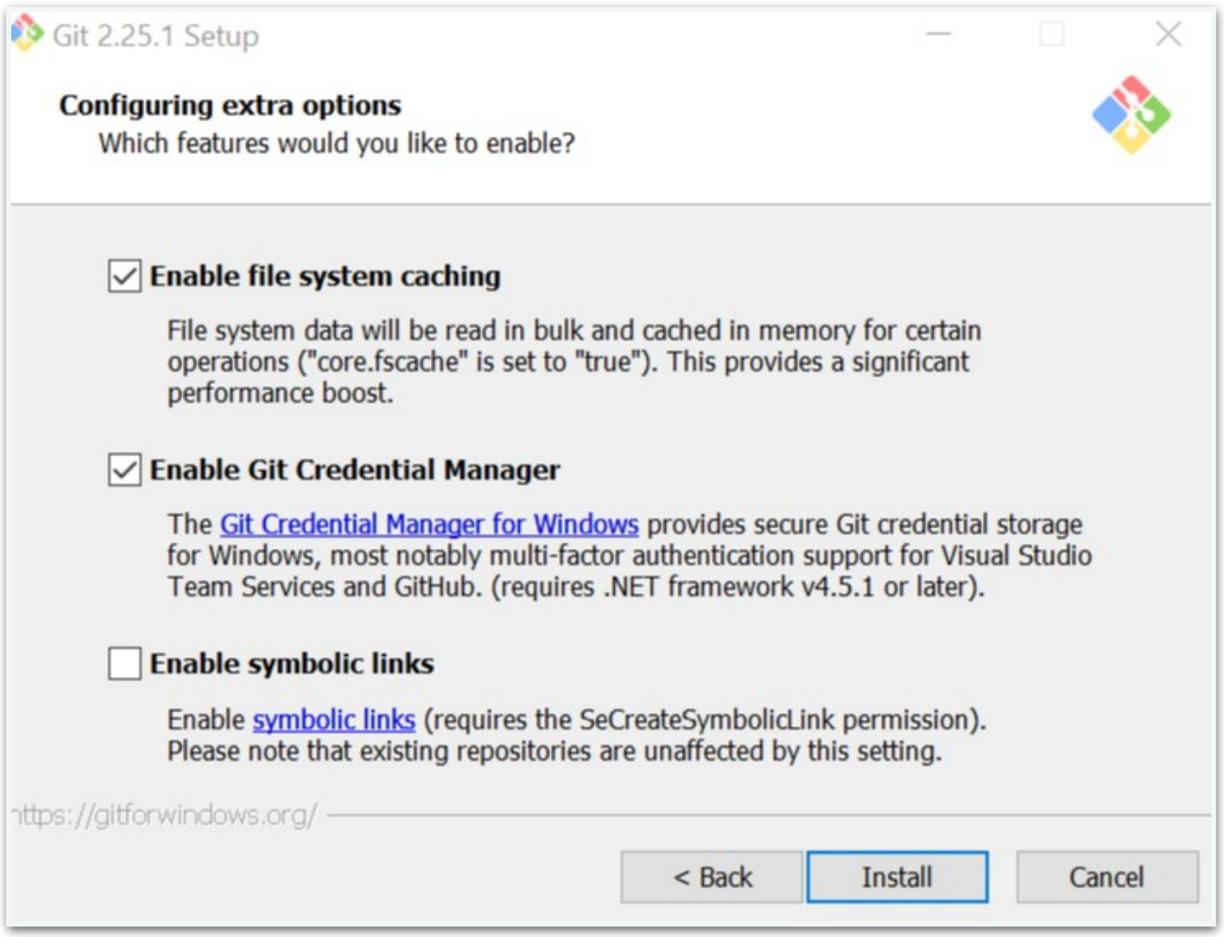




Git Setup: Windows

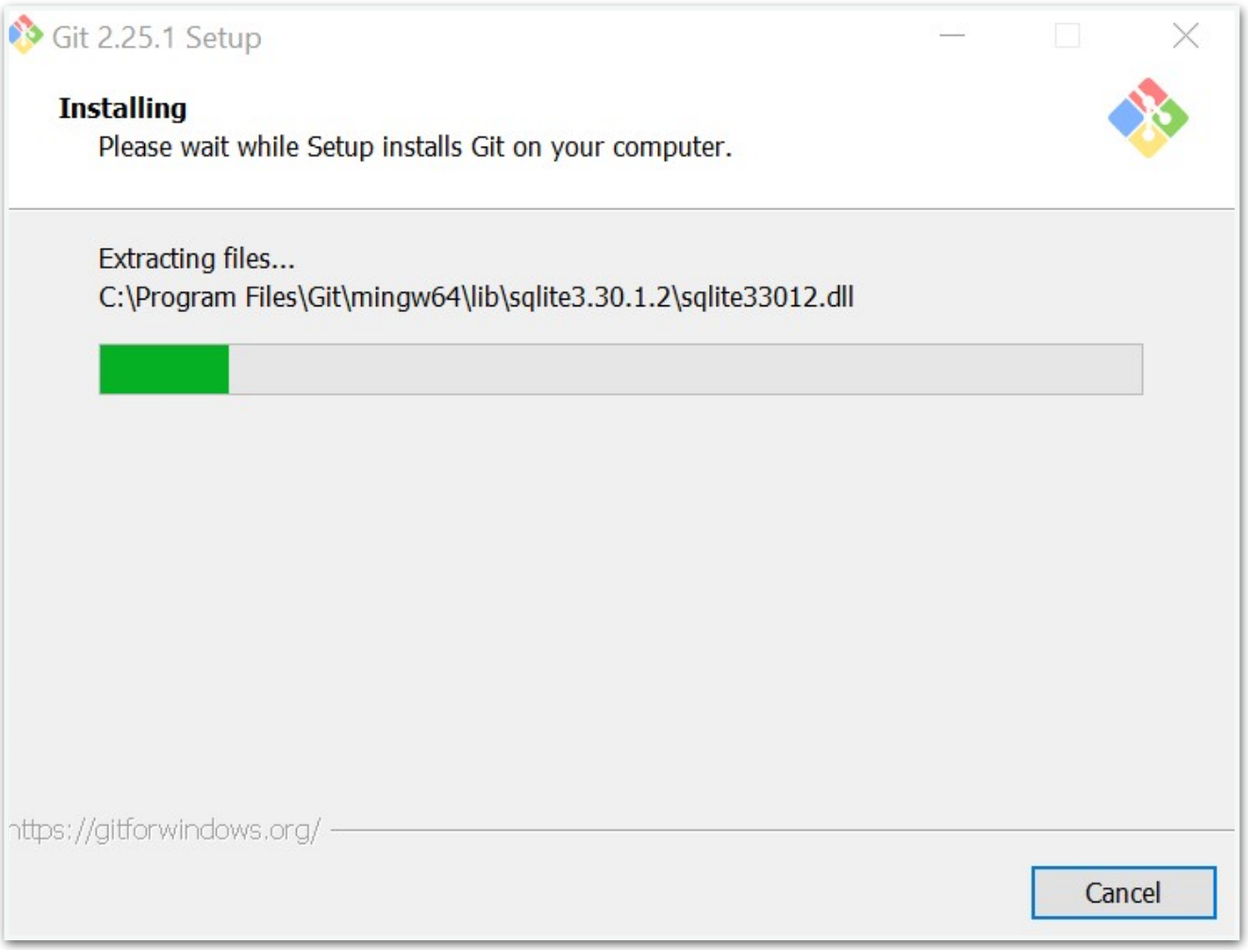
- Select the following options as indicated

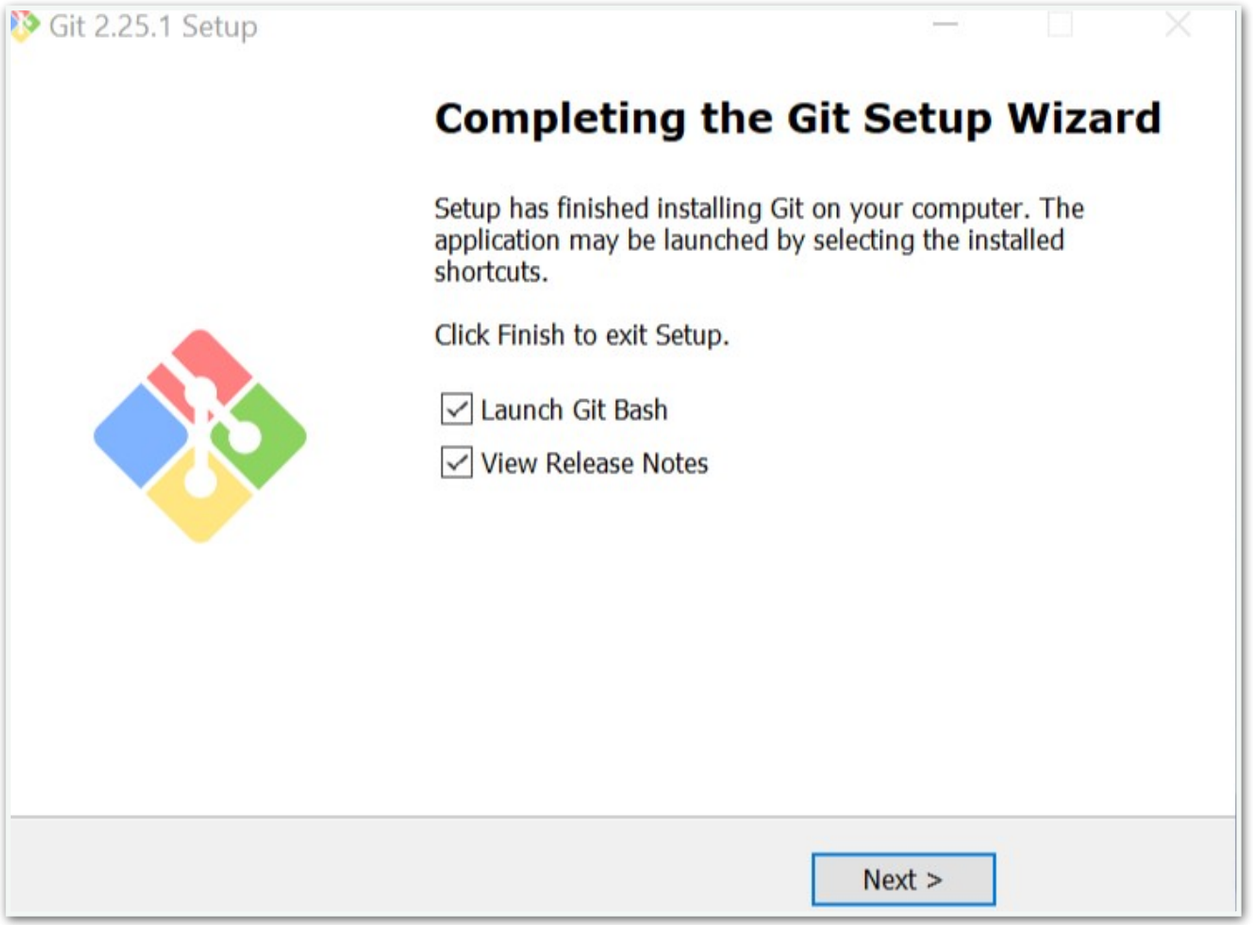




Git Setup: Windows

- Once all setup options are complete, it will finish installation





One-Time `Git Config` Setup

- Before we clone our lab repository from evolene, we must run the following commands in the "`Git Bash`" to configure our setup

```
git config --global user.name "ephelia2"
```

(replace ephelia2 with your CS username)

```
git config --global user.email "ephelia2@cs.williams.edu"
```

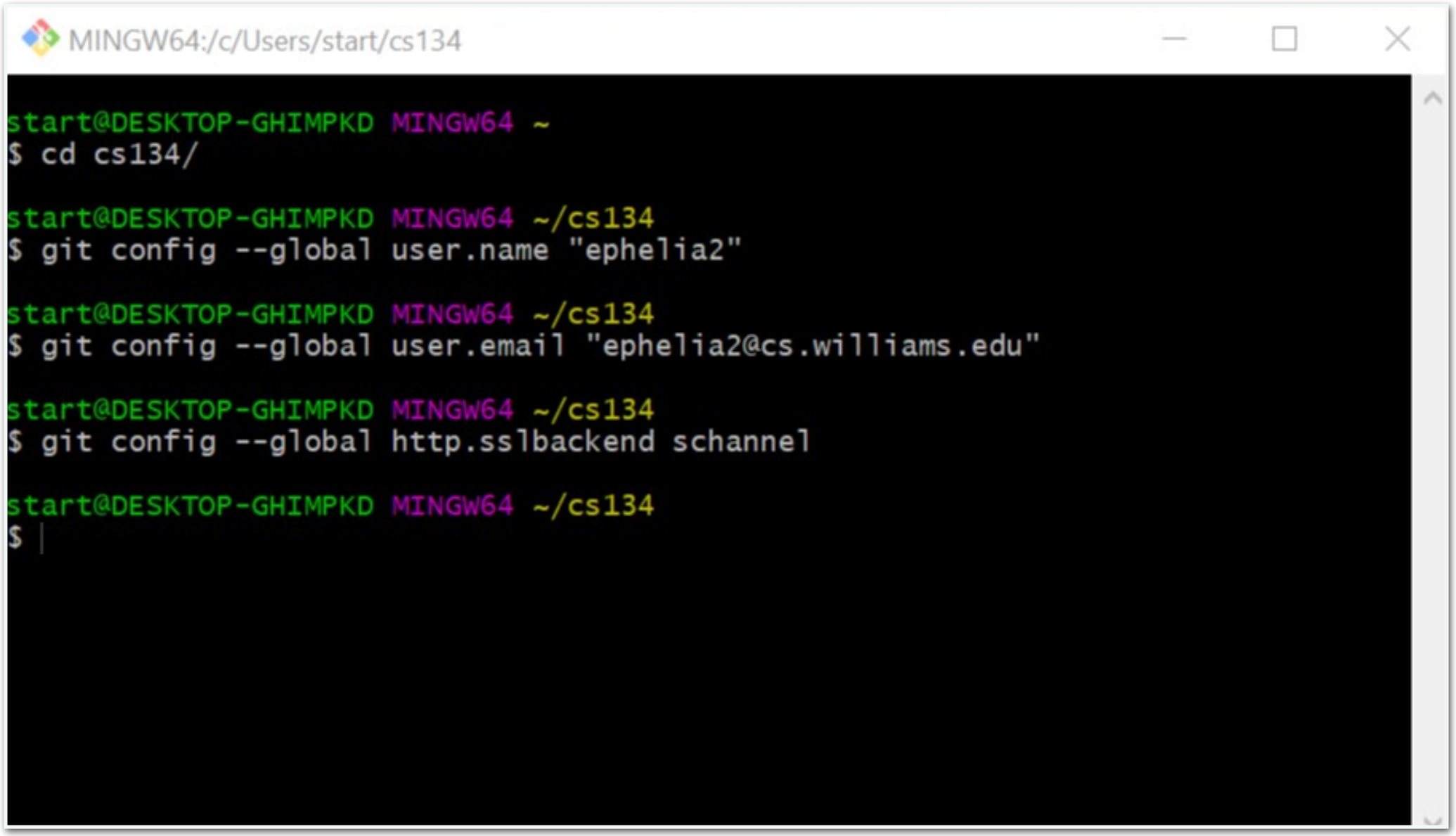
(replace with your CS email)

```
git config --global http.sslbackend schannel
```

[See example screenshot on next slide]

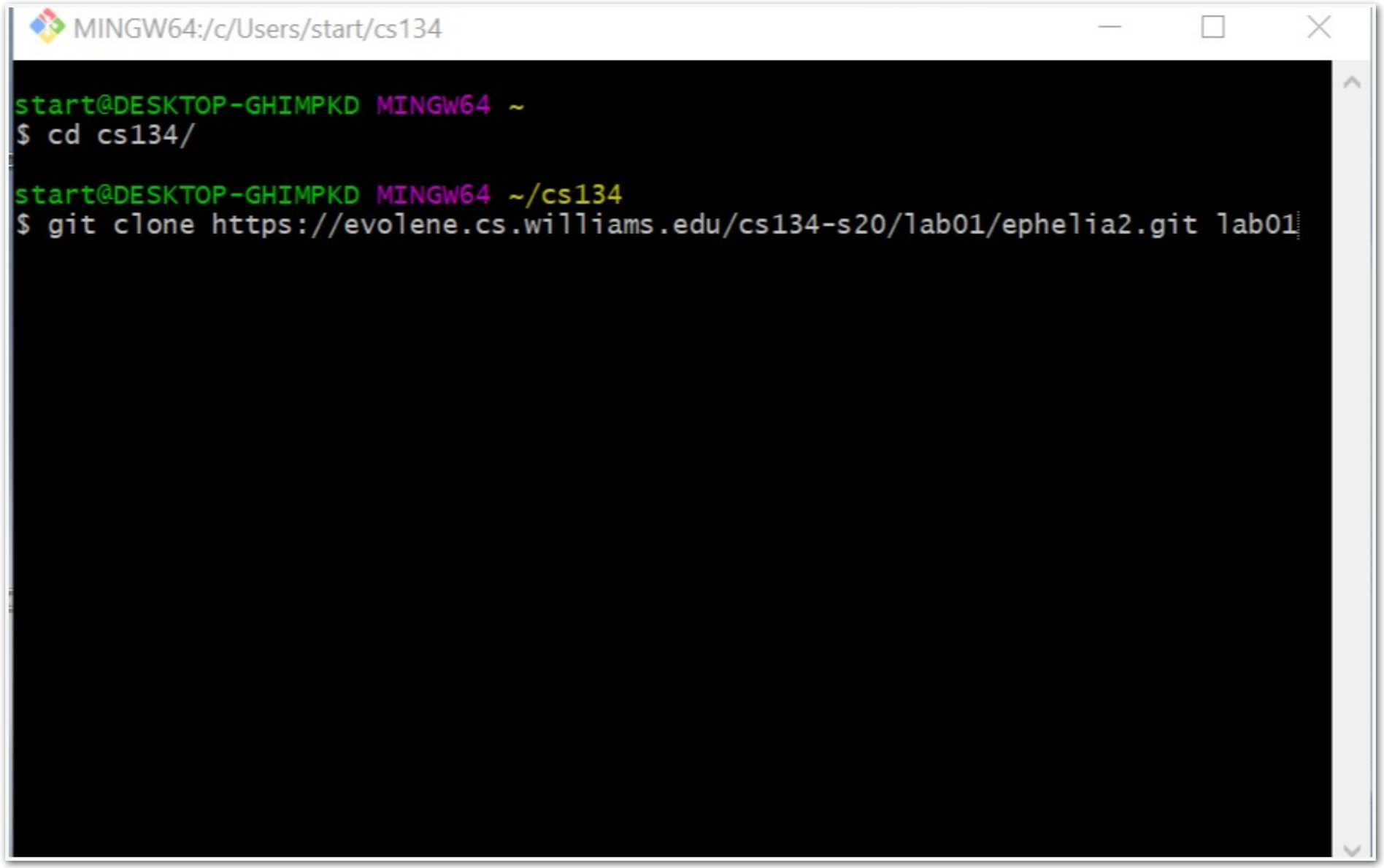
One-Time `Git Config` Setup

- Before we clone our lab repository from evolene, we must run the following commands in the "`Git Bash`" to configure our setup



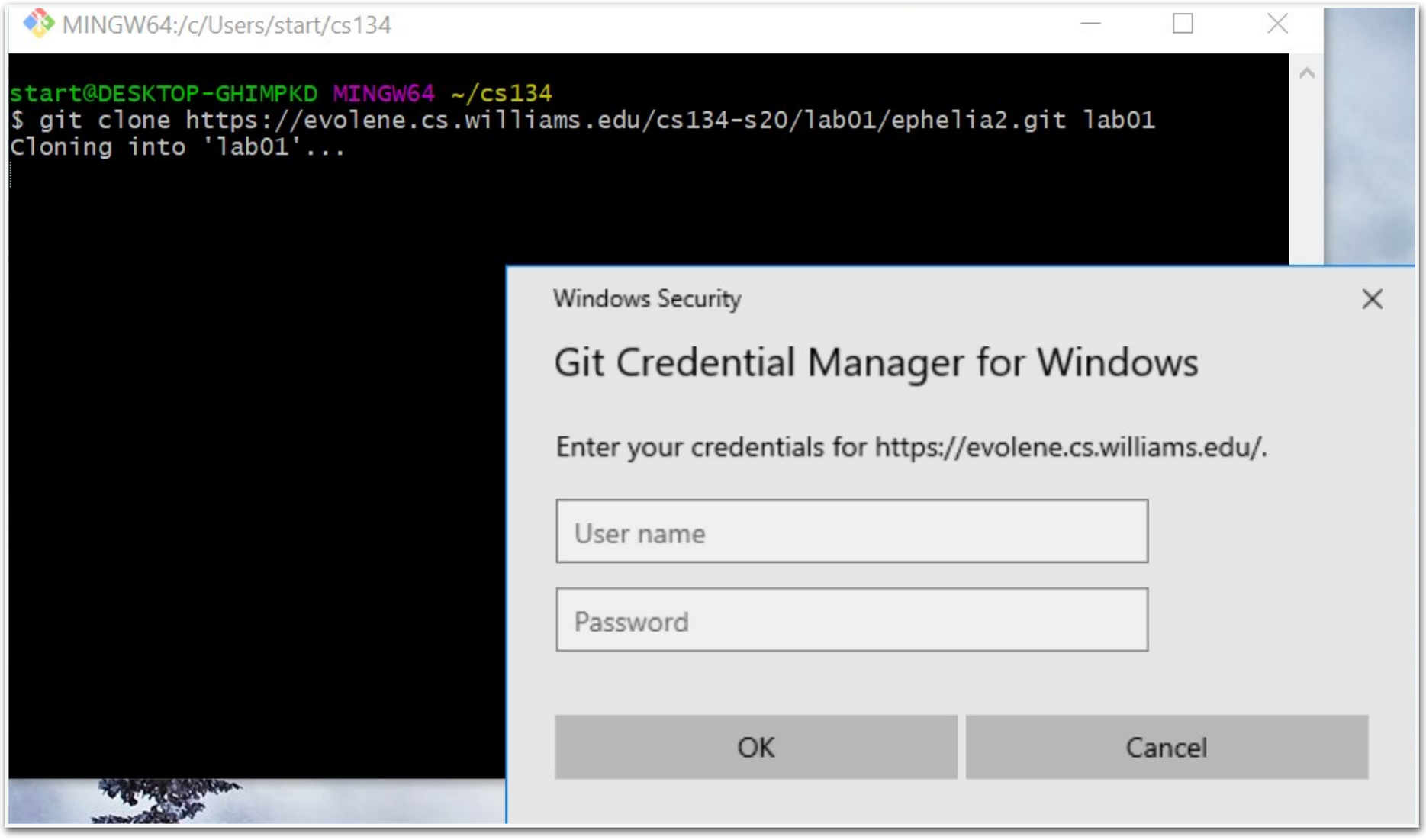
Cloning Repositories from Evolene

- Your git installation comes with a git bash that looks like this
- Here it is being used to clone the lab01 repository in cs134 folder



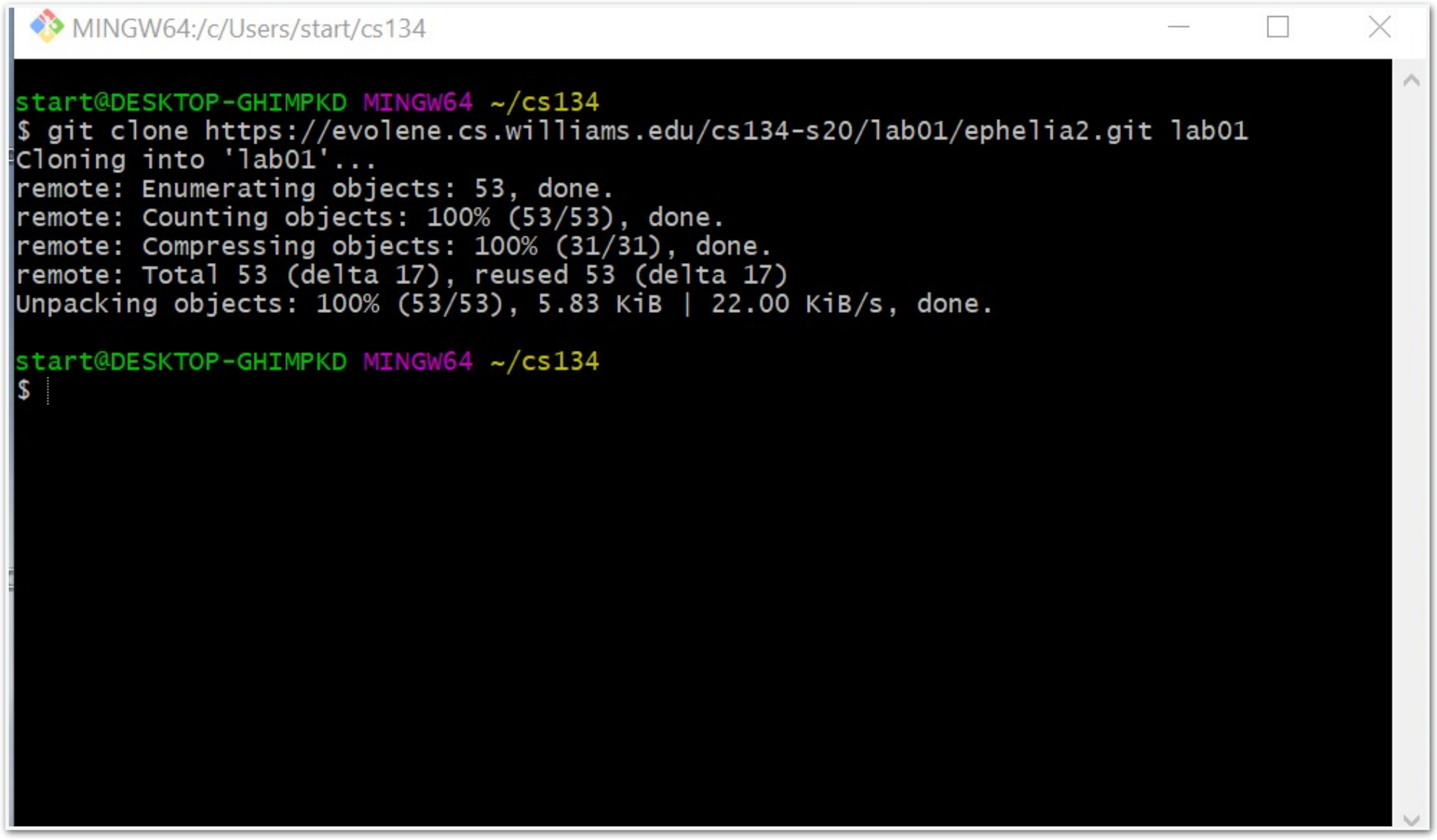
Cloning Repositories from Evolene

- You may be prompted to enter your credentials
- If so enter your CS username and password



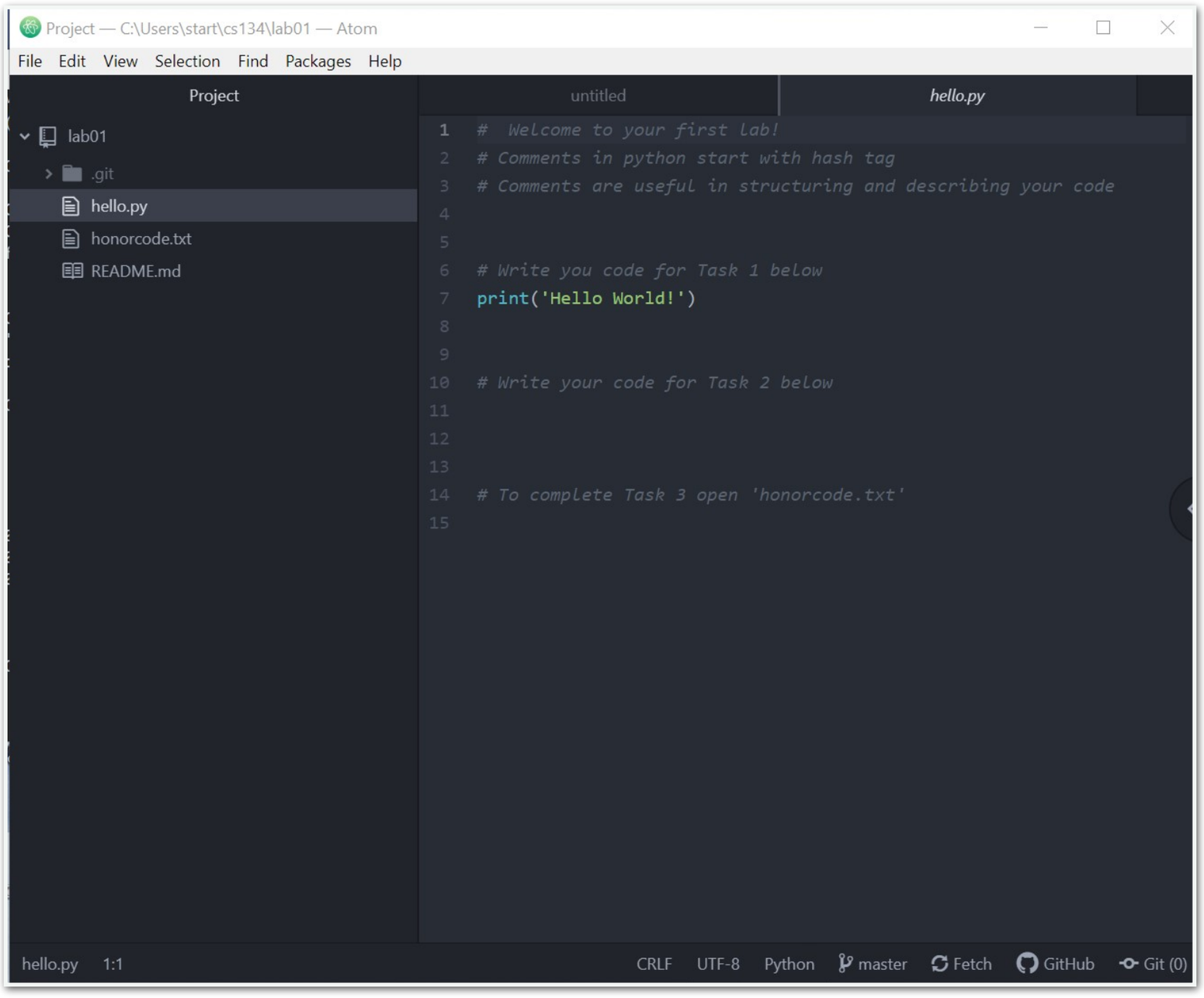
Cloning Repositories from Evolene

- We have just successfully cloned lab01! Now let's go to Atom and add it as a project folder



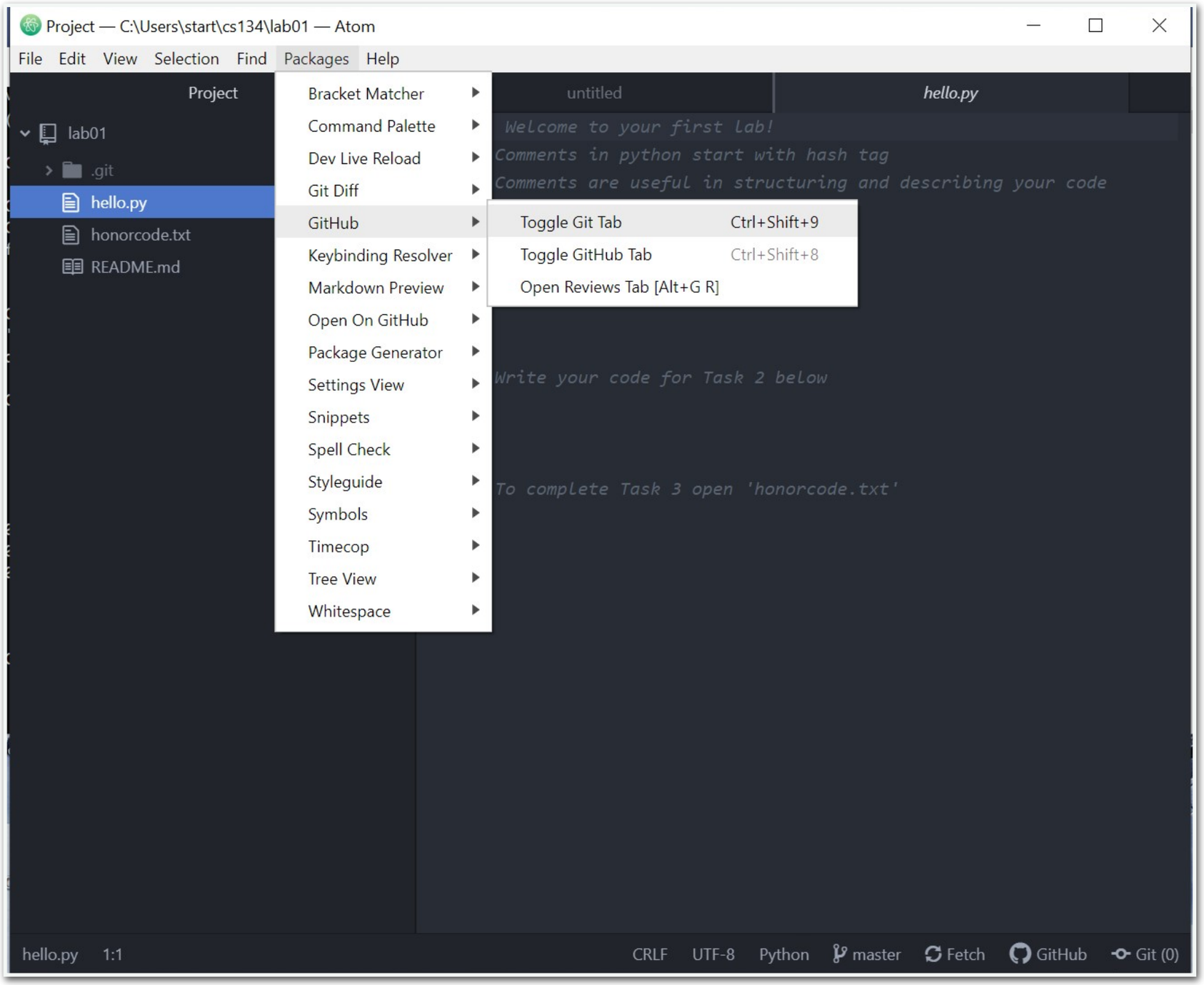
Atom-Git Workflow on Windows

- Go to Atom-> File -> Add project Folder and navigate to the cs134 directory which has lab01 in it



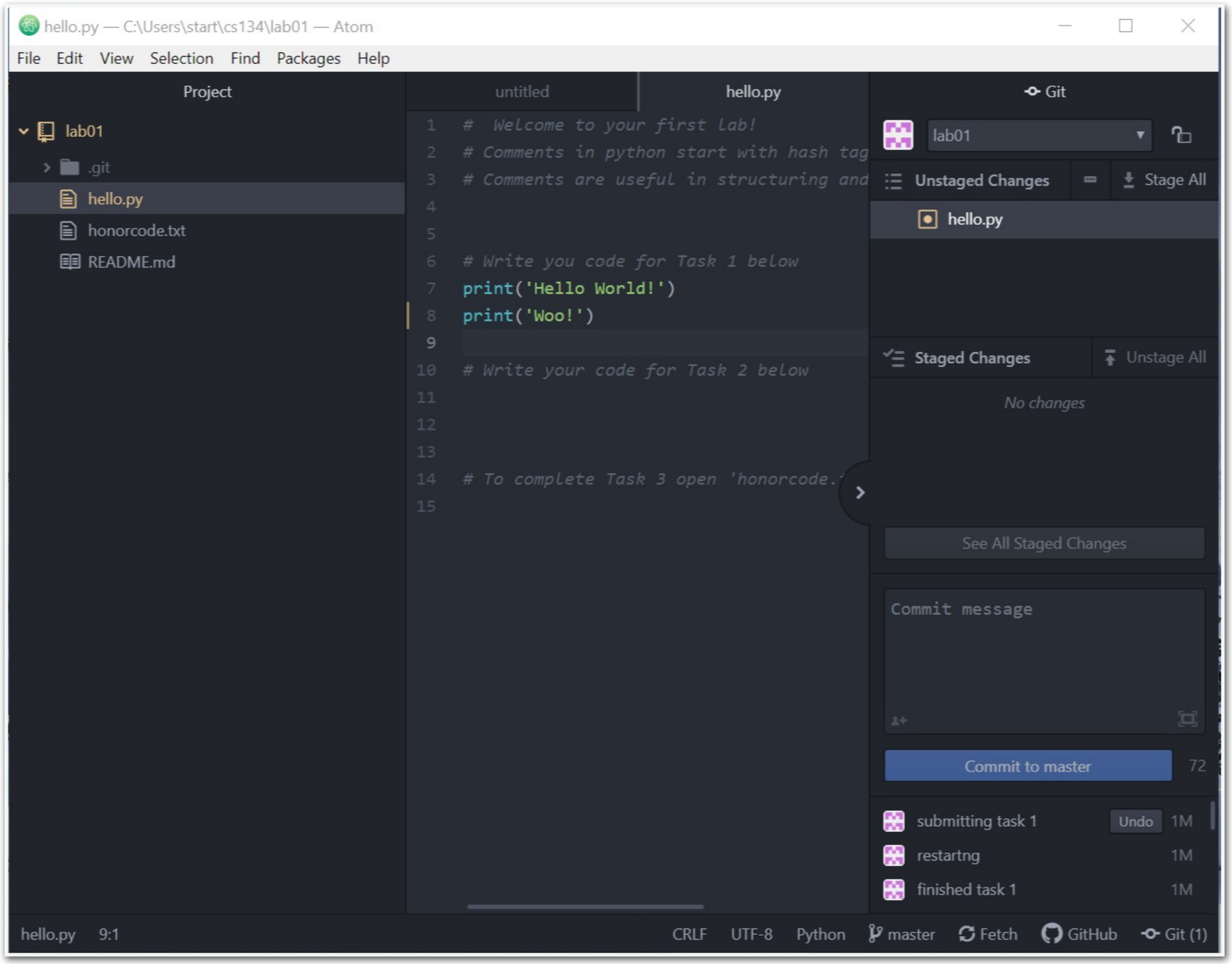
Atom-Git Workflow on Windows

- To commit and push your work, go to Packages -> GitHub -> Toggle Git Tab



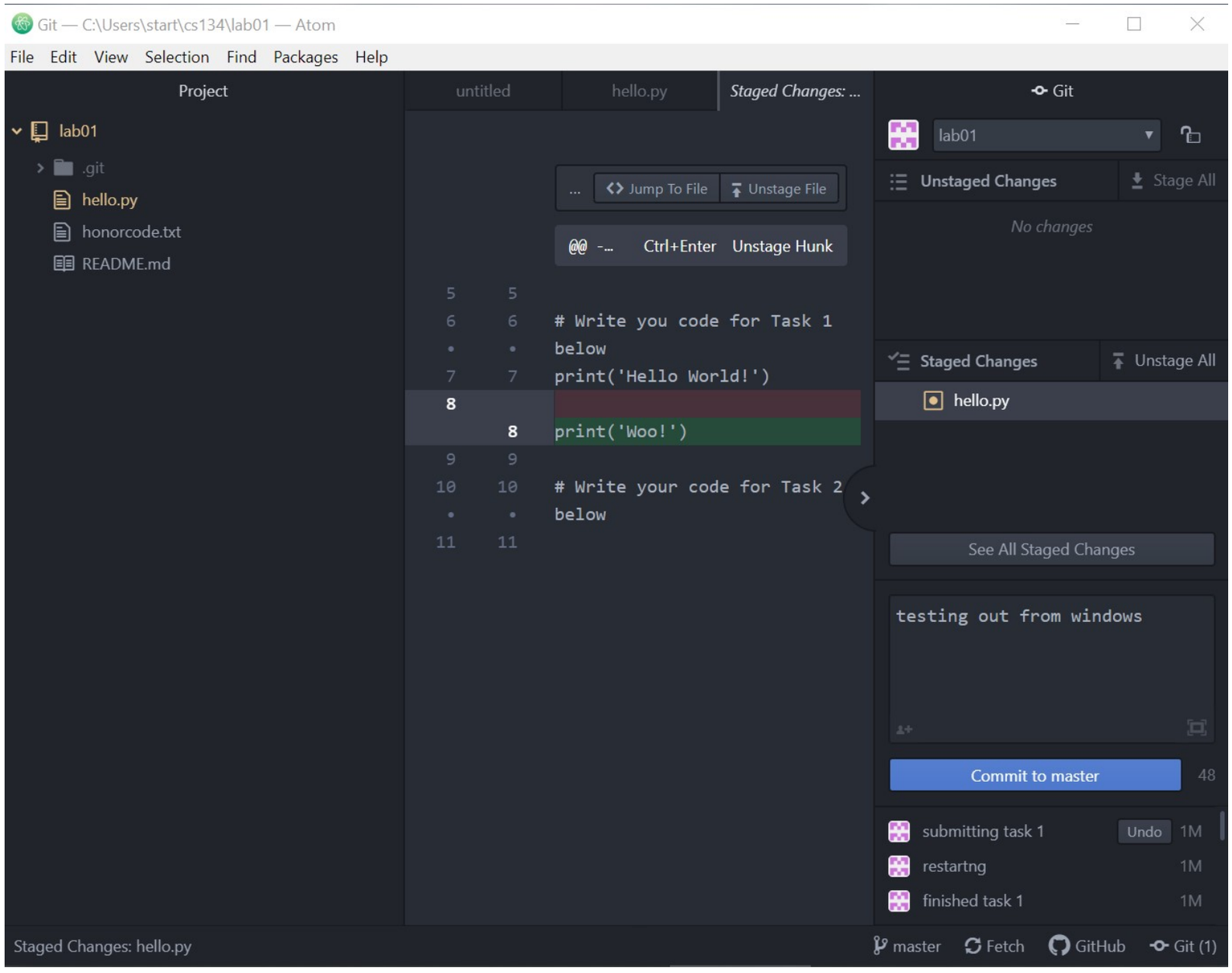
Pushing Work Via Atom

- You will see your unstaged changes in the Git pane



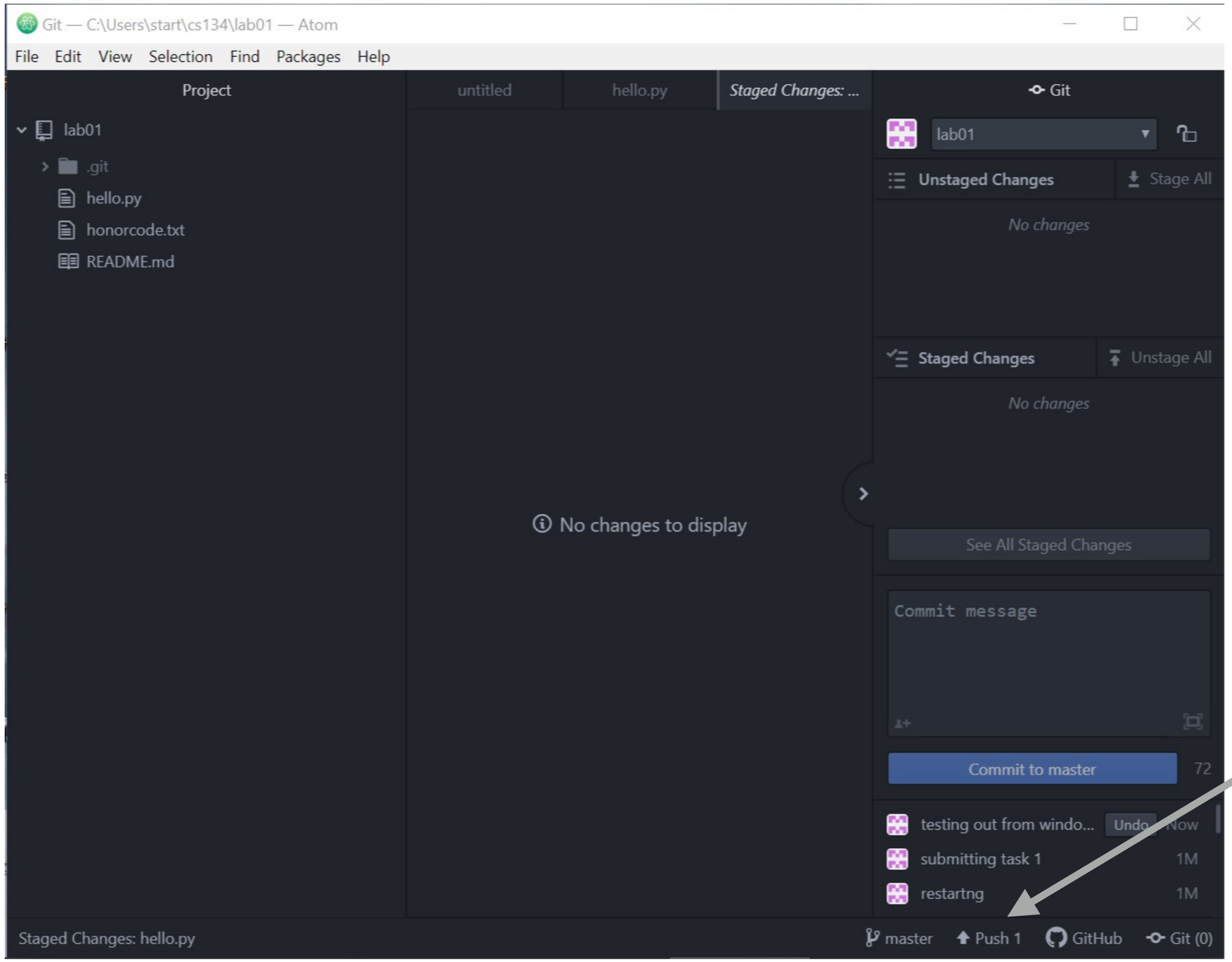
Pushing Work Via Atom

- Stage your changes by double clicking on the file name, type your commit message and click on Commit to Master



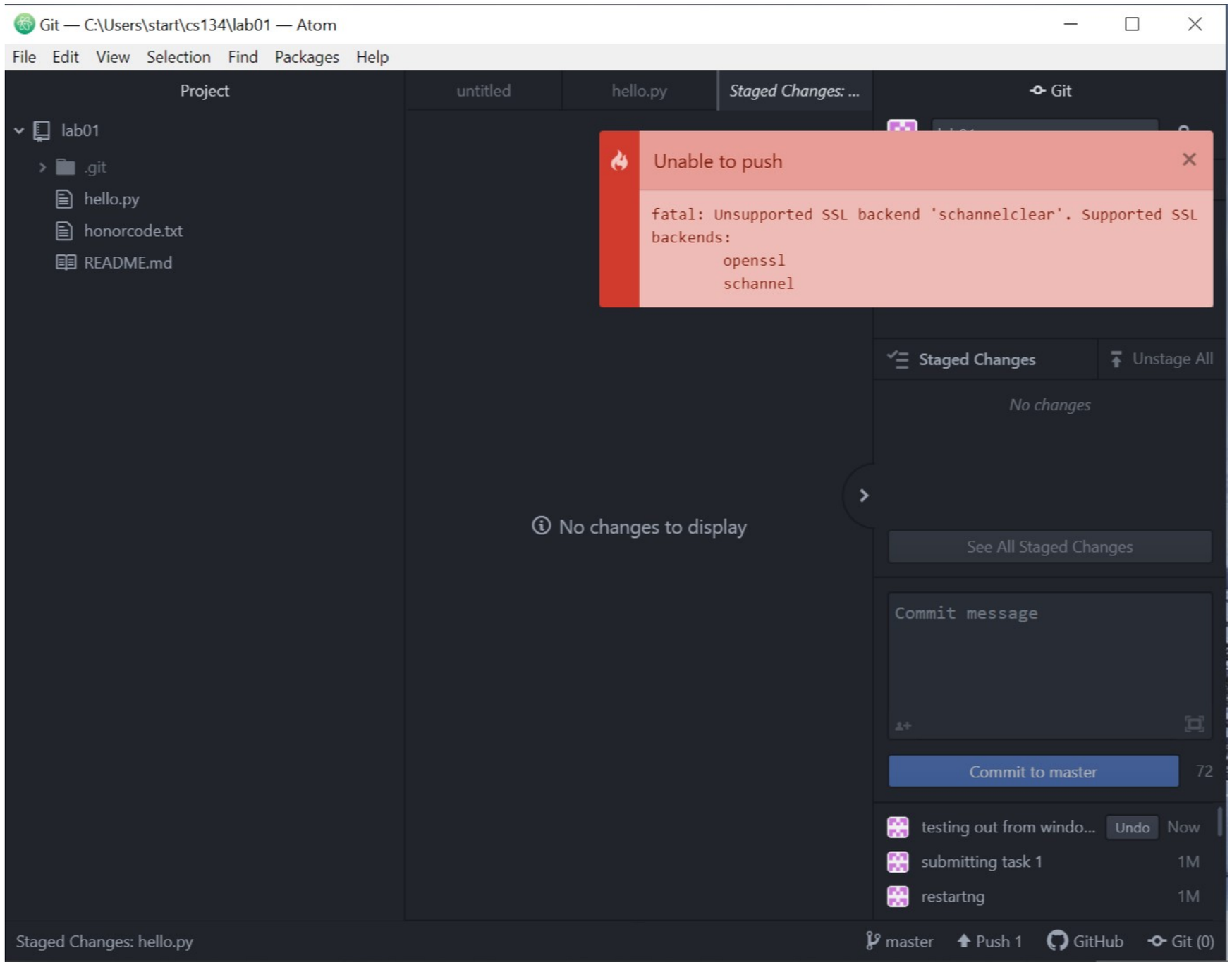
Pushing Work Via Atom

- A Push button will appear at the bottom right of the Git pane



Pushing Work Via Atom

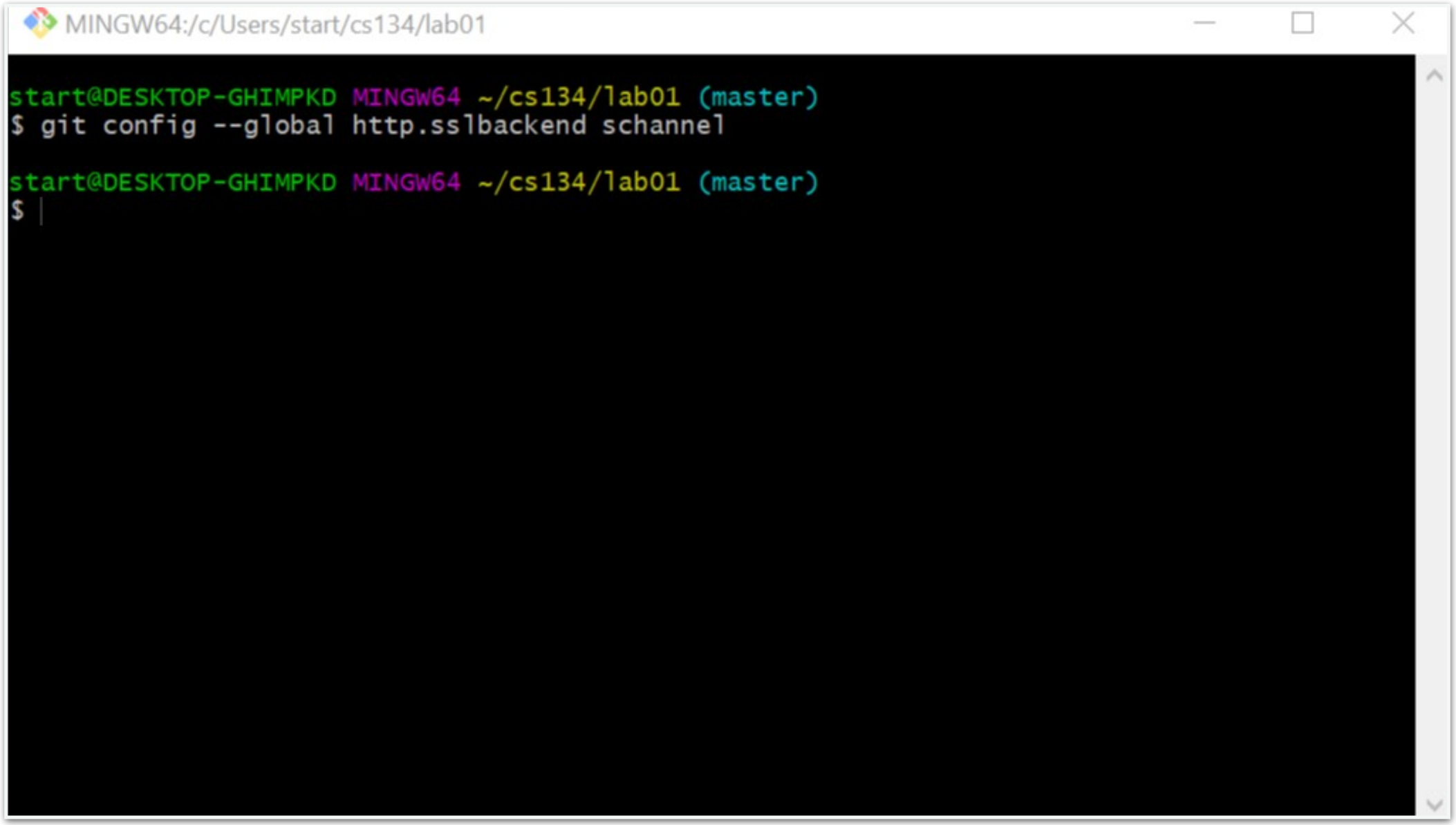
- When you click on it, you might get the following error



Pushing Work Via Atom

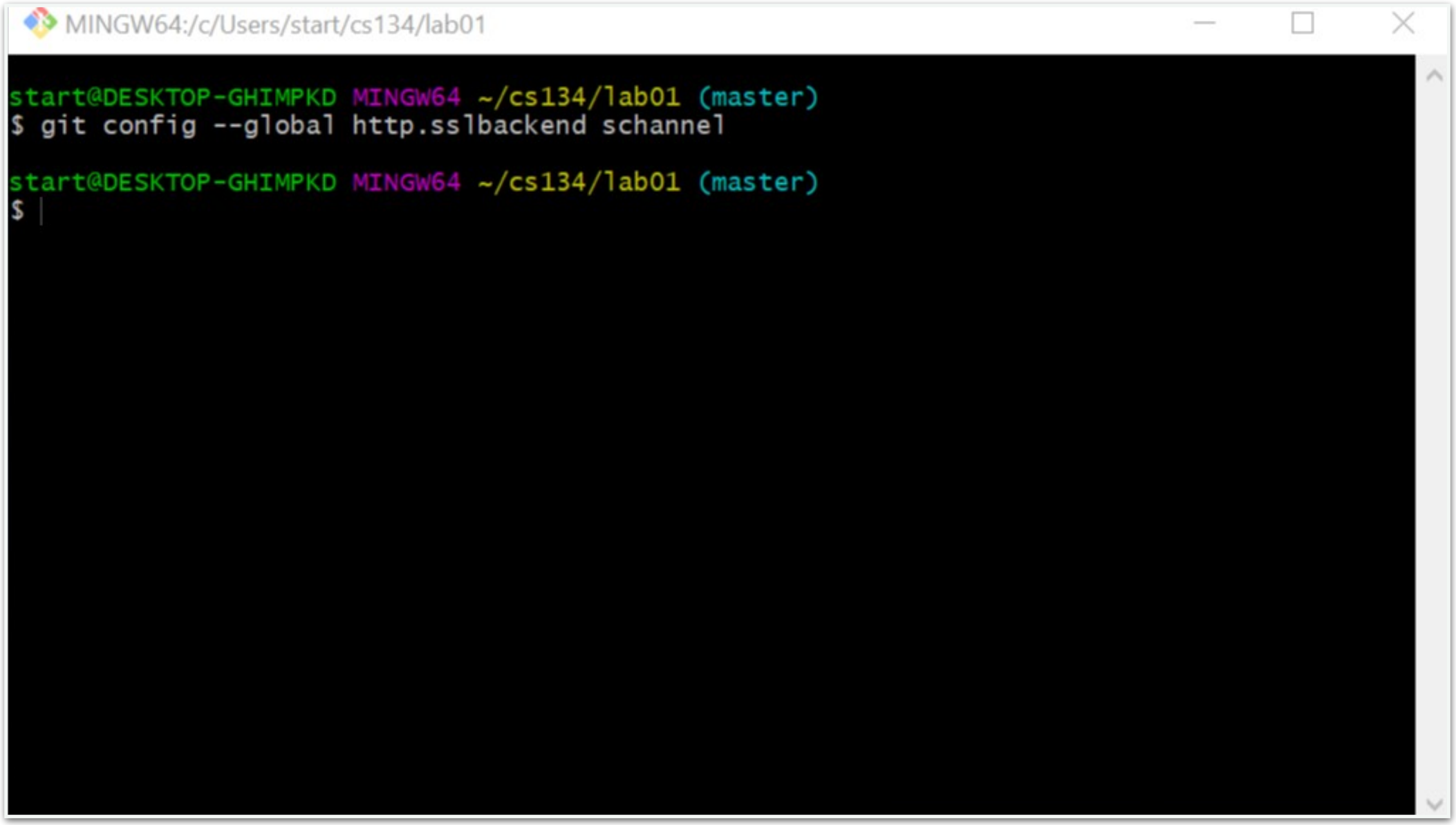
- If so, go back to the git bash and type the following:

```
git config --global http.sslbackend schannel
```



Pushing Work Via Atom

- Try pushing again and it should work this time!



Getting Set Up: Mac

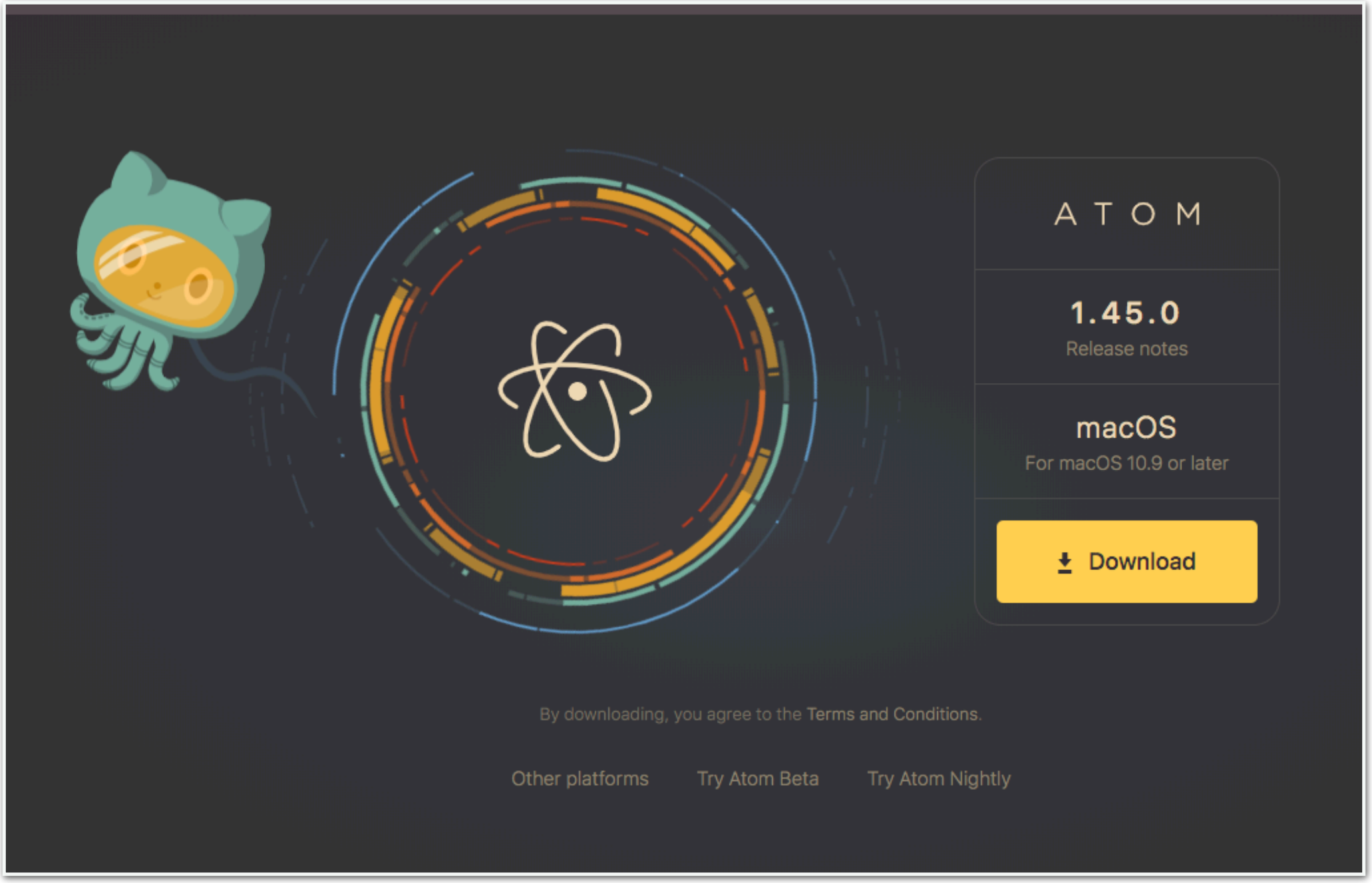
Python3 Setup: Mac

- If you have a Mac, you probably already have python3, but you will need to make sure you are using a version of Python 3.6 or greater.
- Open a terminal and type "`python –version`" or "`python3 –version`" to see what you are running
- Some student said they installed python 3.7 but running python still gave them issues
- If this is the case, make sure you are typing `python3` not `python`
- To upgrade your python version, go to:

https://www.python.org/downloads/release/python-376/

Atom Setup: Mac

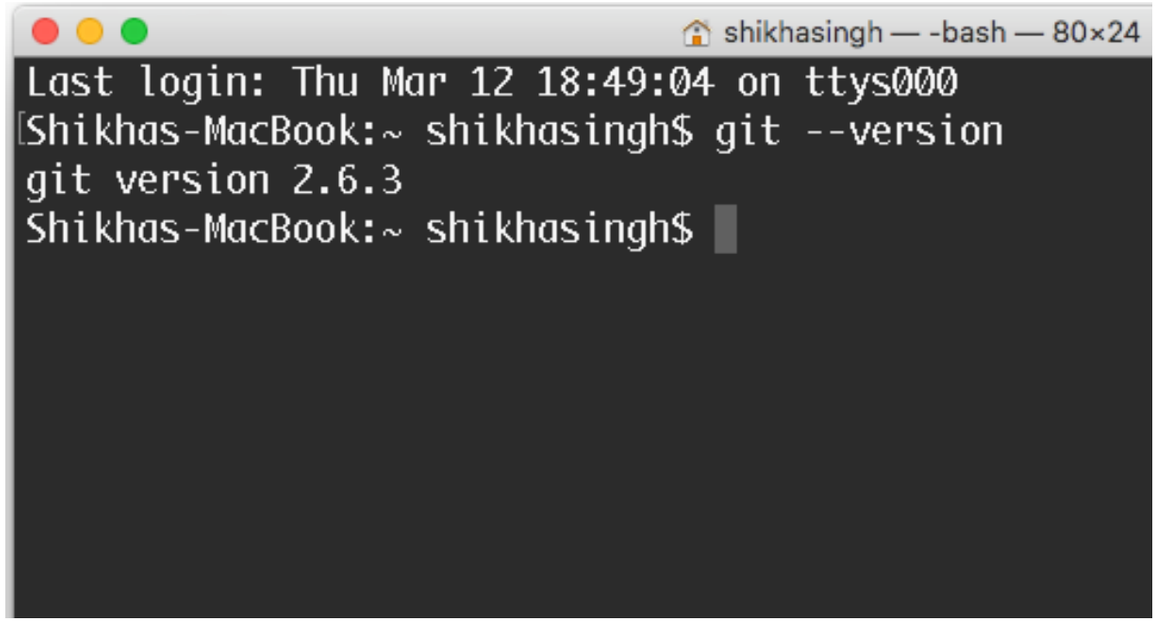
- Log on to https://atom.io/ and click on the yellow download link



Git Setup: Mac

- Check to see if you already have git (version 10.9 and above do) by typing `git --version`

- If git is not pre-installed it will prompt you to install it



If You Have Technical Issues

- We cannot plan for everything
- Problems with respect to technology will come up
- What is the best resource to troubleshoot?
    - Google the problem! Websites like `stackexchange` are super useful in troubleshooting common issues
    - Reach out to us (Iris/ Shikha/ Lida)
    - Send us screenshots so we can figure out what is going wrong
- Communication is going to be key in making this work
- It will take some time to transition but we hope we will all fall into rhythm with the new setup soon

Helpful Links/ Resources

- CS department resources for remote work: https://www.cs.williams.edu/system/
- Williams College OIT Link to Install VPN client https://oit.williams.edu/help-guides/wifi-and-wired-connections/vpn/
- VPN instructions for accessing GitLab remotely
- Python3 setup guide for windows: https://phoenixnap.com/kb/how-to-install-python-3-windows
- Atom setup guide for windows: https://blog.atom.io/2014/12/10/a-windows-installer-and-updater.html
- Git setup guide for windows: https://www.computerhope.com/issues/ch001927.htm