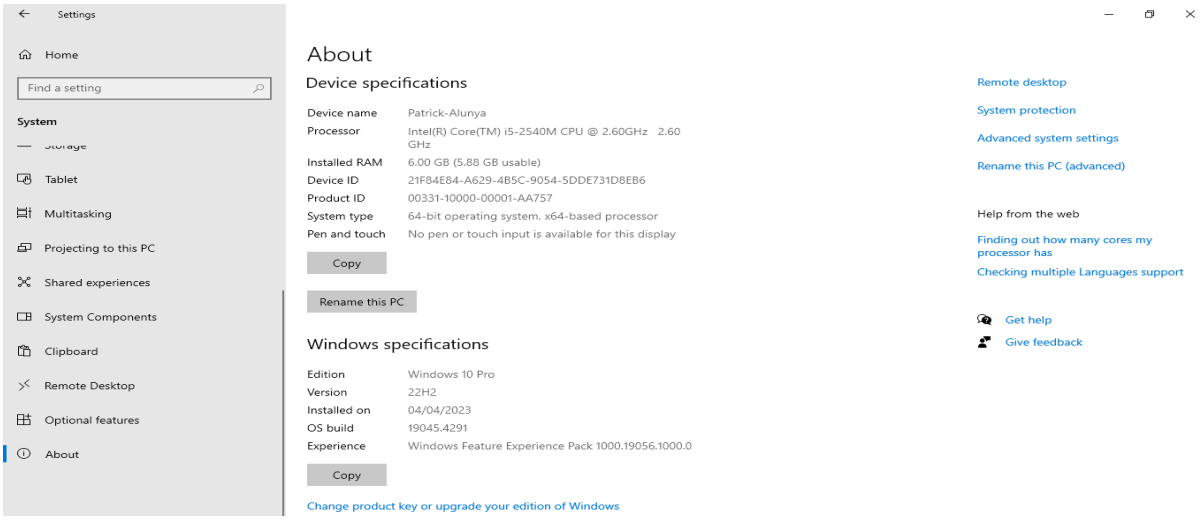
Dev_Setup

Setup Development Environment

#Assignment: Setting Up Your Developer Environment Answers:

```
1. Select Your Operating System (OS):
   Choose an operating system that best suits your preferences and project
requirements. Download and Install Windows 11.
https://www.microsoft.com/software-download/windows11
```

Below screenshot shows the system information for my device and the operating system installed on it.



As you can see My system could only allow installation of windows 10 version.

The version is 22Hz

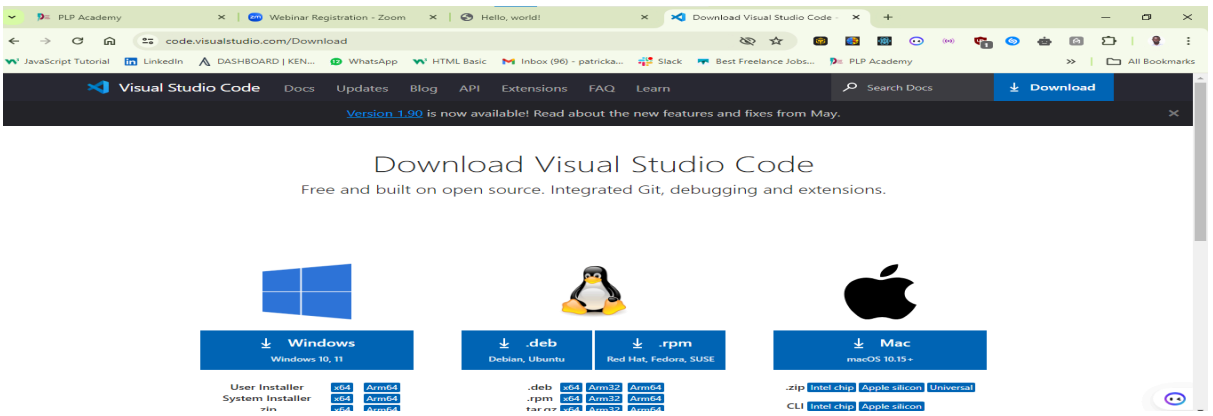
System type is 64-bit operating system.

```
2. Install a Text Editor or Integrated Development Environment (IDE):
   Select and install a text editor or IDE suitable for your programming
languages and workflow. Download and Install Visual Studio Code.
https://code.visualstudio.com/Download
```

So for my case I chose Microsoft Visual Studio Code.

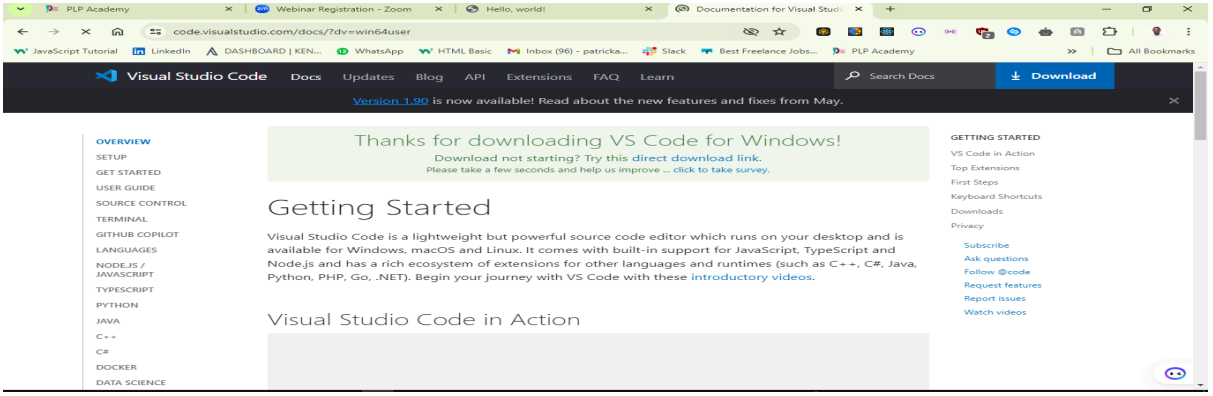
Follow below outlined screenshots that highlight the procedure I took to install my editor.

Step 1: I followed the below official visual studio address to install the text editor.



Step 2: Choose the right product for your system.

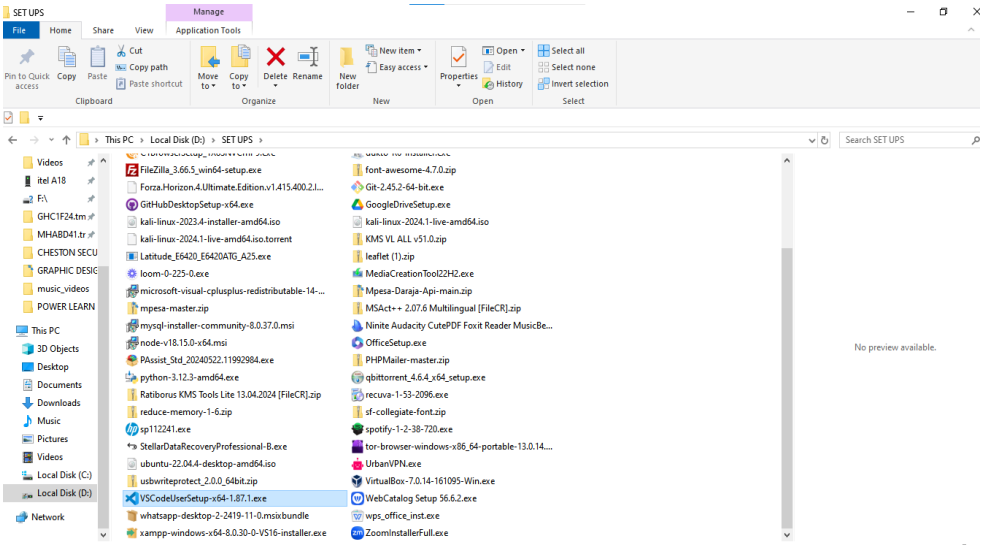
For my case I chose Windows 10,11.



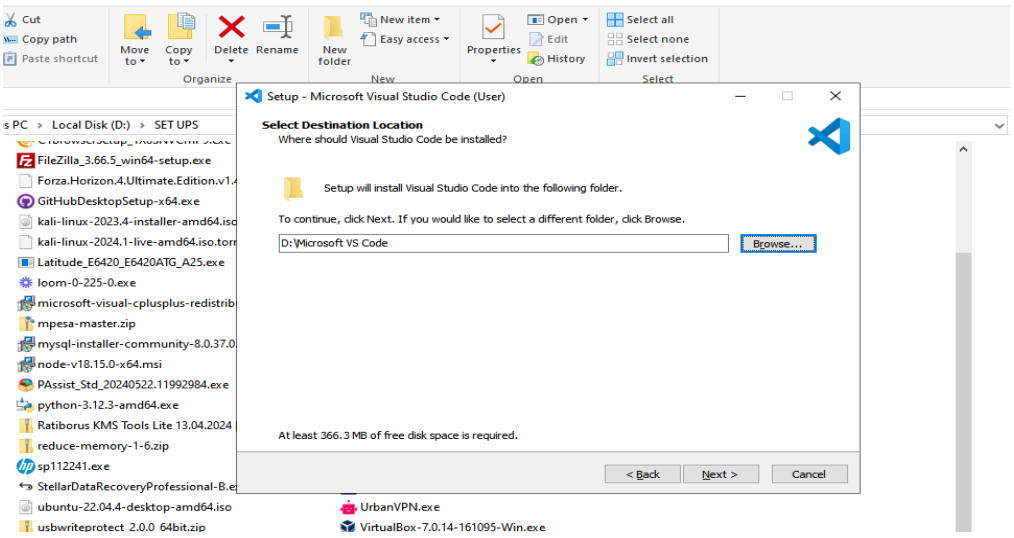
Wait for the set up to install.

After downloading the installer. Go to it in the file system then run it.

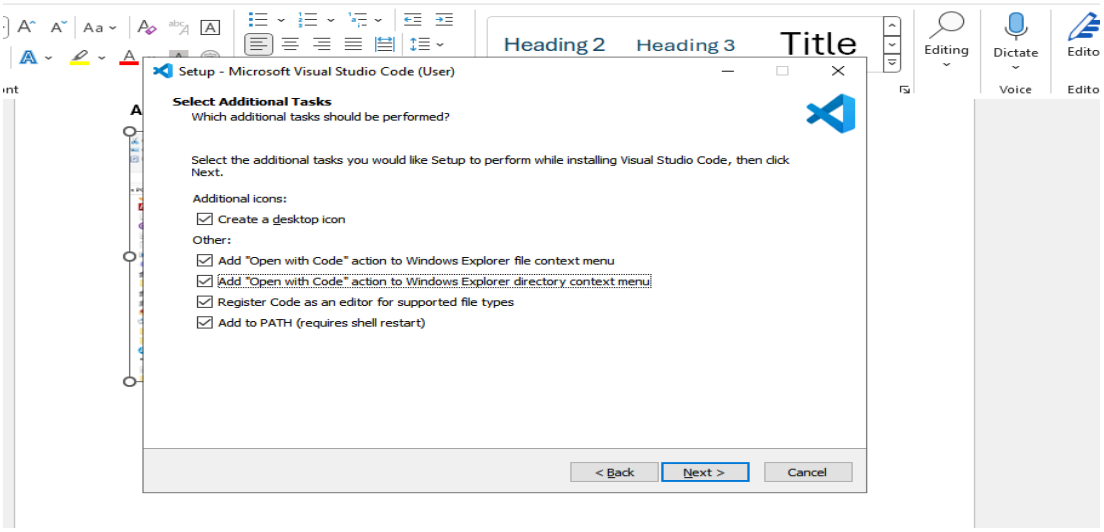
Refer below screenshot:

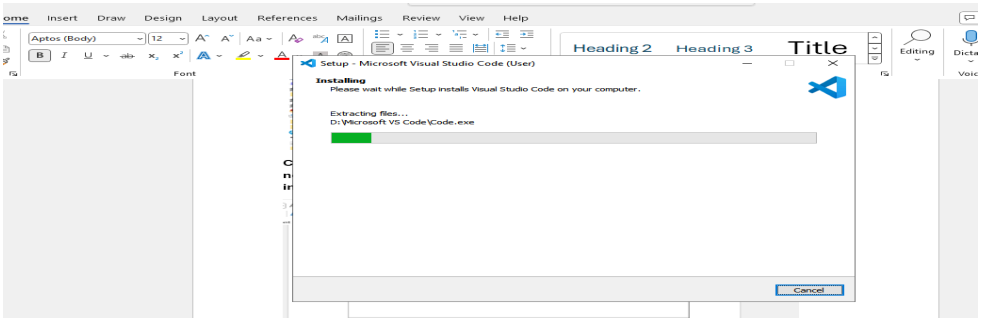


: accept licence agreement and choose where you want the editor to be installed. As shown below in the screenshot:

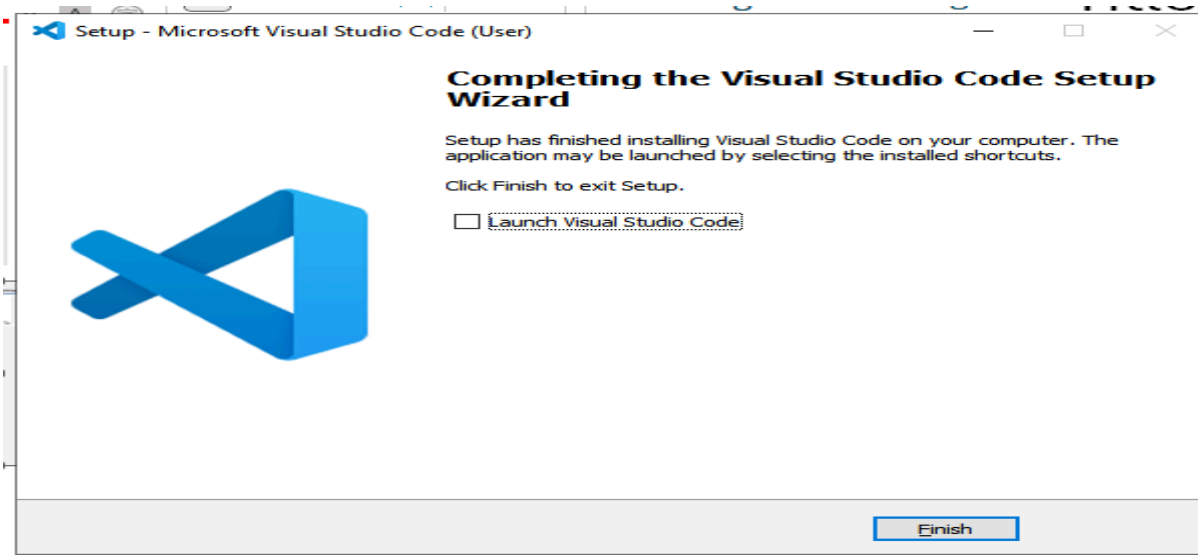


Check all the boxes in the next screen as shown below then click next and on the next page just click install and let the installer perform the magic to install vscode in your machine:





Then click finish:



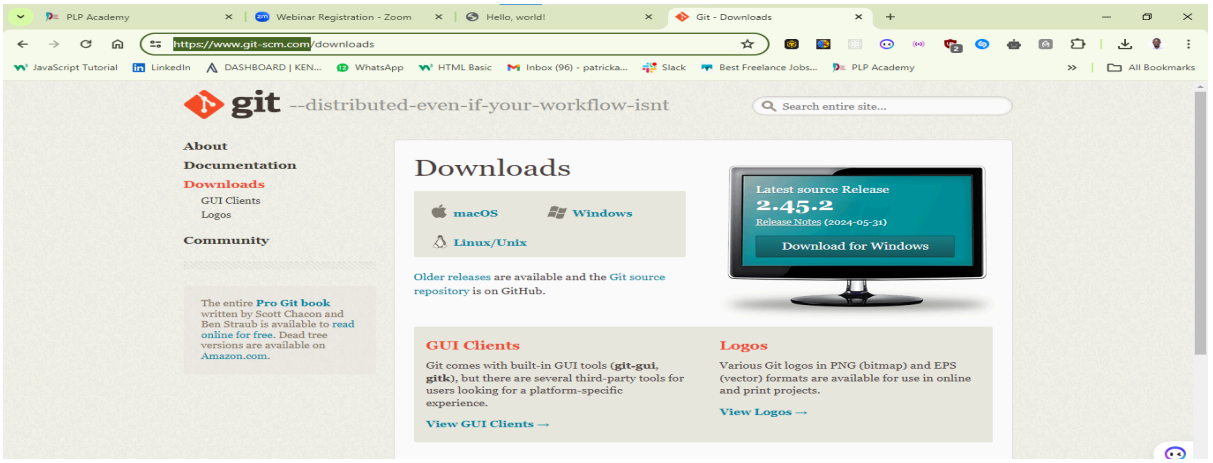

```
3. Set Up Version Control System:
   Install Git and configure it on your local machine. Create a GitHub account
for hosting your repositories. Initialize a Git repository for your project
and make your first commit. https://github.com
```

So our third task is to set up our version control system:

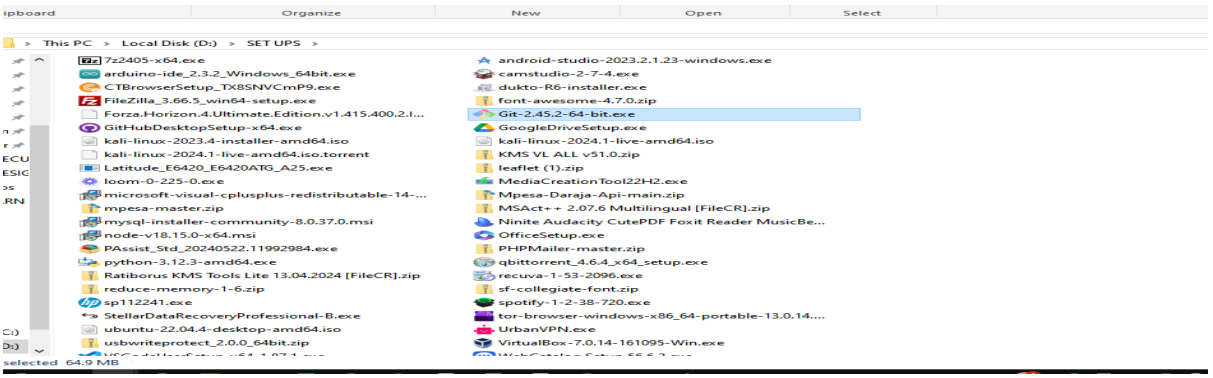
For our case we shall be installing Git as our Version Control System.

Lets go to their official website: `https://www.git-scm.com`

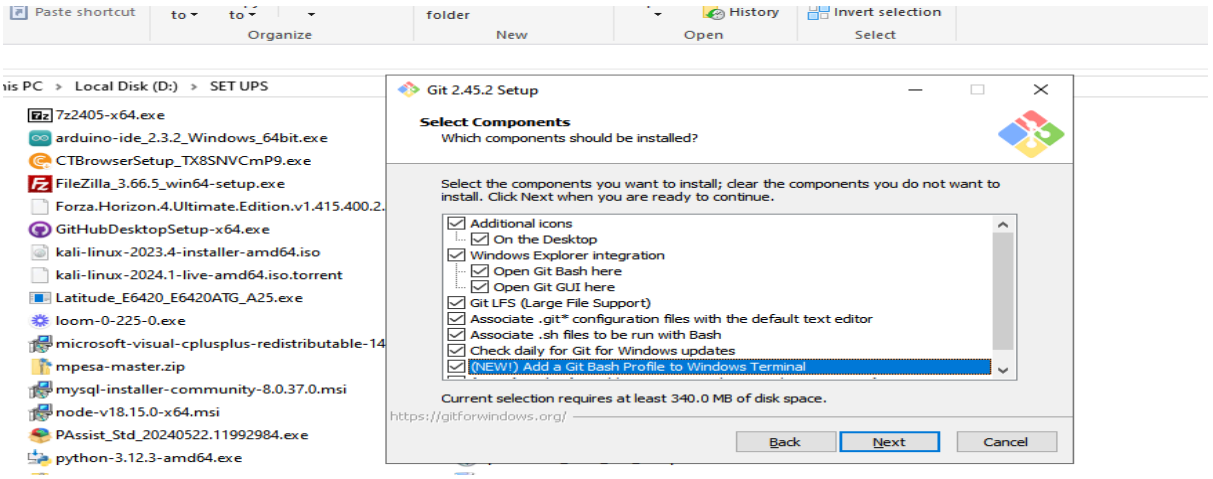
For our case we are using windows, we shall the windows product as in the screenshot below:



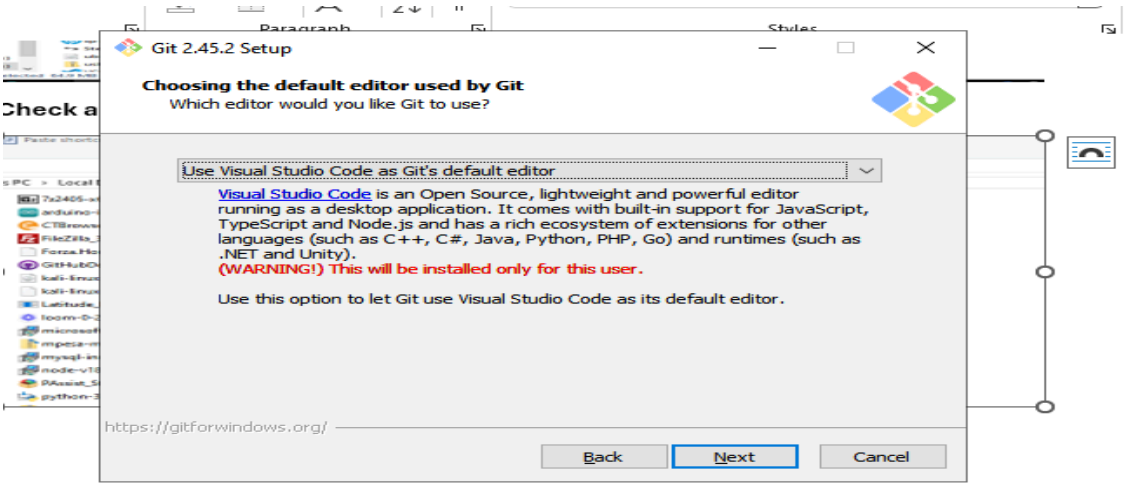
Next click download and then run the installer from your file system.: as below:



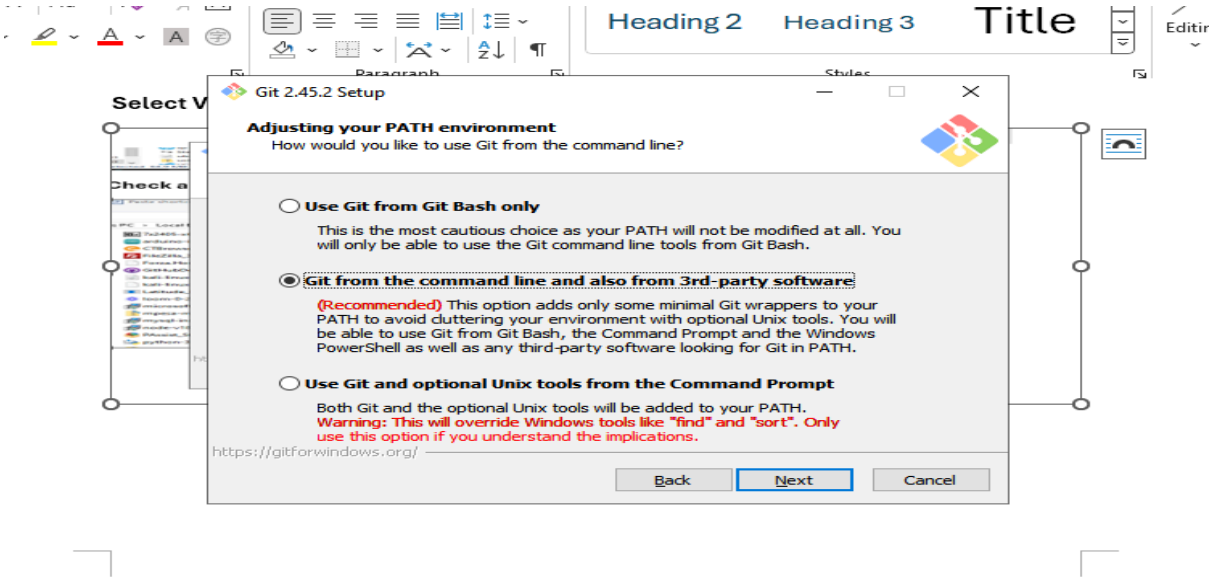
Check all the boxes and click next:



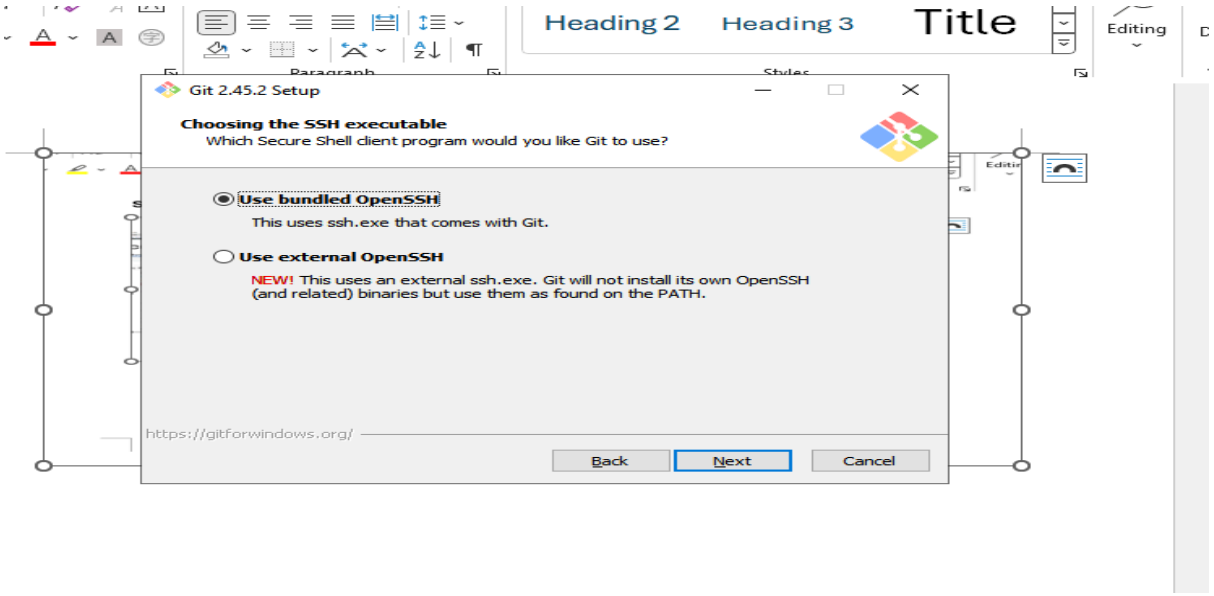
Select Visual Studio Code as default text editor for Git:



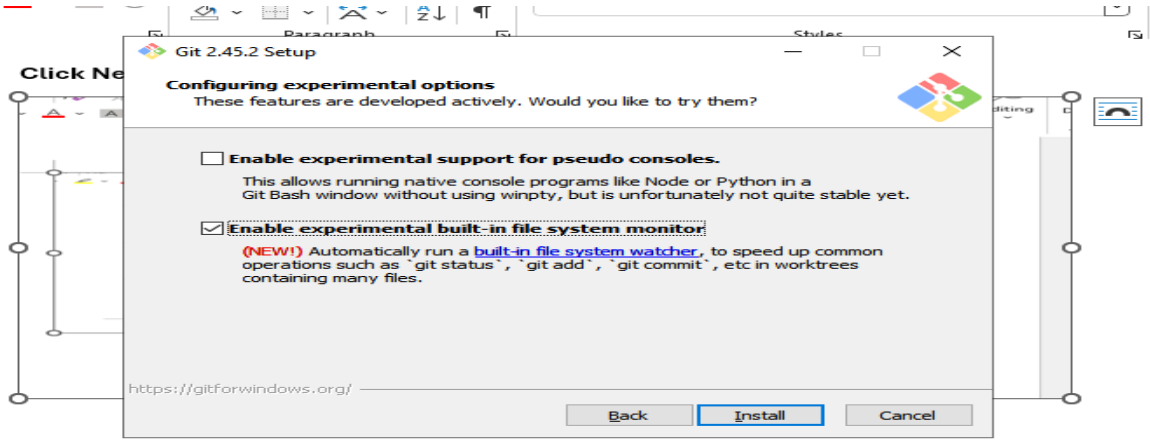
Click next then on the next page still leave as it is and click next:



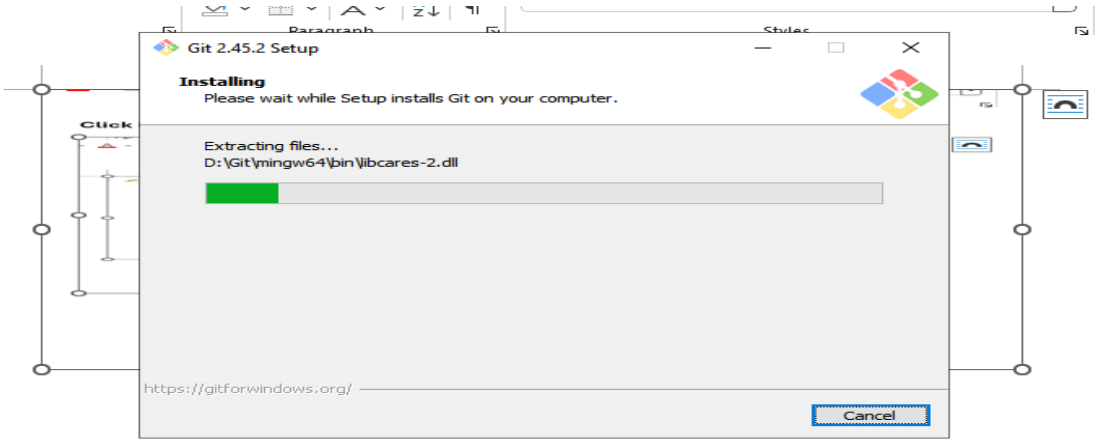
Click Next:



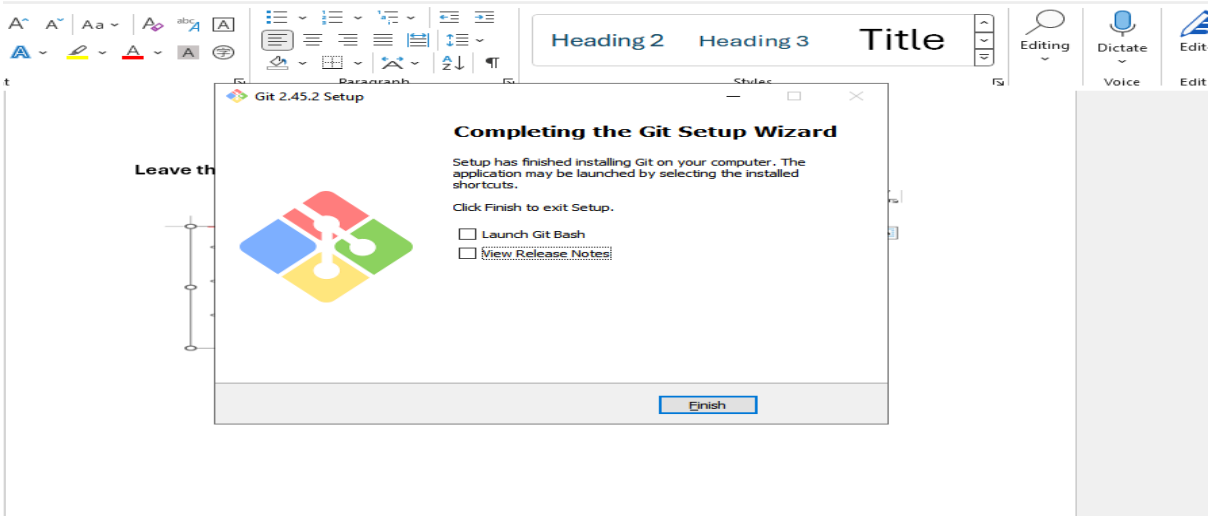
Click next until you see the below screen and click install:



Leave the git installer to perform its magic and install git to your machine:

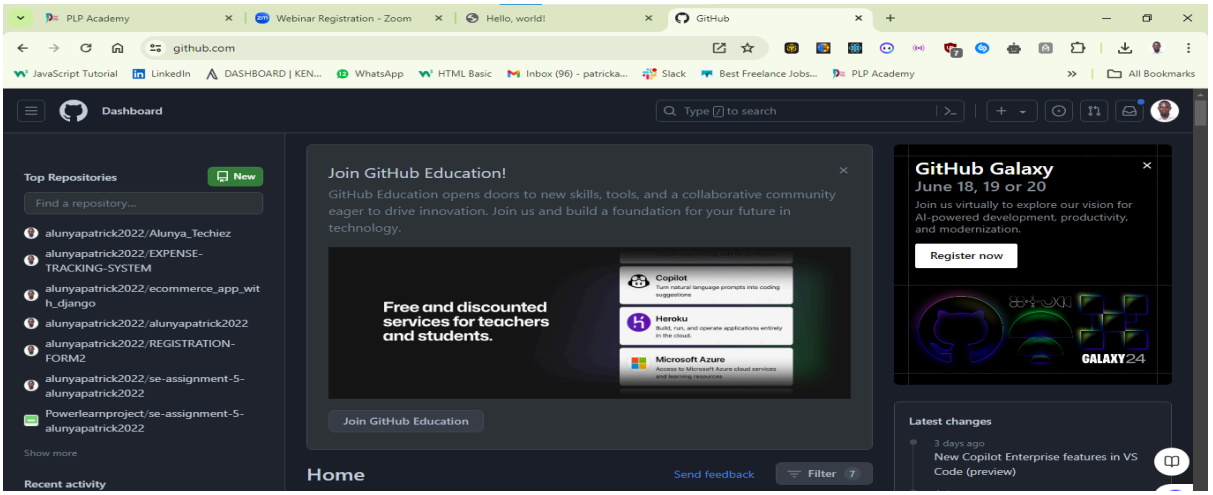


Uncheck the boxes and click finish:

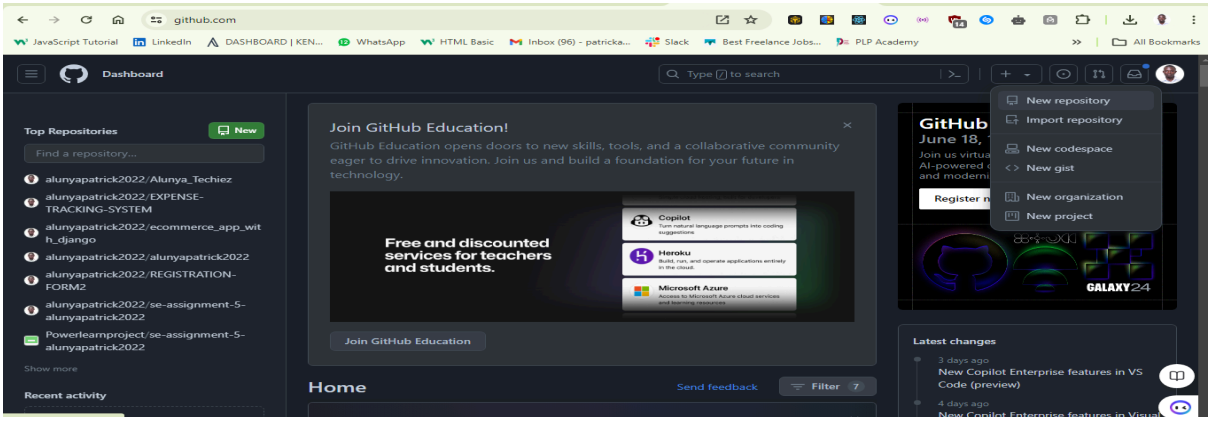


Lets go to https://github.com and create our github account:

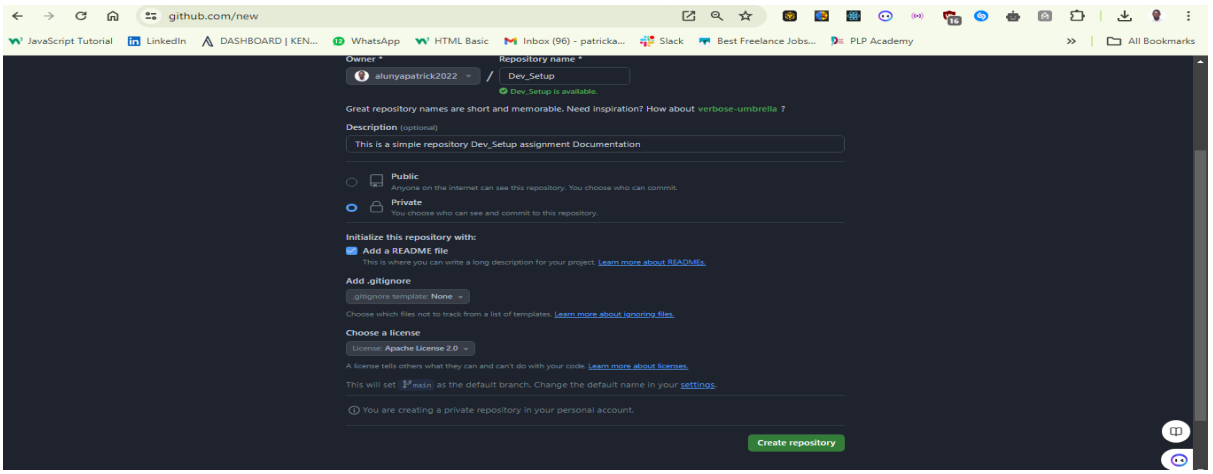
After creating your account login to have a display as shown in the below screenshot:



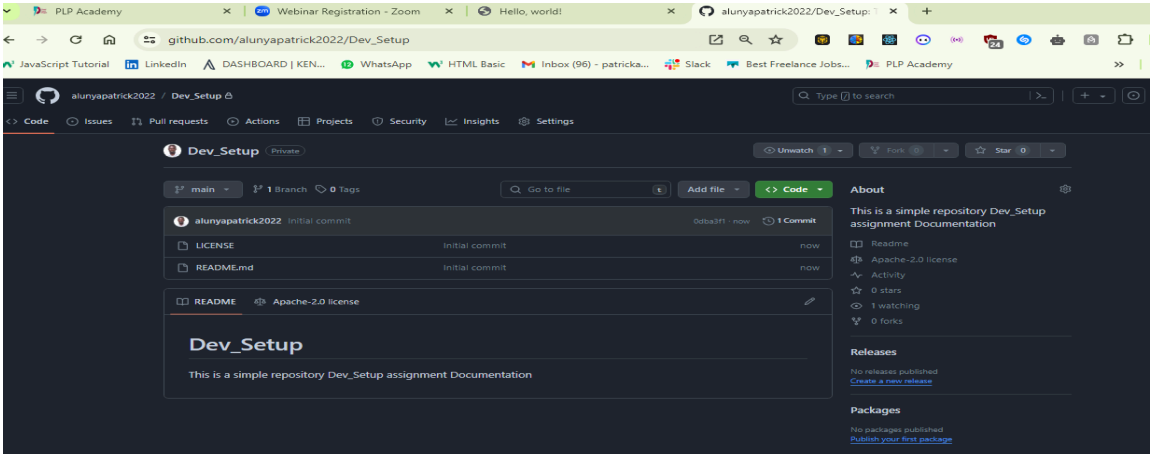
Next, let us create a repository to host our projects: As is in the below screenshot click the down carousel the click new repository:



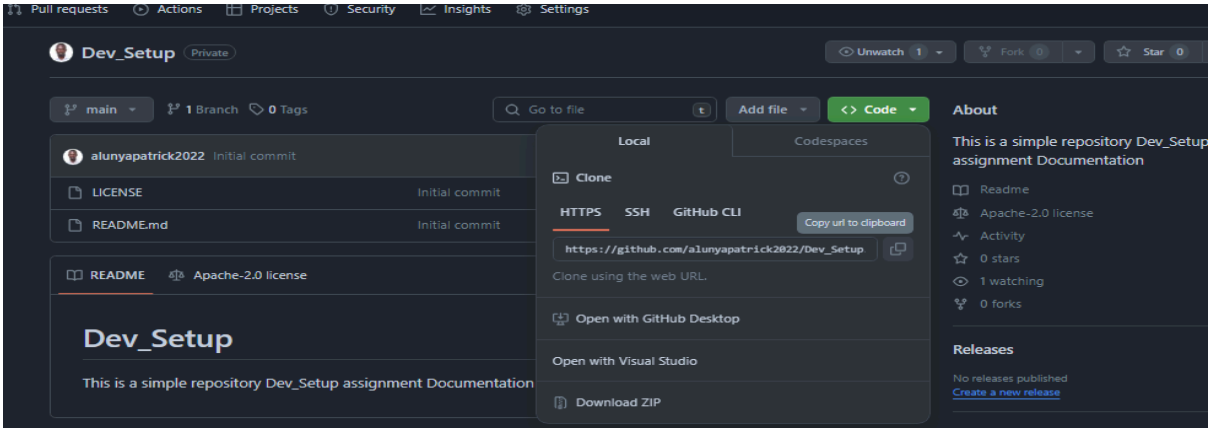
Give the repository a name, a description, and you can give it a readme file and a license as well. That is as below screenshot then click create repository.



You will have something like this:

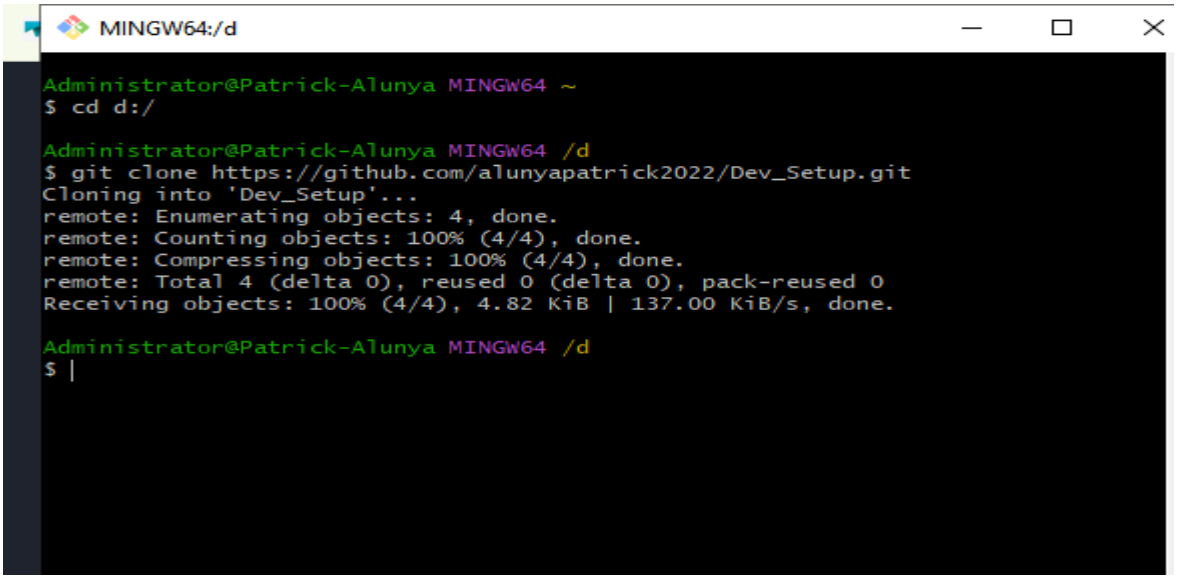


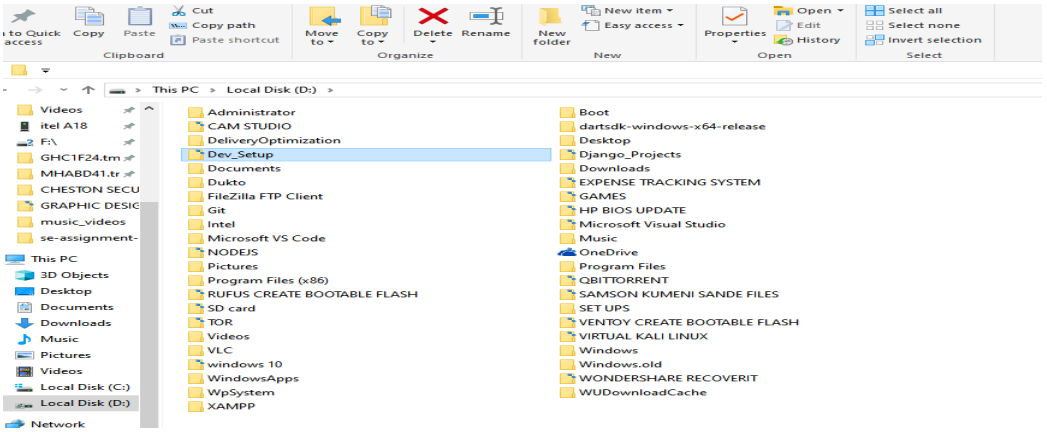
Click code as below, then copy the repository url:



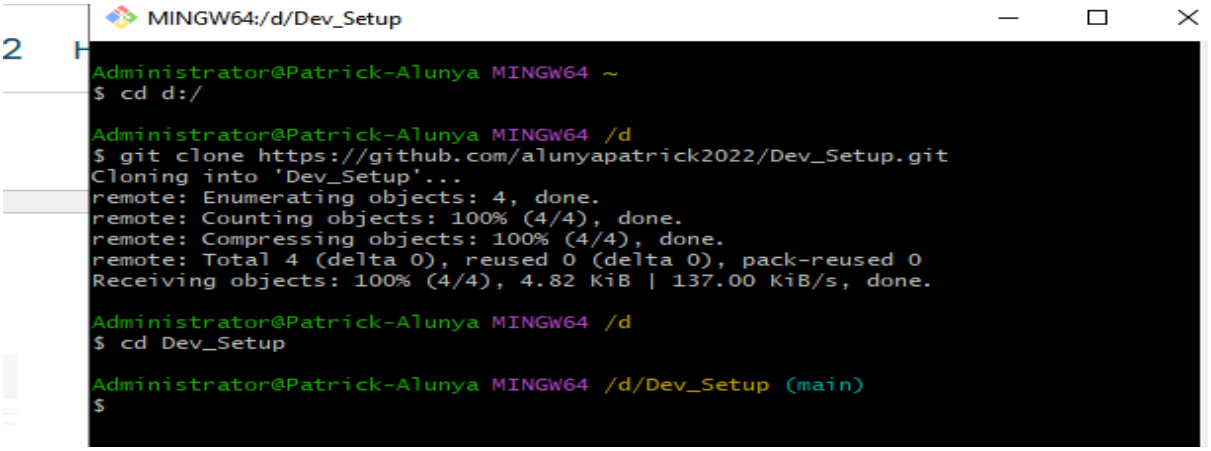
Go back to your windows search bar, search for gitbash and run as adminstrator and type cd d:/ and then git clone https://github.com/alunyapatrick2022/Dev_Setup.git

Git will clone the repository into your local drive D:/

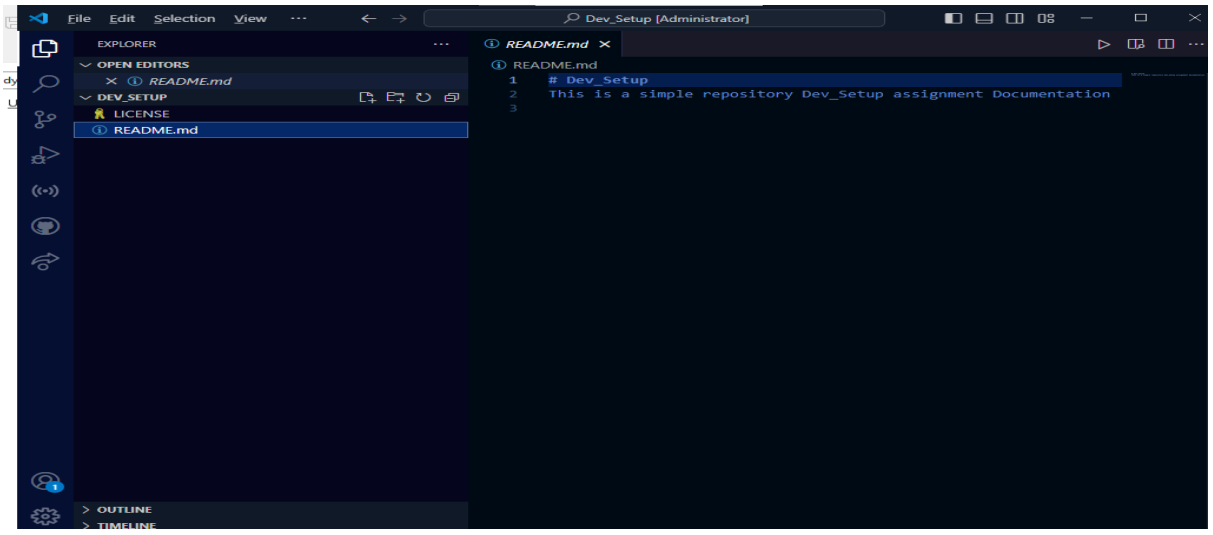




On your git bash cd to your project folder: Then use the command code . (This will open the folder in Vs code).



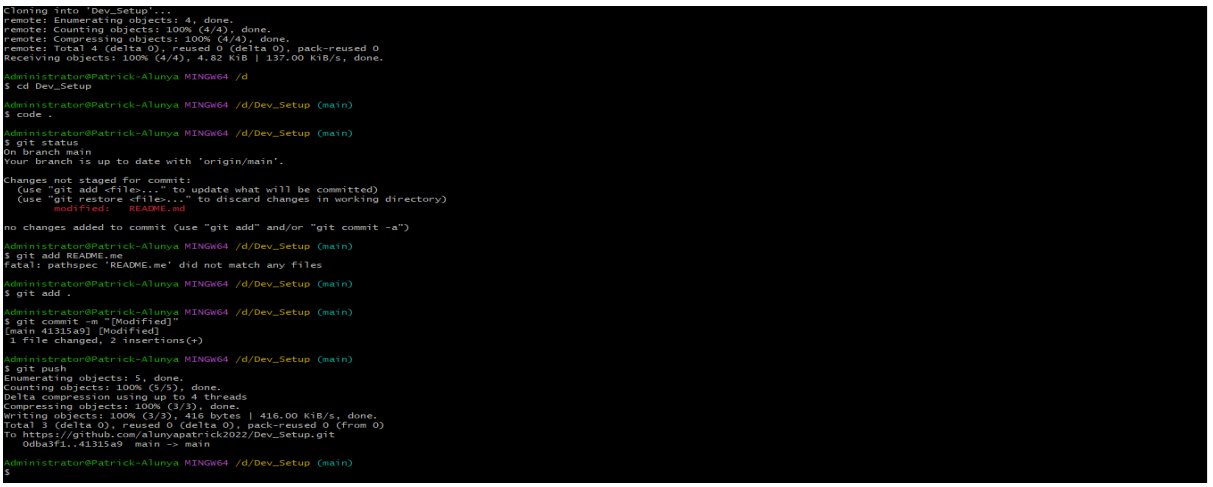
Vs code will open with display of all the files we have on our folder.



Let us try and edit the files and use git status to see what has changed:

We have modified the file let us see in the below screenshot:

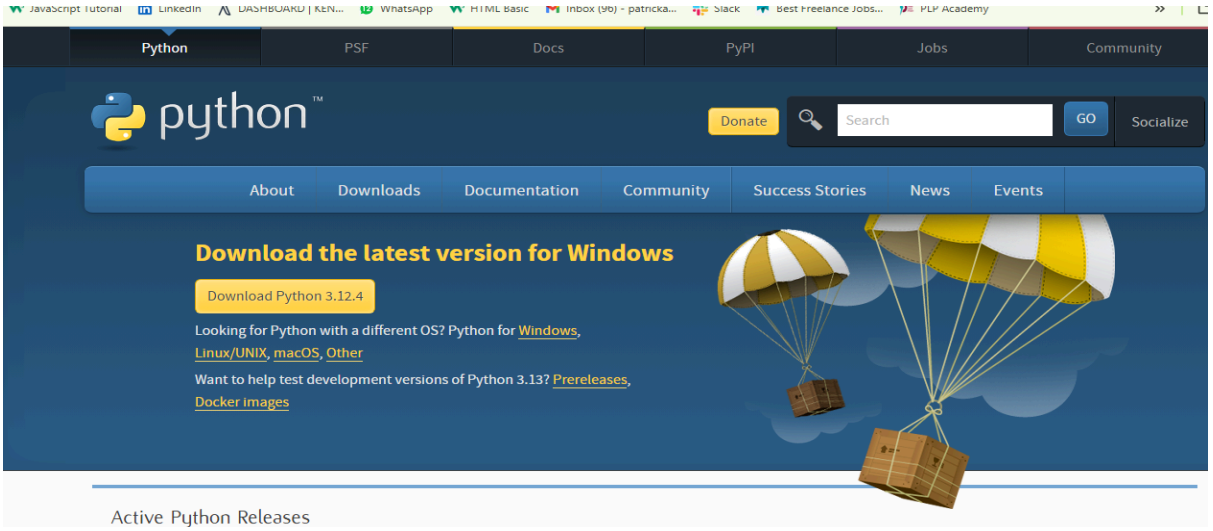
Lets commit changes to github refer below screenshot:



4. Install Necessary Programming Languages and Runtimes:
  Instal Python from http://wwww.python.org programming language required for your project and install their respective compilers, interpreters, or runtimes. Ensure you have the necessary tools to build and execute your code.

Let us now install Python from: http://wwww.python.org

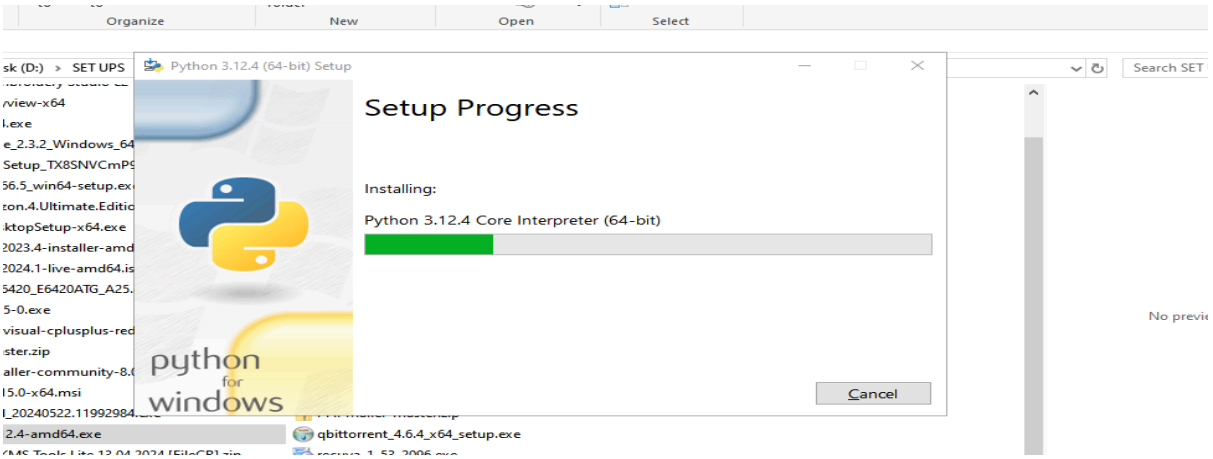
then click downloads and choose your download option.



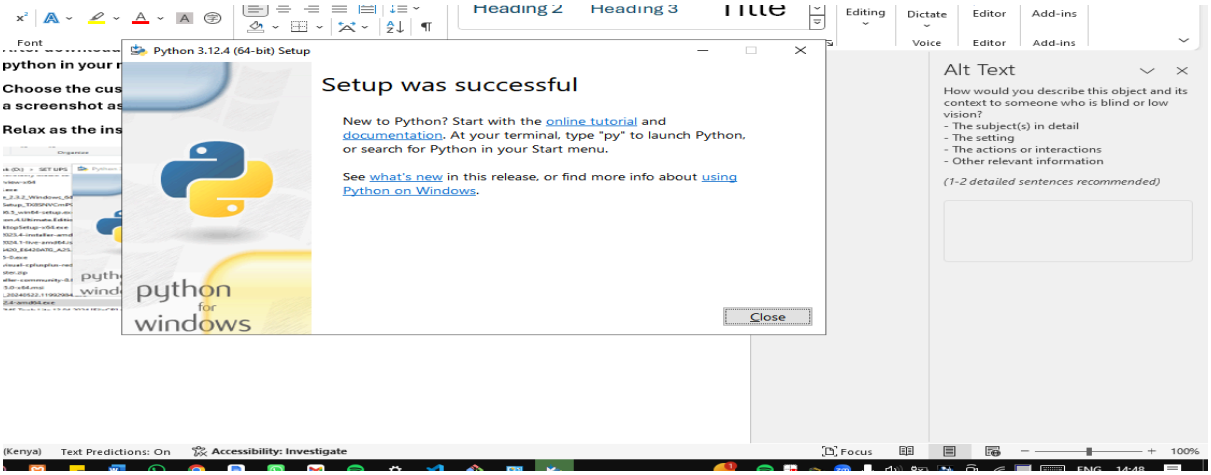
After downloading the installer, go to your file system and run the installer to install python in your machine.

Choose the customised installation and check the add path boxes. You should see a screenshot as is below.

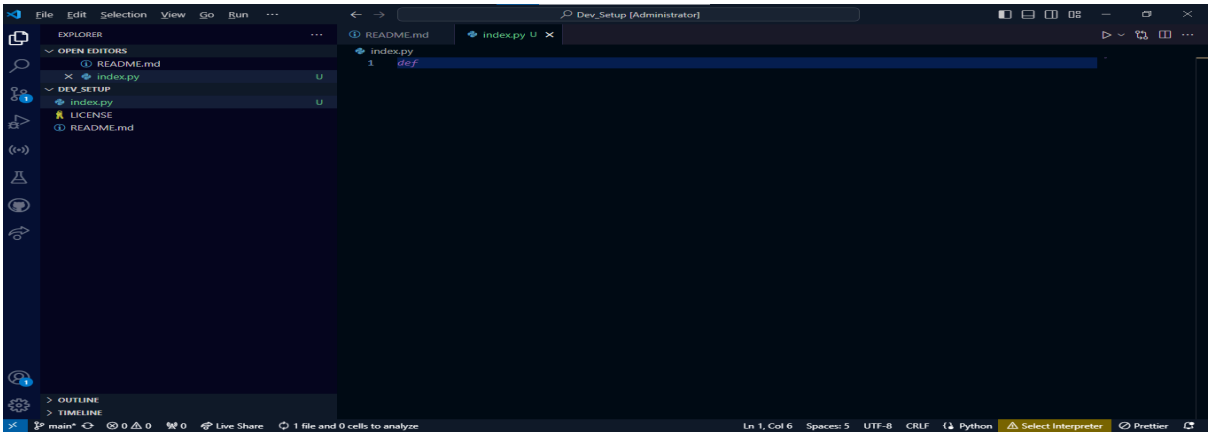
Relax as the installer does its magic and installs Python on your machine.



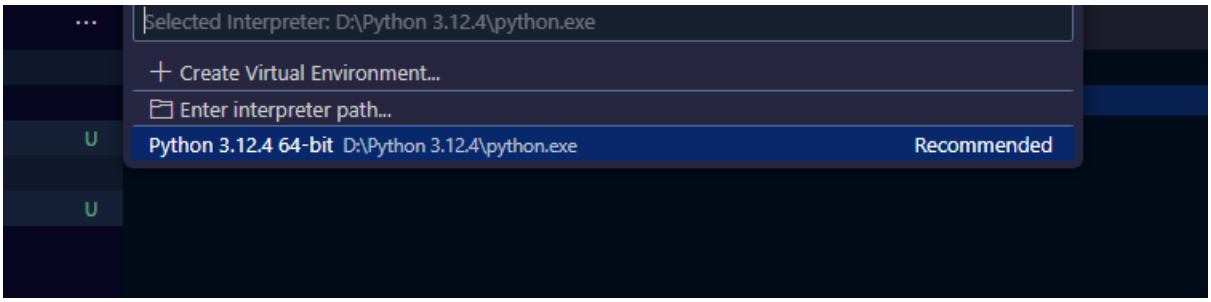
Successfully installed Python :



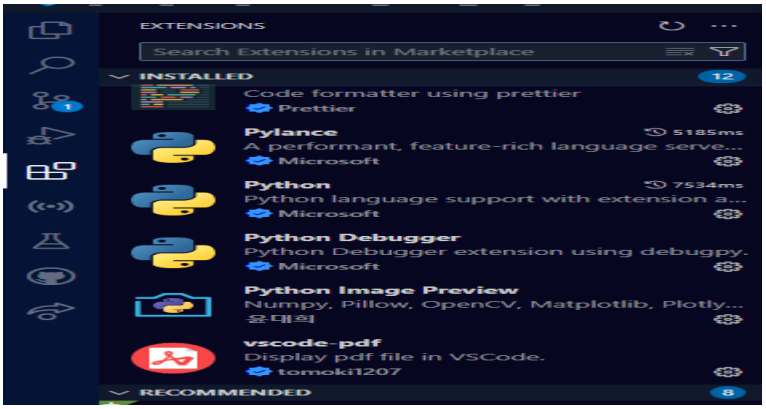
In our Project folder, let us create python file index.py.



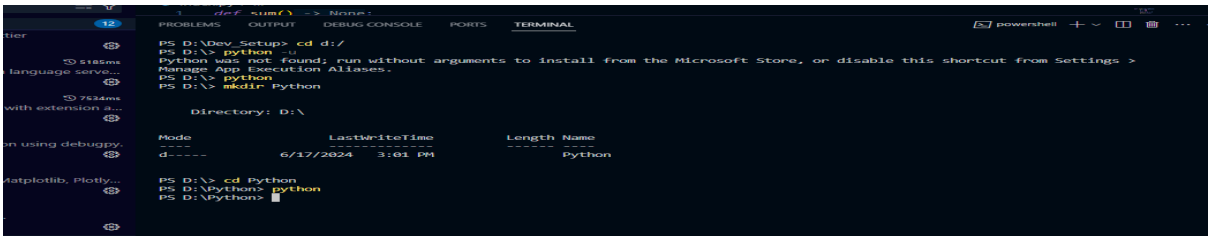
Since we are having a warning to install an interpreter for python file, let us install it: Since we installed python, it comes with its own interpreter. Let us just choose it.



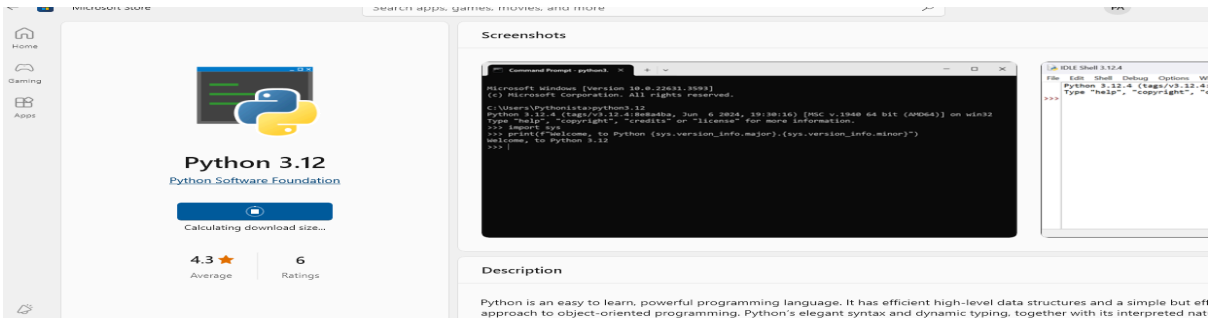
Next step is to install python run times and extensions for debugging our python codes. See below screenshot.



When still getting this error after running this command, run python without arguments to install python 3.12 from Microsoft store.



Installation in progress from Microsoft Store.



Simple Python Maths Programme.

```python
# Addition
a = 5
b = 3
sum_result = a + b
print("Sum:", sum_result)

# Subtraction
difference = a - b
print("Difference:", difference)

# Multiplication
product = a * b
print("Product:", product)

# Division
quotient: float = a / b
print("Quotient:", quotient)

# Exponentiation
power: int = a ** b
print("Power:", power)

# Modulus
remainder = a % b
print("Remainder:", remainder)
```

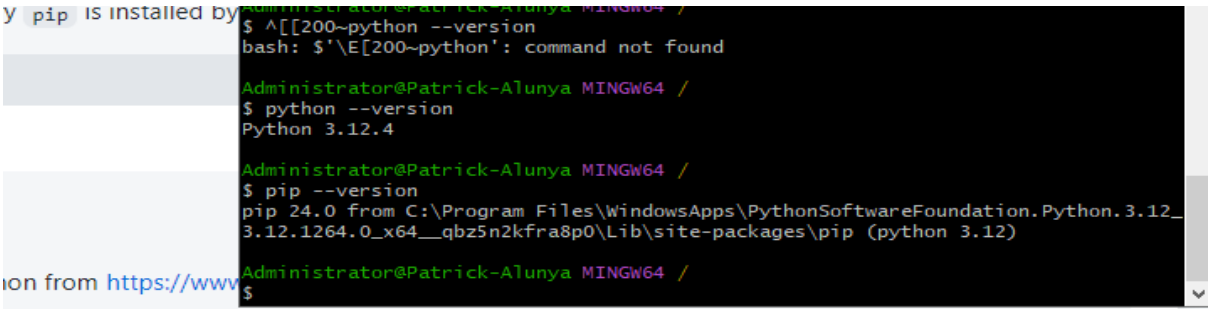
This is what you will see after execution.

```
[Running] python -u "d:\Dev_Setup\index.py"
Sum: 8
Difference: 2
Product: 15
Quotient: 1.6666666666666667
Power: 125
Remainder: 2

[Done] exited with code=0 in 0.977 seconds
```

5. Install Package Managers:
   If applicable, install package managers like pip (Python).

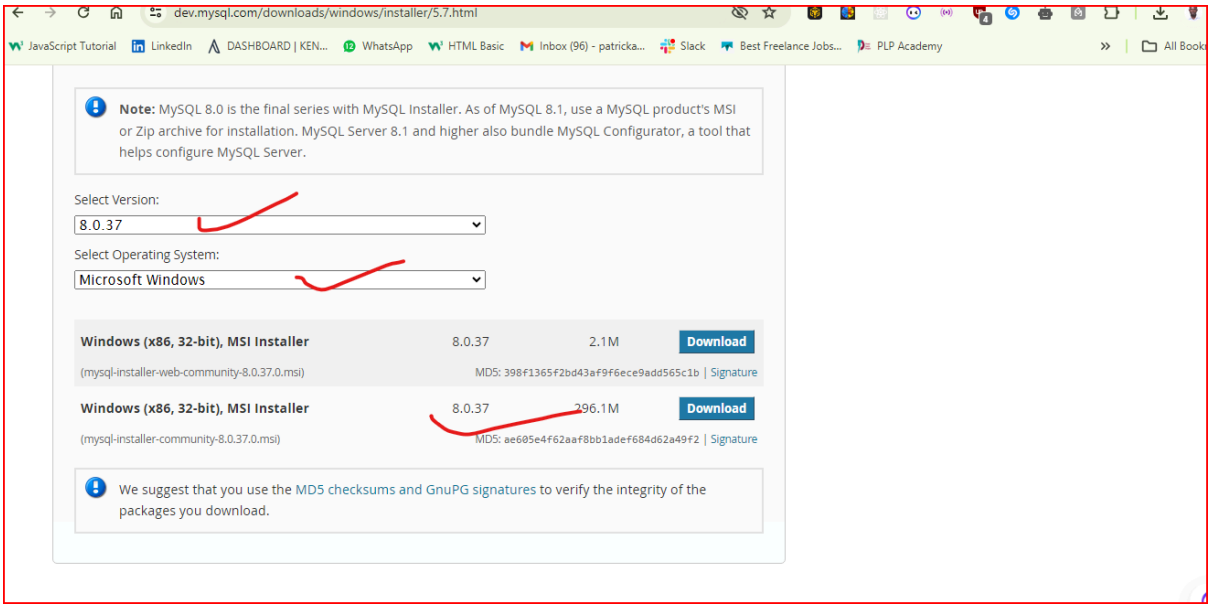
Let us go to gitbash and install package manager pip.



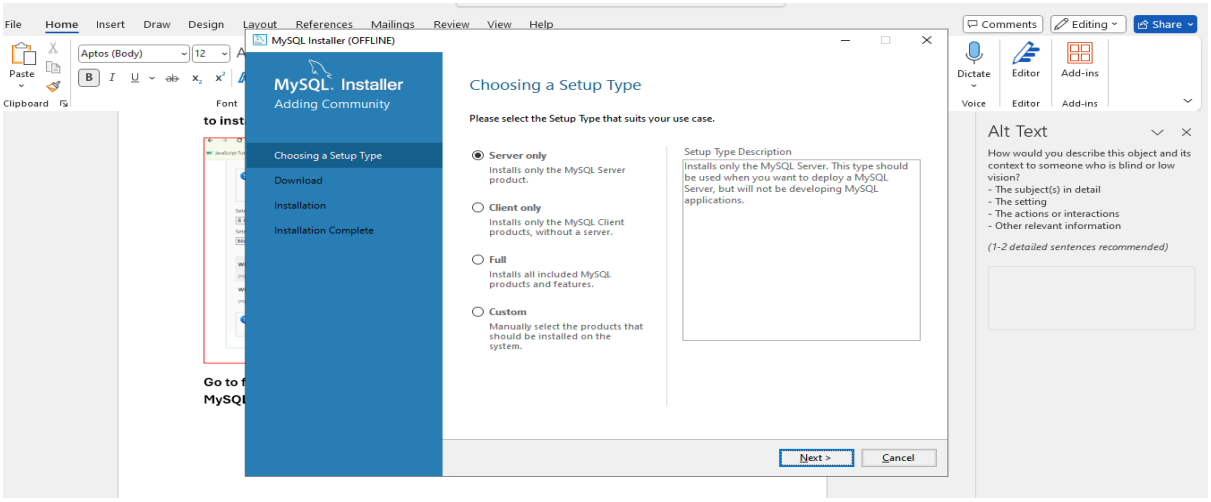
6. Configure a Database (MySQL):
   Download and install MySQL database.
https://dev.mysql.com/downloads/windows/installer/5.7.html

Let us go to ; https://dev.mysql.com/downloads/windows/installer/5.7.html

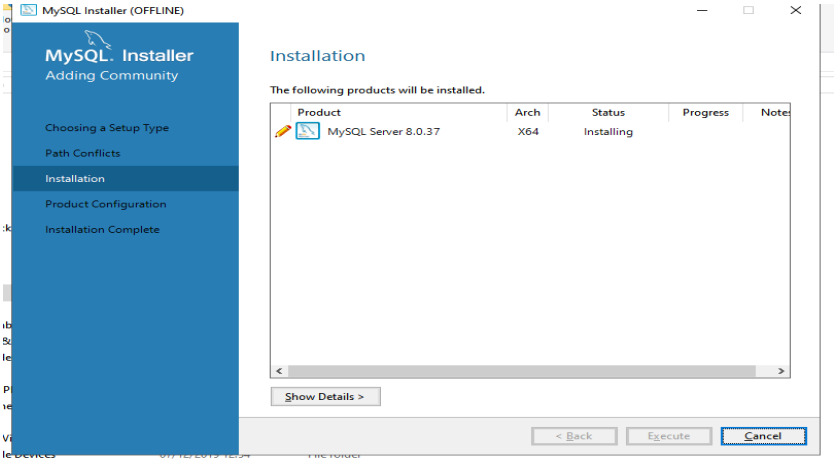
And install MySQL . Choose as marked in the screenshot below and click download to install MySQL installer.



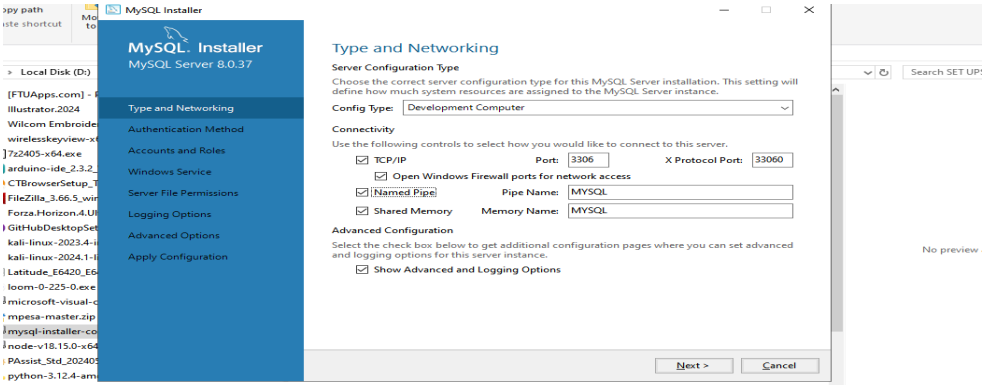
Go to file system where you save your downloads and run installer to start the MySQL installation configuration. Choose to install server only then click next.



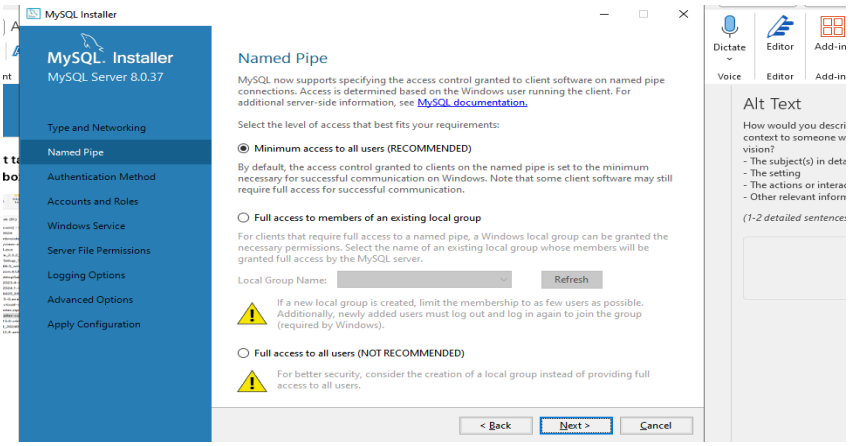
Click execute to install MySQL server



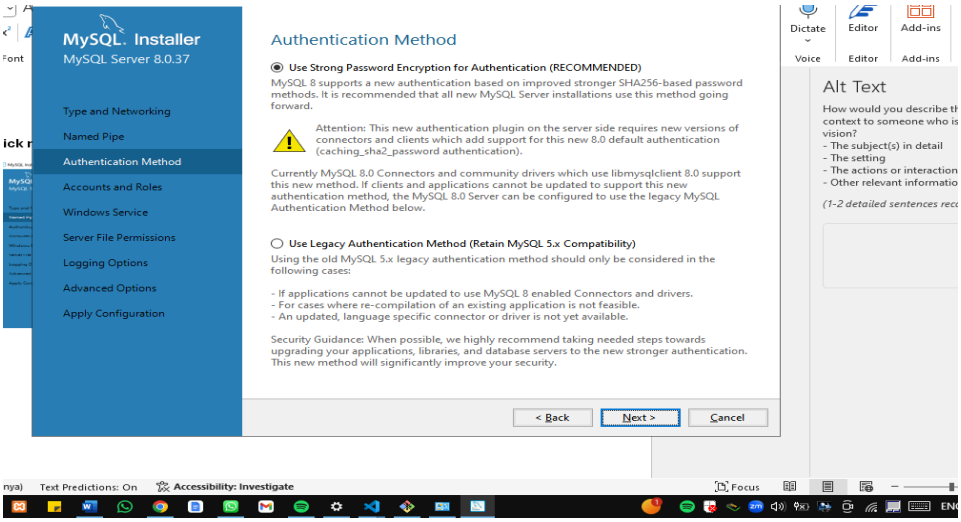
Next task is to configure the server. Choose development computer and check all the boxes, then click next as is in the below screenshot.



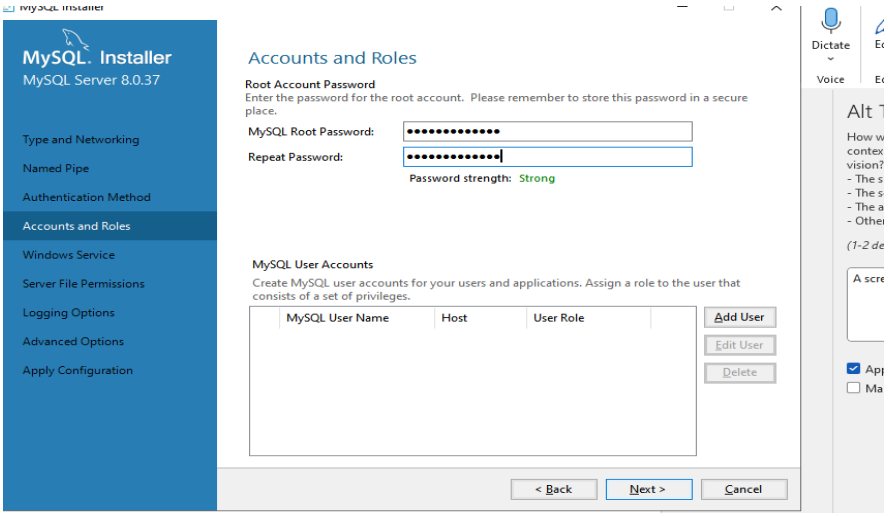
Click next



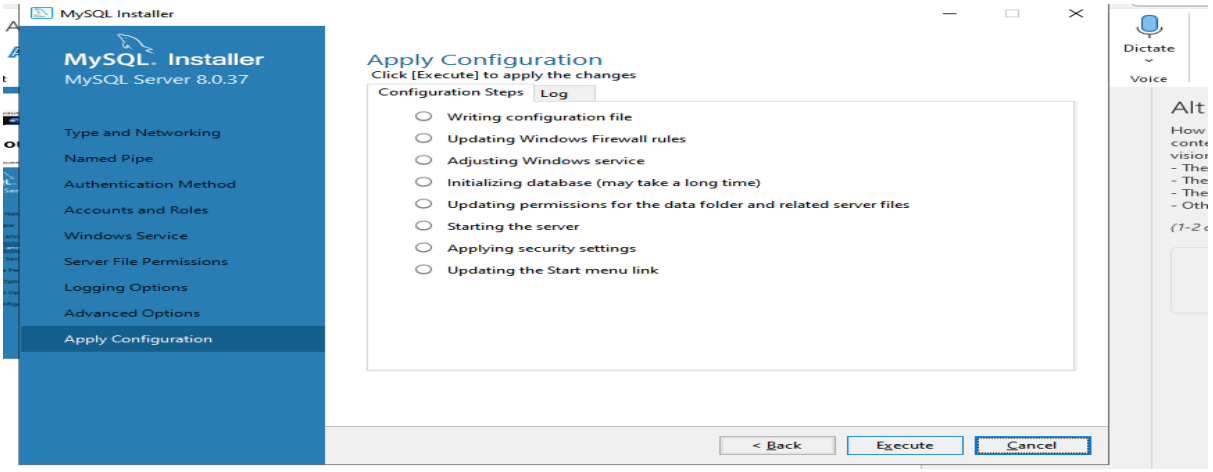
Choose use strong password and click next.



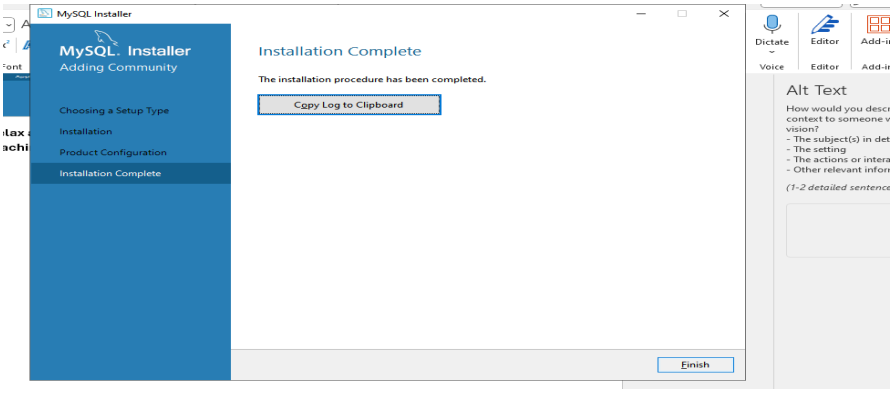
Set your strong password and click next.



Click next until you see the screen below then click execute.



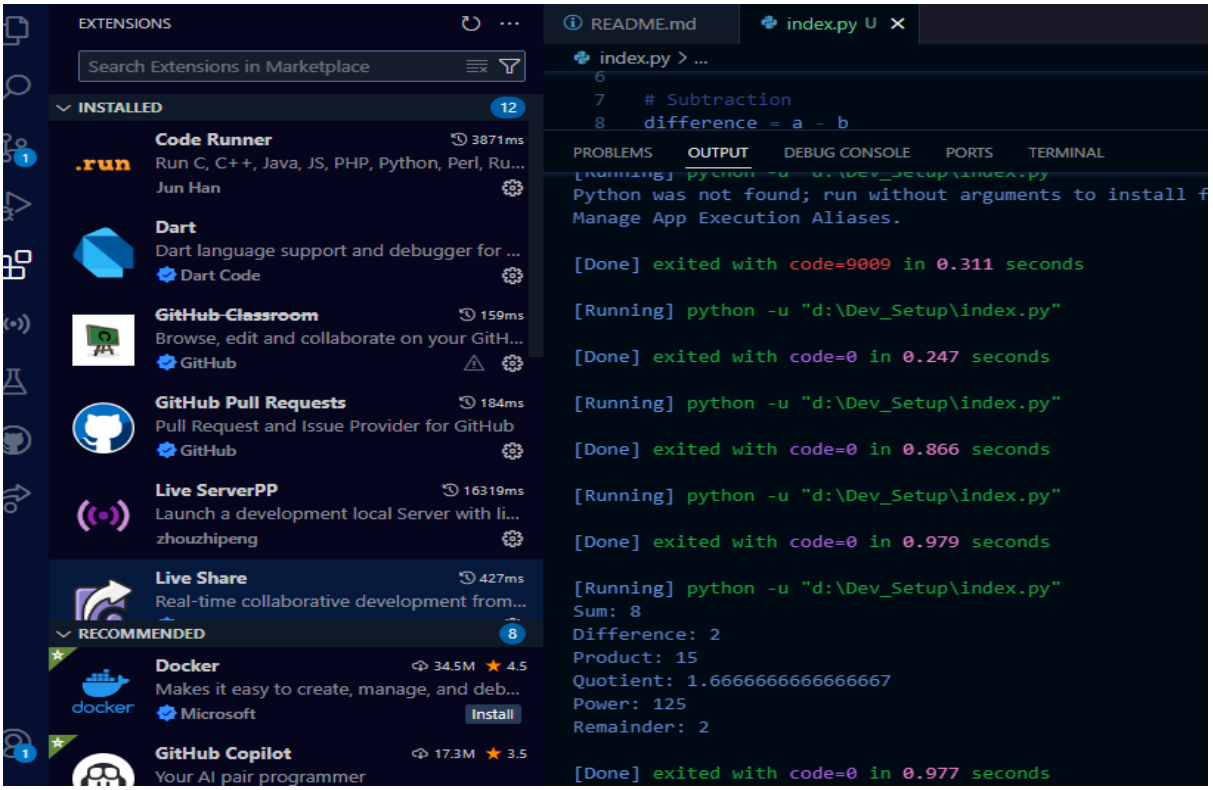
Relax as MySQL installer performs its magic and installs MySQL server 8.0 on your machine. Thereafter click finish.

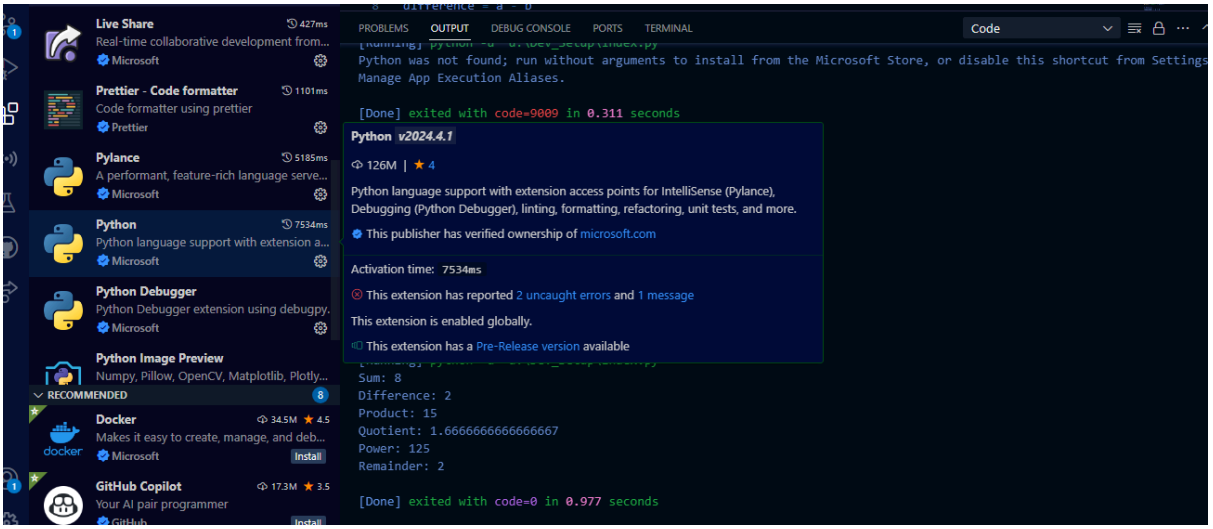


```
8. Explore Extensions and Plugins:
   Explore available extensions, plugins, and add-ons for your chosen text
editor or IDE to enhance functionality, such as syntax highlighting, linting,
code formatting, and version control integration.
```

Let us go to our text editor and see its features.

Below are some our installed extensions.




Live Share
427ms
Real-time collaborative development from...
Microsoft
Prettier - Code formatter
1101ms
Code formatter using prettier
Prettier
Pylance
5185ms
A performant, feature-rich language serve...
Microsoft
Python
7534ms
Python language support with extension a...
Microsoft
Python Debugger
Python Debugger extension using debugpy.
Microsoft
Python Image Preview
Numpy, Pillow, OpenCV, Matplotlib, Plotly...
RECOMMENDED
8
Docker
34.5M
4.5
Makes it easy to create, manage, and deb...
Microsoft
Install
GitHub Copilot
17.3M
3.5
Your AI pair programmer
Install
PROBLEMS
OUTPUT
DEBUG CONSOLE
PORTS
TERMINAL
Code
Python was not found; run without arguments to install from the Microsoft Store, or disable this shortcut from Settings
Manage App Execution Aliases.
[Done] exited with code=9009 in 0.311 seconds
Python v2024.4.1
126M | 4
Python language support with extension access points for IntelliSense (Pylance),
Debugging (Python Debugger), linting, formatting, refactoring, unit tests, and more.
This publisher has verified ownership of microsoft.com
Activation time: 7534ms
This extension has reported 2 uncaught errors and 1 message
This extension is enabled globally.
This extension has a Pre-Release version available
Sum: 8
Difference: 2
Product: 15
Quotient: 1.6666666666666667
Power: 125
Remainder: 2
[Done] exited with code=0 in 0.977 seconds