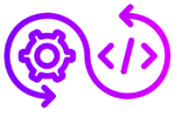
Module 7: Overview of Python



~ Abhijit Zende

1. In Local Windows Machine Install and setup Environment Variable for Python

2. Install Visual Studio Code and Install Python and Terraform Extensions in VS Code
3. Create Python Console Application to randomly generate OTP kind of secure code

4. Create Python Console Application to read the contents of .json file and print in the VS Code python console output
5. Create Python Web Application to using Flask Web Application Framework

 # Detailed notes & Automation scripts on my GitHub #

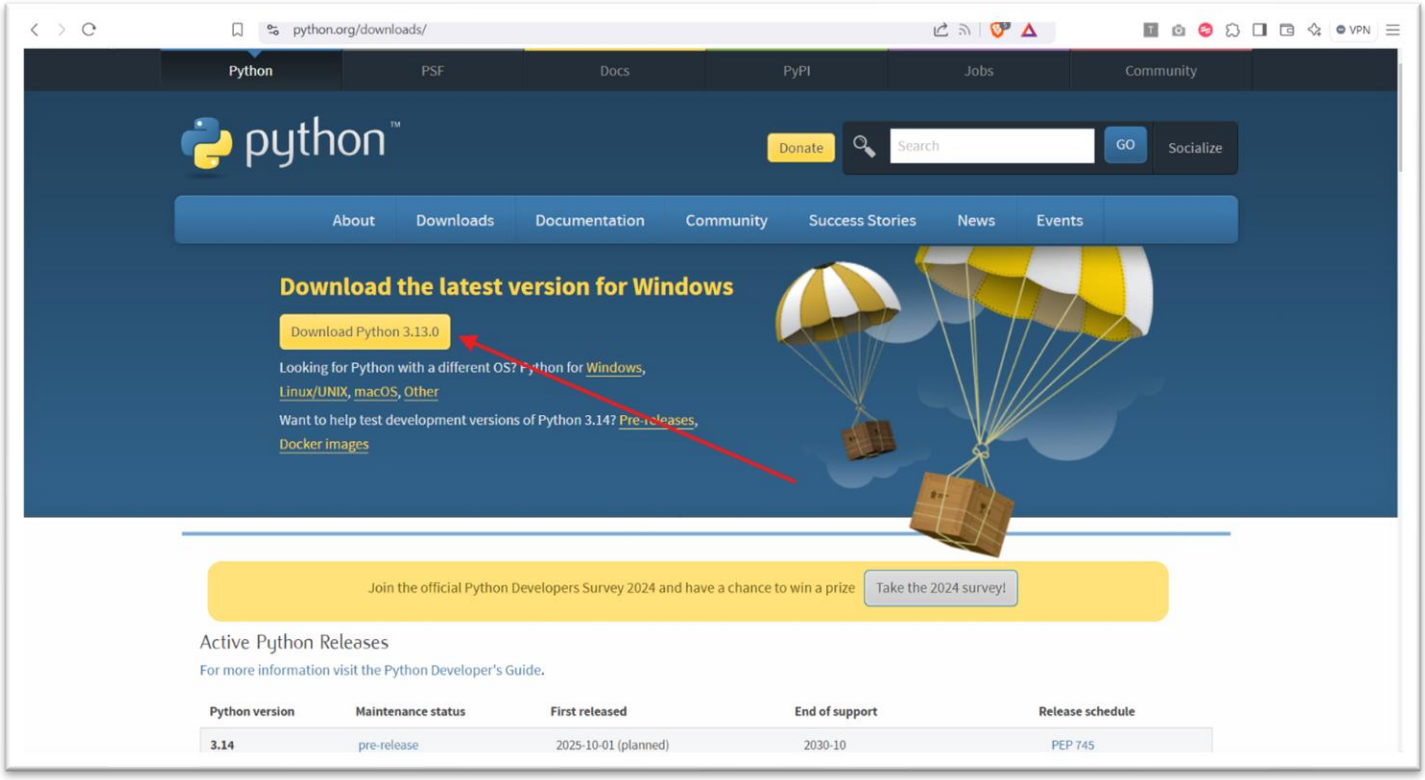
https://github.com/Abhiz2411/Python-101-for-Devops-Enthusiasts

1. L1 – In Local Windows Machine Install and setup Environment Variable for Python

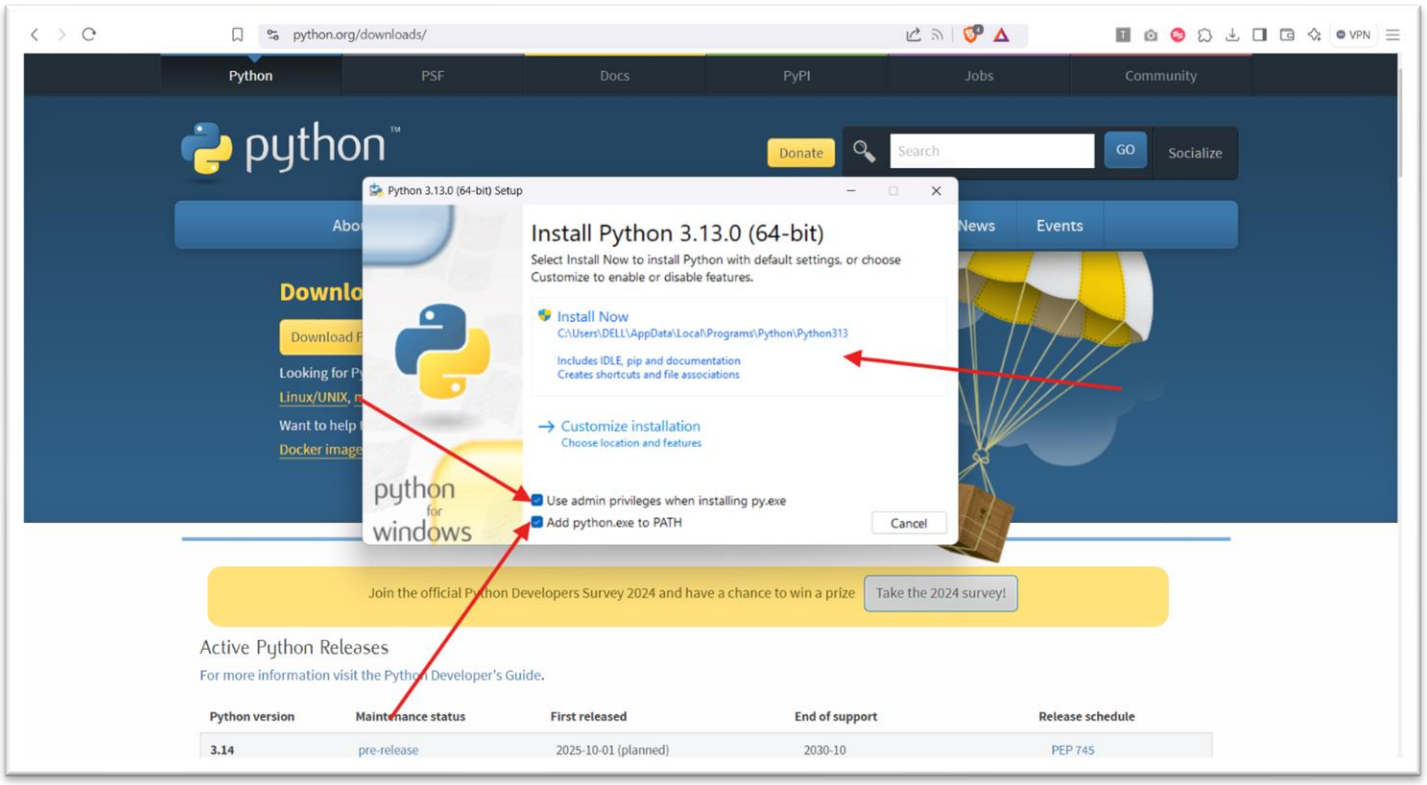
Ans.

(*** Note: Screen shots attached to end of each question ***)

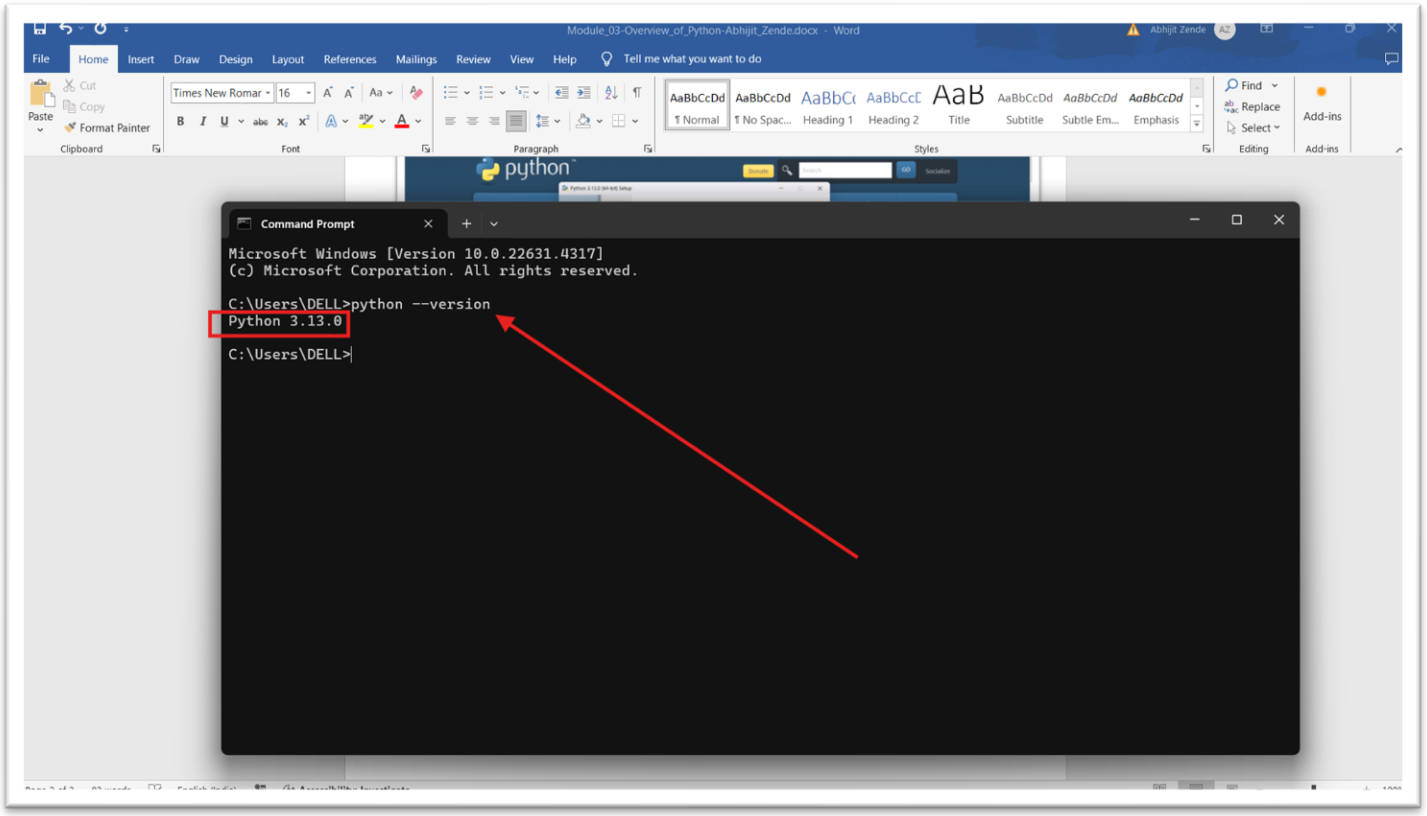
Step 1: Download the latest Python installer from https://www.python.org/downloads/



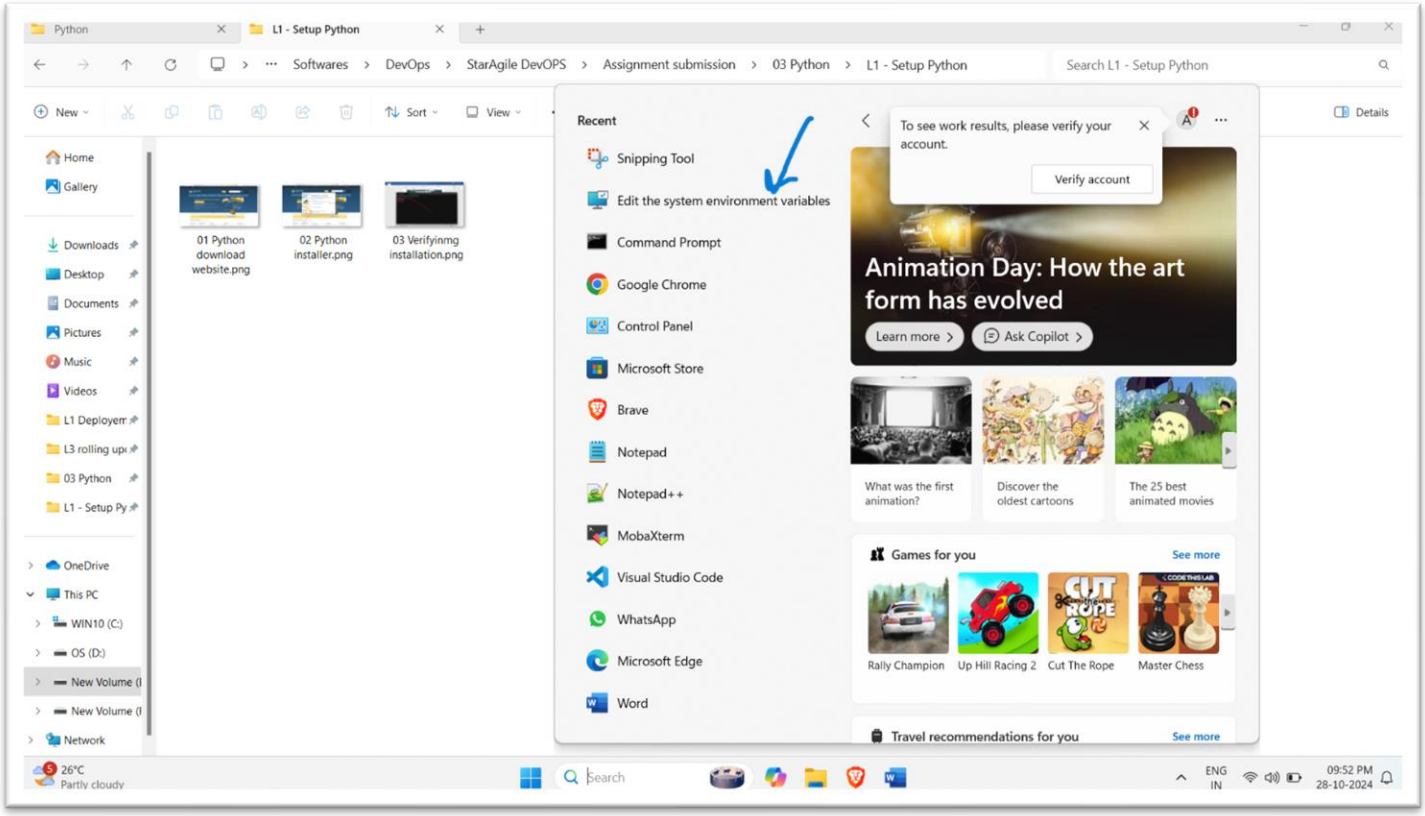
Step 2: Run the installer and check **"Add Python to PATH"** during installation.

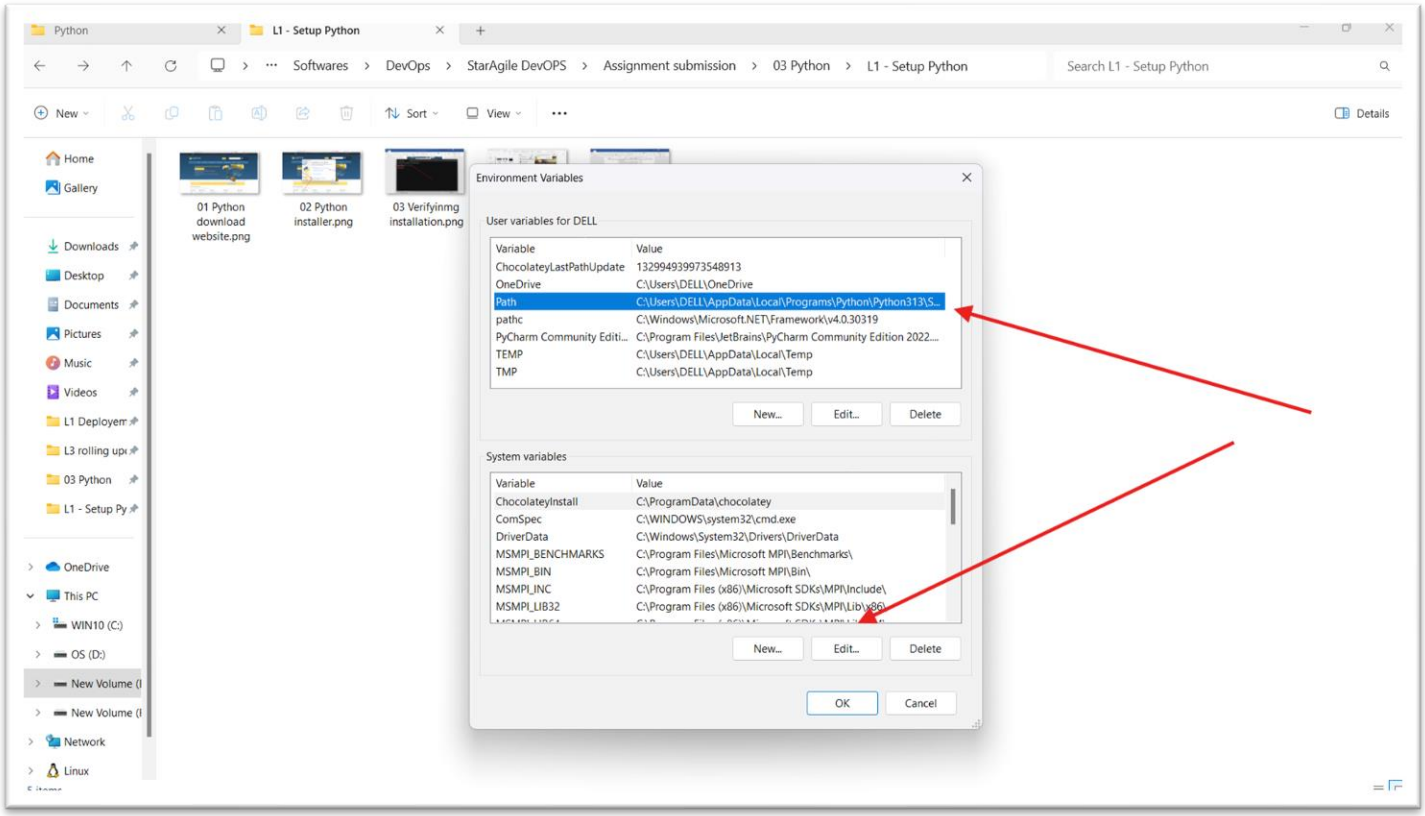


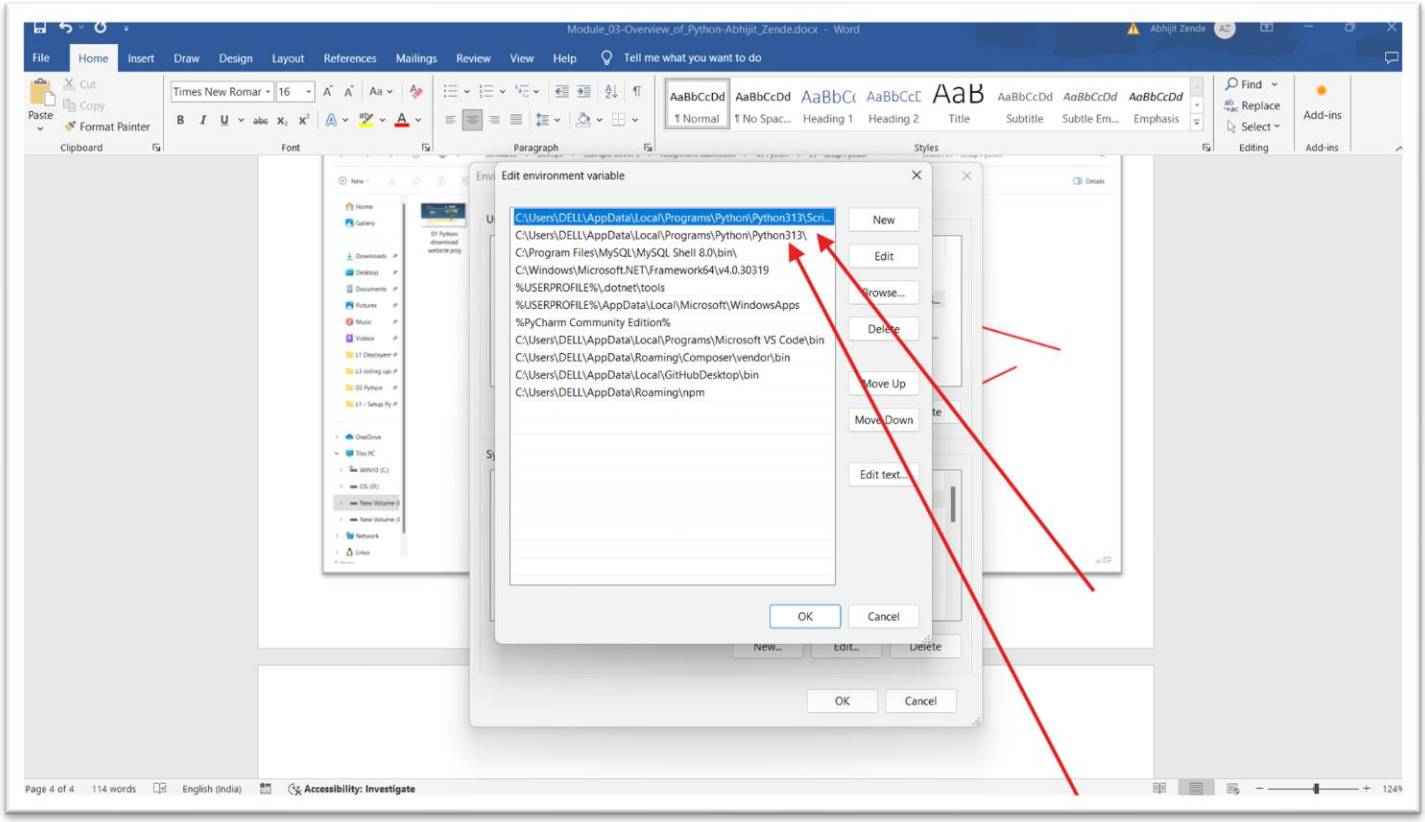
Step 3: Open **Command Prompt** and verify installation with `python –version`



Step 4: Verify if Python has been added to the System environment variables by searching '***Edit Environment variables***' in windows search bar and click on '***Path***' and '**Edit'** option for path.



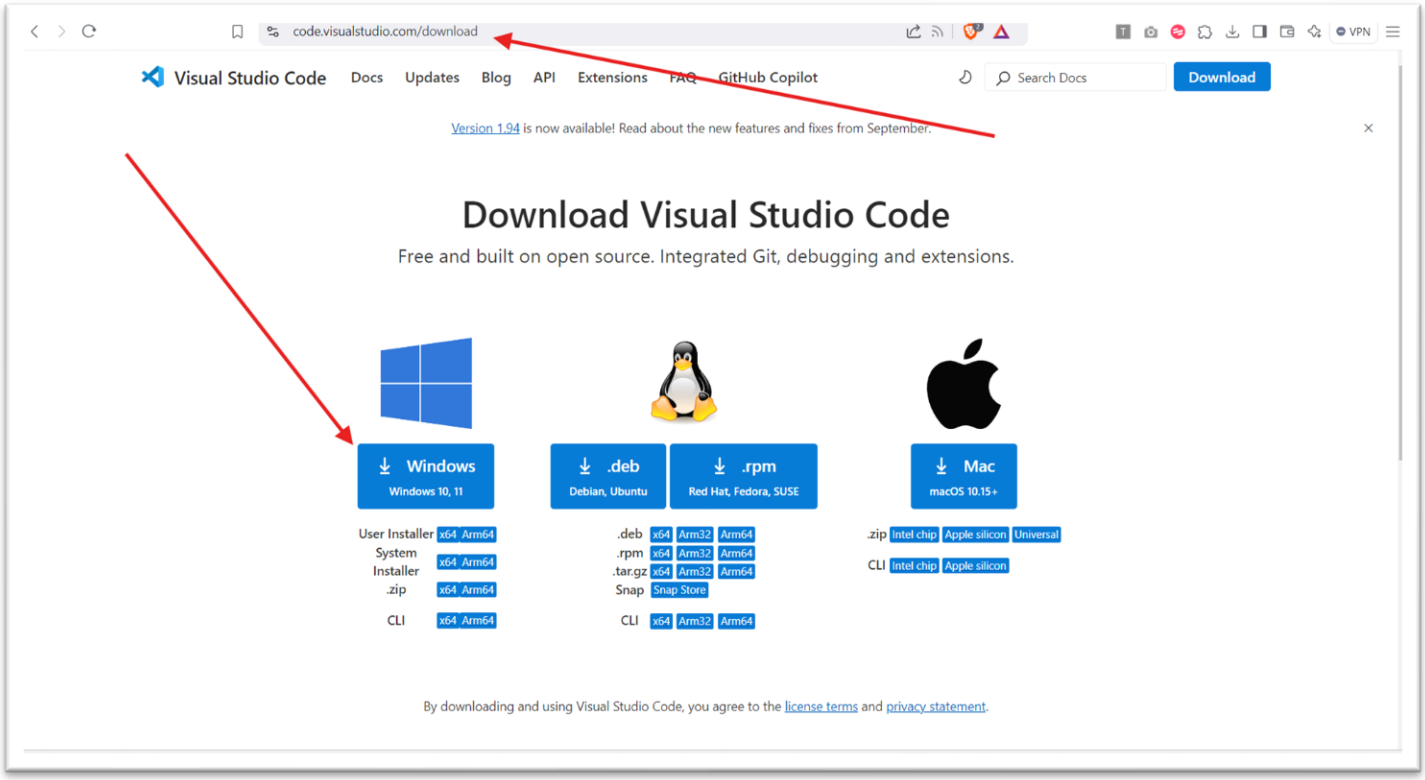



Module_03-Overview_of_Python-Abhijit_Zende.docx - Word
Edit environment variable
C:\Users\DELL\AppData\Local\Programs\Python\Python313\Scri...
C:\Users\DELL\AppData\Local\Programs\Python\Python313\
C:\Program Files\MySQL\MySQL Shell 8.0\bin\
C:\Windows\Microsoft.NET\Framework64\v4.0.30319
%USERPROFILE%\.dotnet\tools
%USERPROFILE%\AppData\Local\Microsoft\WindowsApps
%PyCharm Community Edition%
C:\Users\DELL\AppData\Local\Programs\Microsoft VS Code\bin
C:\Users\DELL\AppData\Roaming\Composer\vendor\bin
C:\Users\DELL\AppData\Local\GitHubDesktop\bin
C:\Users\DELL\AppData\Roaming\npm
New
Edit
Browse...
Delete
Move Up
Move Down
Edit text...
OK
Cancel

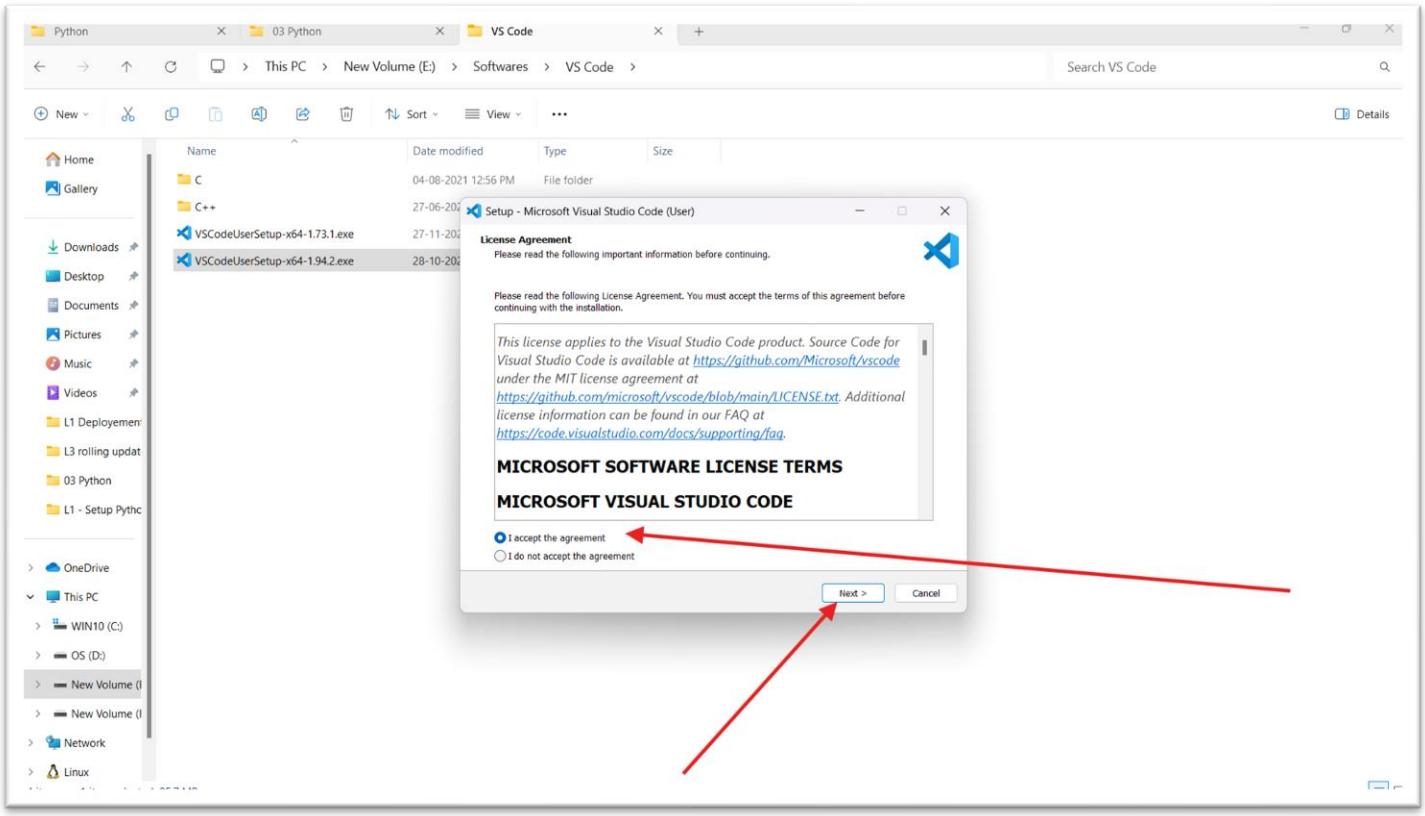
2. L2 - Install Visual Studio Code and Install Python and Terraform Extensions in VS Code

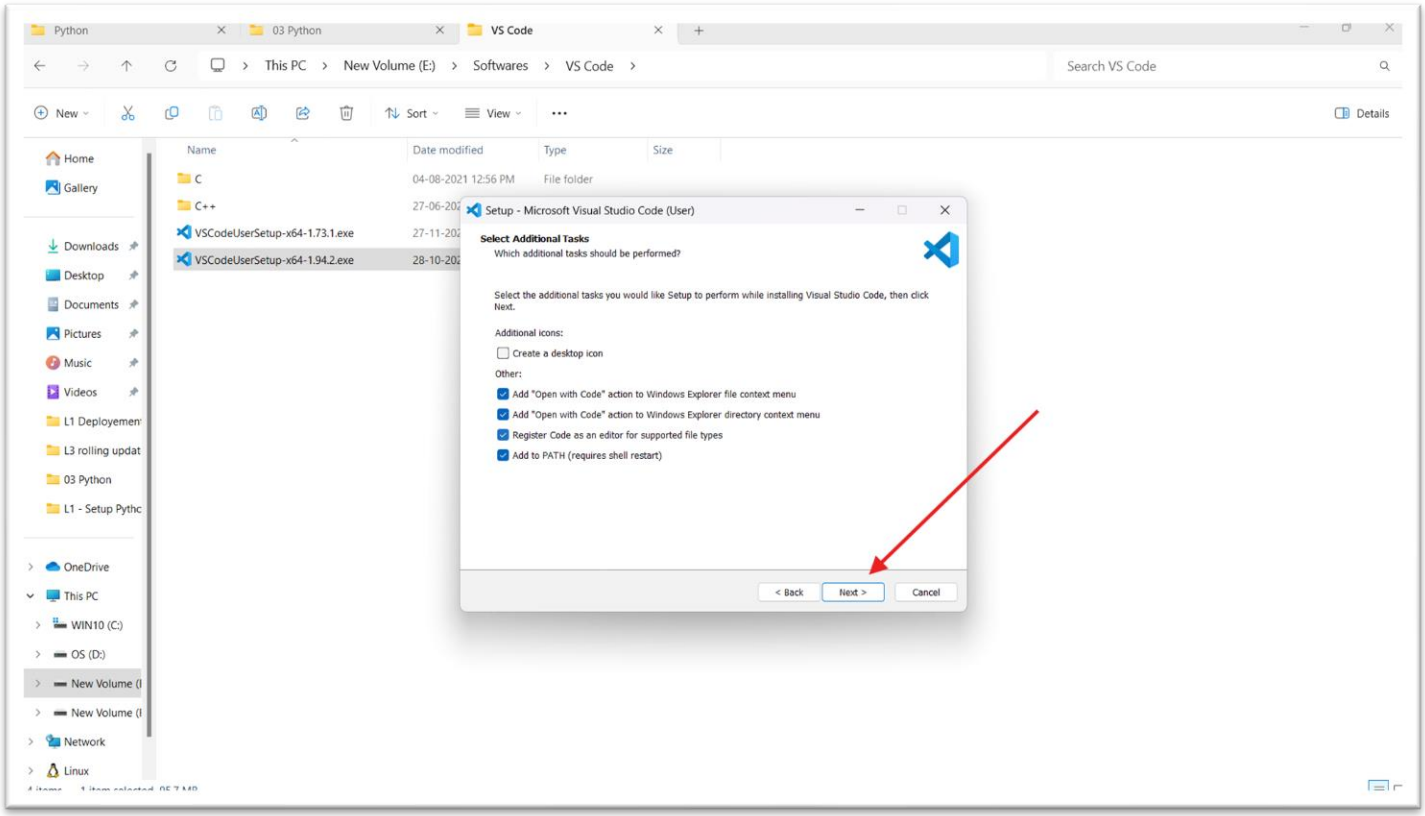
Ans.

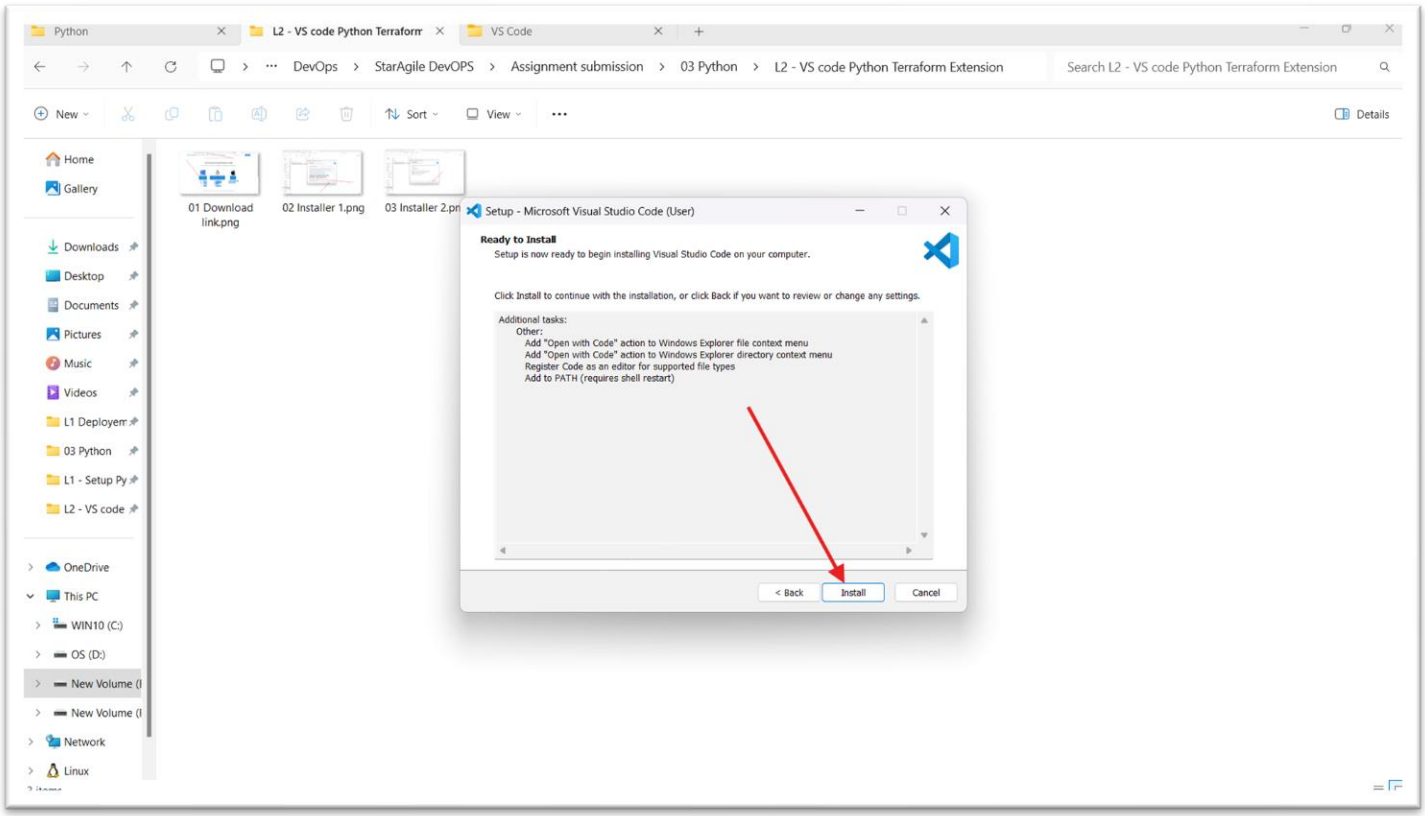
Step 1: Download Visual Studio Code from [Visual studio code downloiad link](#).



Step 2: Run the installer and complete the installation with default settings.






Python
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VS Code
DevOps
StarAgile DevOPS
Assignment submission
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Sort
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Details
Home
Gallery
Downloads
Desktop
Documents
Pictures
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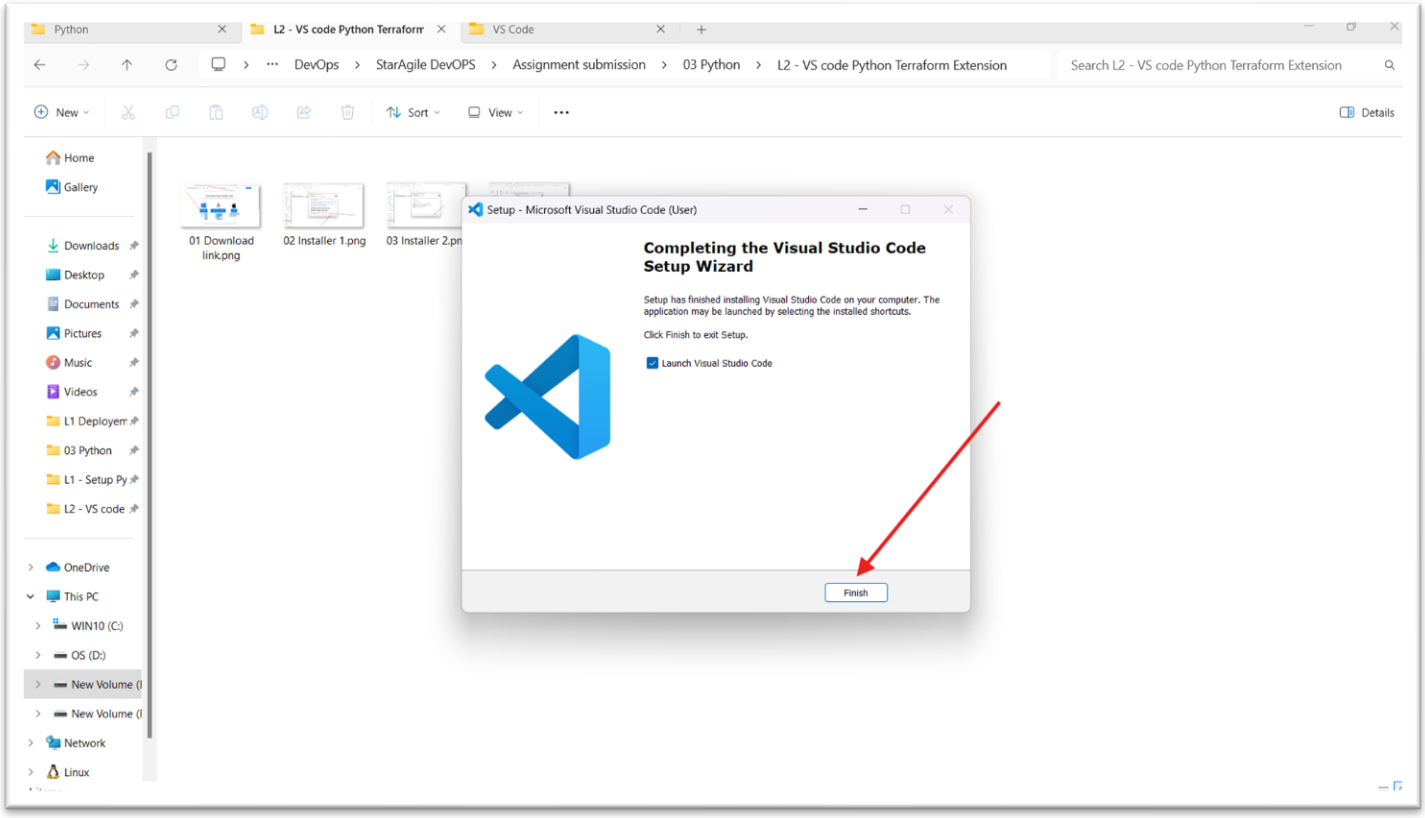
L1 Deployem
03 Python
L1 - Setup Py
L2 - VS code
OneDrive
This PC
WIN10 (C:)
OS (D:)
New Volume (I
New Volume (I
Network
Linux
01 Download link.png
02 Installer 1.png
03 Installer 2.pn
Setup - Microsoft Visual Studio Code (User)
Ready to Install
Setup is now ready to begin installing Visual Studio Code on your computer.
Click Install to continue with the installation, or click Back if you want to review or change any settings.
Additional tasks:
Other:
Add "Open with Code" action to Windows Explorer file context menu
Add "Open with Code" action to Windows Explorer directory context menu
Register Code as an editor for supported file types
Add to PATH (requires shell restart)
< Back
Install
Cancel


Python
L2 - VS code Python Terraform
VS Code
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Assignment submission
03 Python
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New
Sort
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Documents
Pictures
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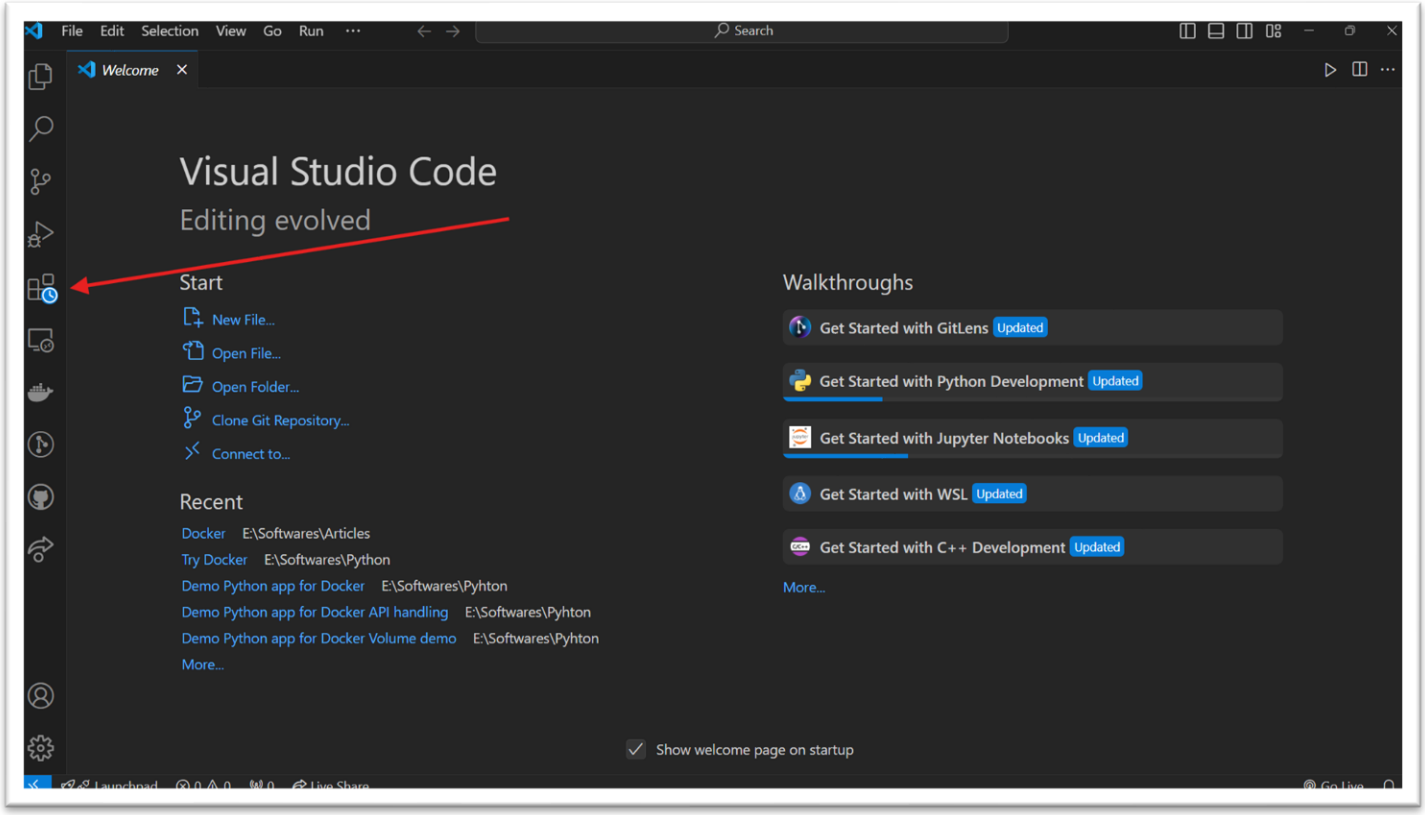
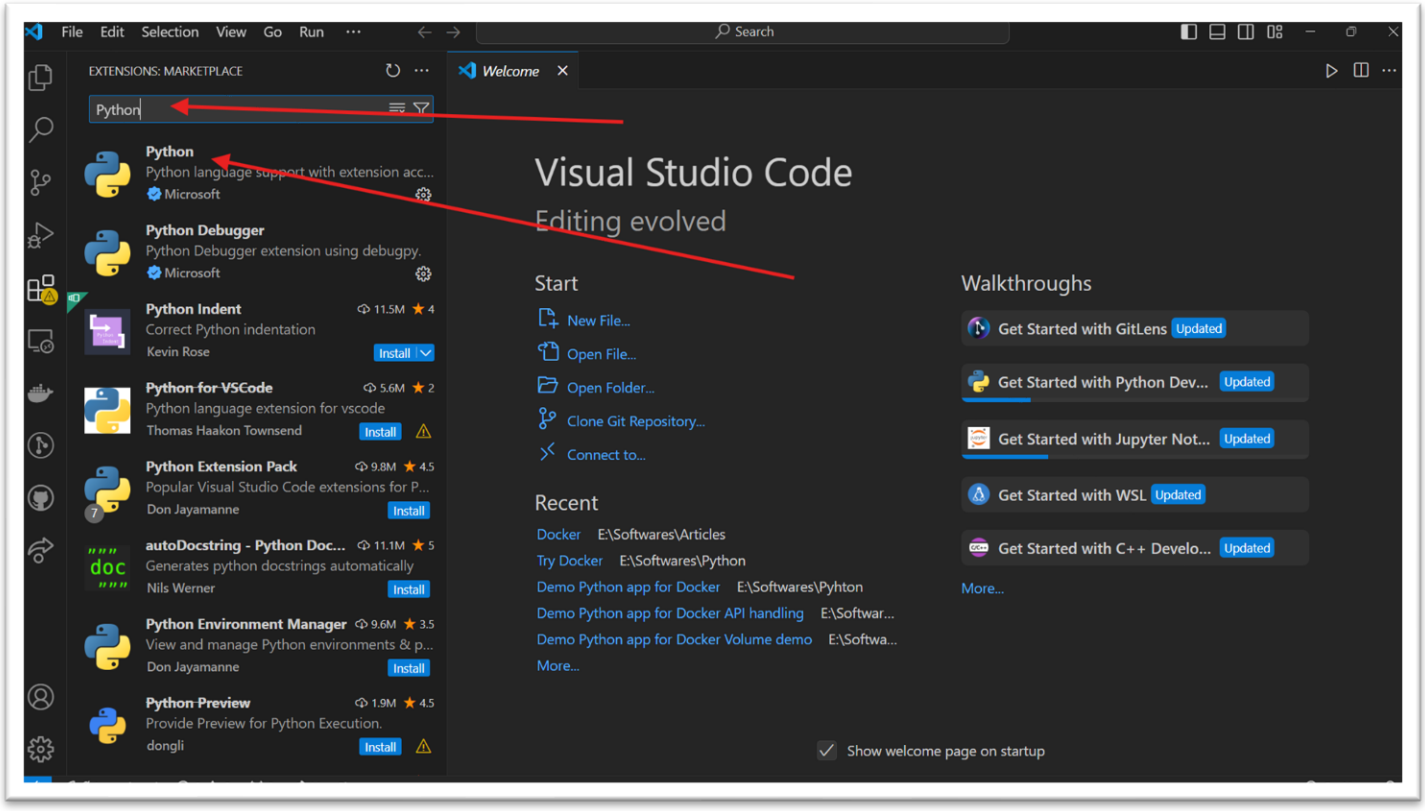
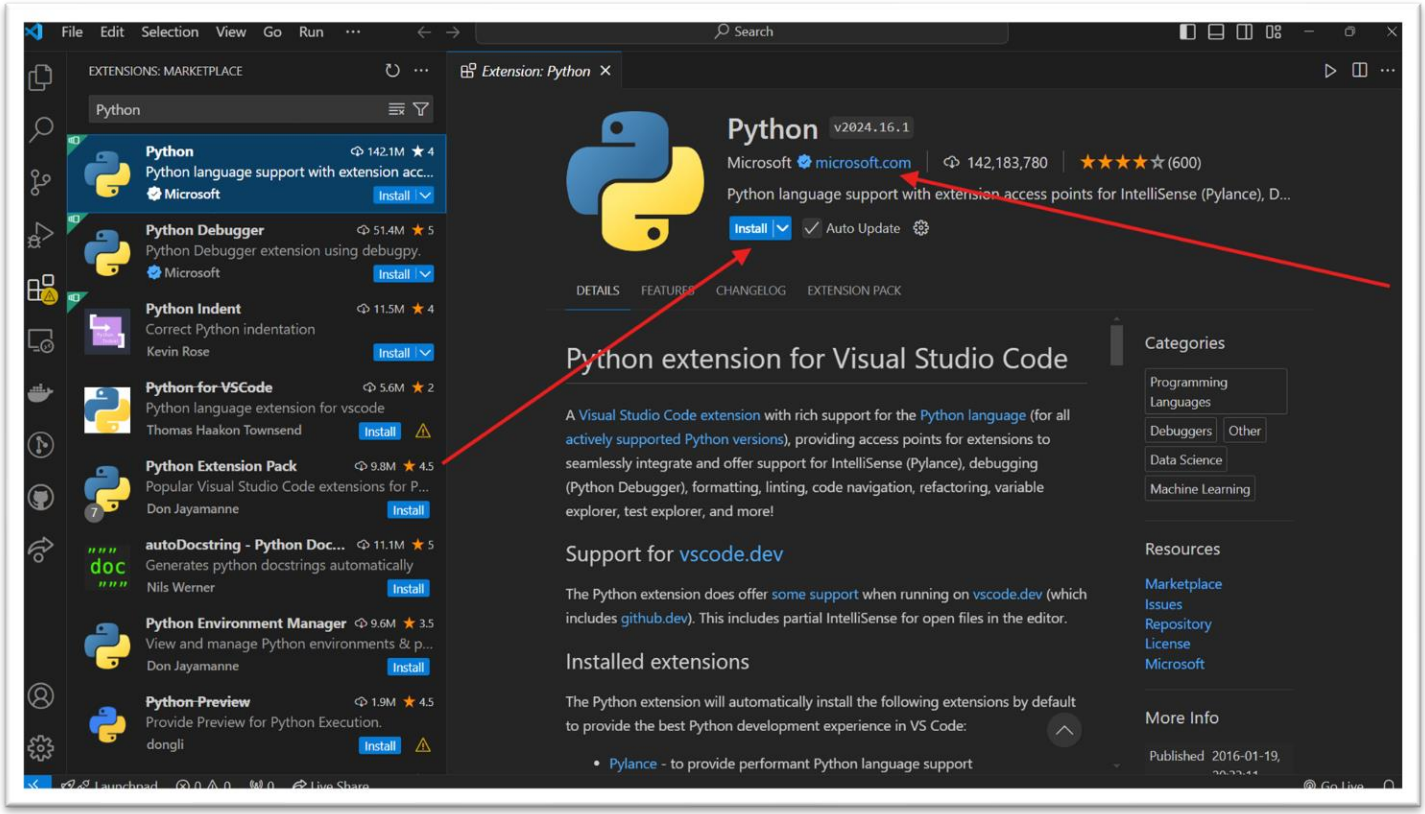
Videos
L1 Deployem
03 Python
L1 - Setup Py
L2 - VS code
OneDrive
This PC
WIN10 (C:)
OS (D:)
New Volume (I
New Volume (I
Network
Linux
01 Download link.png
02 Installer 1.png
03 Installer 2.pn
Setup - Microsoft Visual Studio Code (User)
Completing the Visual Studio Code Setup Wizard
Setup has finished installing Visual Studio Code on your computer. The application may be launched by selecting the installed shortcuts.
Click Finish to exit Setup.
Launch Visual Studio Code
Finish

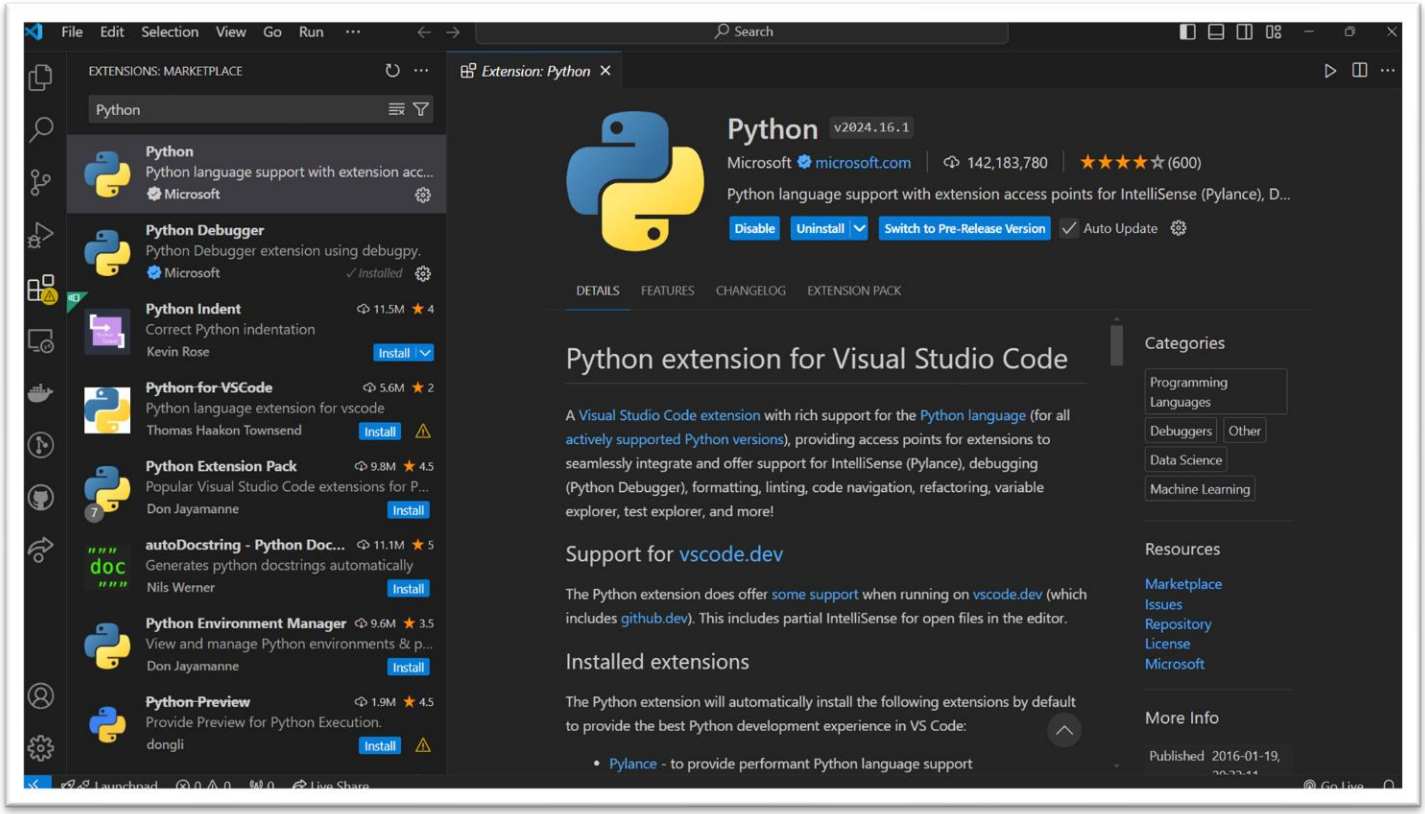
Step 3: Open VS Code and go to the **Extensions** tab **(Ctrl+Shift+X)**.



Step 4: Search for **Python** extension and click **Install**.




File Edit Selection View Go Run
Search
EXTENSIONS: MARKETPLACE
Python
Extension: Python
Python
v2024.16.1
Microsoft microsoft.com
142,183,780
(600)
Python language support with extension access points for IntelliSense (Pylance), D...
Install
Auto Update
DETAILS FEATURES CHANGELOG EXTENSION PACK
Python extension for Visual Studio Code
A Visual Studio Code extension with rich support for the Python language (for all actively supported Python versions), providing access points for extensions to seamlessly integrate and offer support for IntelliSense (Pylance), debugging (Python Debugger), formatting, linting, code navigation, refactoring, variable explorer, test explorer, and more!
Support for vscode.dev
The Python extension does offer some support when running on vscode.dev (which includes github.dev). This includes partial IntelliSense for open files in the editor.
Installed extensions
The Python extension will automatically install the following extensions by default to provide the best Python development experience in VS Code:
Pylance - to provide performant Python language support
Categories
Programming Languages
Debuggers
Other
Data Science
Machine Learning
Resources
Marketplace
Issues
Repository
License
Microsoft
More Info
Published 2016-01-19,
Python
Python language support with extension acc...
Microsoft
Install
Python Debugger
Python Debugger extension using debugpy.
Microsoft
Python Indent
Correct Python indentation
Kevin Rose
Python for VSCode
Python language extension for vscode
Thomas Haakon Townsend
Python Extension Pack
Popular Visual Studio Code extensions for P...
Don Jayamanne
autoDocstring - Python Doc...
Generates python docstrings automatically
Nils Werner
Python Environment Manager
View and manage Python environments & p...
Don Jayamanne
Python Preview
Provide Preview for Python Execution.
dongli


File Edit Selection View Go Run
Search
EXTENSIONS: MARKETPLACE
Python
Extension: Python
Python
v2024.16.1
Microsoft microsoft.com
142,183,780
(600)
Python language support with extension access points for IntelliSense (Pylance), D...
Disable
Uninstall
Switch to Pre-Release Version
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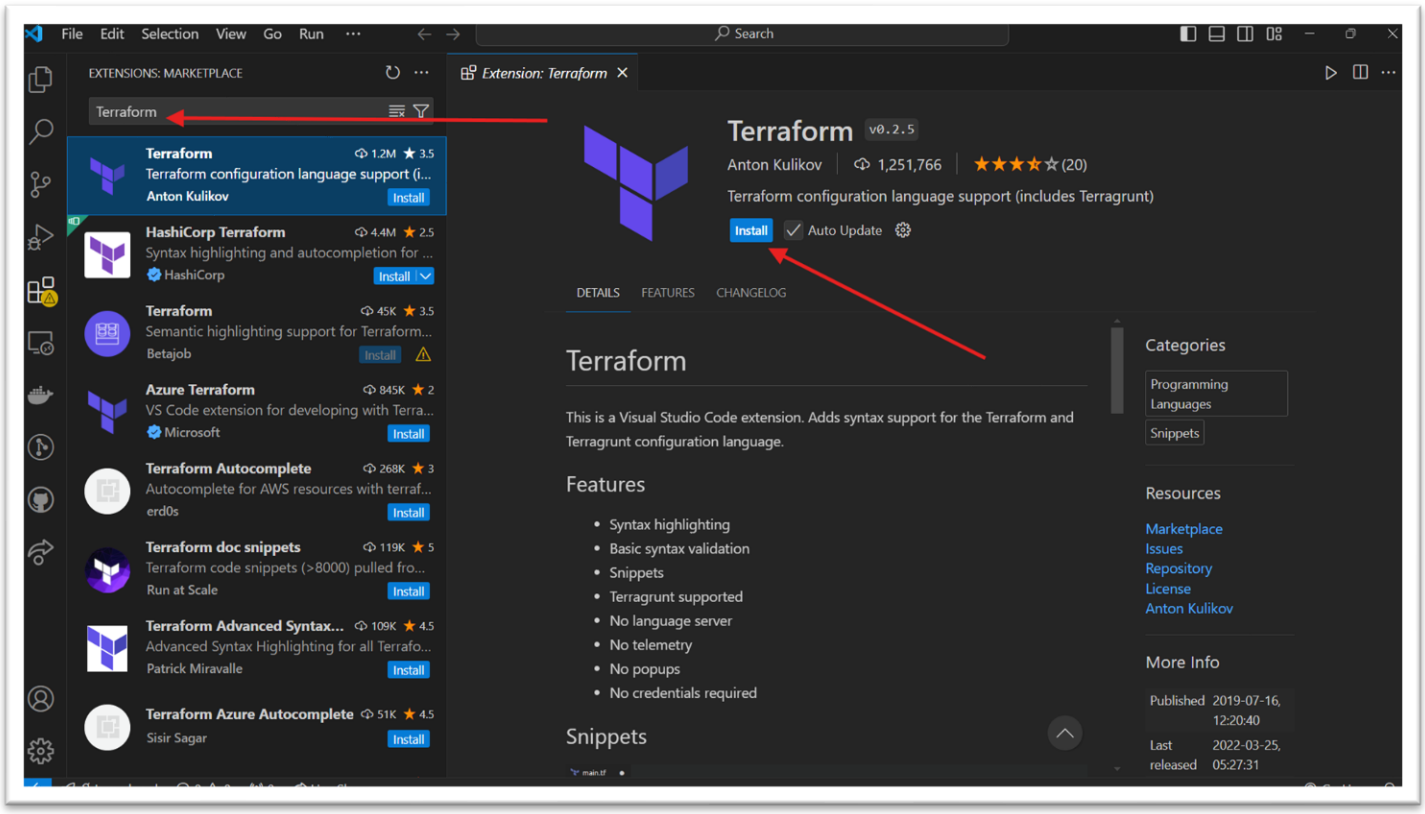
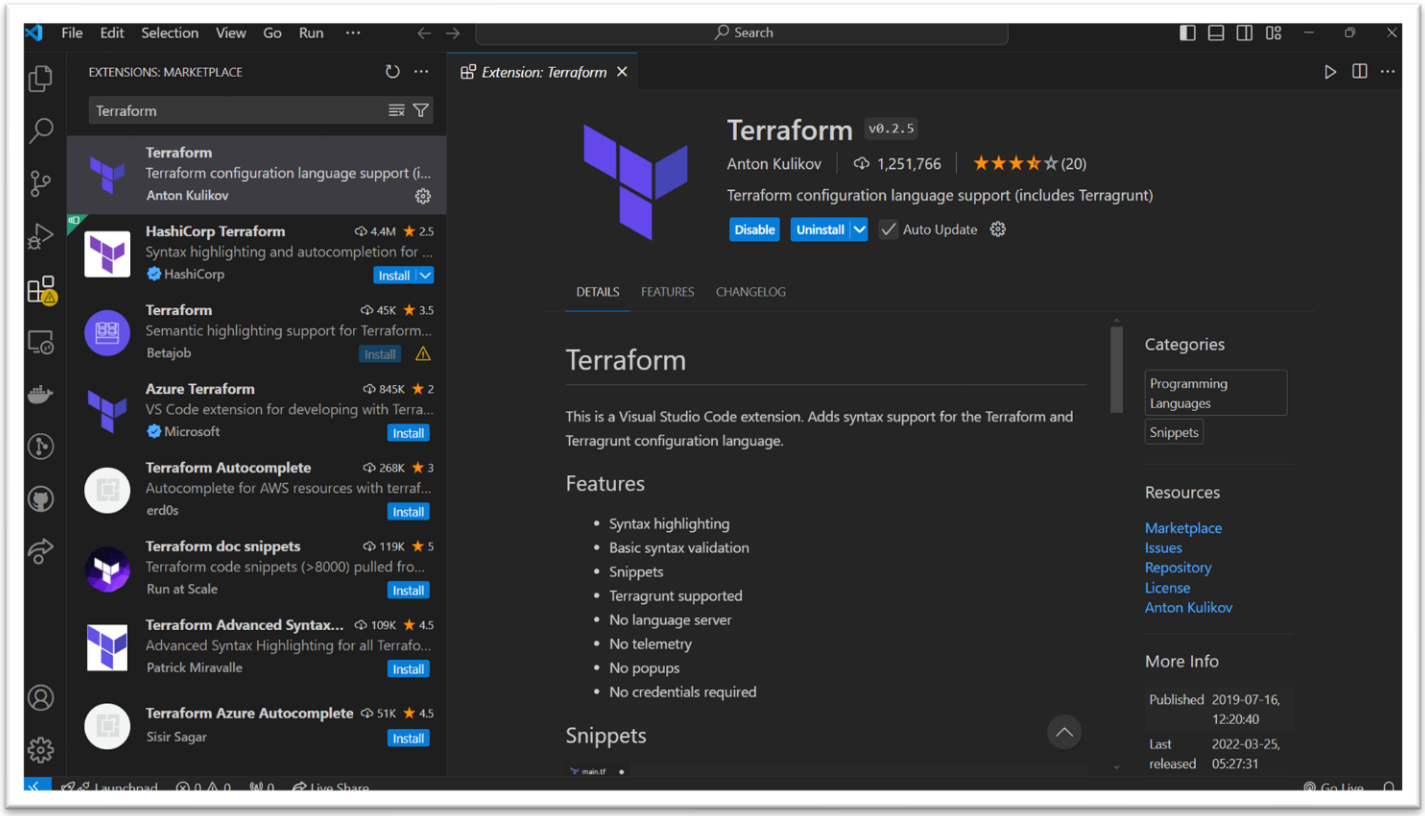
Don Jayamanne
autoDocstring - Python Doc...
Generates python docstrings automatically
Nils Werner
Python Environment Manager
View and manage Python environments & p...
Don Jayamanne
Python Preview
Provide Preview for Python Execution.
dongli

Step 5: Search for **Terraform** extension and click **Install**.

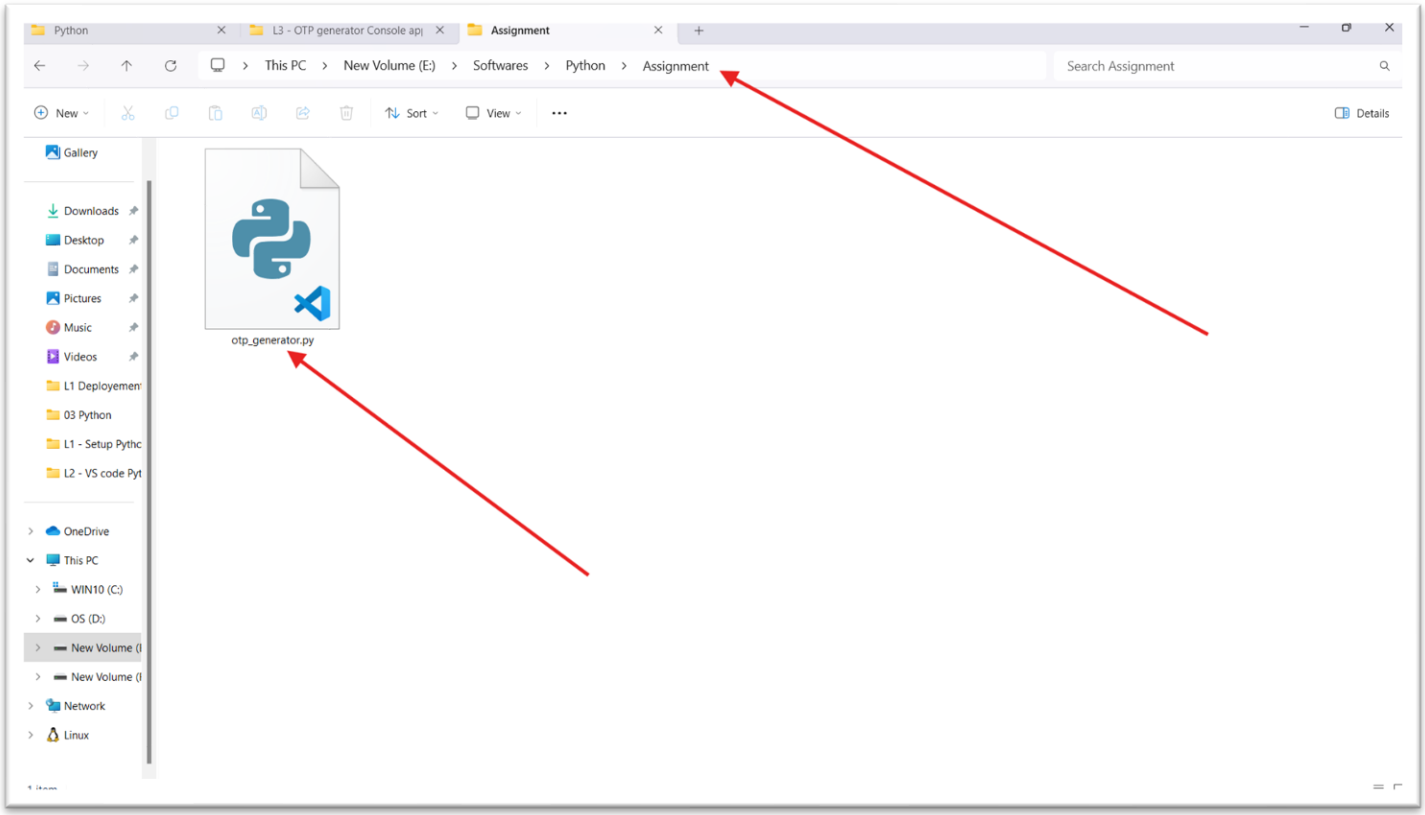




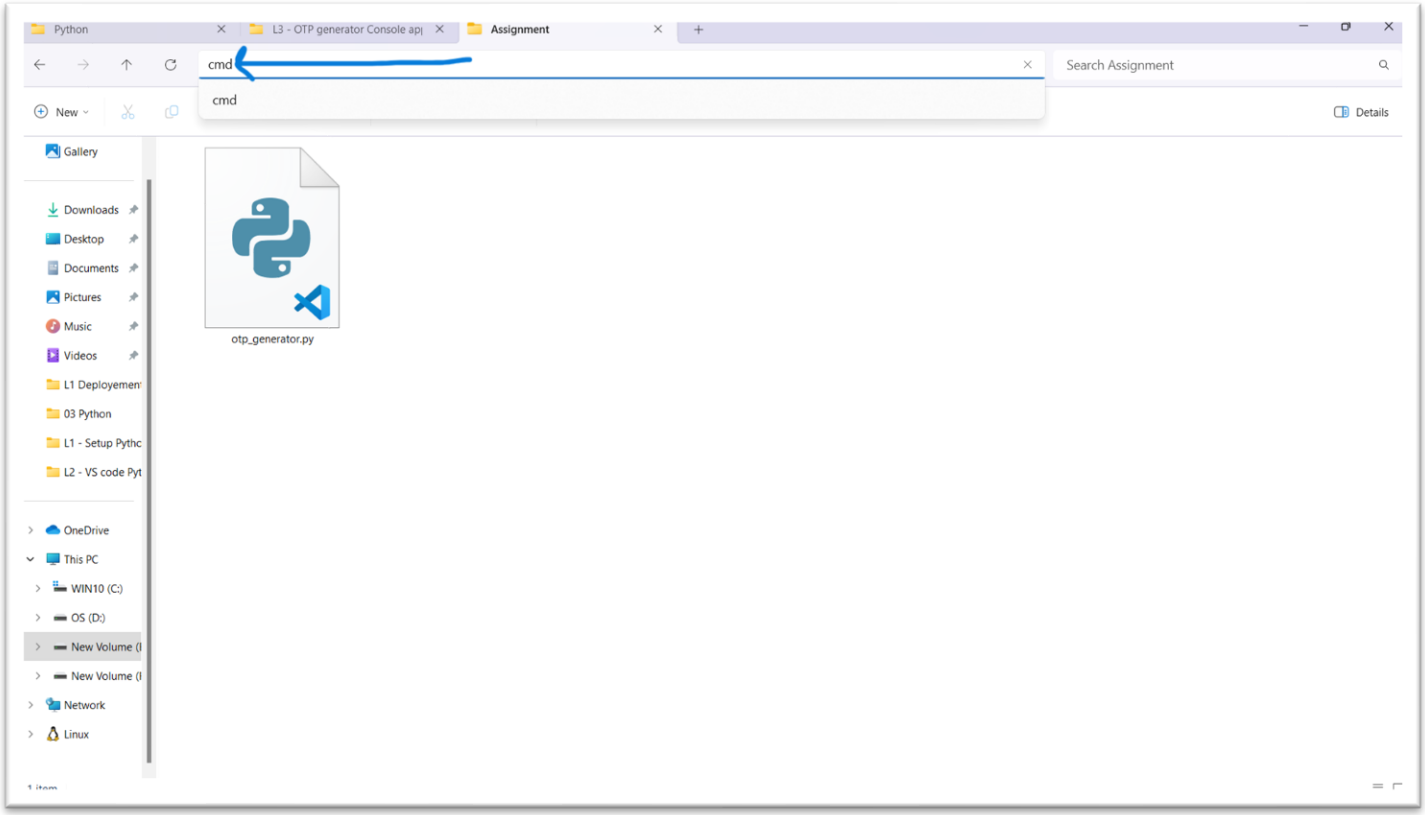
3. L3 - Create Python Console Application to randomly generate OTP kind of secure code

Ans.

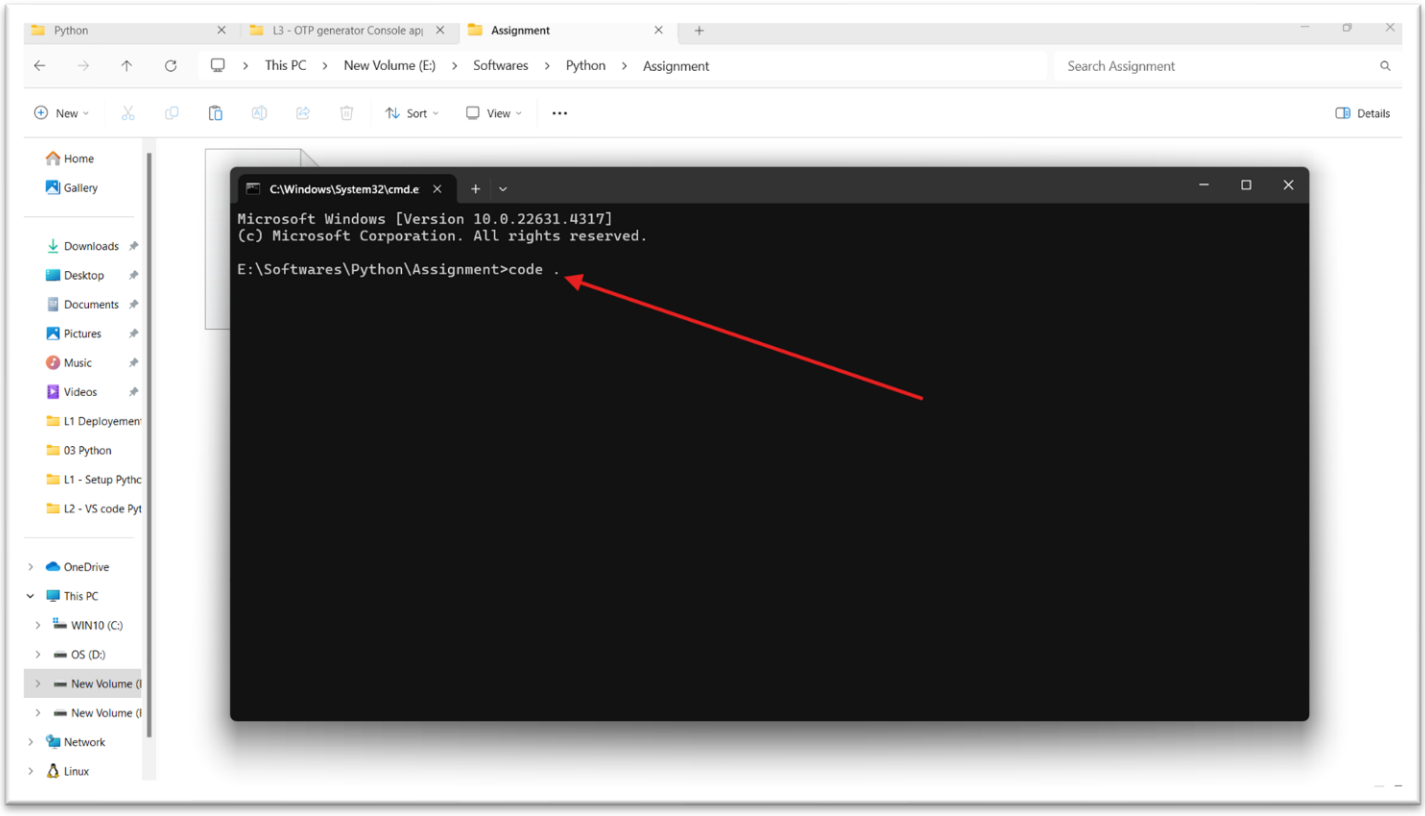
Step 1: Create a **Folder** and python file with it **.py** extension for our code

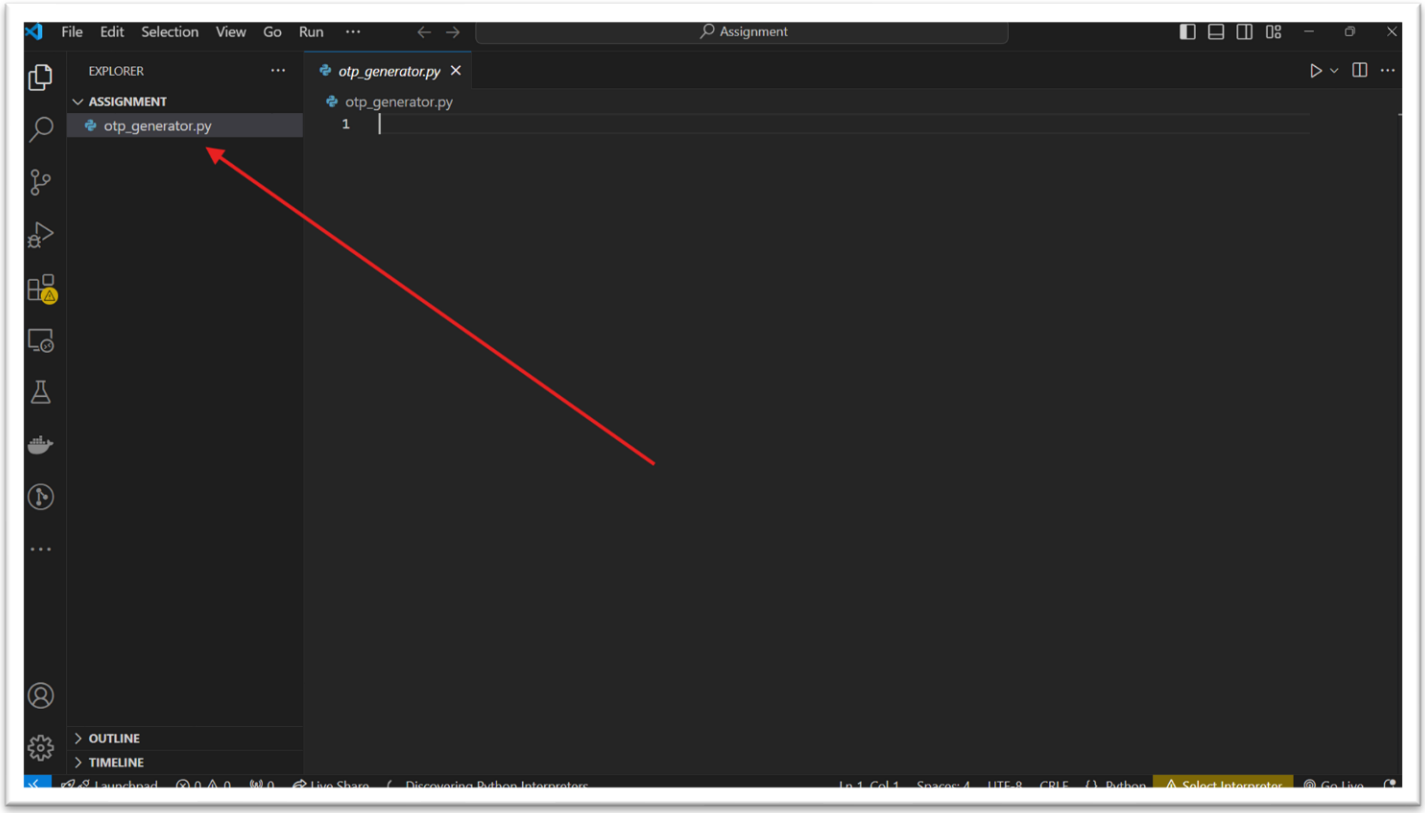


Step 2: Click on address bar of Windows file explorer and enter ‘cmd’ to open command prompt in current location

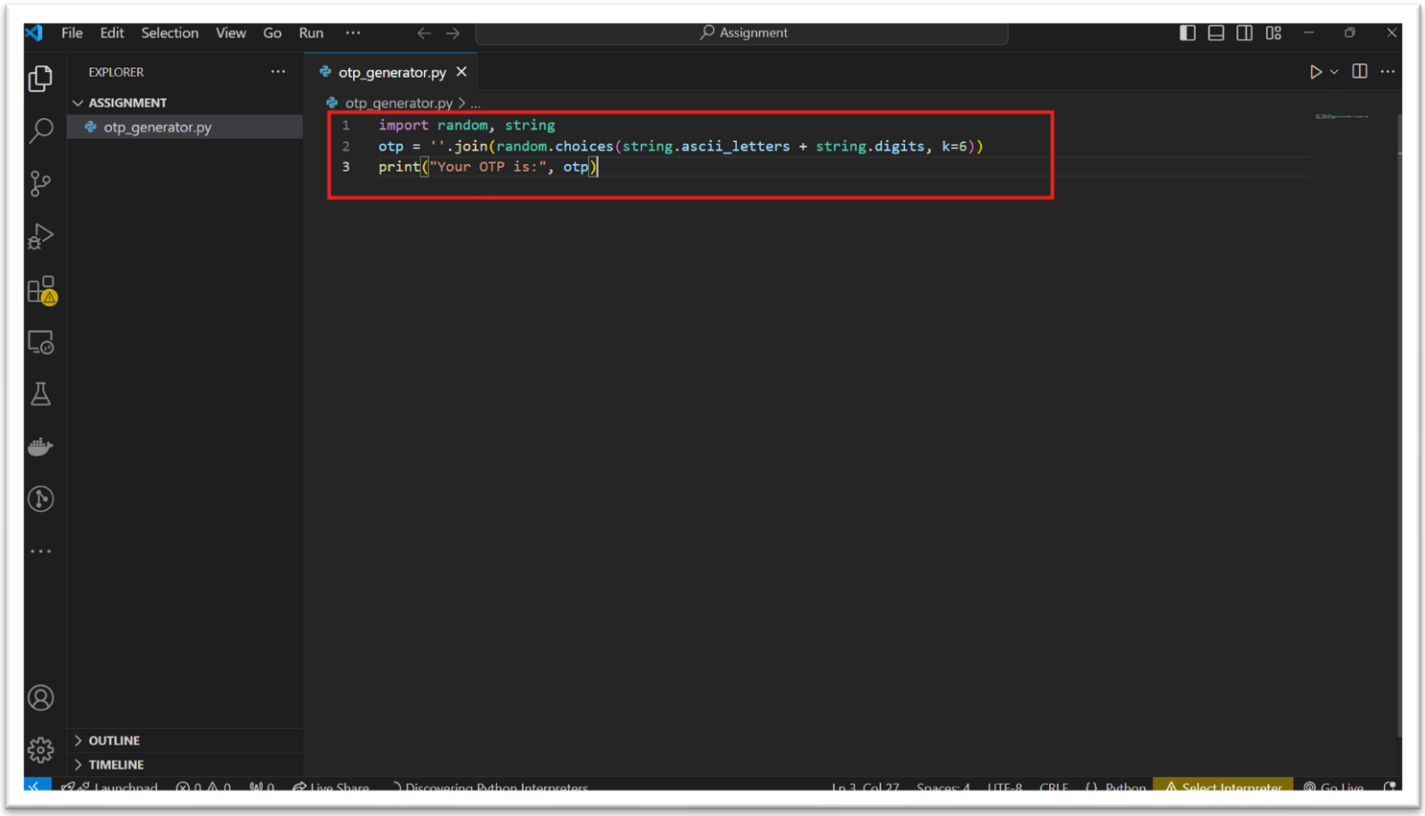


Step 3: Enter `**code .**` in the command prompt to open VS code in current directory

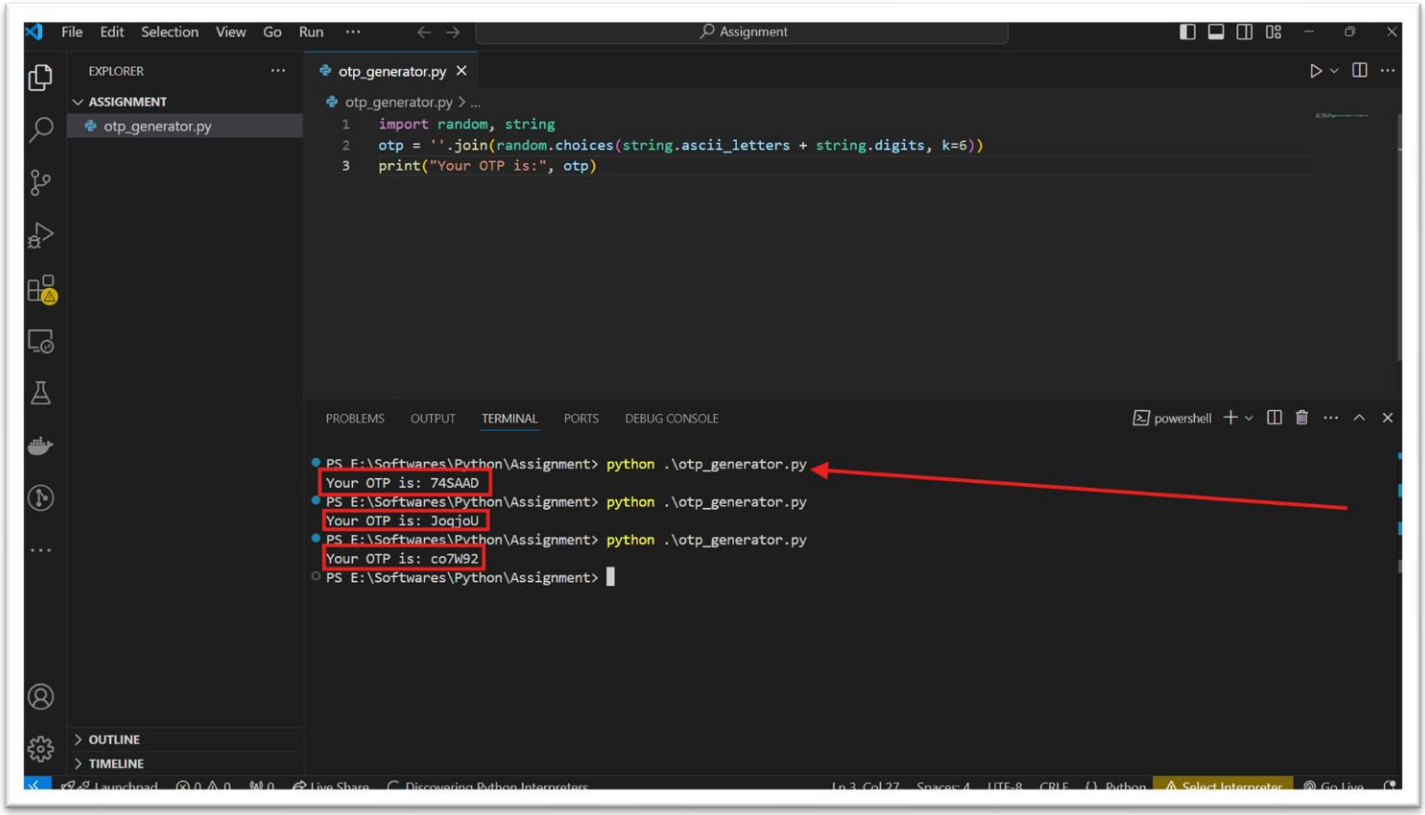




Step 4: Enter the code in the attached screen shot to make a otp generator python console app. Do '**Ctrl + S**' to save the file once the code is done



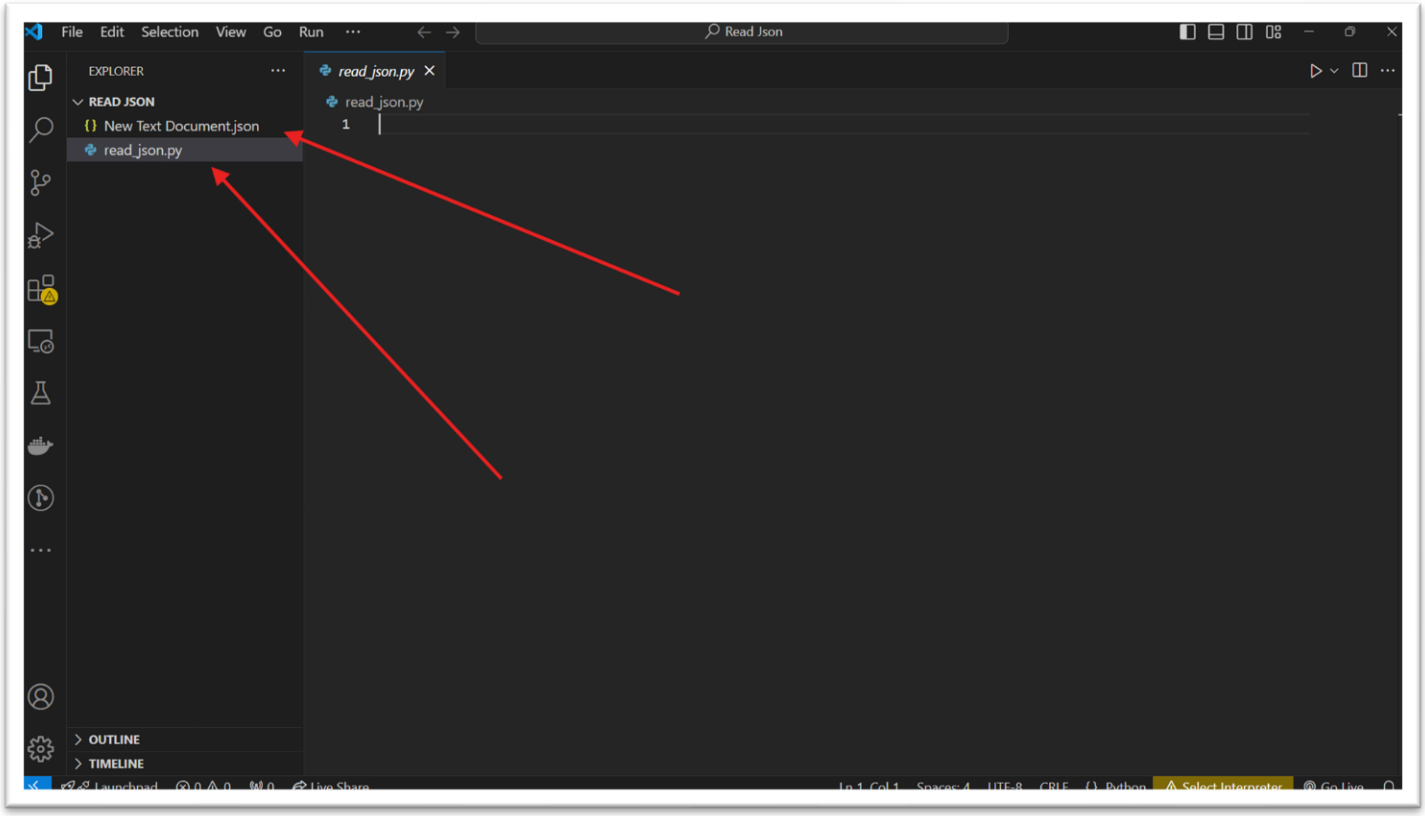
Step 5: Do '**Ctrl** + ~' to open VS code terminal to run the program enter command `python <otp_generator_py_app_name.py>` or Click the Run button of '**Code Runner extension**' to directly run the program



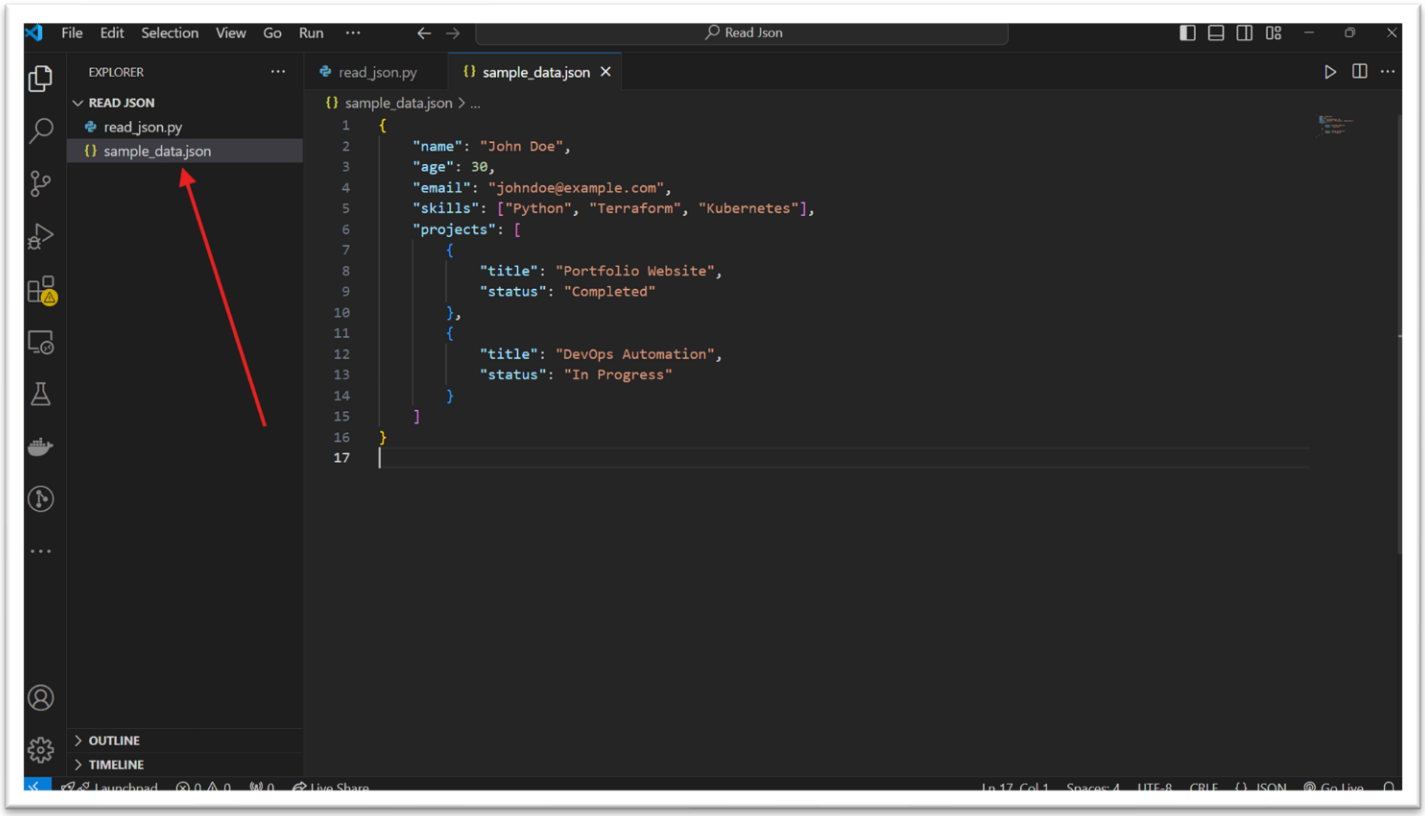
4. L4 - Create Python Console Application to read the contents of .json file and print in the VS Code python console output

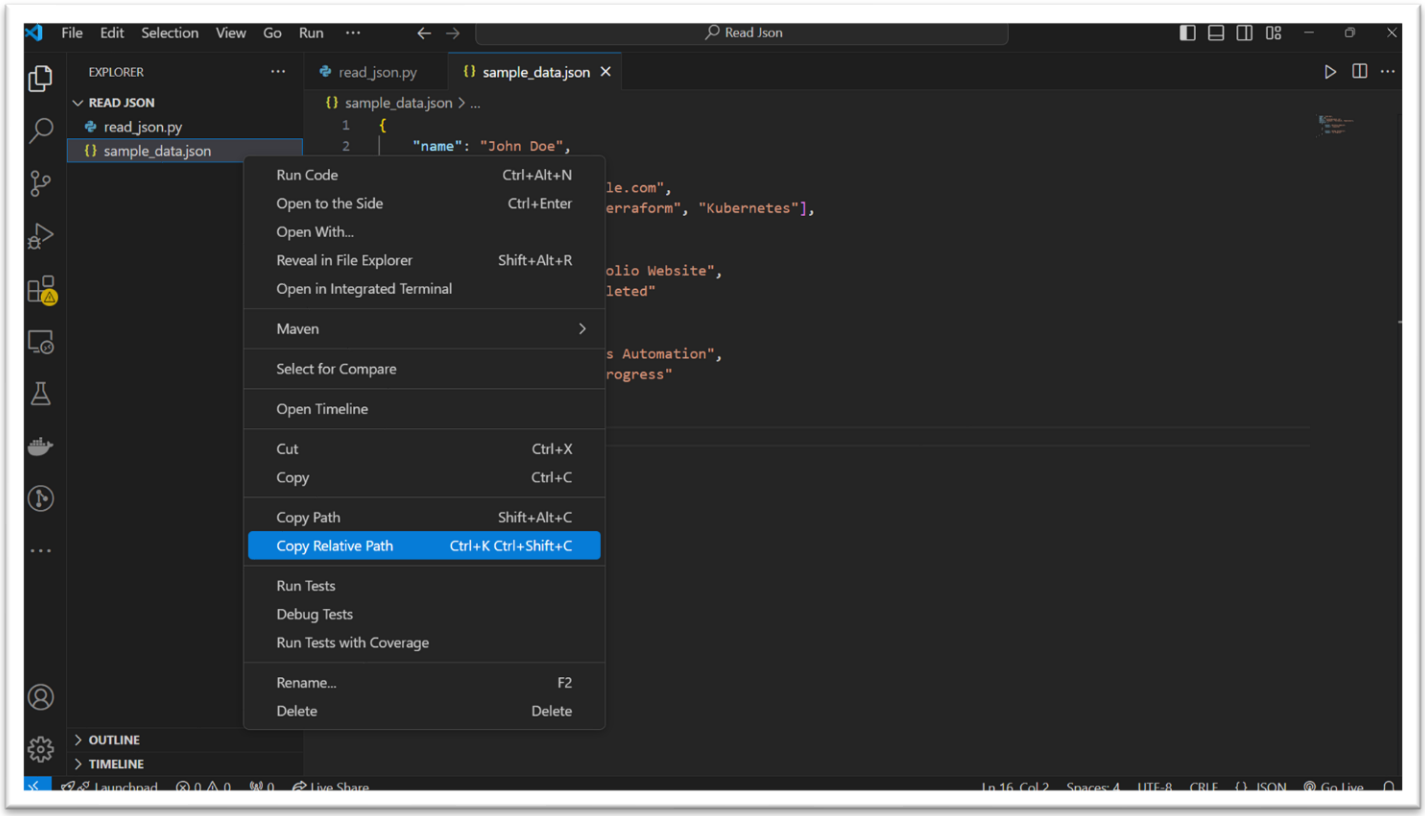
Ans.

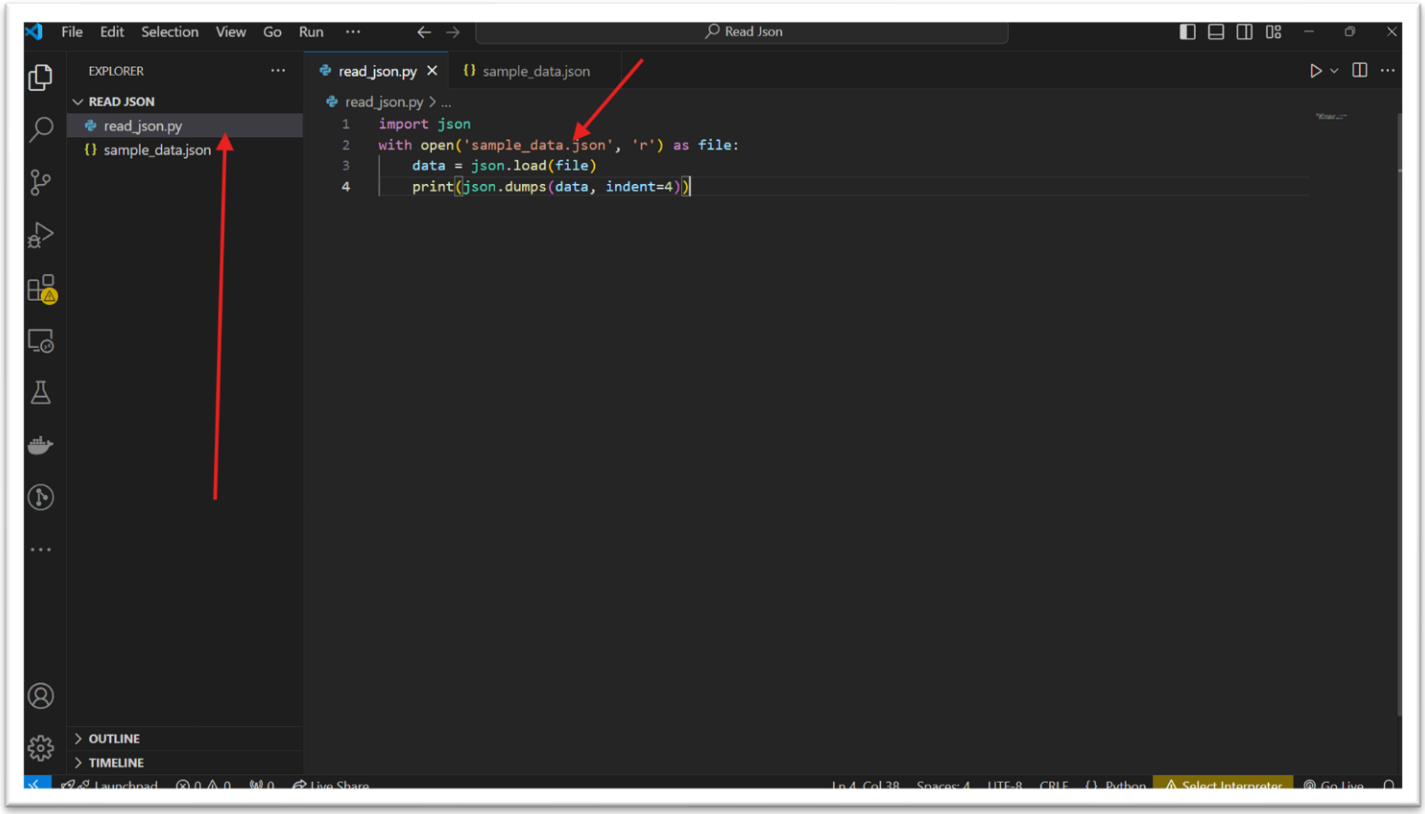
Step 1: Create a new Folder and python file with **.py** extension and open it in VS code



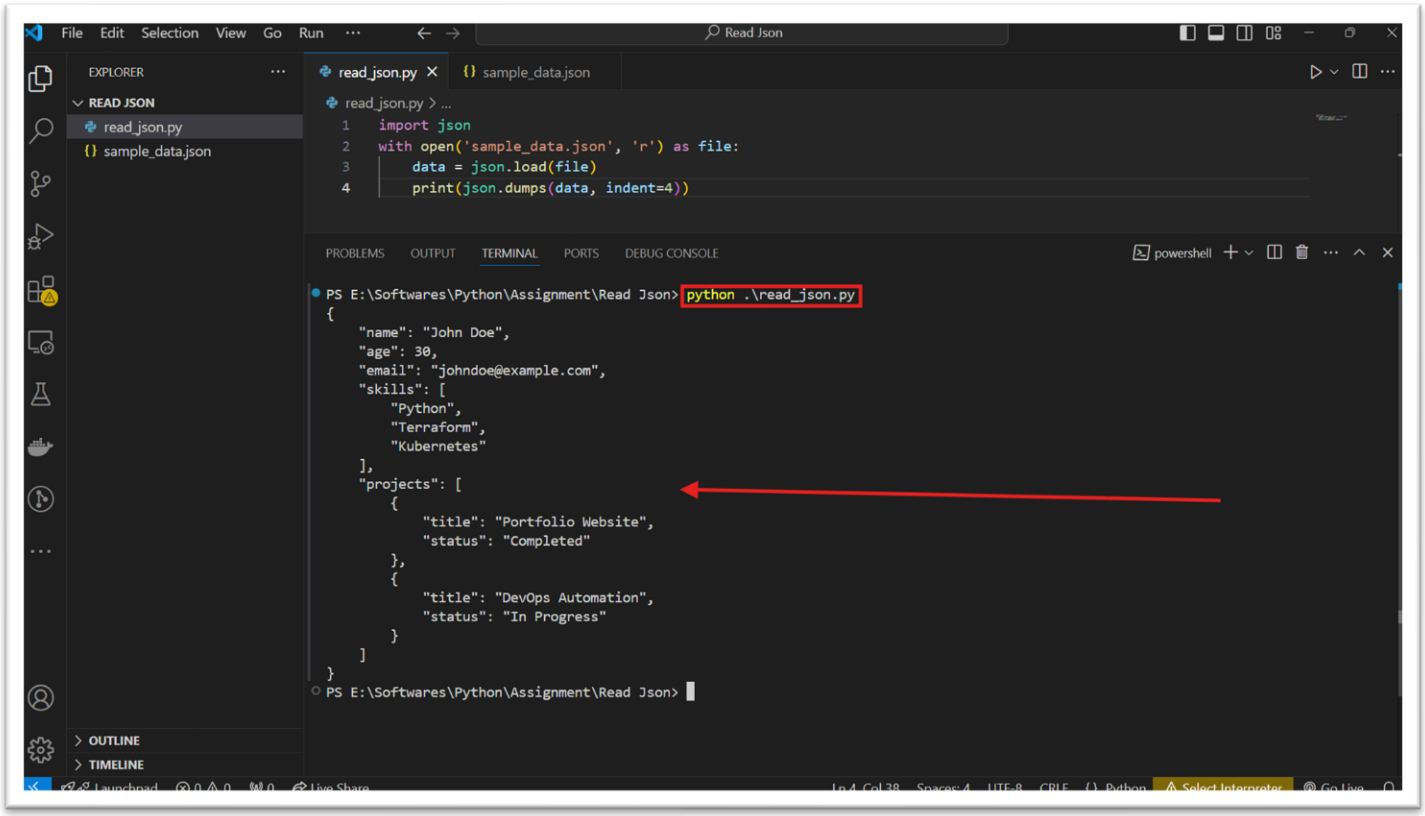
Step 2: Copy paste the code in the attached screenshot to run the app







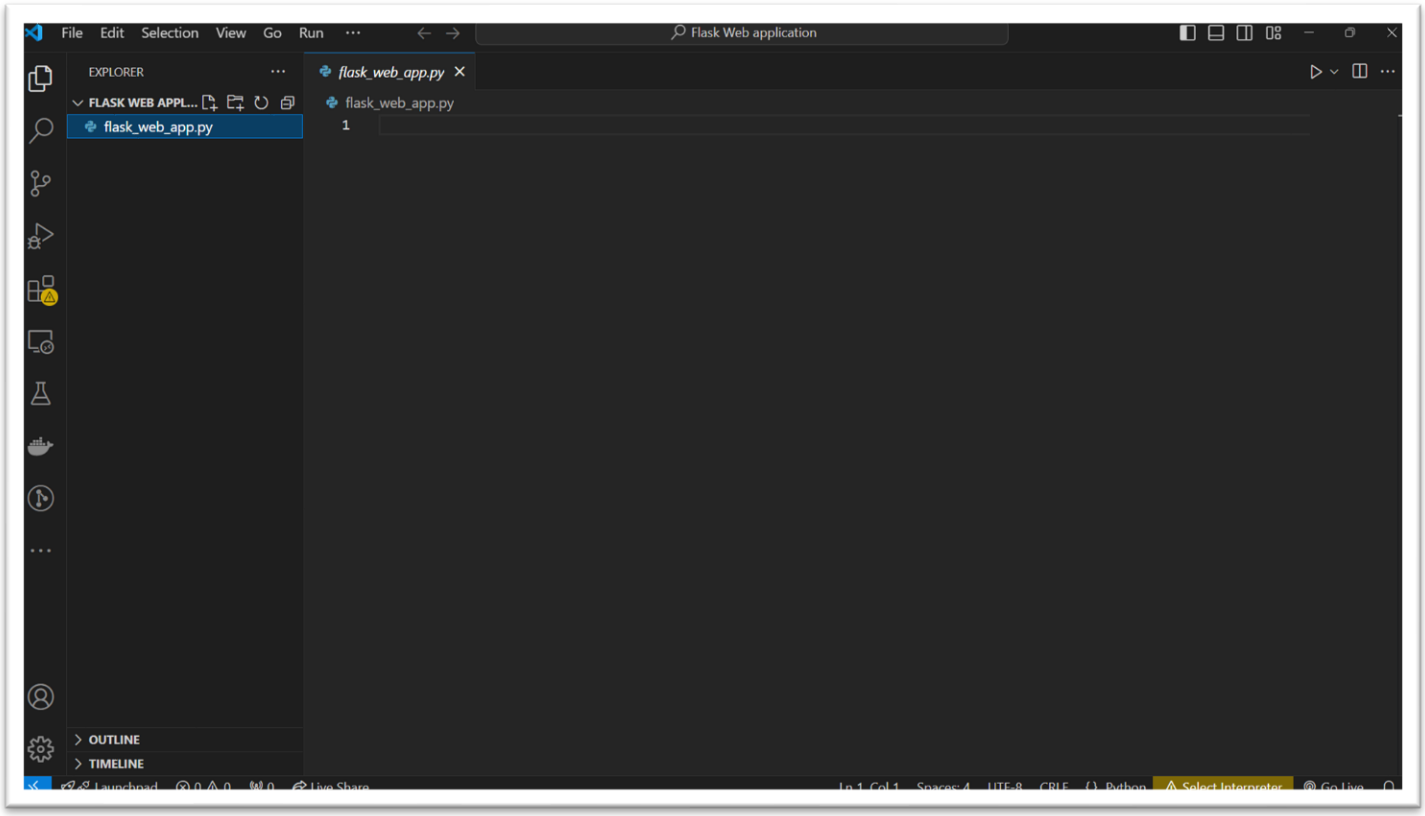
Step 3: Run the app by using VS code terminal(**Ctrl** + ~) and entering command `python <app_name.py>` or just click the Run button of the '**Code Runner**' extension



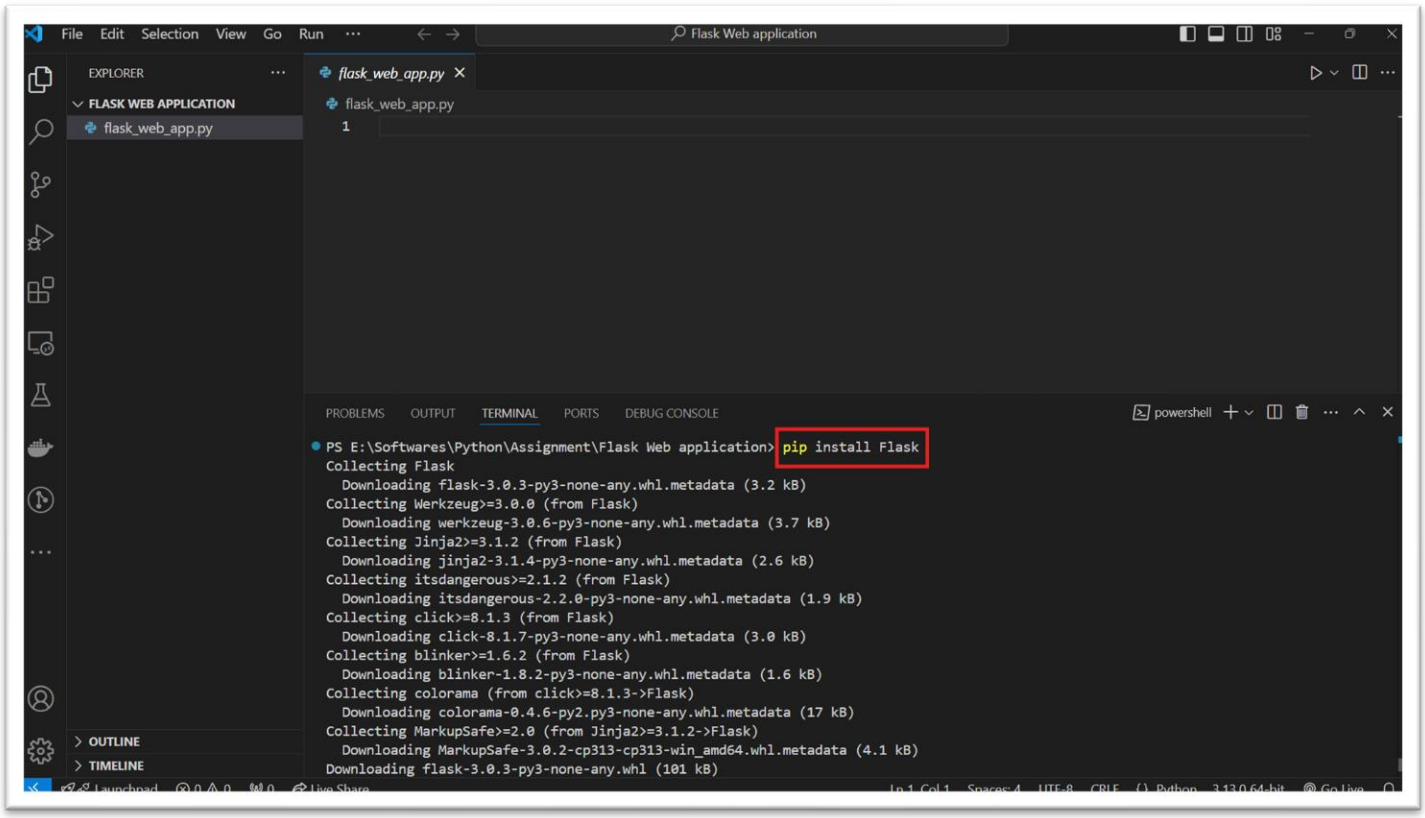
5. L5 - Create Python Web Application to using Flask Web Application Framework

Ans.

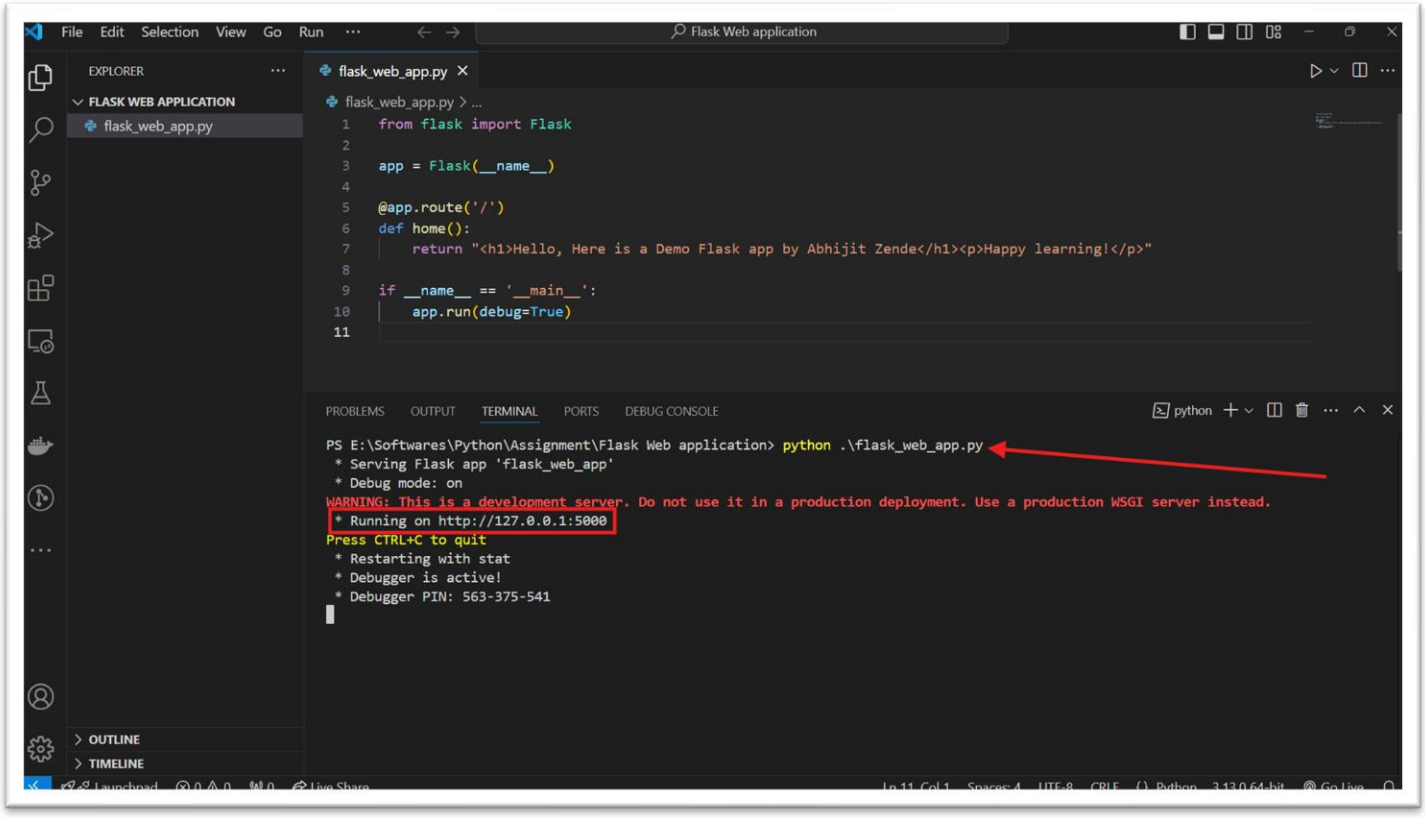
Step 1: Open your project folder in Visual Studio Code.



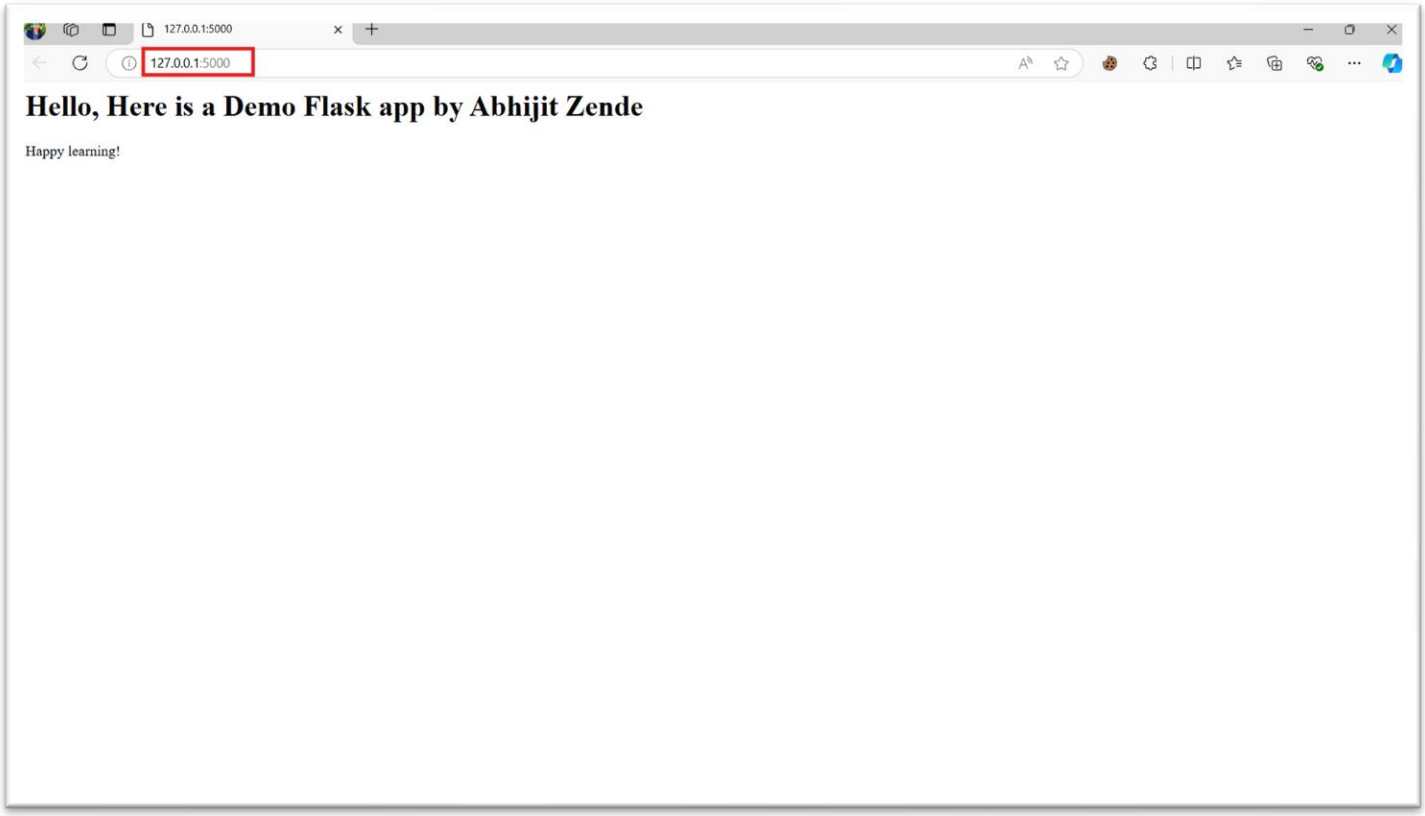
Step 2: Install Flask by running `pip install Flask` in the terminal.



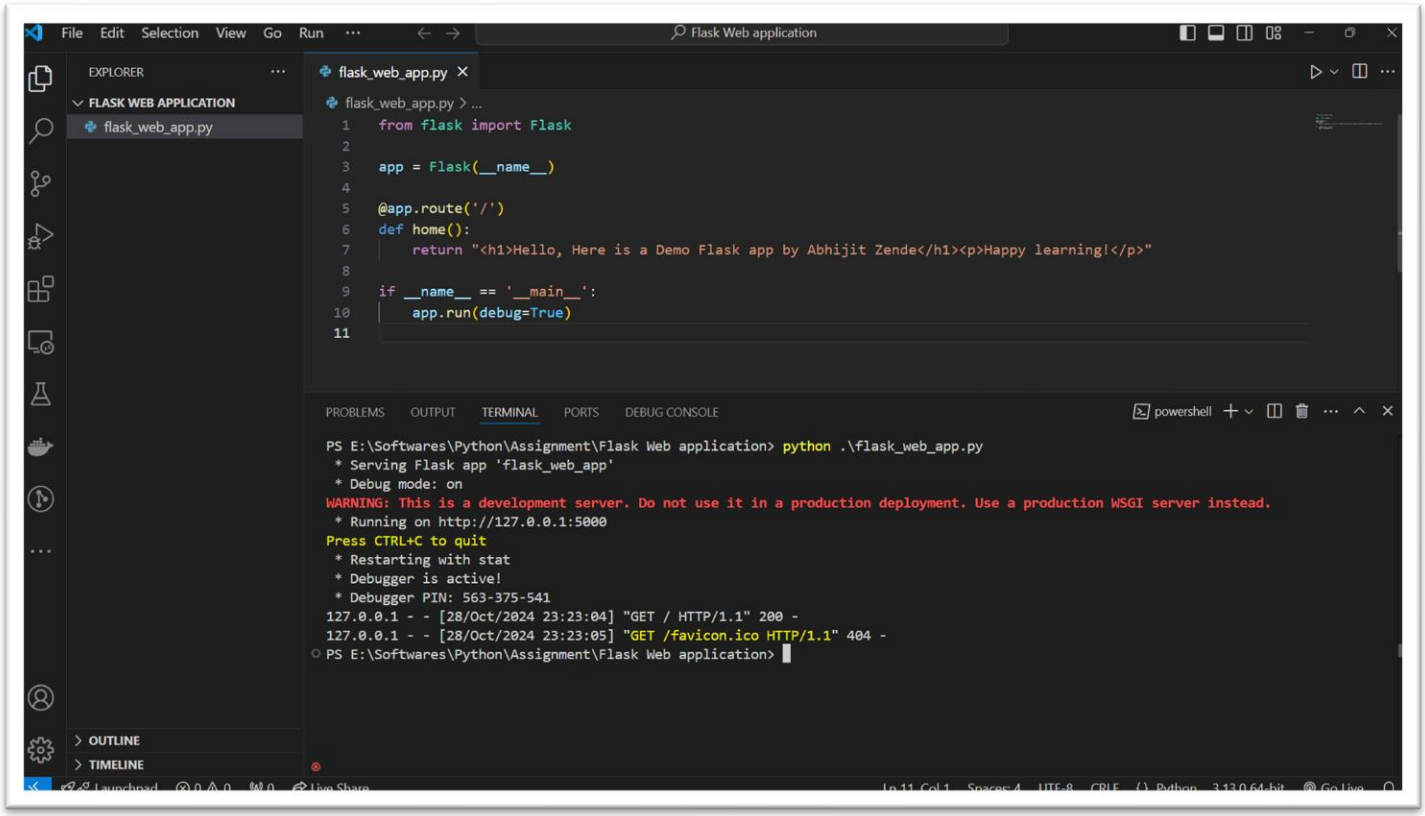
Step 3: Write the code from below screenshot, save, and run the python program

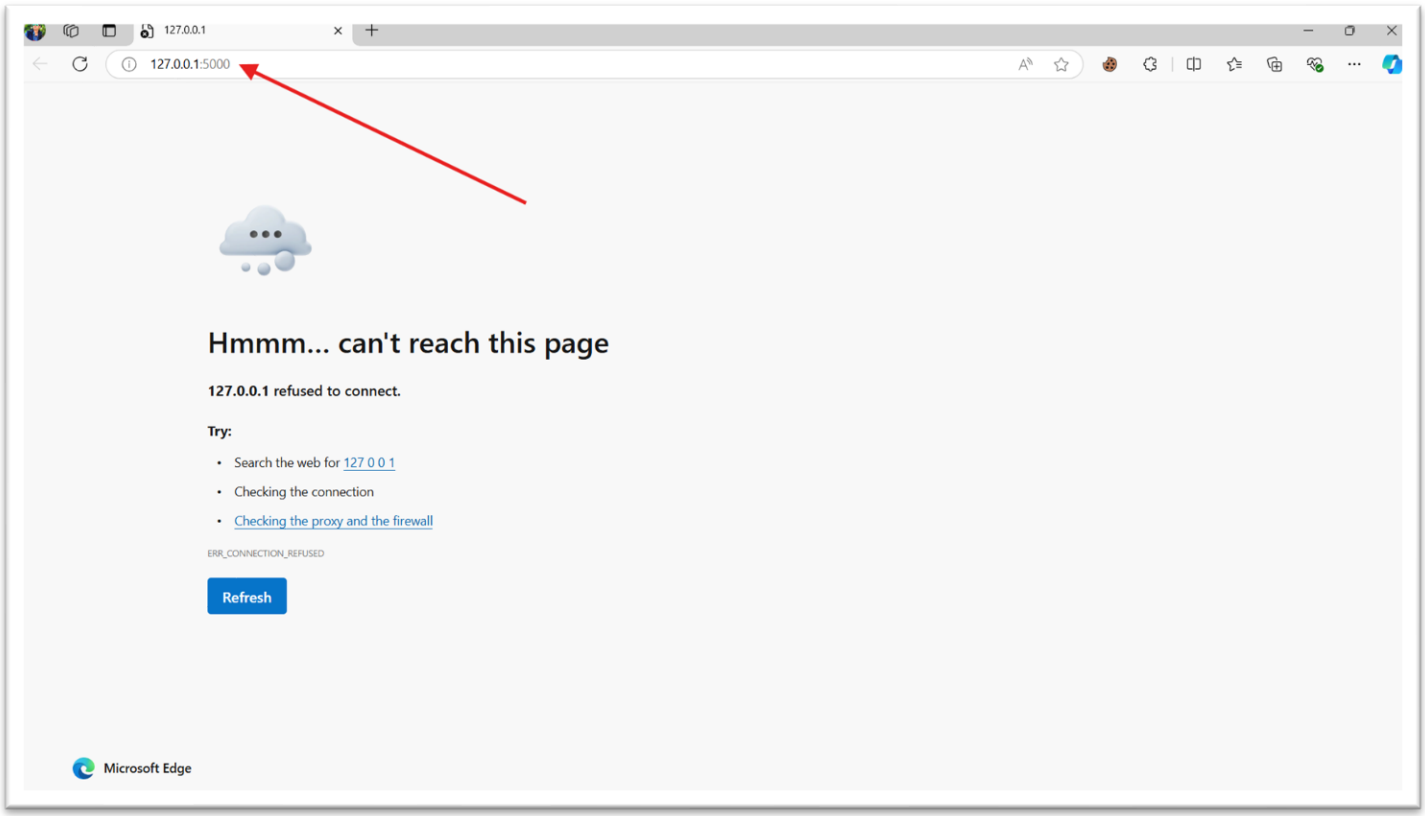


Step 4: Open a browser and go to ‘http://127.0.0.1:5000’ to see the web app running.



Step 5: top the server by pressing **Ctrl+C** in the terminal when done.




127.0.0.1
127.0.0.1:5000
Hmmm... can't reach this page
127.0.0.1 refused to connect.
Try:
Search the web for 127 0 0 1
Checking the connection
Checking the proxy and the firewall
ERR_CONNECTION_REFUSED
Refresh
Microsoft Edge