Hello Learners, this guide is created to help you get started with all setups for the coding module. If you are someone who has technical know-how in Python, please feel free to skip the details. For others, please follow the guidelines one by one.

We will do a 3-step setup to get started:

1: Download the programming language in which we will code (In our case, it is Python)

2: Download an interface (called as IDE) in which we can write the code (In our case, it is Pycharm)

3: Download the libraries that will be needed in the code

And then we will see how to write a code and run Streamlit. So let's get started….

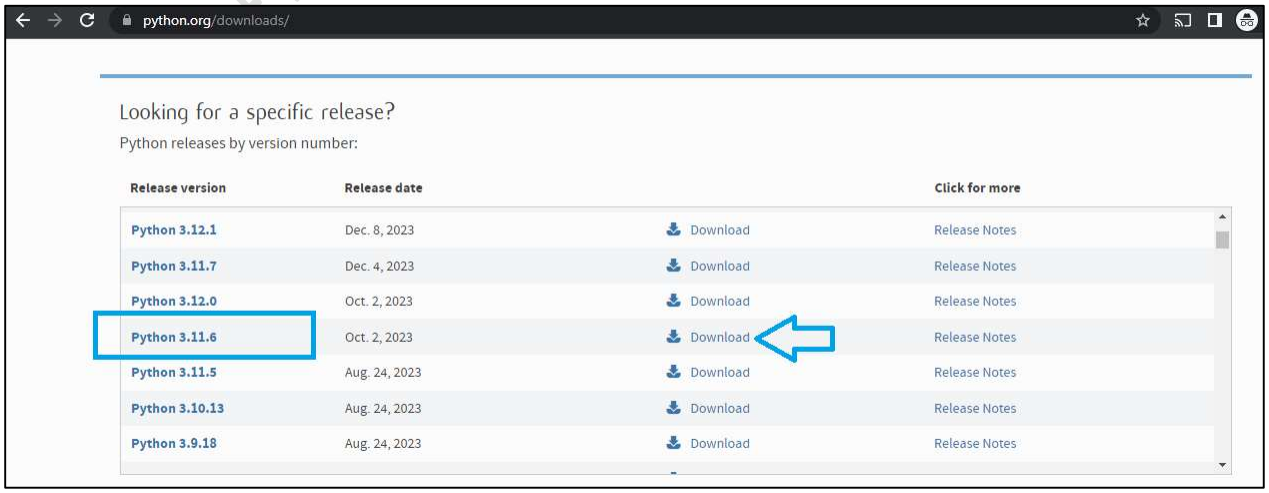
Step 1: Install Python:

a: Google for "download python"

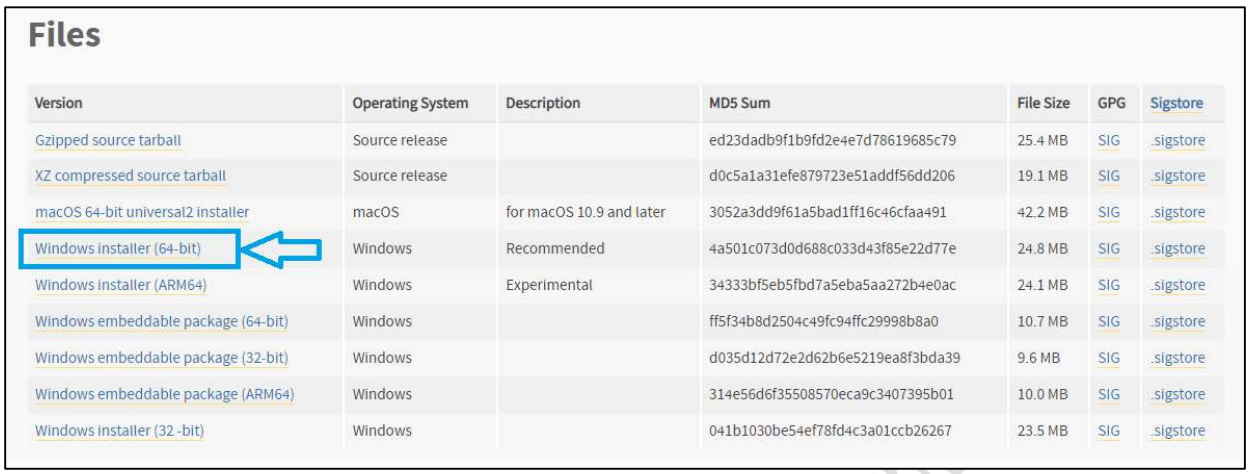
b: Make sure you click on the result from python.org which is the official website

c: Python comes with newer major/minor versions every few weeks, but we want to download an older version, considering it would be more stable and verified by users.

I will download version 3.11.6, so I scroll down and click on "Download" next to 3.11.6



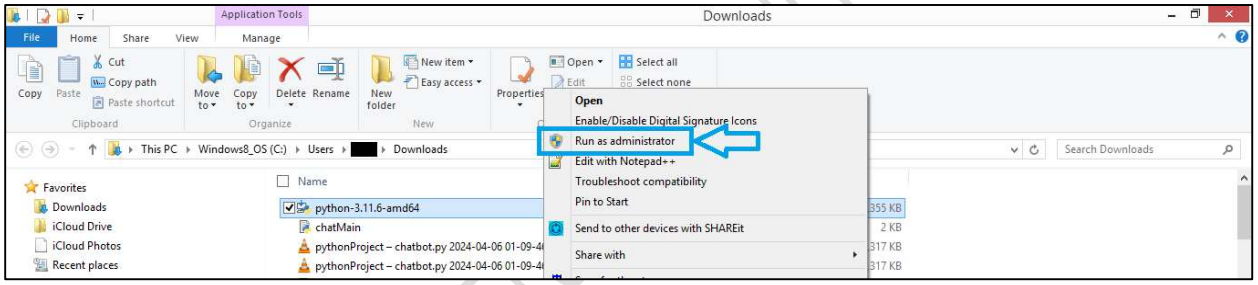
d: On the next page, click on the installer corresponding to your operating system (Windows or Mac etc.)



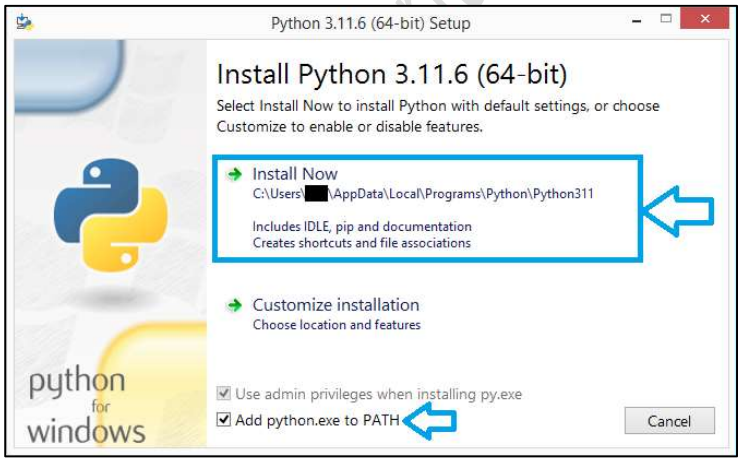
Files

Version	Operating System	Description	MD5 Sum	File Size	GPG	Sigstore
Gzipped source tarball	Source release		ed23dadb9f1b9fd2e4e7d78619685c79	25.4 MB	SIG	.sigstore
XZ compressed source tarball	Source release		d0c5a1a31efe879723e51addf56dd206	19.1 MB	SIG	.sigstore
macOS 64-bit universal2 installer	macOS	for macOS 10.9 and later	3052a3dd9f61a5bad1ff16c46cfaa491	42.2 MB	SIG	.sigstore
Windows installer (64-bit)	Windows	Recommended	4a501c073d0d688c033d43f85e22d77e	24.8 MB	SIG	.sigstore
Windows installer (ARM64)	Windows	Experimental	34333bf5eb5fbd7a5eba5aa272b4e0ac	24.1 MB	SIG	.sigstore
Windows embeddable package (64-bit)	Windows		ff5f34b8d2504c49fc94ffc29998b8a0	10.7 MB	SIG	.sigstore
Windows embeddable package (32-bit)	Windows		d035d12d72e2d62b6e5219ea8f3bda39	9.6 MB	SIG	.sigstore
Windows embeddable package (ARM64)	Windows		314e56d6f35508570eca9c3407395b01	10.0 MB	SIG	.sigstore
Windows installer (32-bit)	Windows		041b1030be54ef78fd4c3a01ccb26267	23.5 MB	SIG	.sigstore

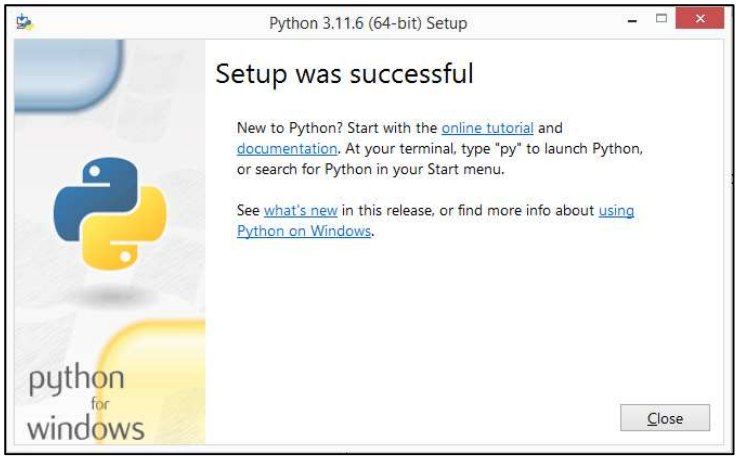
e: Run the downloaded exe file. If you are unsure of your permissions, its best to run as an administrator



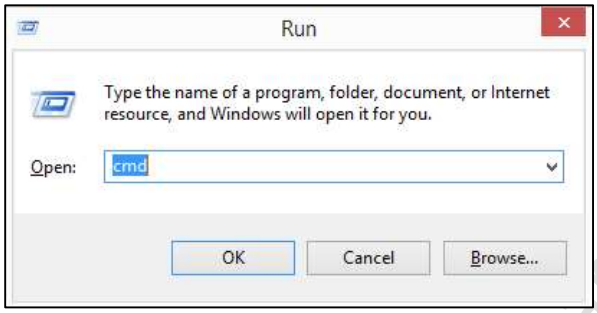
f: Click on “Install Now”. Be sure to check the last box (“Add python.exe to PATH”)



g: Wait for the installation to complete

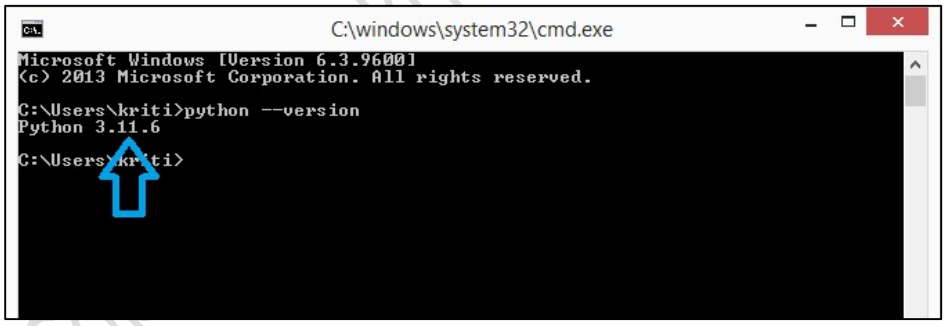


h: Once done, go to command prompt (if you are on Windows, press window button + R, and type in "cmd" and press Enter)



i: Write "python –version" and hit Enter

g: If you see a Python version, means your installation is successful



This concludes our installation of Python.

Step 2: Install PyCharm:

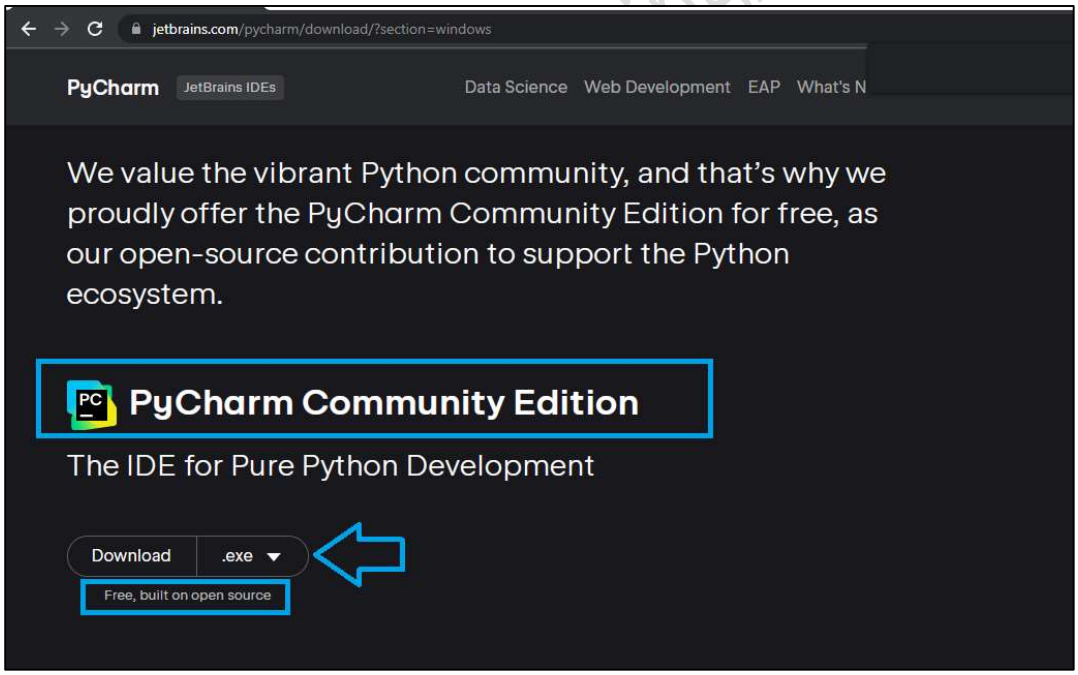
Now that we have installed Python, we have a programming language to code in. But to write our code and run it, we need an IDE or Integrated Development Environment. IDE is a software application for programmers. You can use it to write, edit, and organize code more easily. Plus there are additional features for debugging, syntax check, library installation etc.

There are many IDEs available in market, each suited to a coding language. For Python, my recommendation is to install PyCharm, which is a nice IDE with host of features. To do so,

a: Google for "download pycharm"

b: Look for the result from "jetbrains" which is the parent company of PyCharm

c: PyCharm has 2 versions – a "Professional Edition" which is paid, and a "Community Edition" which is free. We would be using the latter, free version

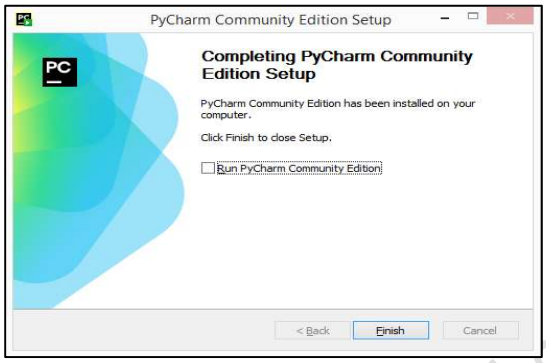


d: Run the downloaded exe file. Once again, if you are unsure of your permissions, its best to run as an administrator

e: Keep clicking "Next". *You do not need to change any option*

It will take couple of minutes for the installation to complete

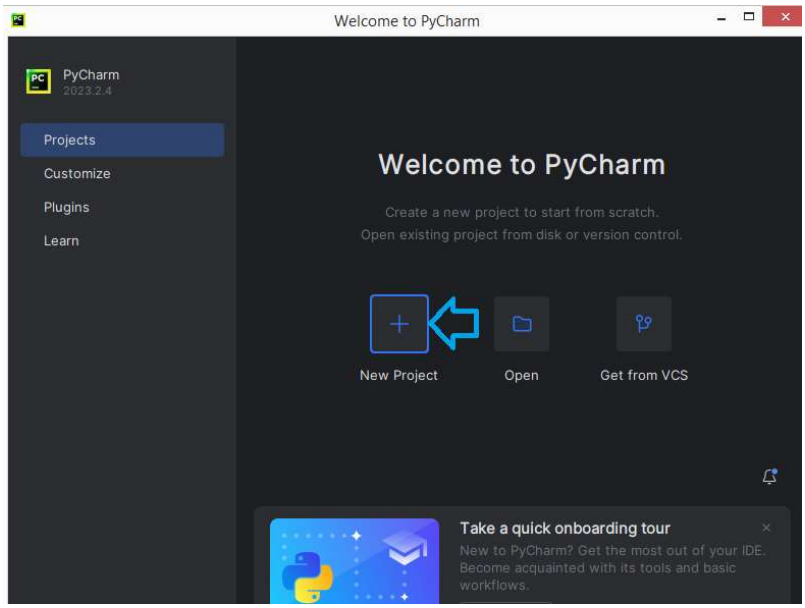
f: Once the installation is completed, you will get below screen. This means you are all set.



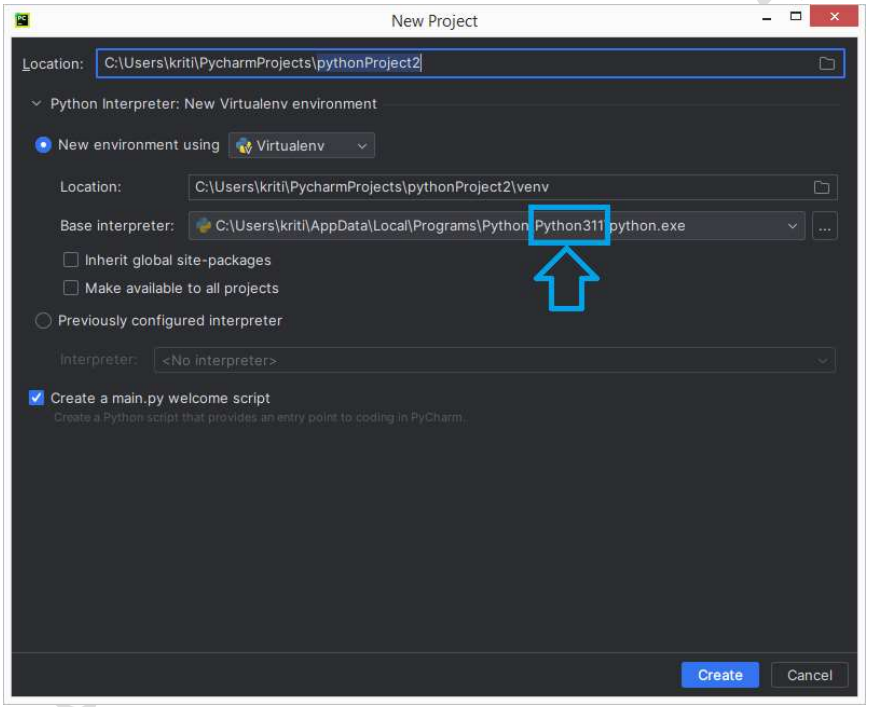
g: Check the box for “Run PyCharm Community Edition” and click on Finish.

This will open PyCharm, it will take few minutes to get everything ready the first time it opens.

h: Click on “New Project”

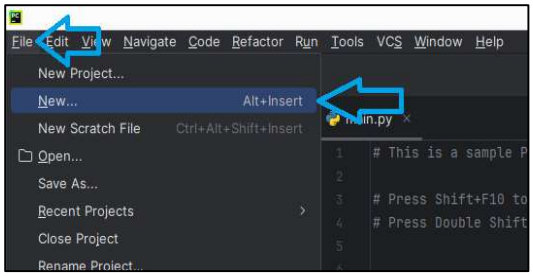


i: On the next screen, DO NOT change any option. Let's use the default options that are populated. You should also check here that the Python version shown is the one you installed earlier.

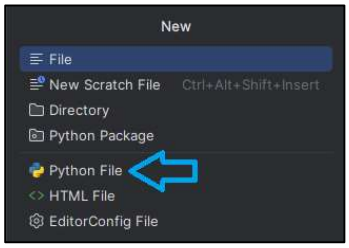


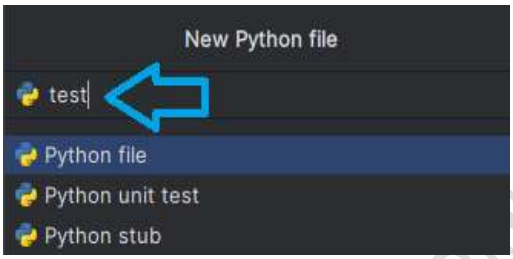
j: Click on Create. Again, it will take few minutes to create the virtual environment. Please be patient

k: We will do a quick test to make sure things are all good. Click on File >> New

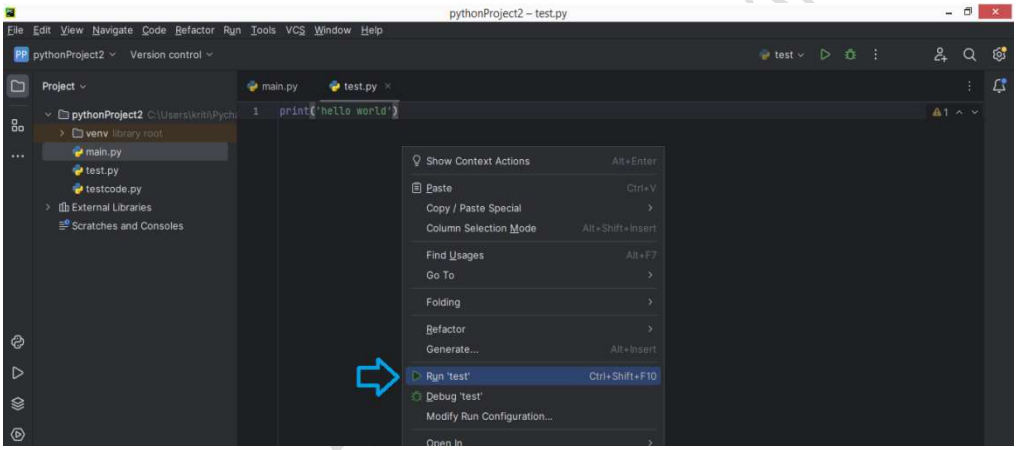


l: Click on “Python File”, and enter any name on next screen (I entered “test”)



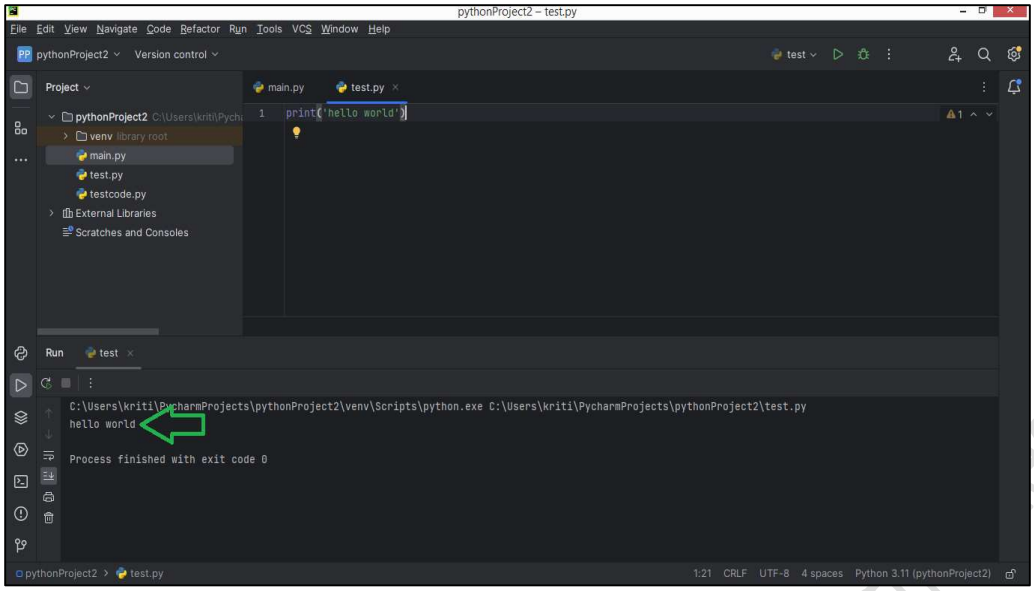


m: Write print('hello world'). Right-click anywhere on the blank screen and click on Run



You will see a small window pop at the bottom that says – hello world

This means Python, PyCharm are installed correctly

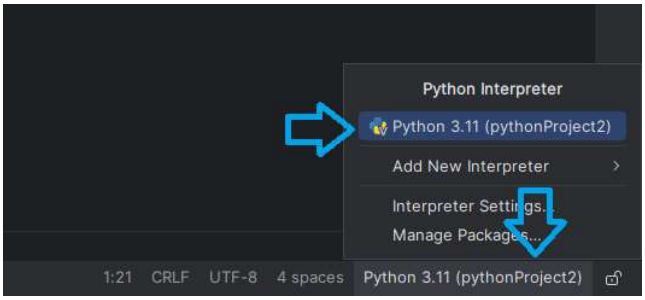


This concludes our installation of PyCharm.

Step 3: Install Libraries:

Now that we have installed Python and PyCharm, we are all set for the last step, which is installing libraries. Think of libraries as add-ons, which help you do tasks easily. For example, to read the pdf file, we will download a library called PyPdf2 which provides several enhanced options to work with pdfs.

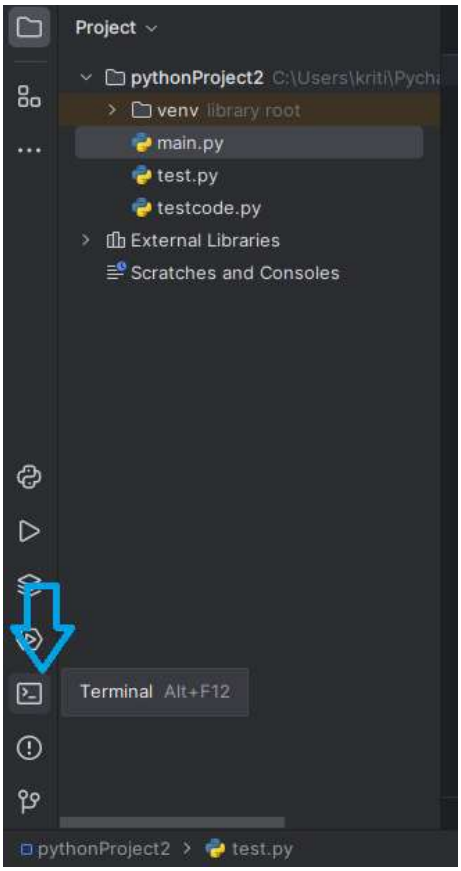
Before we install any libraries, it's important to make sure you are working on the right Python version. Click on the Python version name *at bottom right*, and make sure it shows the installed Python version.



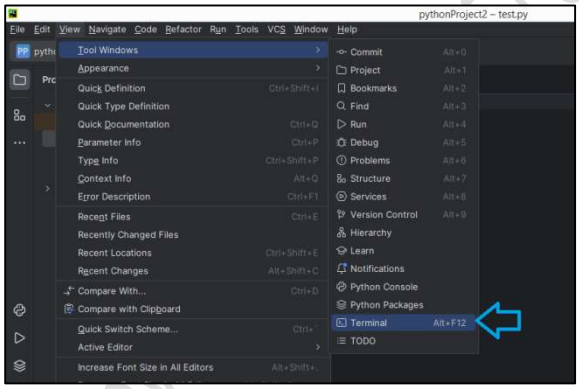
Unless you have multiple Python versions installed, you would see only one option here.

Now we are all set to install libraries.

a: Click on the "Terminal" option at bottom left:



Or you can click on View >> Tool Windows >> Terminal



b: Once the terminal opens, you are ready to use it for installing libraries.

c: You can type in –> pip install <<library name>> , example pip install streamlit

(PIP is the installer package for Python, and it got downloaded when we installed Python. And "streamlit" is the name of the library we want to install)

d: Once you hit enter, the install will start. Most libraries will also install other dependencies so it can take a while. Please be patient.

e: Once installation completes, you can install other libraries.

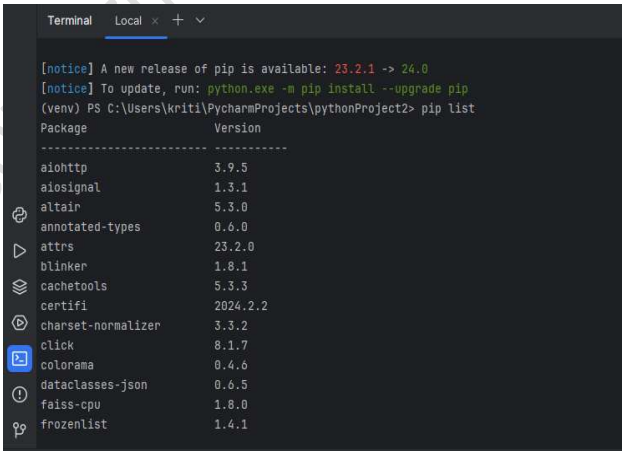
f: You can also install multiple libraries together, by putting one name after another, like:
pip install pypdf2 langchain faiss-cpu openai tiktoken
(these libraries are good to start with. As we progress in the course, we will install more libraries)

```
Requirement already satisfied: mdurl~=0.1 in c:\users\kriti\pycharmprojects\pythonproject2\venv\lib\site-packages (from markdown-it-py>=2.2.0->rich<14,>=10.14
.0->streamlit) (0.1.2)
Requirement already satisfied: six>=1.5 in c:\users\kriti\pycharmprojects\pythonproject2\venv\lib\site-packages (from python-dateutil>=2.8.2->pandas<3,>=1.3.0
->streamlit) (1.16.0)

[notice] A new release of pip is available: 23.2.1 -> 24.0
[notice] To update, run: python.exe -m pip install --upgrade pip
(venv) PS C:\Users\kriti\PycharmProjects\pythonProject2> pip install pypdf2 langchain faiss-cpu openai tiktoken
```

Library management can be sometime complicated, and you may get errors like Module not found, Import Error etc. In that case, simply do a pip install <<library name>> for which ever library is reported as missing.

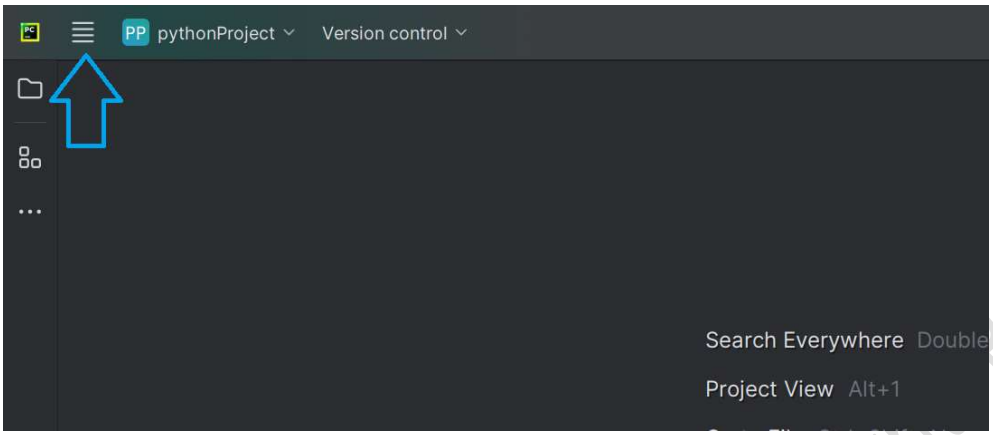
You can also,

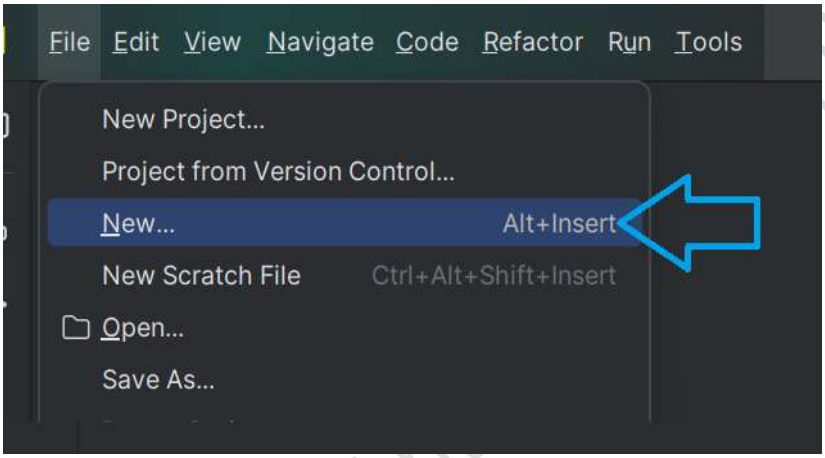
- uninstall a library by writing –> pip uninstall <<library name>>
- download a specific version of the library (compatible with your Python version) by writing the version name in command –> pip install streamlit==1.29.0
- view list of all installed libraries and their versions -> pip list

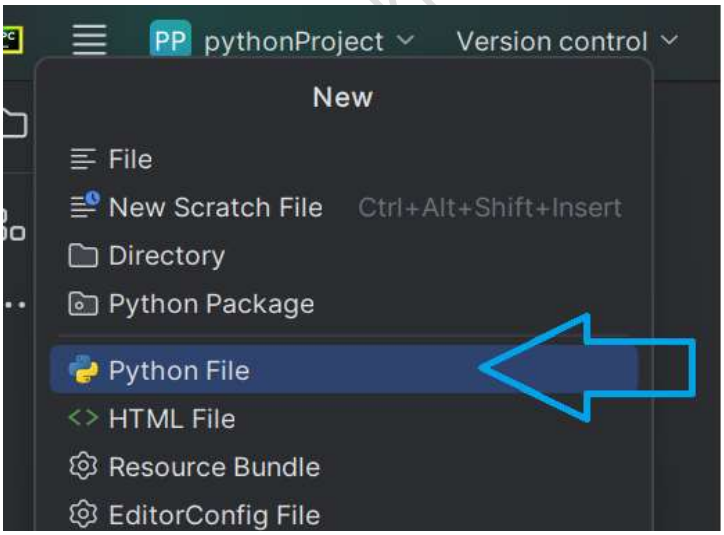


How to write & run the code [SAMPLE]

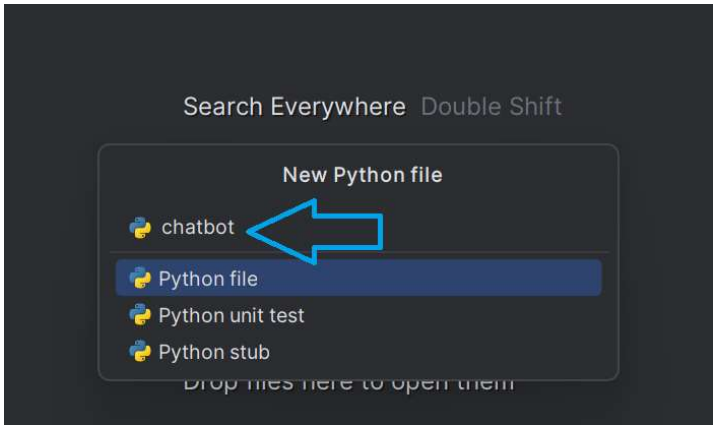
1. Create a new Python file. Click on the 4 lines at top left > New > Python File



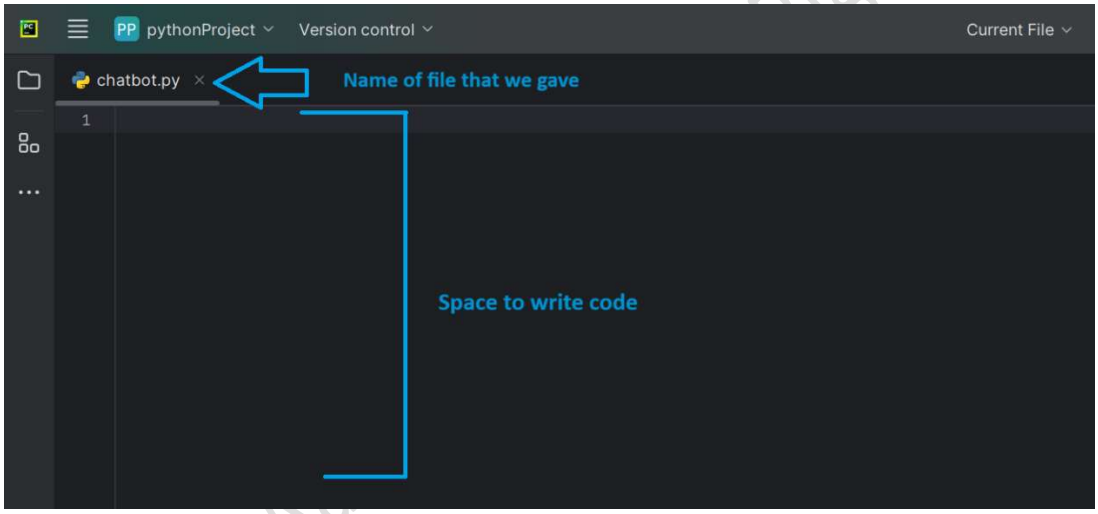




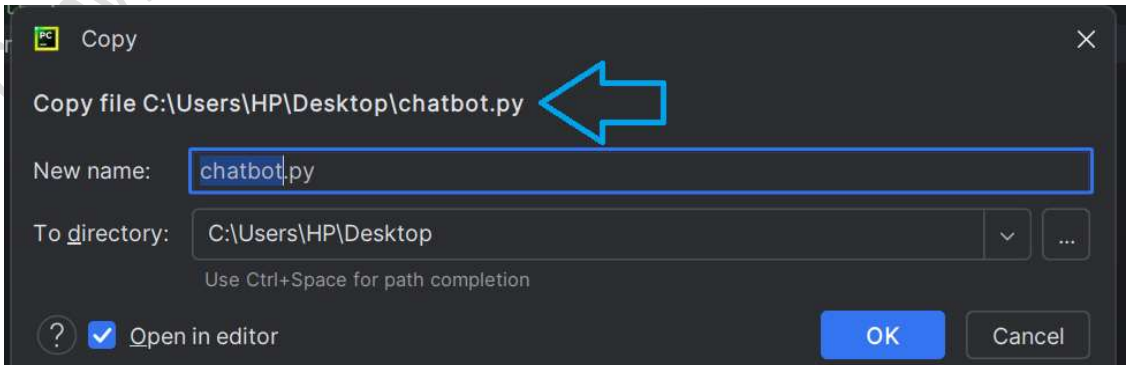
2. Give a name to your file (for example, I called mine “chatbot”) and press Enter. Avoid names with space. If you need multiple words, put an underscore in between them.



3. Now you should see chatbot.py file opened to write your code



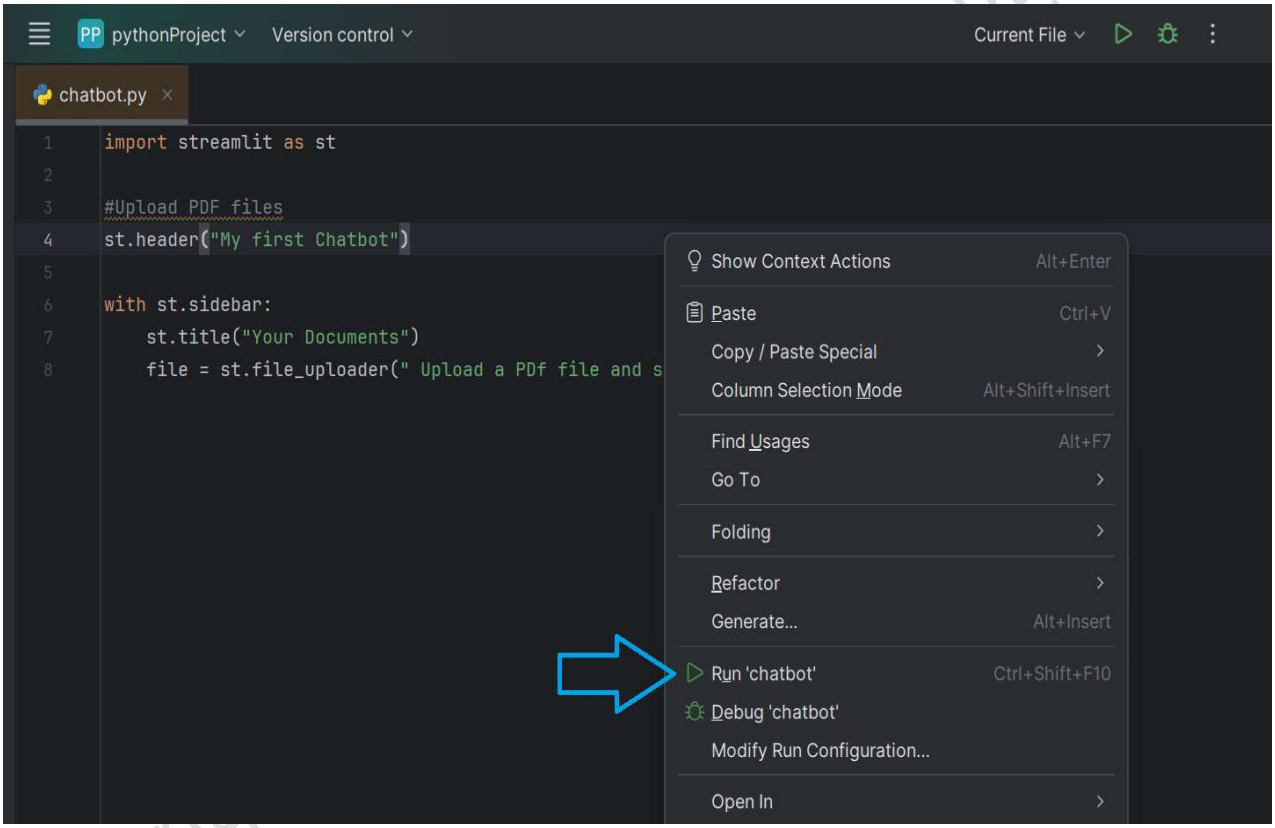
To know where your file is saved, you can again click on the 4 lines at top left, and click on Save As, this will give you the current file’s path. For example, as you can see, my file is saved to “C:\Users\HP\Desktop\chatbot.py”



4. Let's write a few lines to launch streamlit

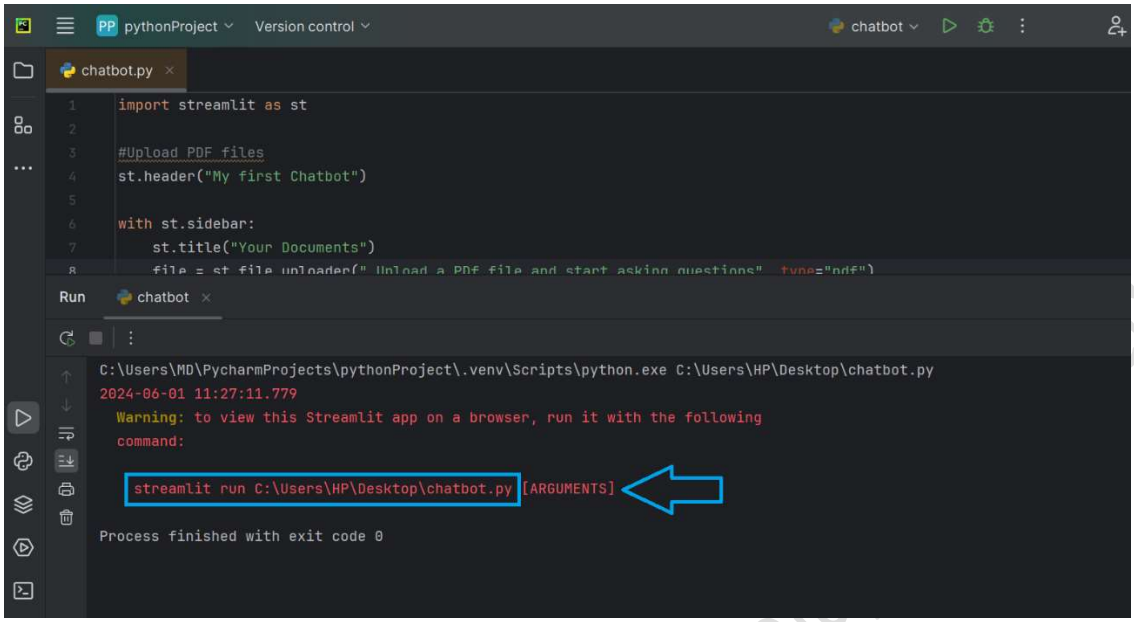
```
import streamlit as st

#Upload PDF files
st.header("My first Chatbot")

with st.sidebar:
    st.title("Your Documents")
    file = st.file_uploader(" Upload a PDf file and start asking questions",
type="pdf")
```

5. Right click on the blank area of the code writing section, and click Run

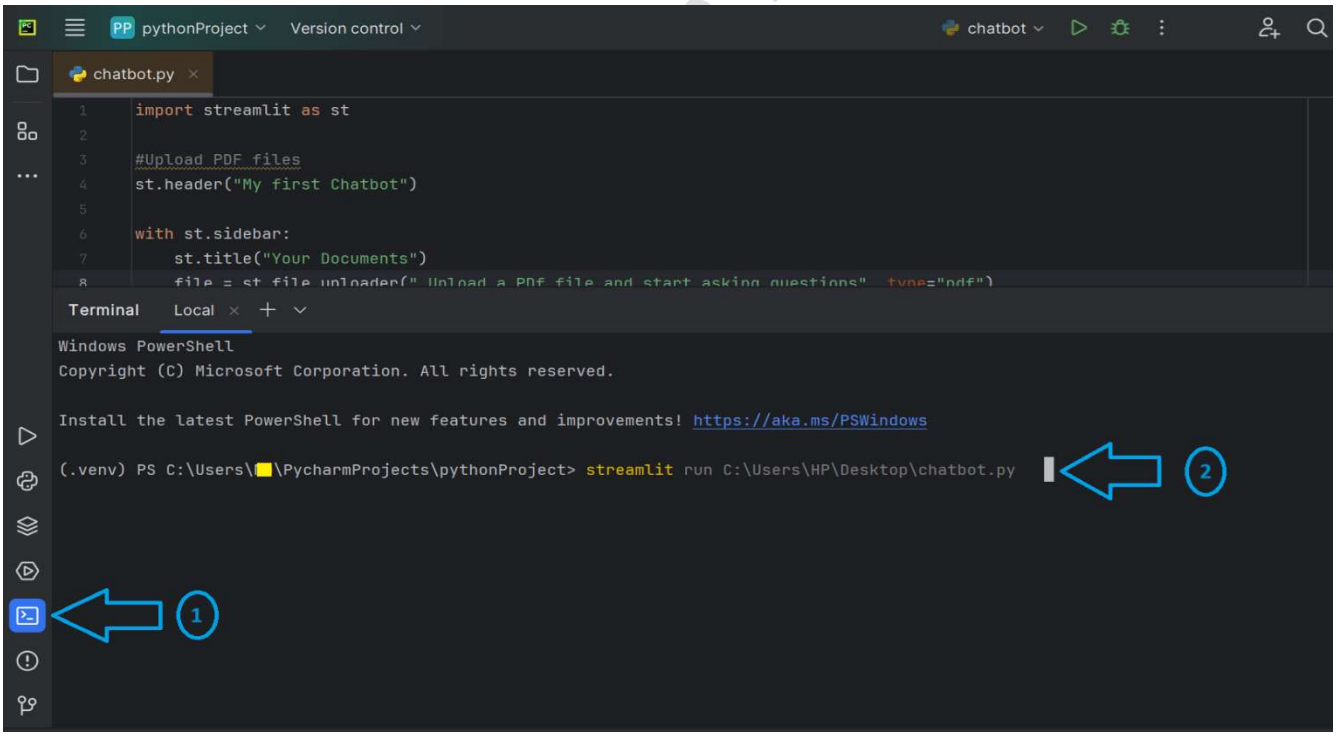


6. The Run window will popup at bottom, and ask you to run the Streamlit launch command. You have all the details needed there, just copy the highlighted part below

   In my case, it is -> streamlit run C:\Users\HP\Desktop\chatbot.py
   (you do not need to copy "[ARGUMENTS]")

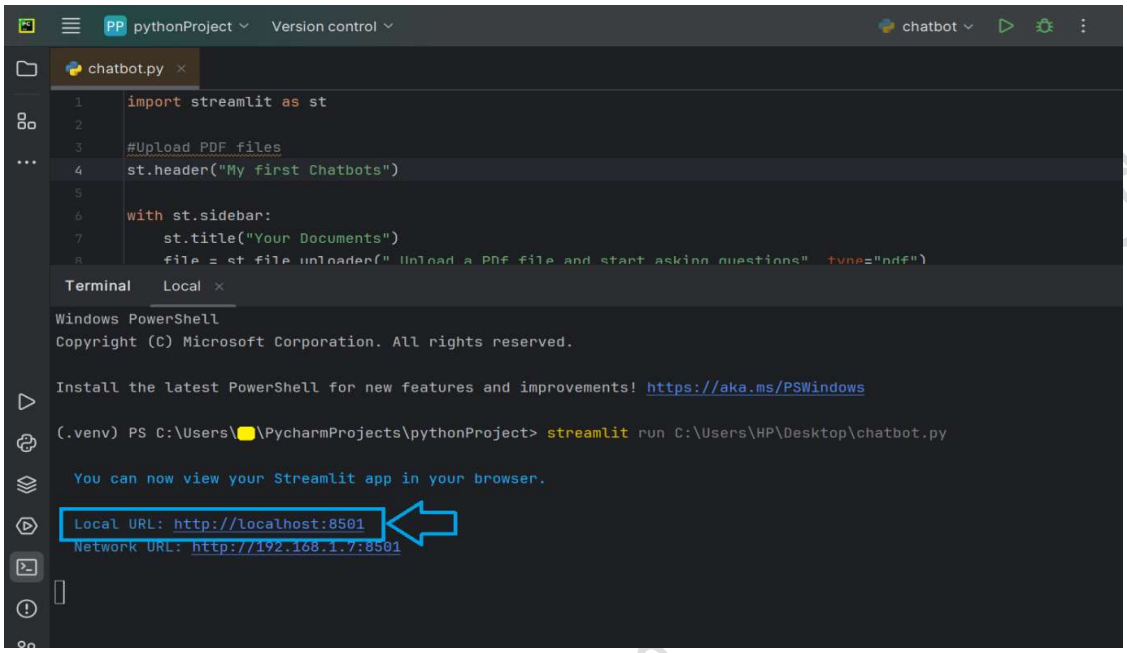


7. Now go to the Terminal option from bottom left, paste this copied path and hit Enter



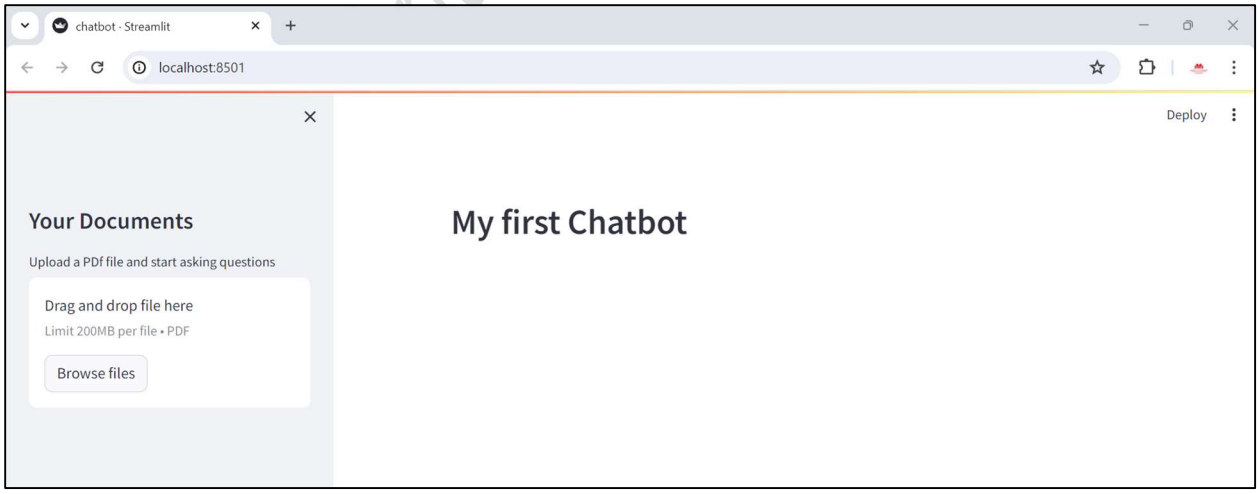
(Note: If you used space in your Python file name, you will have to pass the path in double quotes, example -> streamlit run “C:\Users\HP\Desktop\my first chatbot.py”

8. You would now get the URL, and also your default browser (likely, Edge or Internet Explorer) will launch with Streamlit open.



Note couple of things:

a. In case you are copying manually, use the "Local URL", not the "Network URL"
b. Wait for the default browser to load, then you can copy paste the url to Chrome or any other browser you want
c. Do not close Pycharm or stop the program



9. Each time you make a change to the Python code, you can save the py file, and then just refresh the above page on Chrome

That's it folks… That's all the information you would need to get started, or if you got stuck somewhere.

Remember if you faced any issue and wanted to uninstall Python or PyCharm you can do so from Control Panel. Make sure to restart your computer post that.

If you face any issue in the above setups, please email us on aakriti.elearning@gmail.com with the steps, error message and screenshot and we will definitely help you out.

Now we are all set to start coding in the next modules. Good Luck & Keep Learning!!