Steps to Install JAVA in your system
==========

Install java 1.8 in your system.

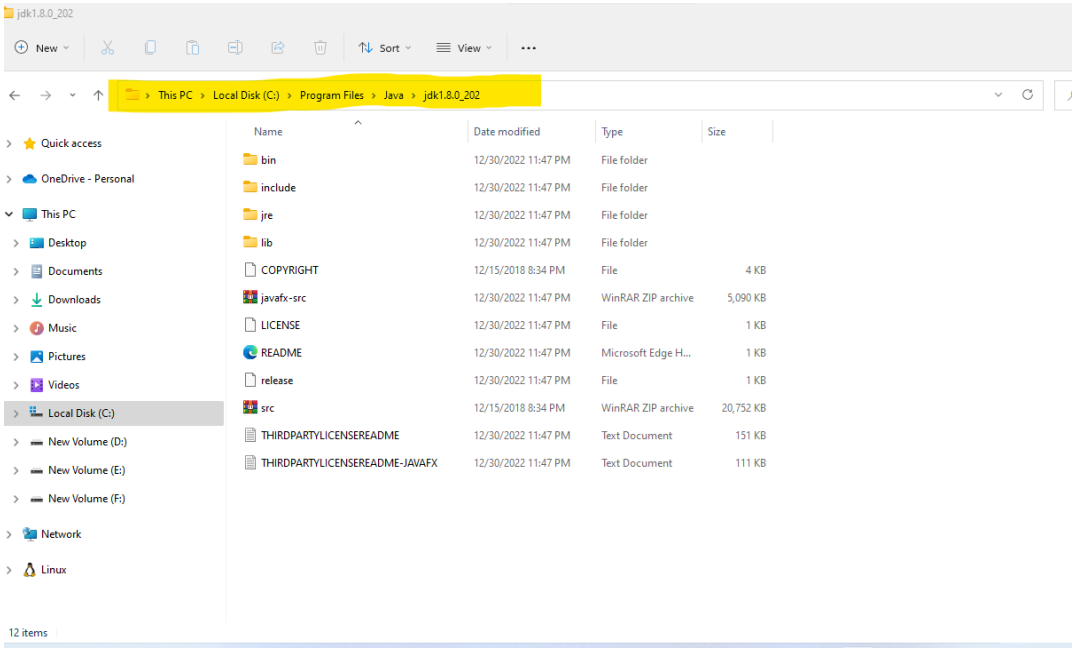
Link to install java file:
https://drive.google.com/file/d/1rmcNO-lj5QDQMq0Qpfz7hM0yci1g5o5l/view?usp=drive_link

Refer the following video to install

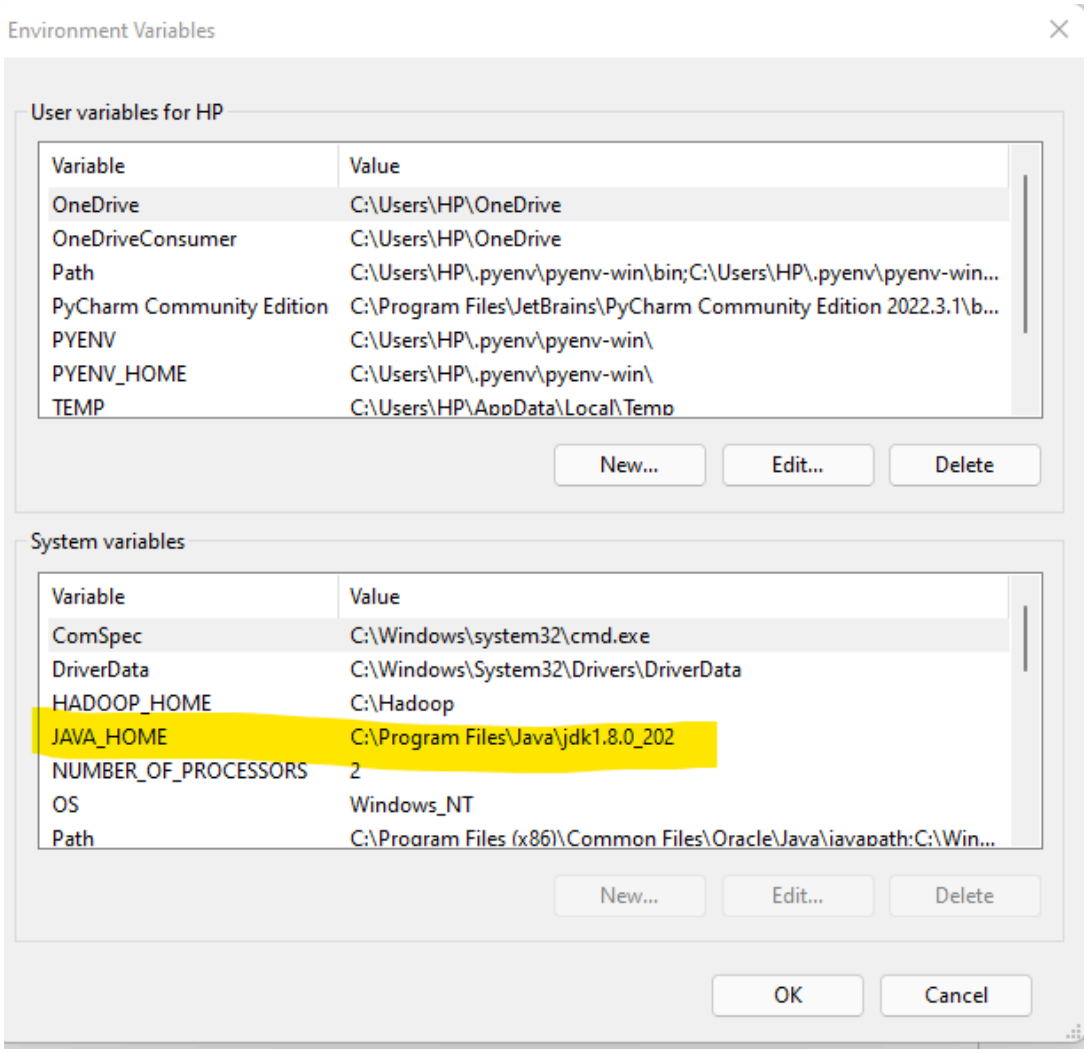
https://www.youtube.com/watch?v=ClcHrcNXP9g

In System environment variable, add the path JAVA_HOME (add the path of jdk)

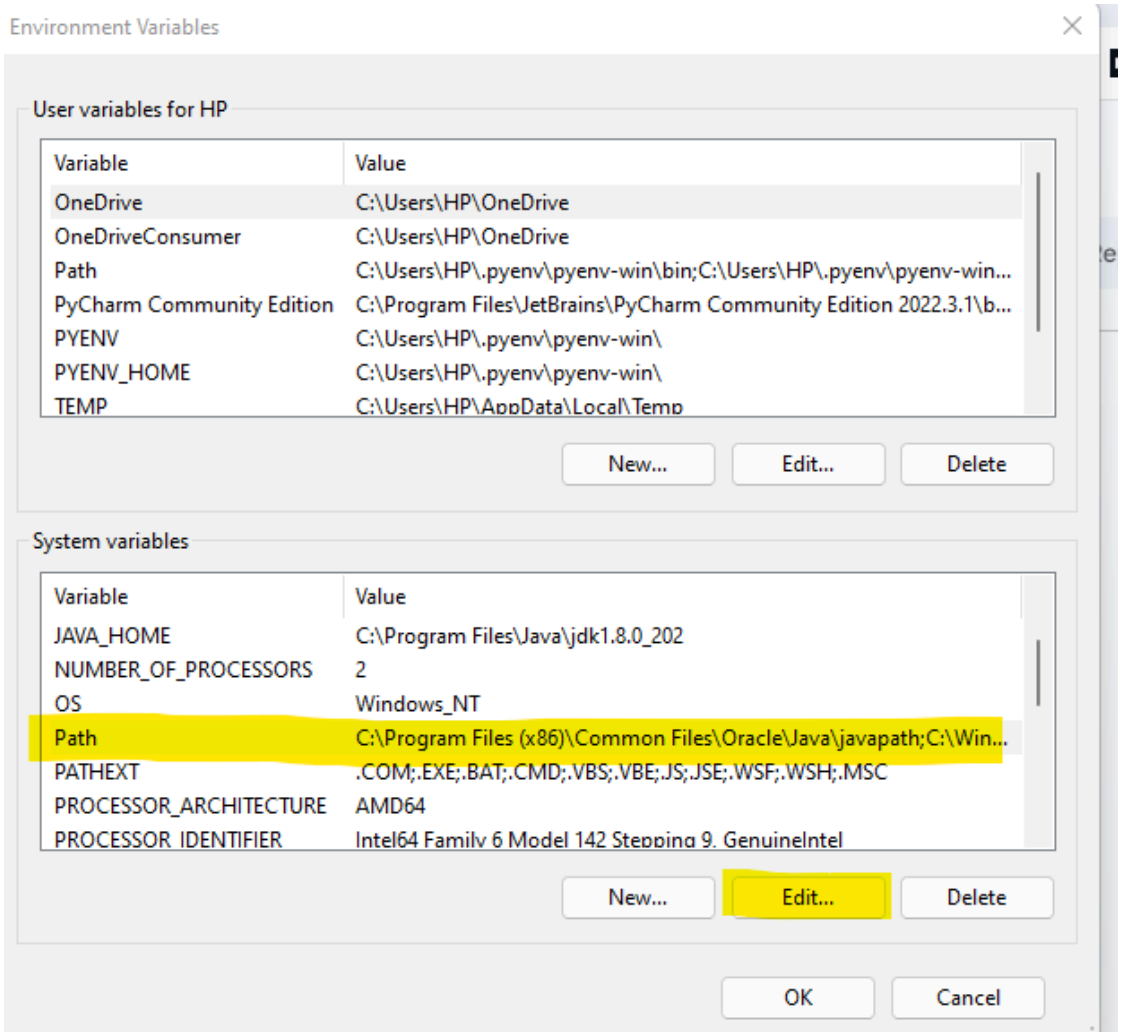
Follow below steps to add the path :
==========
First copy the path of jdk
Note: You can go to “Programs file” and in that “java folder” will be created in which you can see jdk and jre folders. Now open that jdk folder and copy that path.



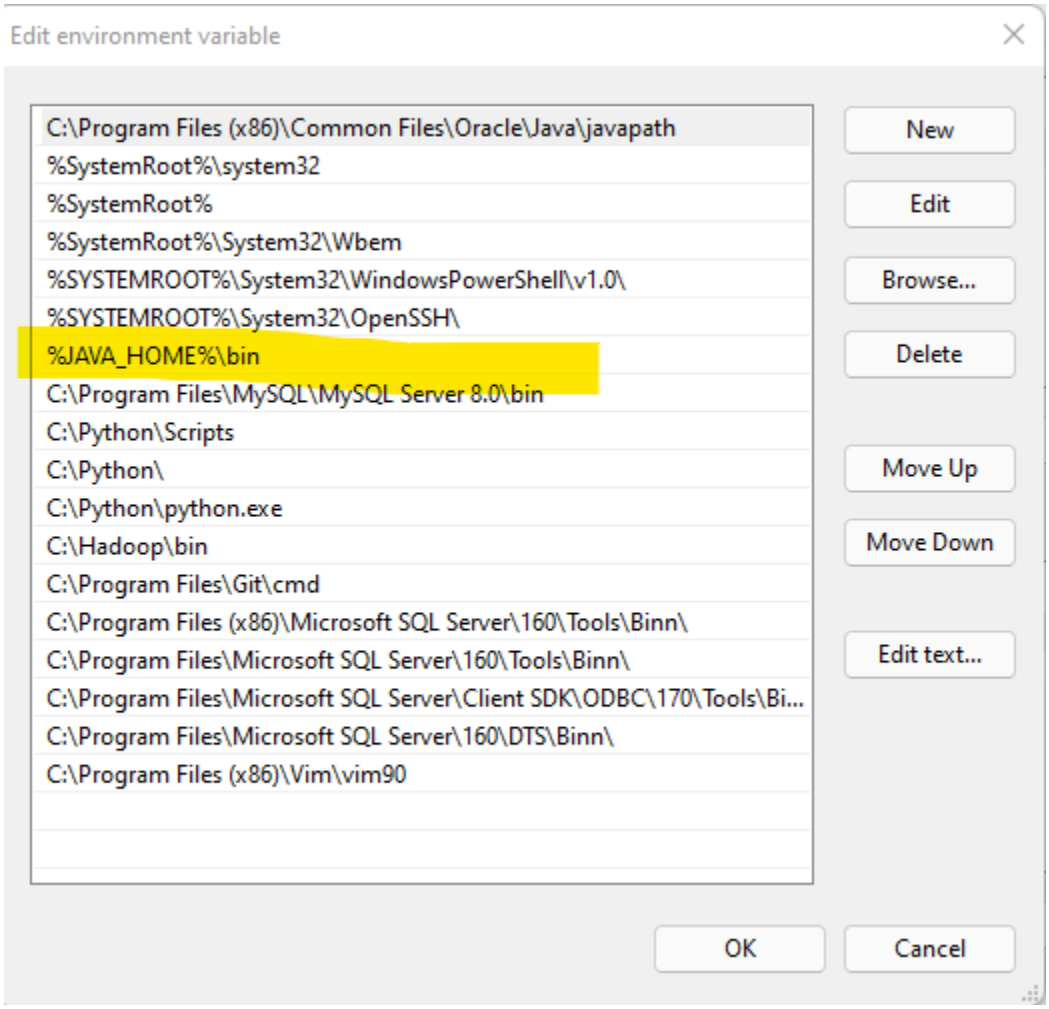
Now create a JAVA_HOME variable and mention the above path as shown in the below screenshot.



Then click on the path option and then click on edit in the system variable as shown below.


Environment Variables
User variables for HP
Variable
Value
OneDrive
C:\Users\HP\OneDrive
OneDriveConsumer
C:\Users\HP\OneDrive
Path
C:\Users\HP\.pyenv\pyenv-win\bin;C:\Users\HP\.pyenv\pyenv-win...
PyCharm Community Edition
C:\Program Files\JetBrains\PyCharm Community Edition 2022.3.1\b...
PYENV
C:\Users\HP\.pyenv\pyenv-win\
PYENV_HOME
C:\Users\HP\.pyenv\pyenv-win\
TEMP
C:\Users\HP\AppData\Local\Temp
New...
Edit...
Delete
System variables
Variable
Value
JAVA_HOME
C:\Program Files\Java\jdk1.8.0_202
NUMBER_OF_PROCESSORS
2
OS
Windows_NT
Path
C:\Program Files (x86)\Common Files\Oracle\Java\javapath;C:\Win...
PATHEXT
.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH;.MSC
PROCESSOR_ARCHITECTURE
AMD64
PROCESSOR_IDENTIFIER
Intel64 Family 6 Model 142 Stepping 9, GenuineIntel
New...
Edit...
Delete
OK
Cancel

Now add the %JAVA_HOME%\bin path as shown below



Installing python locally in windows.

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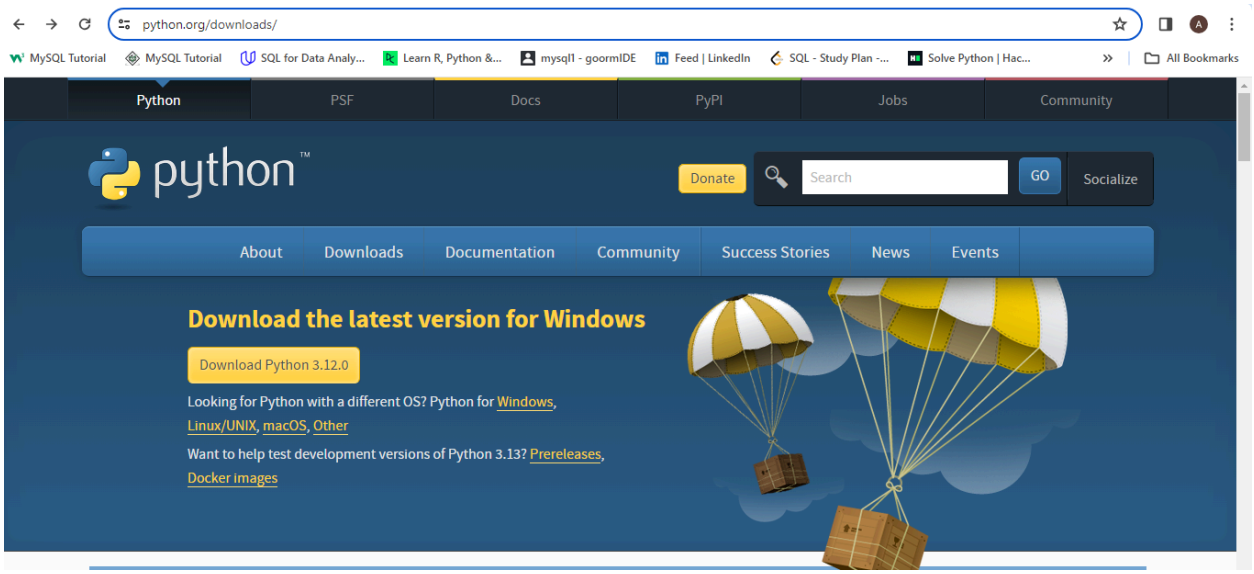
Follow below steps to install Python locally.

- Download required python version from the below link

https://www.python.org/downloads/

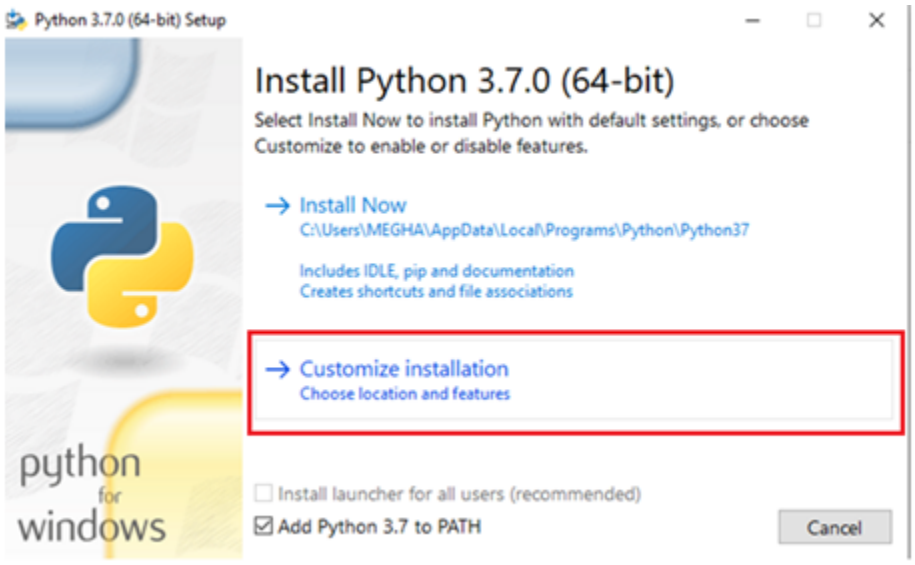


- Select Windows option to check for different versions.

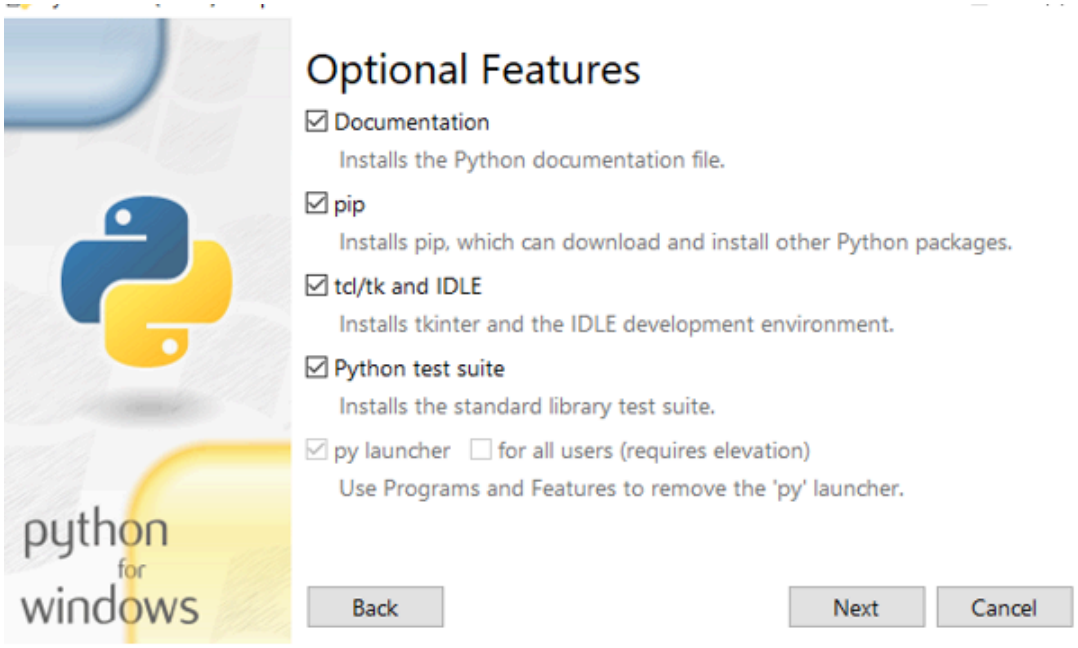
- Download zip file for 64 bit Windows x86-64 executable installer and for 32 bit Windows x86 executable installer

- Customize installation and follow the steps

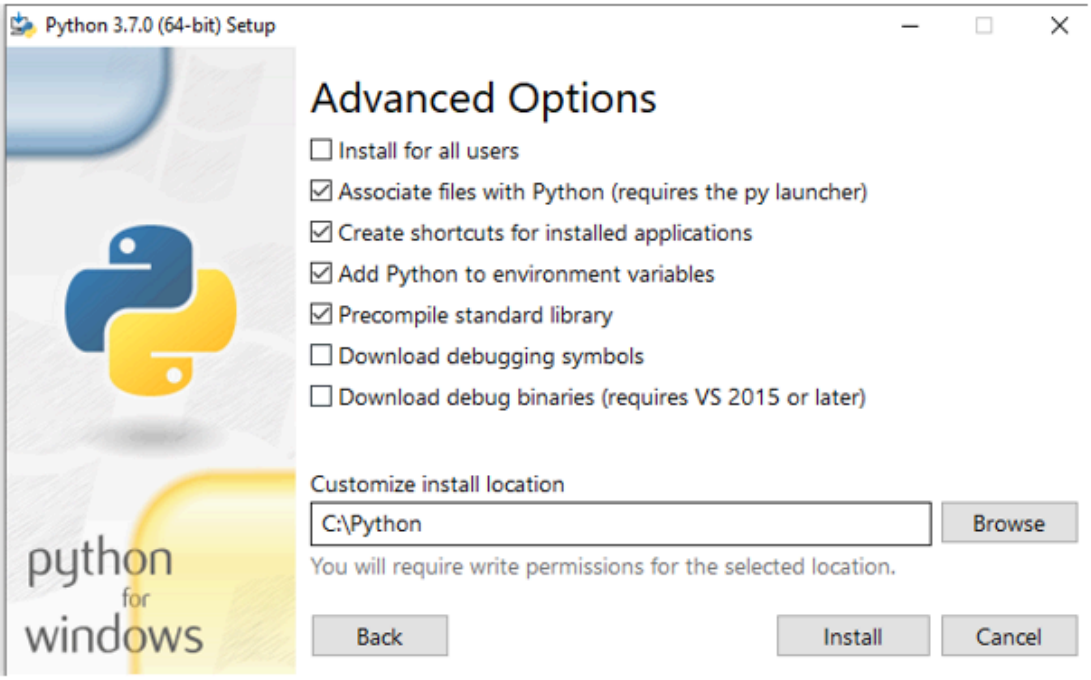
Select option Customize installation and select Add Python 3.7 to path as shown in



Then select the optional feature (refer to the below image).

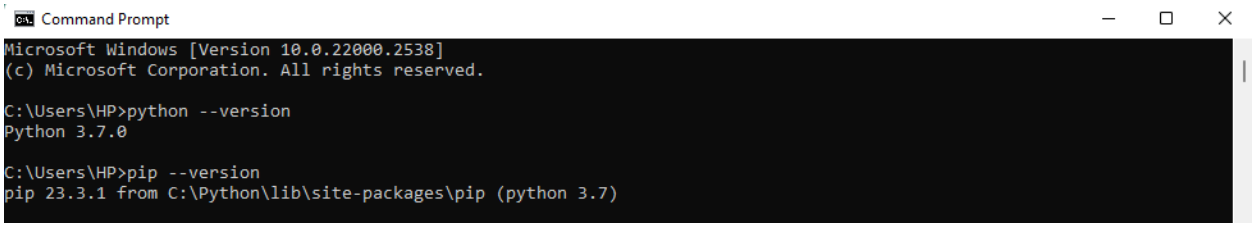


Create a Python folder on C drive. Now install python by browsing this path(C:\Python)



Note:

To check version of pip run the below command in CMD:



pip --version or pip3 --version

To upgrade pip use the command:

1. Use the below command to upgrade pip

pip install --upgrade pip or pip3 install --upgrade pip

Or

Replace the path of the python.exe file as per your system in below command and upgrade the pip version locally.

C:\Python\python.exe -m pip install --upgrade pip

To install Pyspark:

==========

For setting of SPARK_HOME variable follow below steps:

1. Download spark 2.4.4 from below link:

http://archive.apache.org/dist/spark/spark-2.4.4/spark-2.4.4-bin-hadoop2.7.tgz

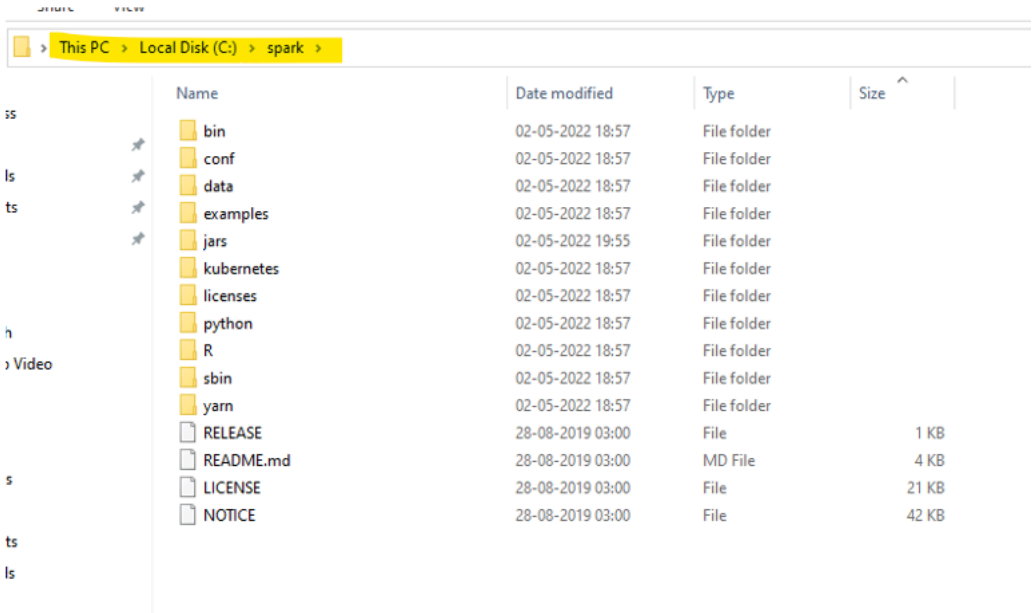
2. Please copy and paste the link in another tab , downloading will automatically start.
3. The above Spark bundle is in tgz compressed format. We need to decompress it. For that download a software using below link:

   https://www.rarlab.com/rar/winrar-x64-561.exe

   and then install it by clicking the executable.

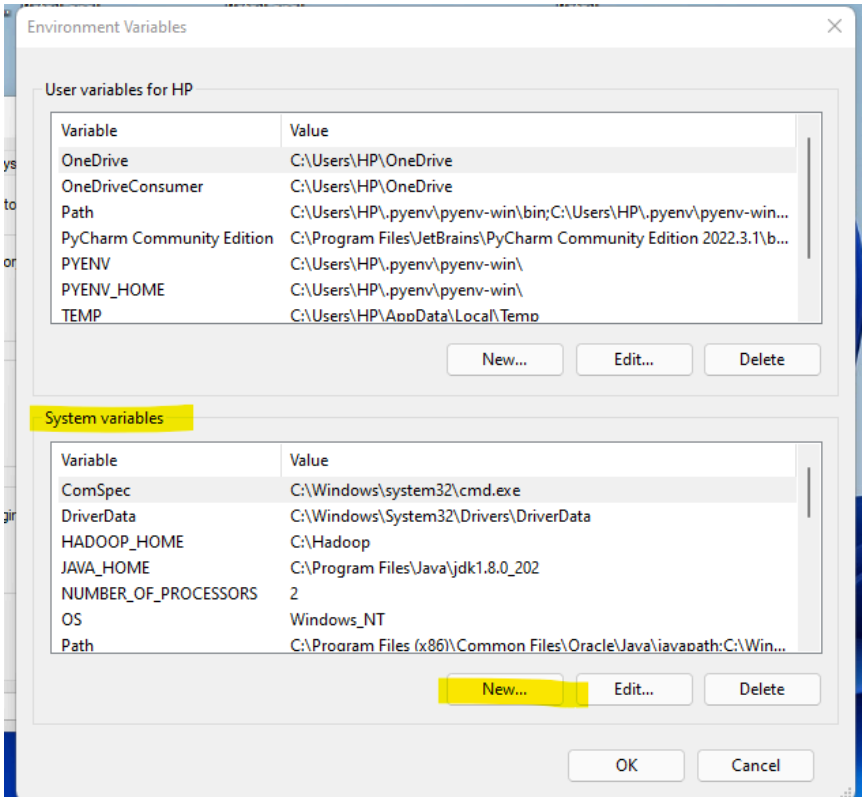
Note: No need to download the above software if you are able to decompress it or you already have WinRAR with you.

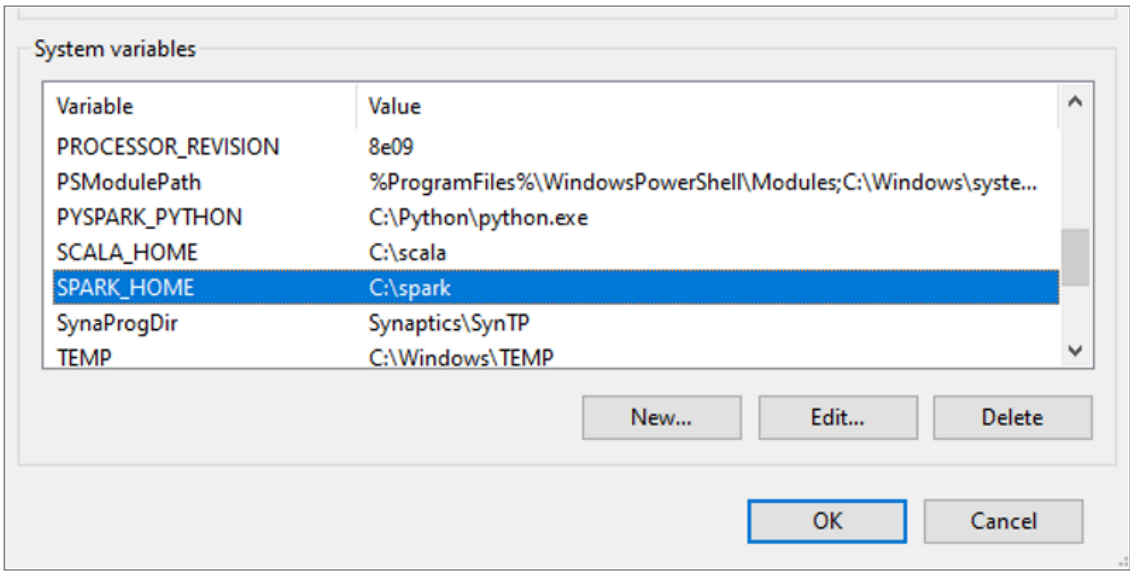
In “c drive” create a folder with name spark then extract the spark folder by right clicking and extract the files. You can refer to this screenshot.



and add your spark in your system variable and path in environment variable as SPARK_HOME as per ss

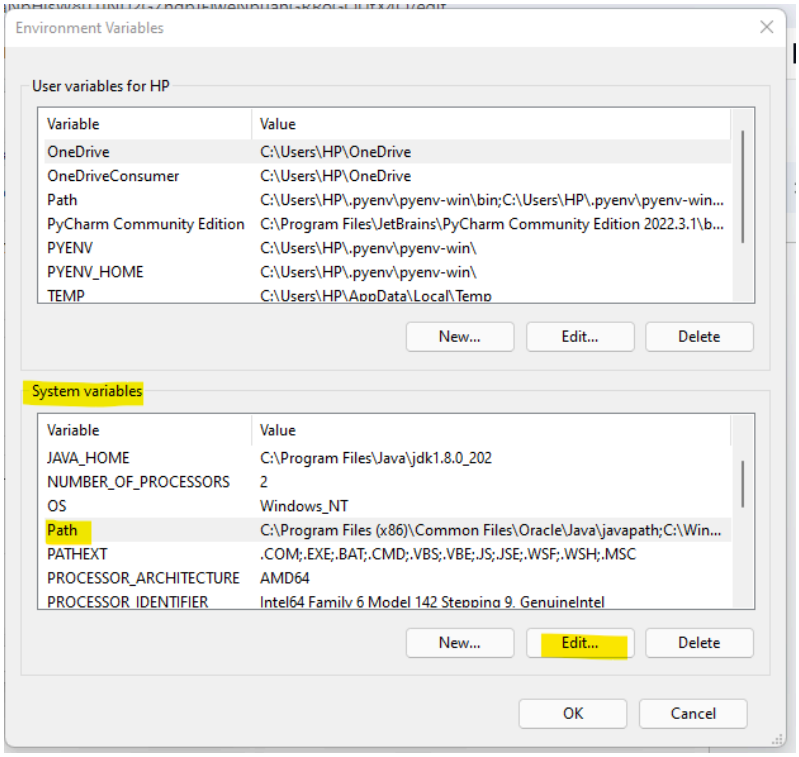
To add the SPARK_HOME variable go to edit Environment variable. Then click on new and add the SPARK_HOME variable as shown in the screenshots below.



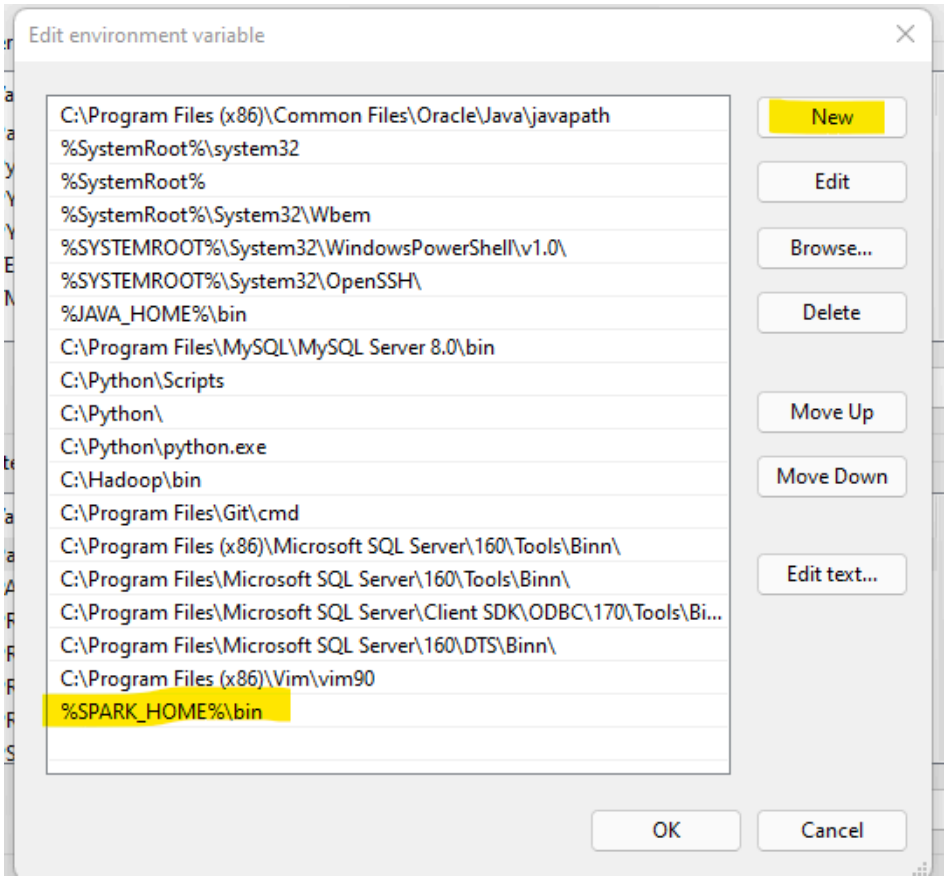


Also now add the path of this variable in the list of paths. To do so follow below steps:

1. In “system variable” click on “path” option then click on “edit”.

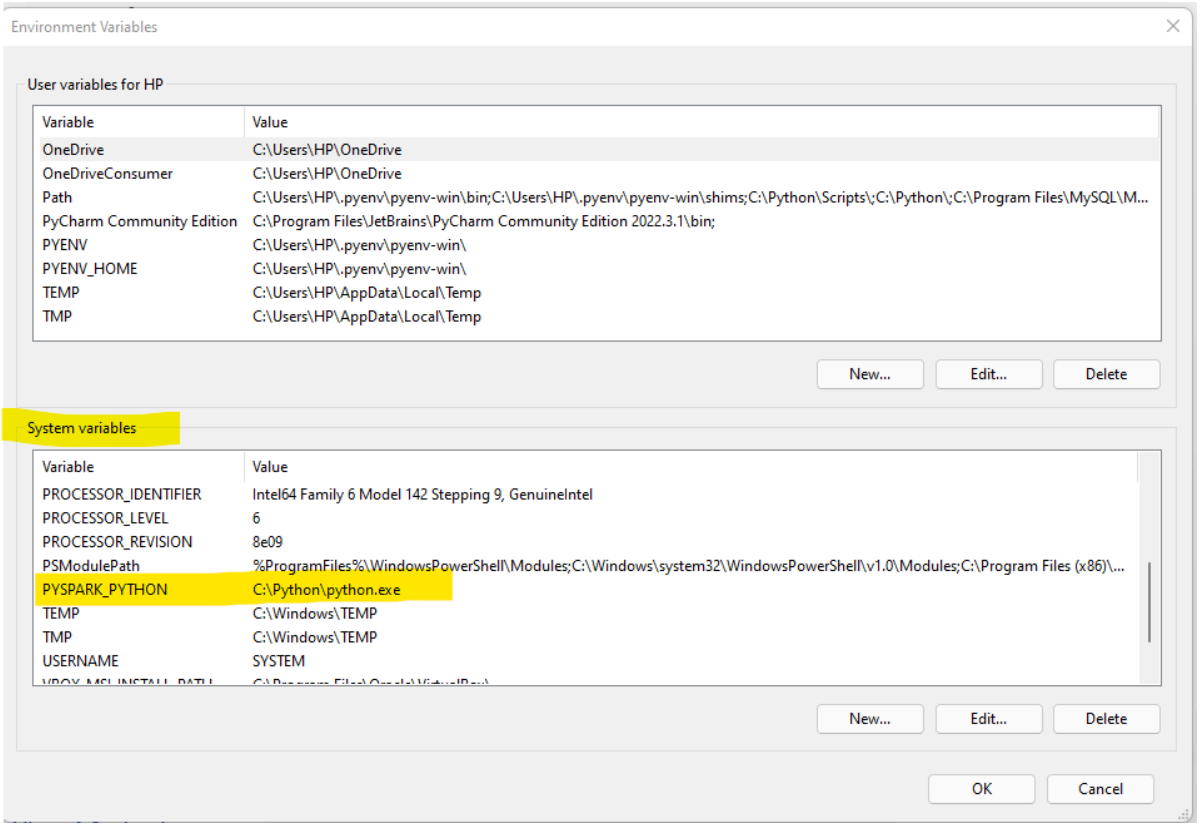


2. Click on “new” and add the “%SPARK_HOME%\bin” path as shown in the screenshot below.


Edit environment variable
C:\Program Files (x86)\Common Files\Oracle\Java\javapath
%SystemRoot%\system32
%SystemRoot%
%SystemRoot%\System32\Wbem
%SYSTEMROOT%\System32\WindowsPowerShell\v1.0\
%SYSTEMROOT%\System32\OpenSSH\
%JAVA_HOME%\bin
C:\Program Files\MySQL\MySQL Server 8.0\bin
C:\Python\Scripts
C:\Python\
C:\Python\python.exe
C:\Hadoop\bin
C:\Program Files\Git\cmd
C:\Program Files (x86)\Microsoft SQL Server\160\Tools\Binn\
C:\Program Files\Microsoft SQL Server\160\Tools\Binn\
C:\Program Files\Microsoft SQL Server\Client SDK\ODBC\170\Tools\Bi...
C:\Program Files\Microsoft SQL Server\160\DTS\Binn\
C:\Program Files (x86)\Vim\vim90
%SPARK_HOME%\bin
New
Edit
Browse...
Delete
Move Up
Move Down
Edit text...
OK
Cancel

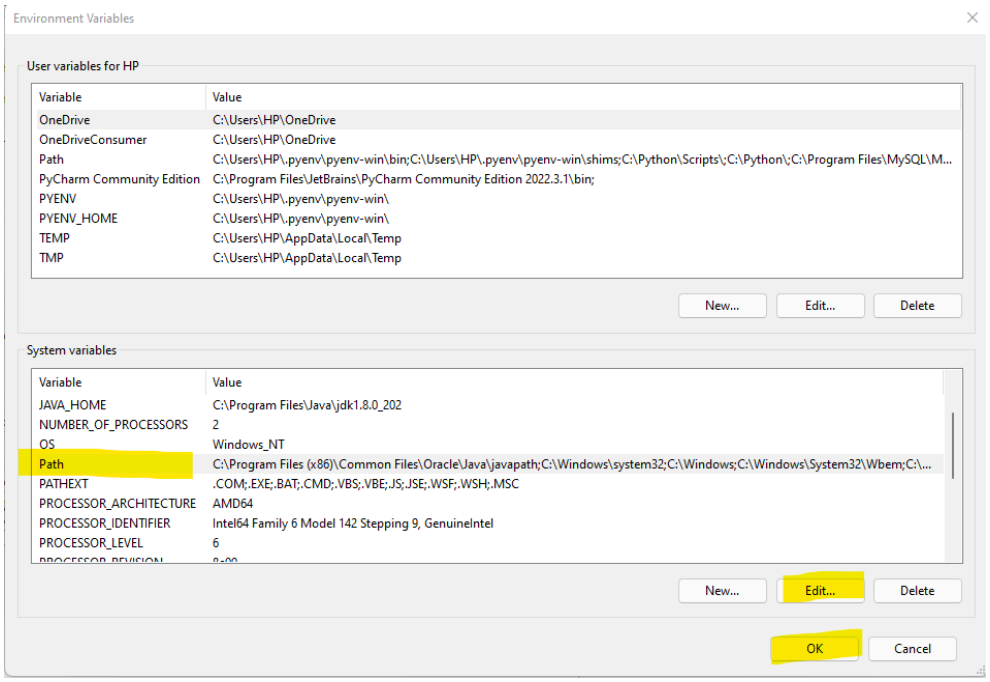
Now to set the path PYSPARK_PYTON follows the process below(Steps will be the same as we did for SPARK_HOME.)

First go to the environment variable, now in System variable click on “new” and add the variable PYSPARK PYTHON and mention the path of the python.exe file which is which c drive which we installed before refer below screenshot.

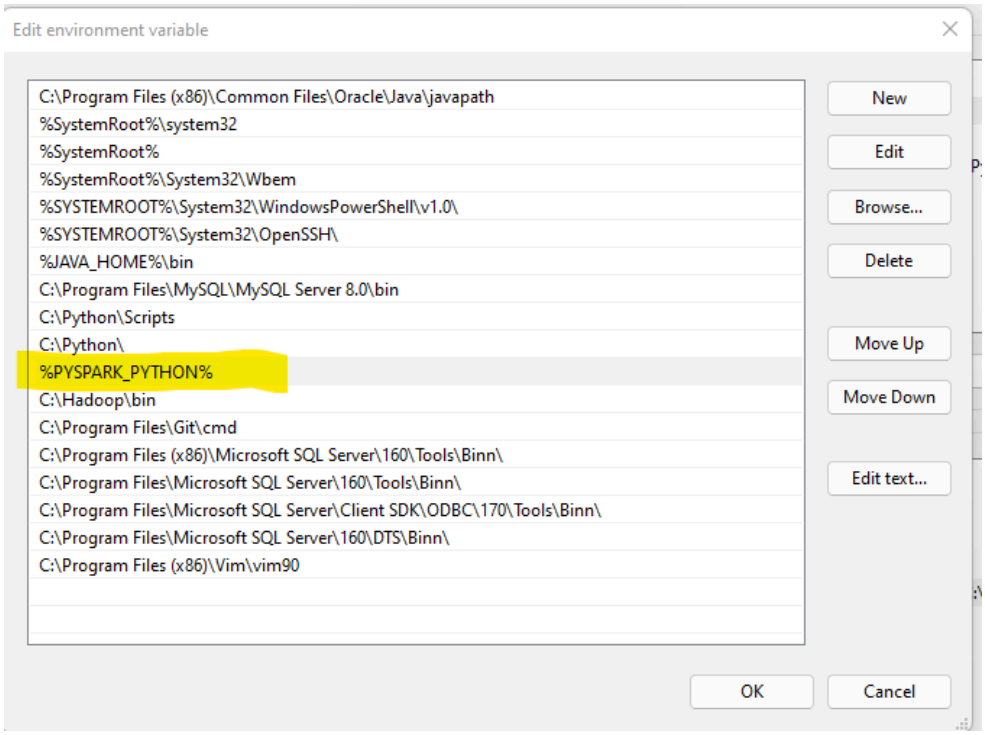


Also now add the path of this variable in the list of paths. To do so follow below steps:

1.In “system variable” click on “path” option then click on “edit”.



2.Click on “new” and add the “%PYSPARK_PYTHON%” path as shown in the screenshot below.



Installing vim in Windows:

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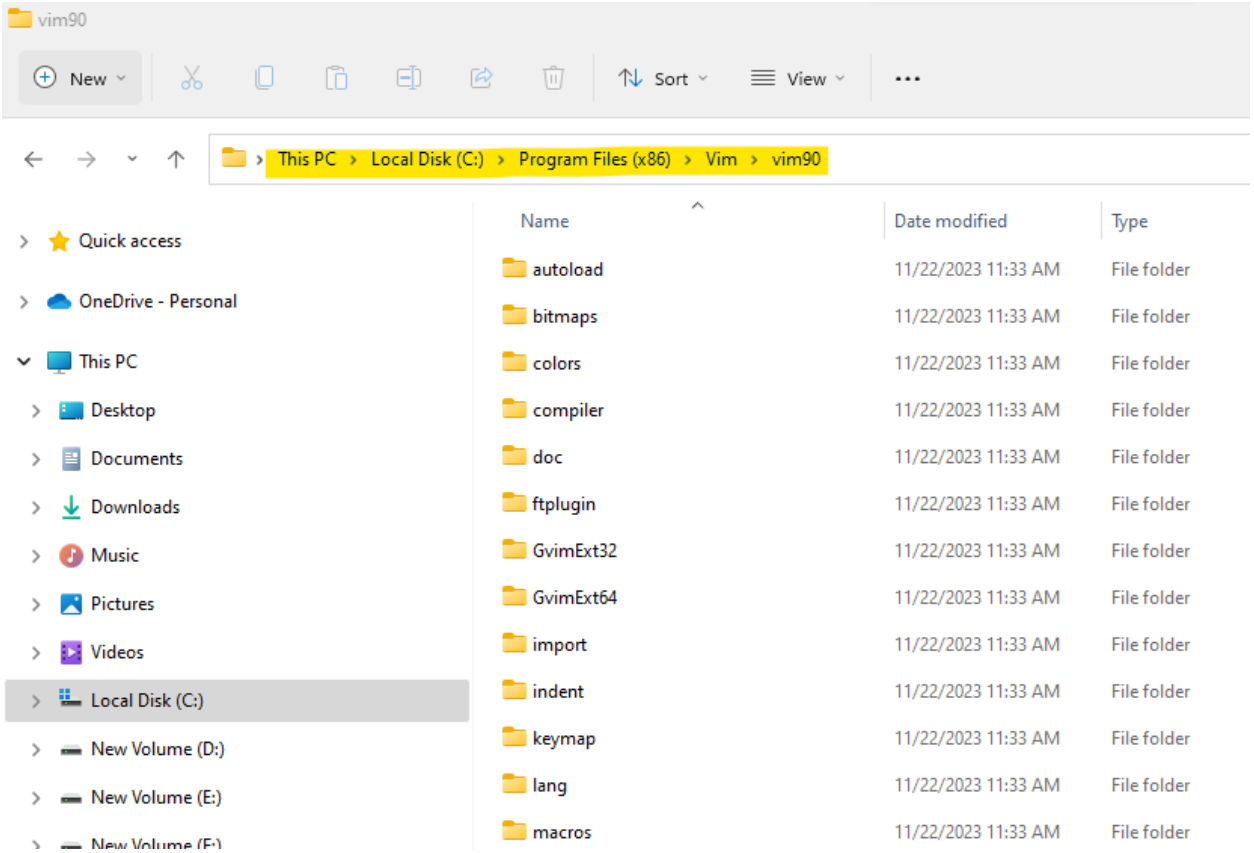
Refer this video to install vim in your system.

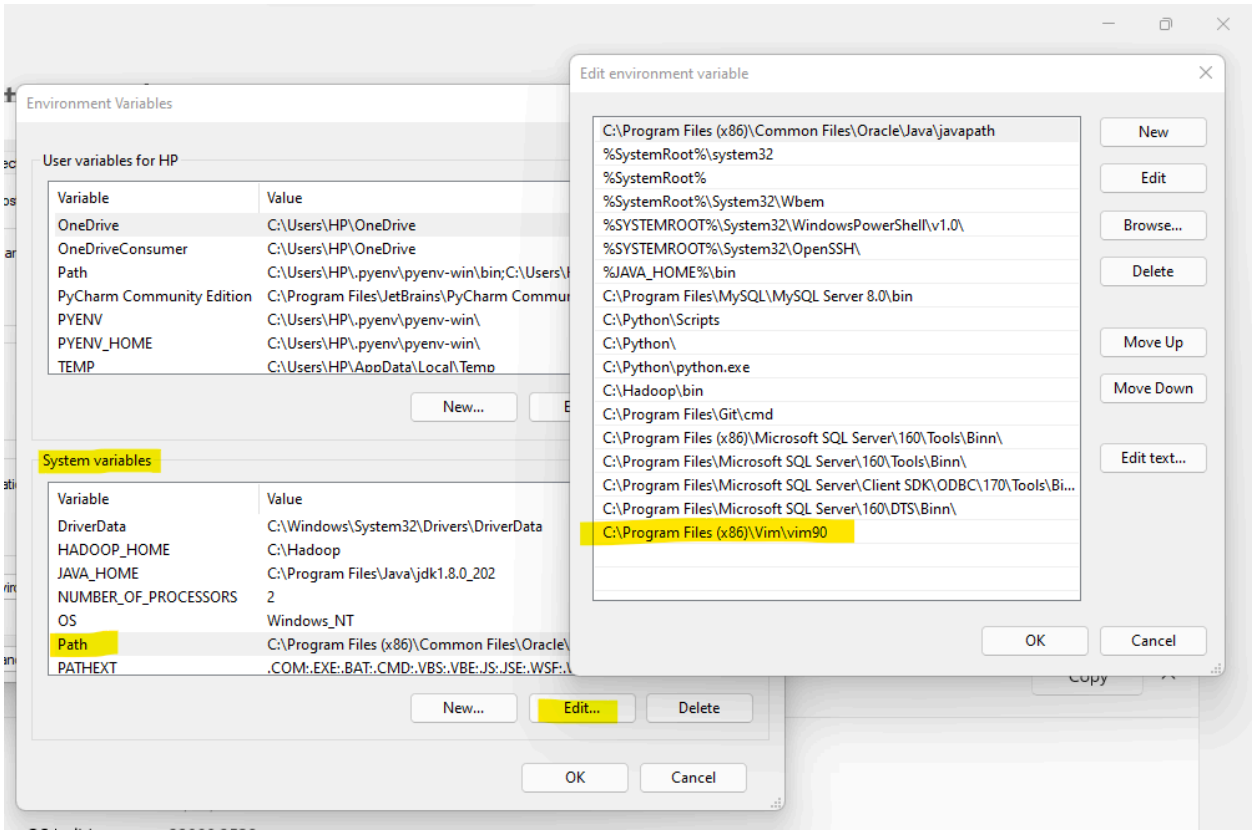
https://www.youtube.com/watch?v=oMGN27kO0wU

Now, check the path of the vim90 folder in your system and copy that path as shown in the screenshot below.

In this screenshot path is “C:\Program Files (x86)\Vim\vim90”



Also please add this path in system variable, refer below screenshot



Installing vim in vs code:

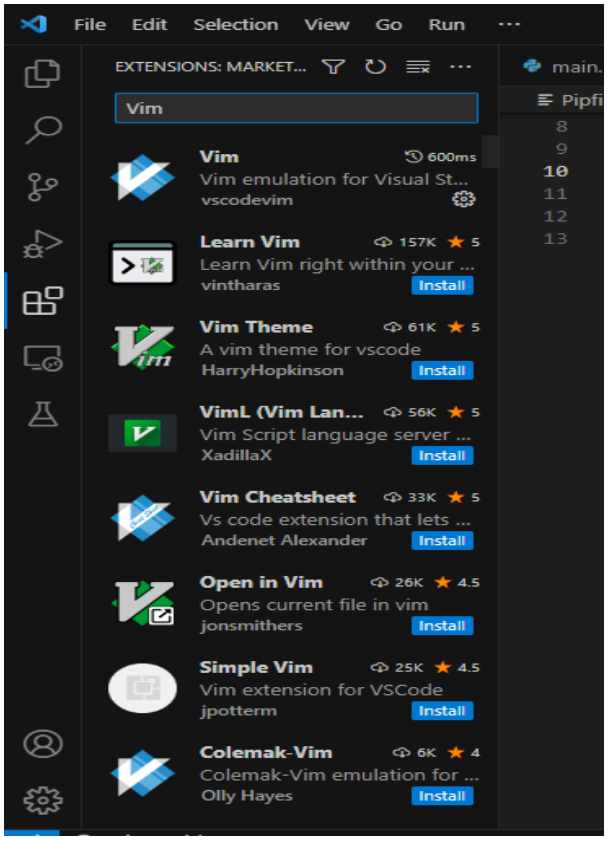
==========

Installing vim in vs code.

To do that please follow below step:

Go to setting => Extension => search for vim and install it.

Refer from below image.



Now use the command -
vim filename (instead of vi filename).

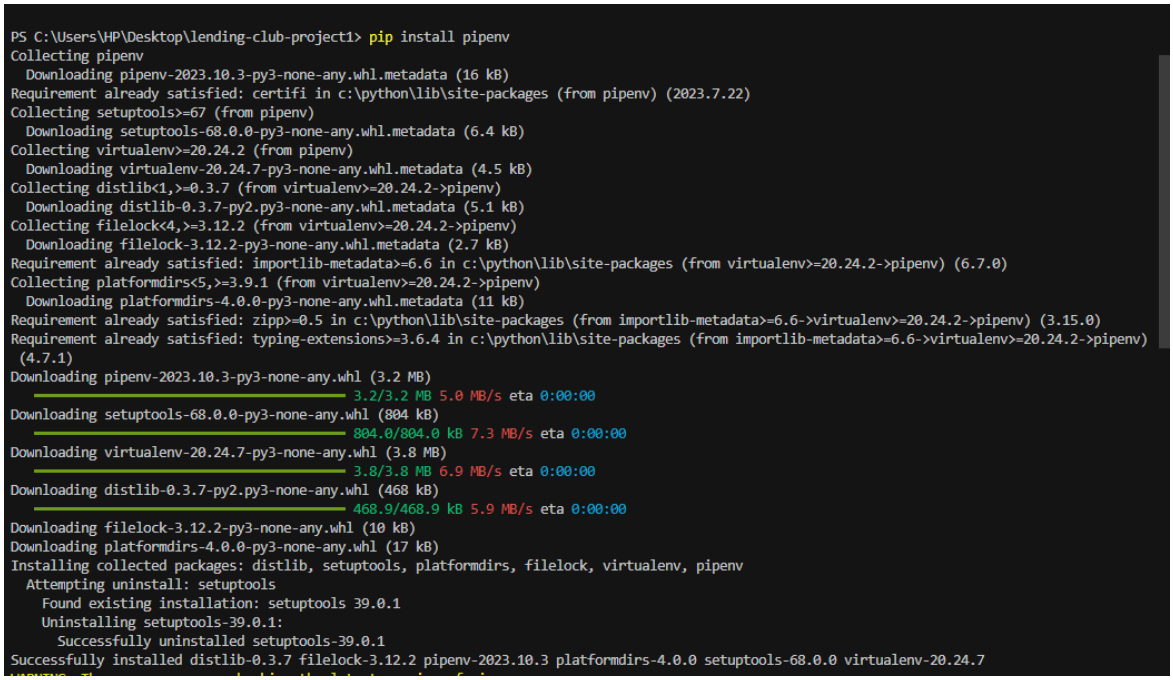
For creating virtual Environment for the project:

==========

First go to the particular project using cd command using your ide (Ex: VS Code)

To install pipenv use below command

pip install pipenv



To activate environment use the command:

pipenv shell

To exit the virtual environment:
exit

To remove virtual environment:
pipenv –rm

Without activating environment how to run the python

pipenv run python

To exit => exit()

To install pytest in dev run the command:
pipenv install pytest –dev

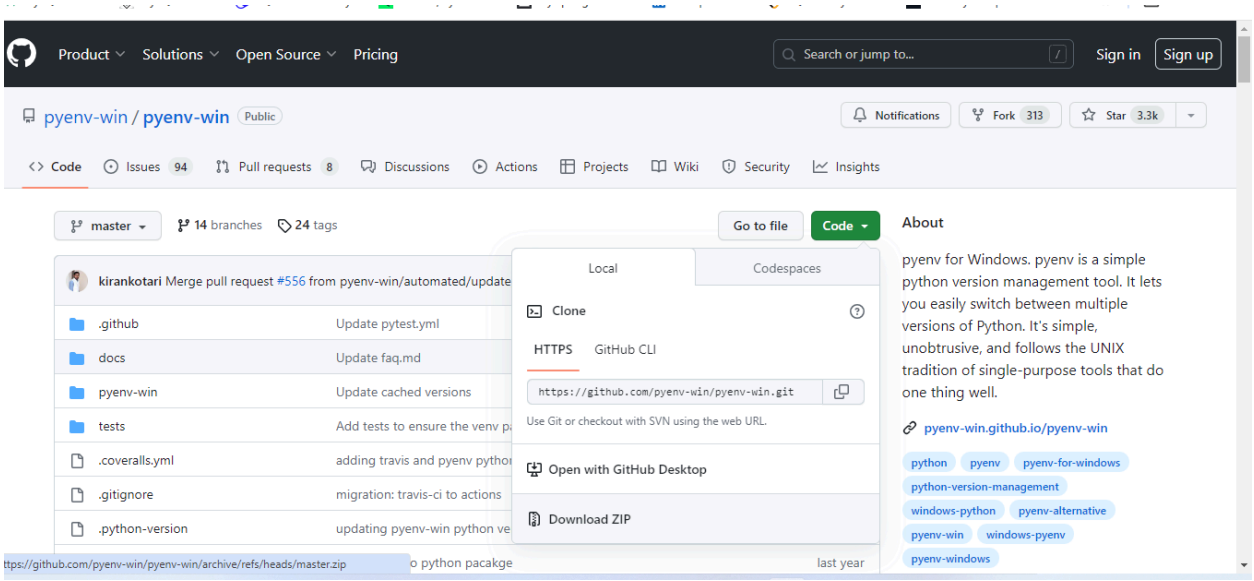
To uninstall pytest
pipenv uninstall pytest

Installing Pyenv in your system(Local):

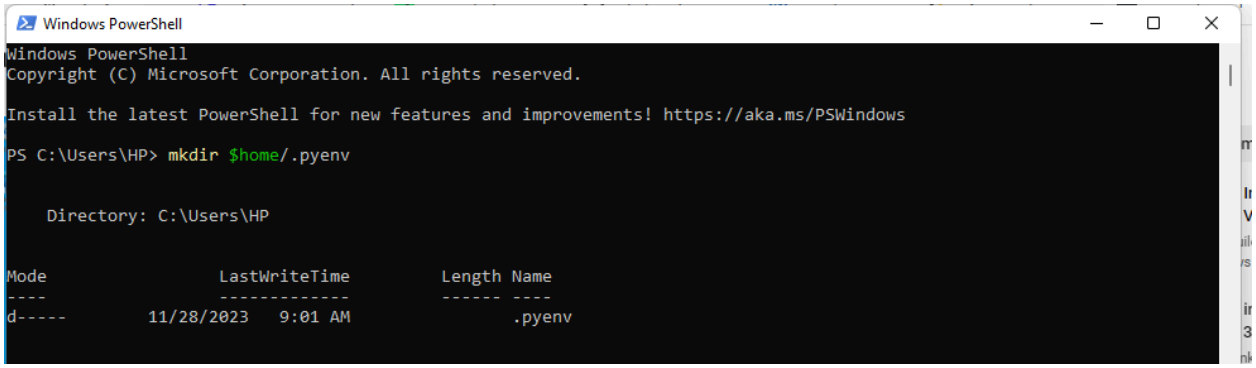
Please check the below link to download the pyenv

https://github.com/pyenv-win/pyenv-win

Now click on code and download the zip file

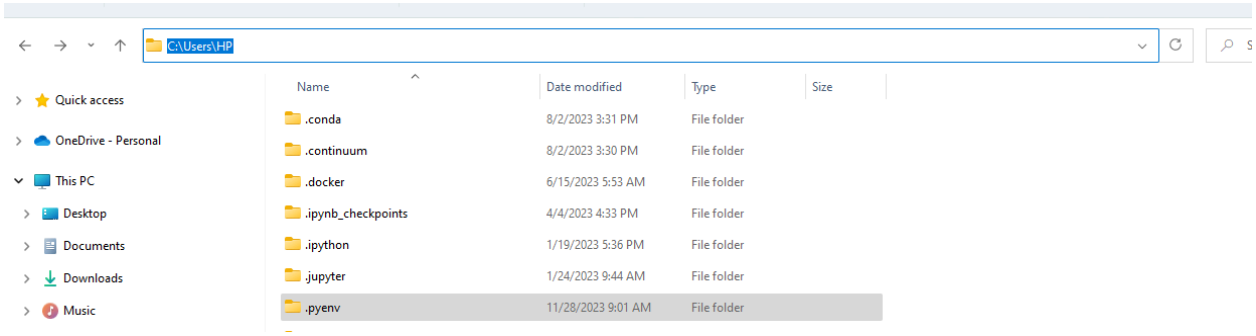


Go to powershell and run the following command to create pyenv directory in user directory
mkdir $home/.pyenv

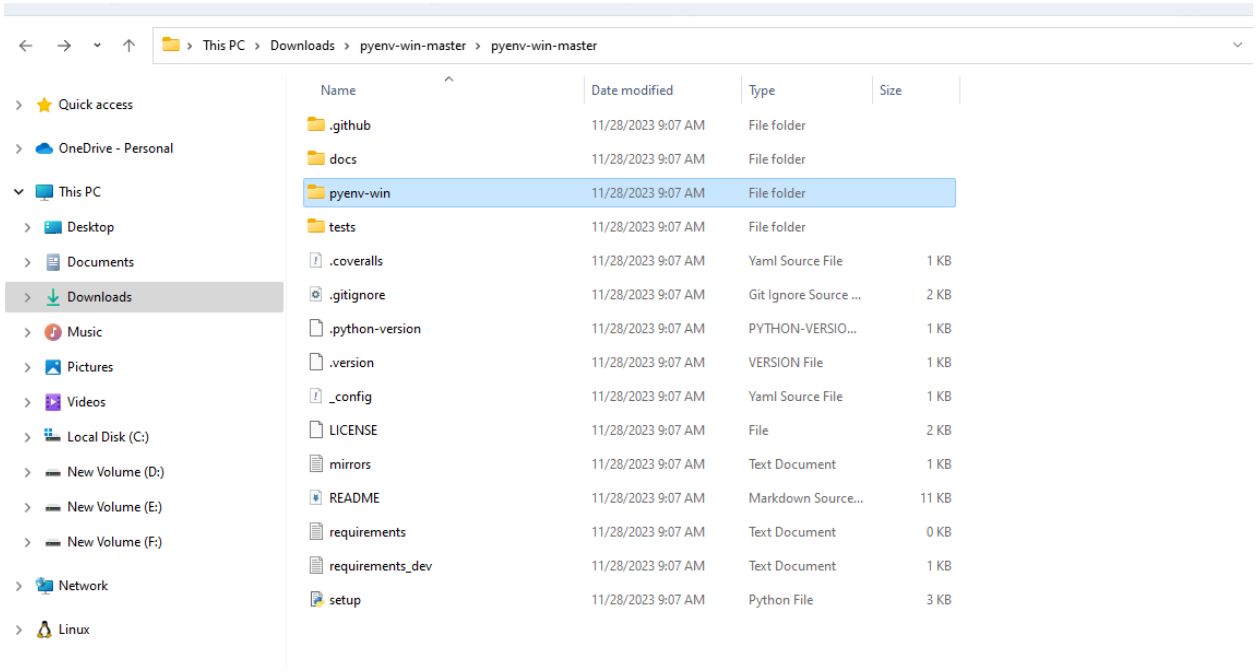


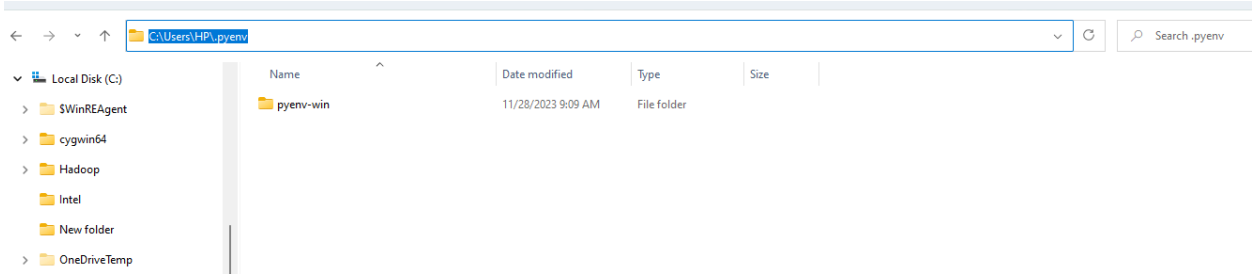
Now go to
C => user => <username> and you can see .pyenv folder created.

For below ss username is HP check for your system using above this



And copy files pyenv-win from the extracted files to .pyenv folder refer attached screenshots



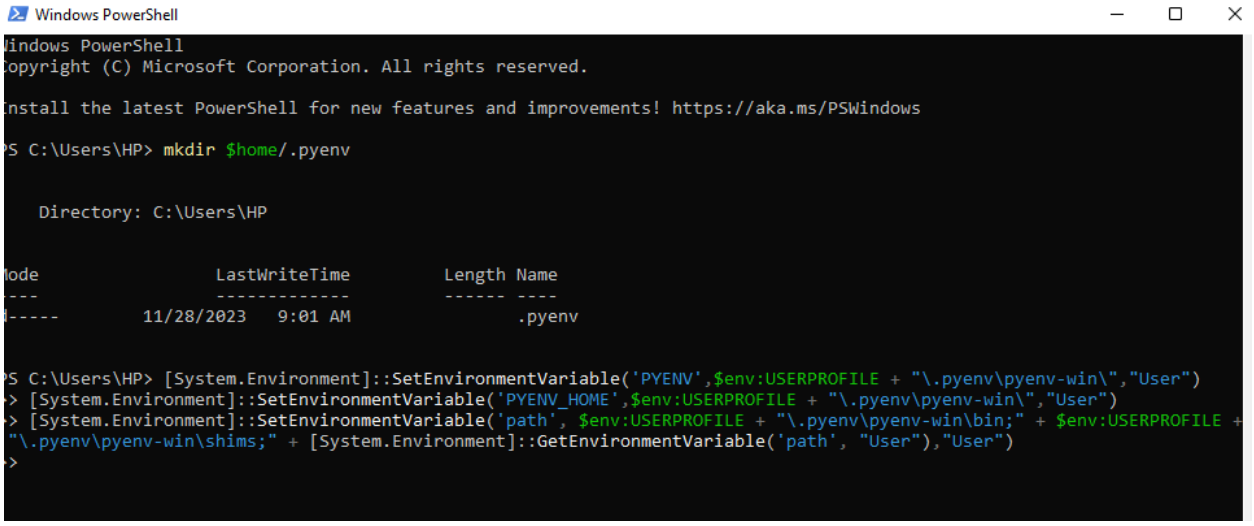


Set the environment variables PYENV and PYENV_HOME that point to the installation folder:
[System.Environment]::SetEnvironmentVariable('PYENV',$env:USERPROFILE + "\.pyenv\pyenv-win\","User")
[System.Environment]::SetEnvironmentVariable('PYENV_HOME',$env:USERPROFILE + "\.pyenv\pyenv-win\","User")

Add the bin folder to the PATH variable. Such that pyenv can be found when using the command line.

[System.Environment]::SetEnvironmentVariable('path', $env:USERPROFILE + "\.pyenv\pyenv-win\bin;" + $env:USERPROFILE + "\.pyenv\pyenv-win\shims;" + [System.Environment]::GetEnvironmentVariable('path', "User"),"User")

Refer the screenshot



Close the currently open powershell and If you haven't enabled script execution yet, start a new PowerShell with admin privileges by right-clicking on the PowerShell icon in the start menu and choose Run as administrator. Otherwise, skip this step.

Enter the following command into the PowerShell to enable the execution of scripts:

Set-Execution-Policy unrestricted

pyenv install --list

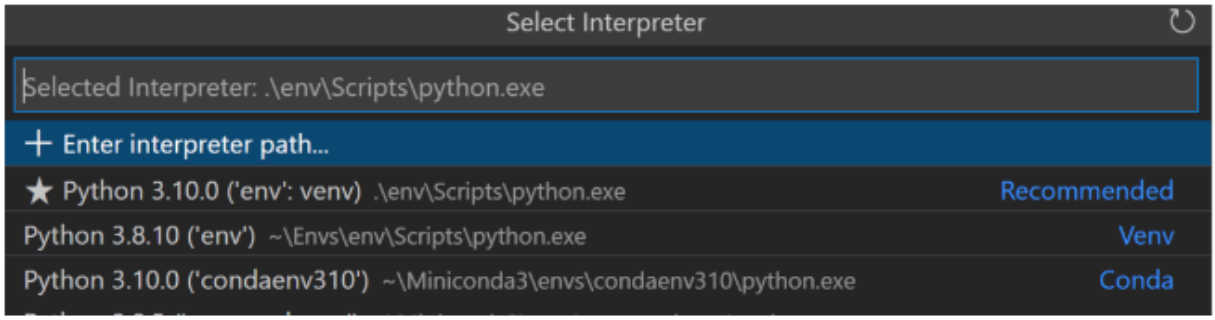
pyenv install 3.8.12

Steps to set path of virtual environment in VS code:

To set the virtual interpreter:

Follow below steps:

Click on "View" > select "Command Palette" > Type "Select Interpreter"

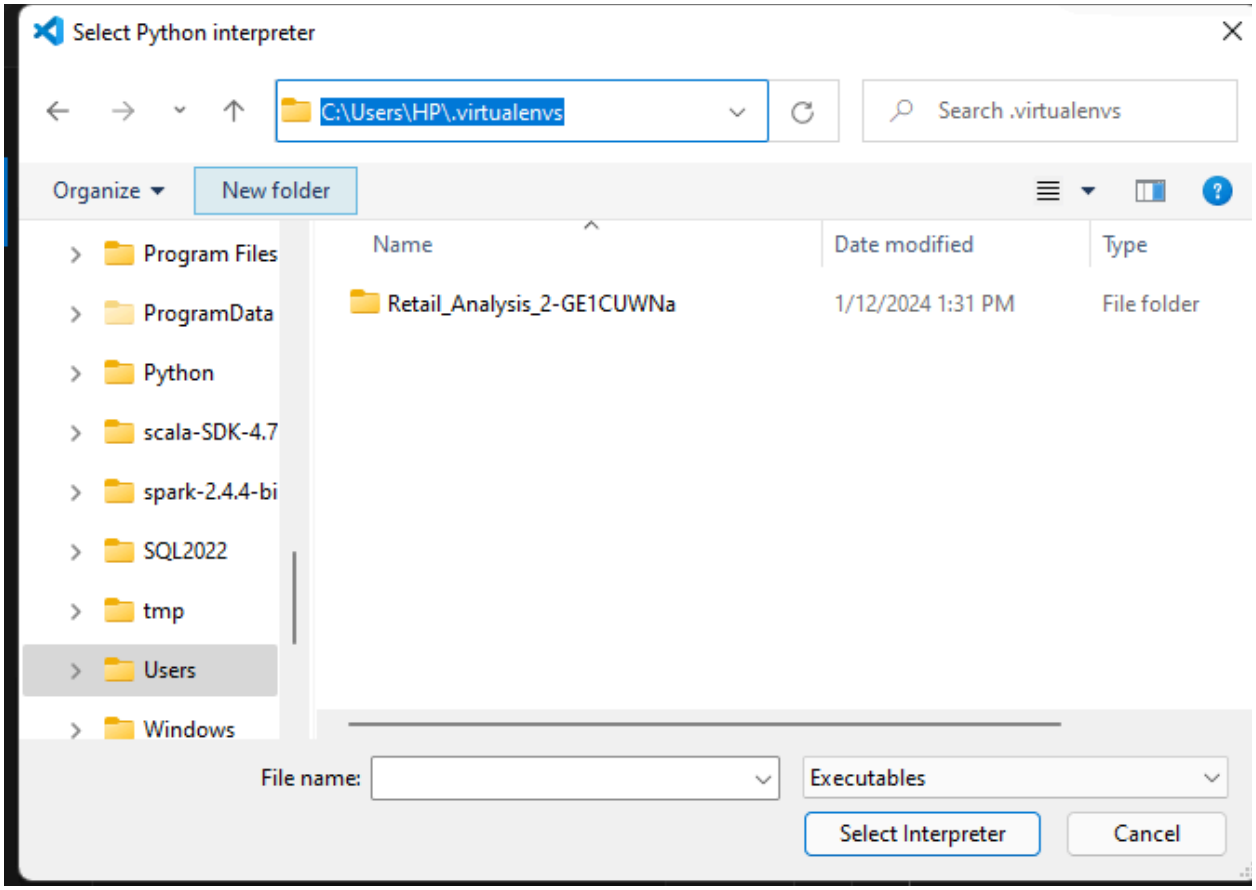


In the list of available interpreters, you should see the Python interpreter from your virtual environment. Select the desired Python interpreter from the list

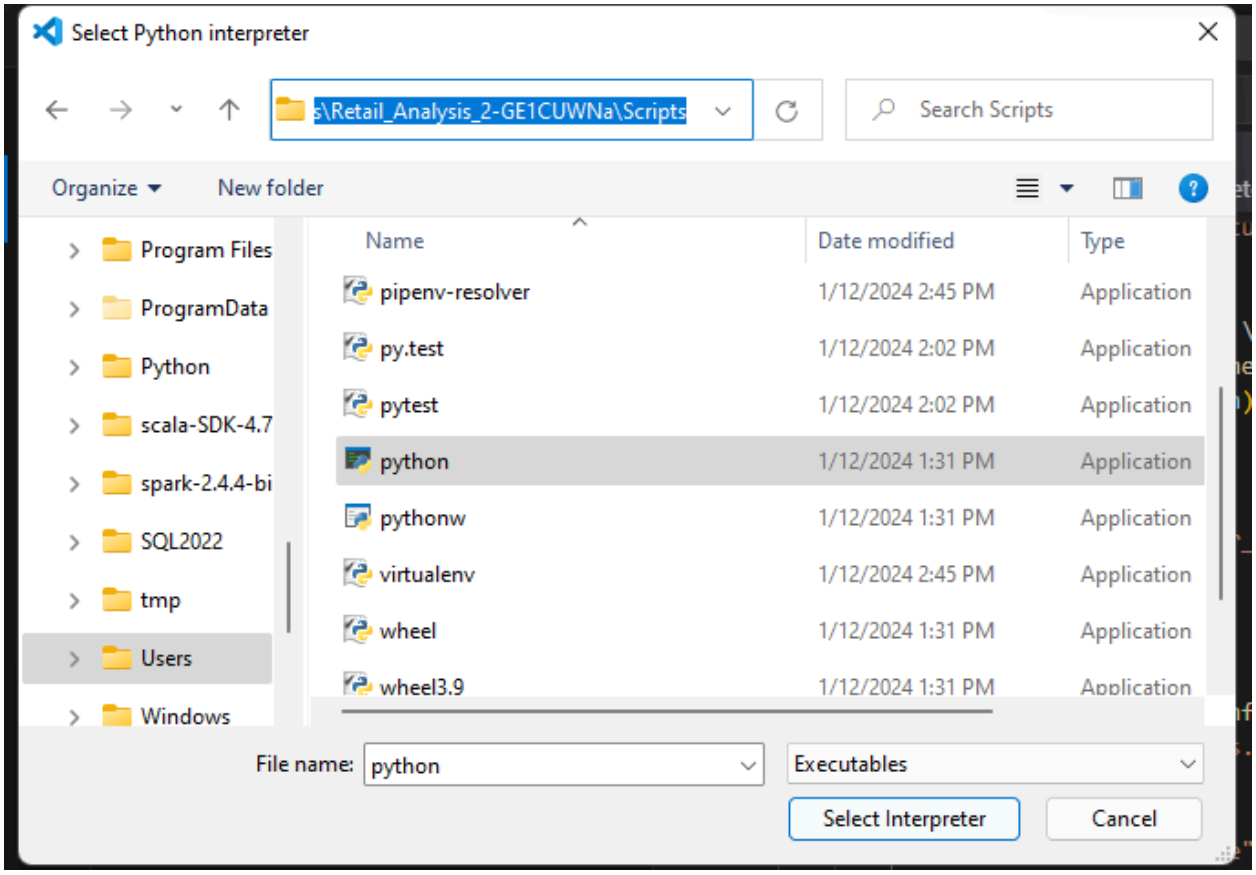
If it is not listed you can browse that path. follow below steps

Click on "Enter Interpreter path" => Find =>

Using browse option go to C drive => User => .virtualenvs => scripts => python.exe (select file)



And give the path of the python.exe file using the browse option from the project for which you have created a virtual environment.



Refer this document

https://code.visualstudio.com/docs/python/environments