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1 Installing Python 3.6

The Python download requires about 30 Mb of disk space; save it into machine in case re-install of Python is required. When installed, Python requires about an additional 90 Mb of disk space and memory size may increase when additional libraries are installed according to the requirement.

1.1 Python 3.6 in Windows OS

1.1.1 Downloading

- a) Click [Python website](#), to browse python website
- b) The following browser shown in Figure 1 will appear in the browser. Click on **“Windows”** to find python for windows operating system

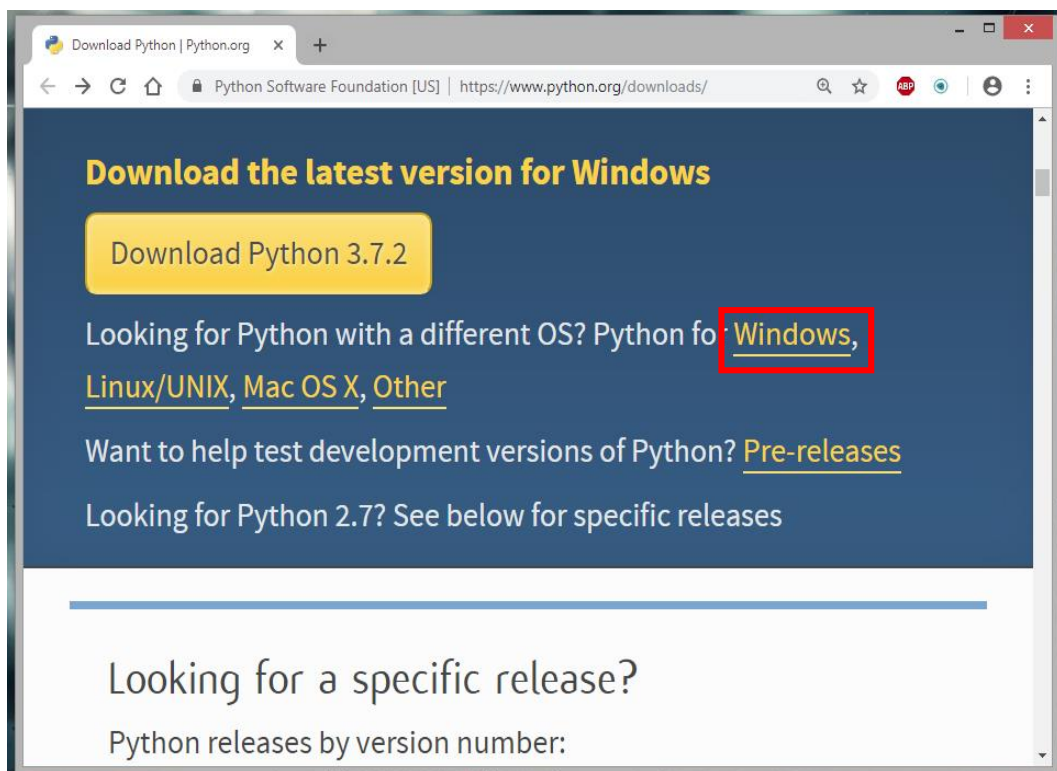


Figure 1

- c) Click on “**x86 executable installer**” to download installation file for 32 – bit windows operating system or click on “**x86-64 executable installer**” to download installation file for 64 – bit windows operating system as shown in Figure 2.

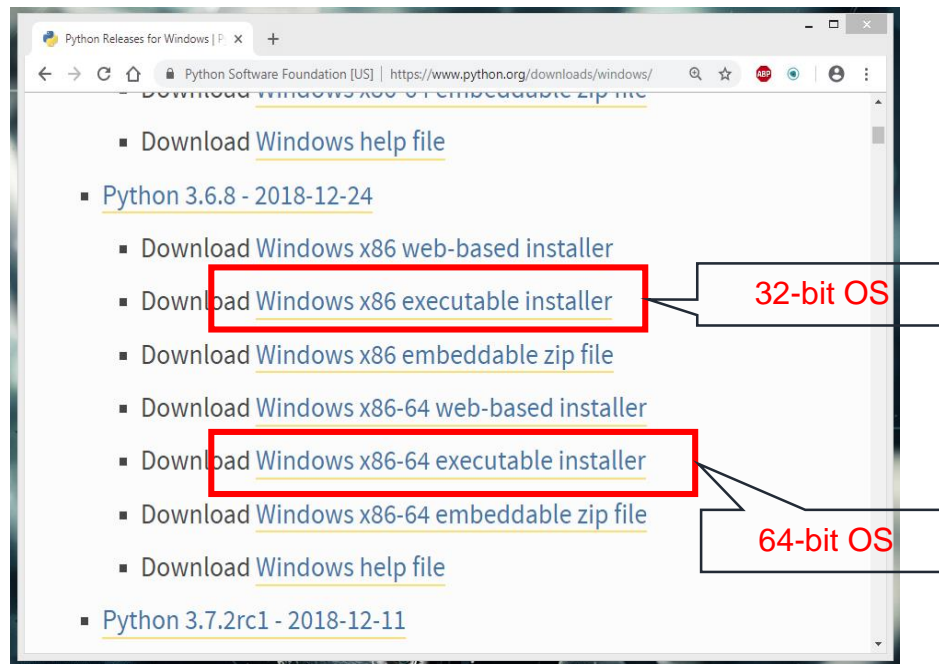


Figure 2

- d) After downloading, an executable setup file is ready as shown in the Figure 3

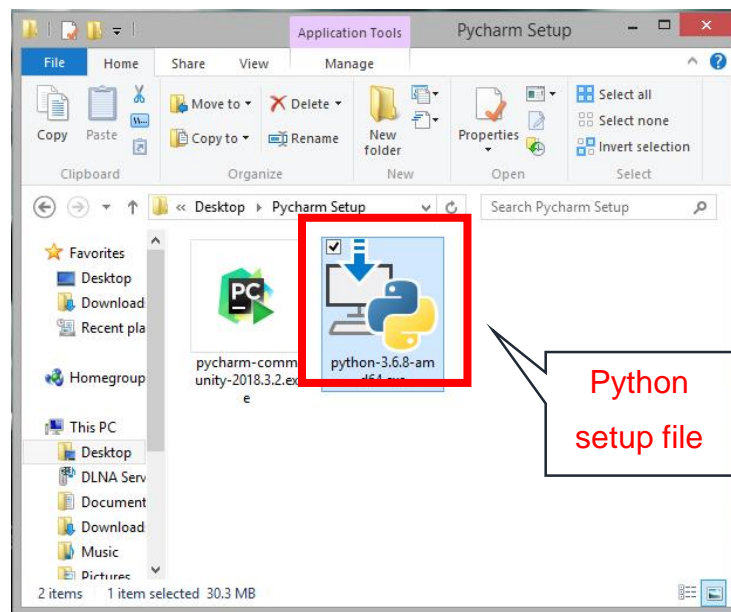


Figure 3

1.1.2 Installing

- a) Double click the “**setup file**” previously downloaded as shown in Figure 3
- b) A Python setup pop-up window will appear as shown in Figure 4.

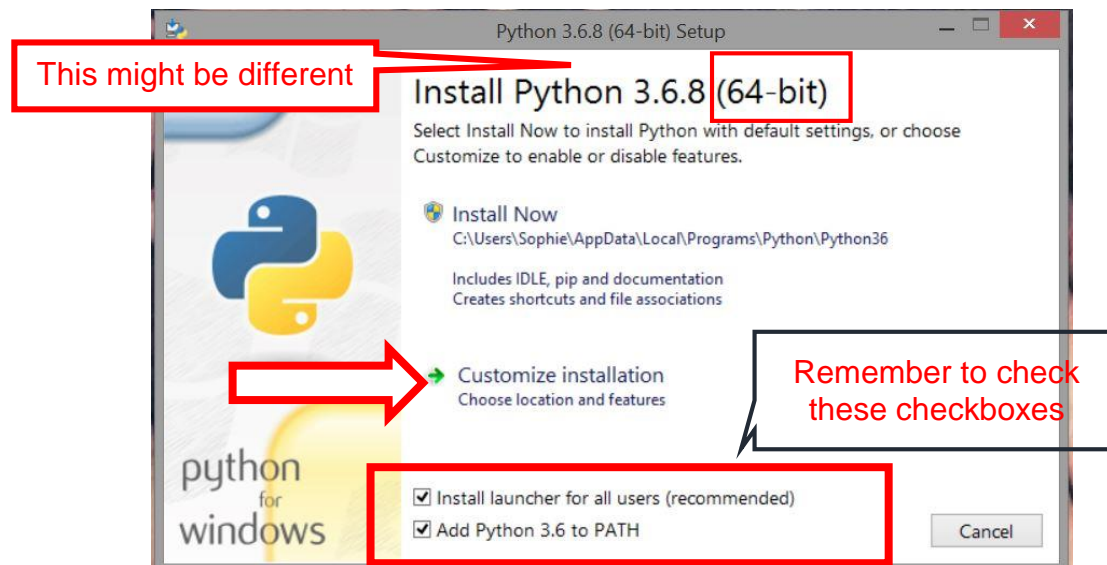


Figure 4

Ensure that the “**Install launcher for all users (recommended)**” and the “**Add Python 3.6 to PATH (recommended)**” checkboxes at the bottom are checked.

- c) Click on “**Customize Installation**” A new pop-up window called “**Optional Features**” will appear and which allows to choose the various components. Check on all checkboxes and Click “**Next**”.

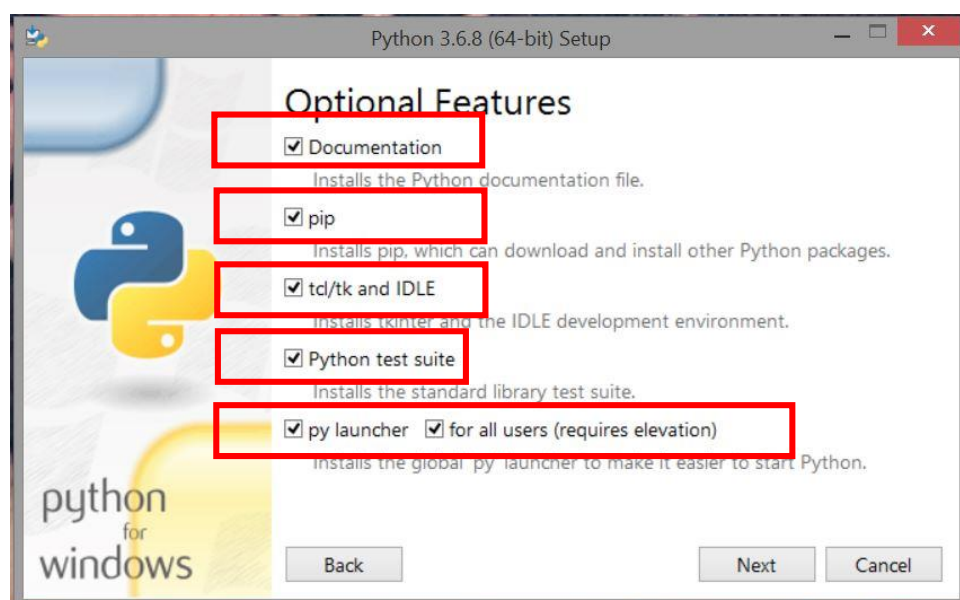
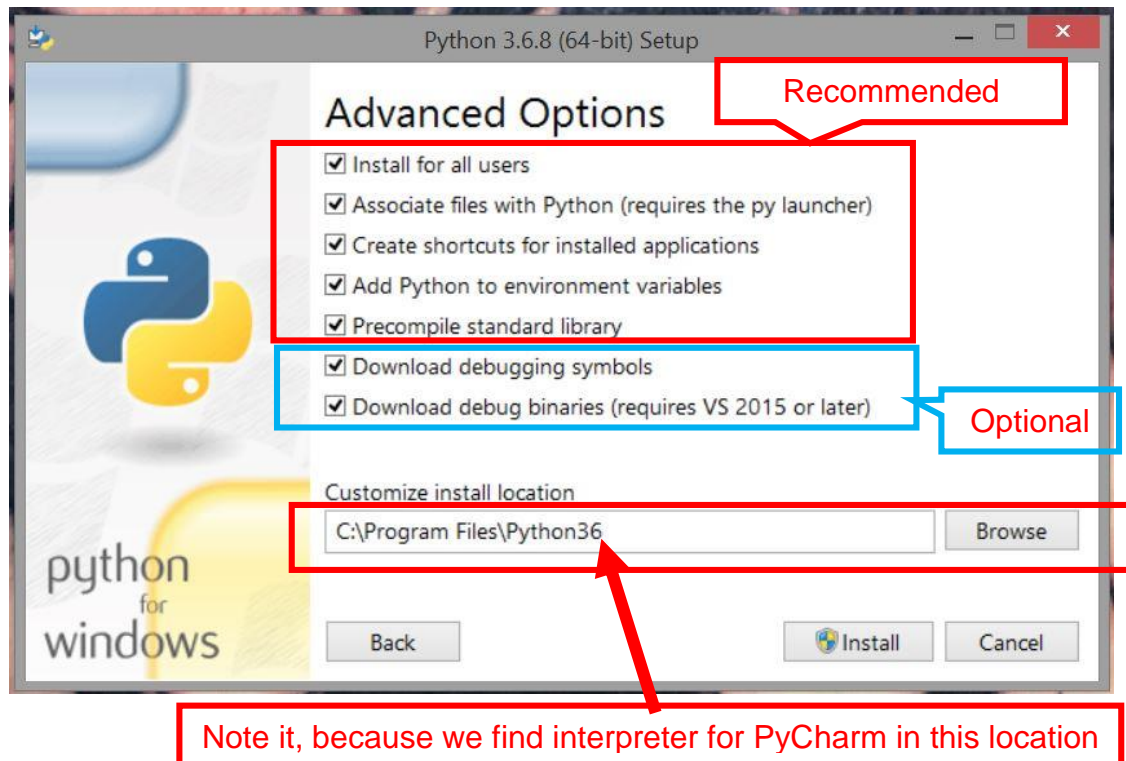


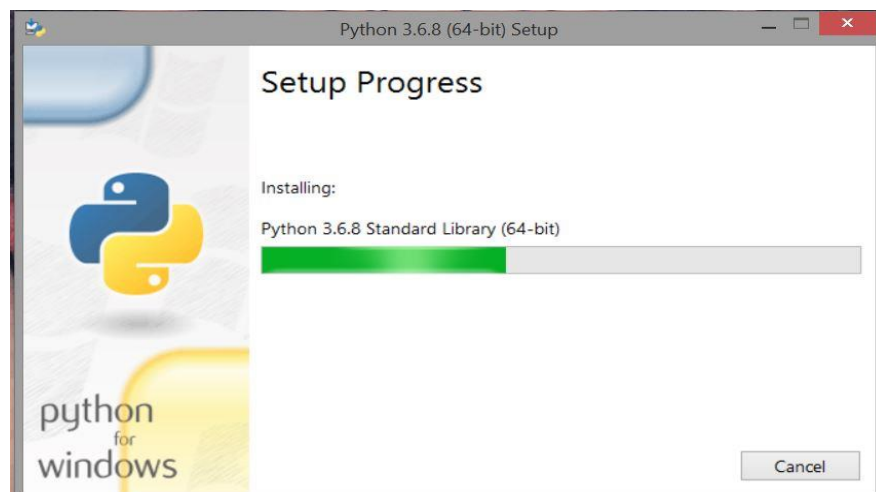
Figure 5

d) Now a new window will pop up called “**Advance Options**”. Select at least “**First five**” checkboxes in which “**Add Python to environment variable**” is the important one.

(You can also change the “**Customize install location**” to desired location in your computer. If not, you can leave as it is and note down the install location)



e) A new **Python Setup** pop-up window will appear with a **Setup Progress** message and a progress bar. During installation, it will show the various components it is installing and move the progress bar towards completion.



- f) A new **Python Setup** pop-up window will appear with a **Setup was successful** message as shown in Figure 6. Click **“Close”**.



Figure 6

- g) To **verify** if python is installed correctly search “**IDLE**” python shell program in the search and open the program as shown in Figure 7.

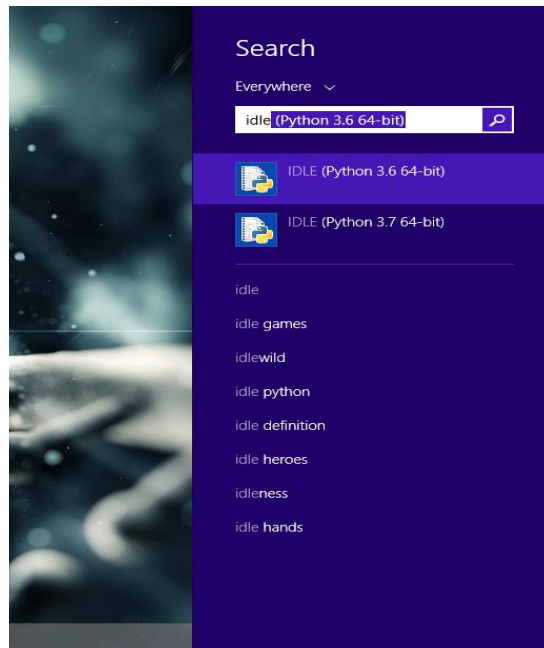
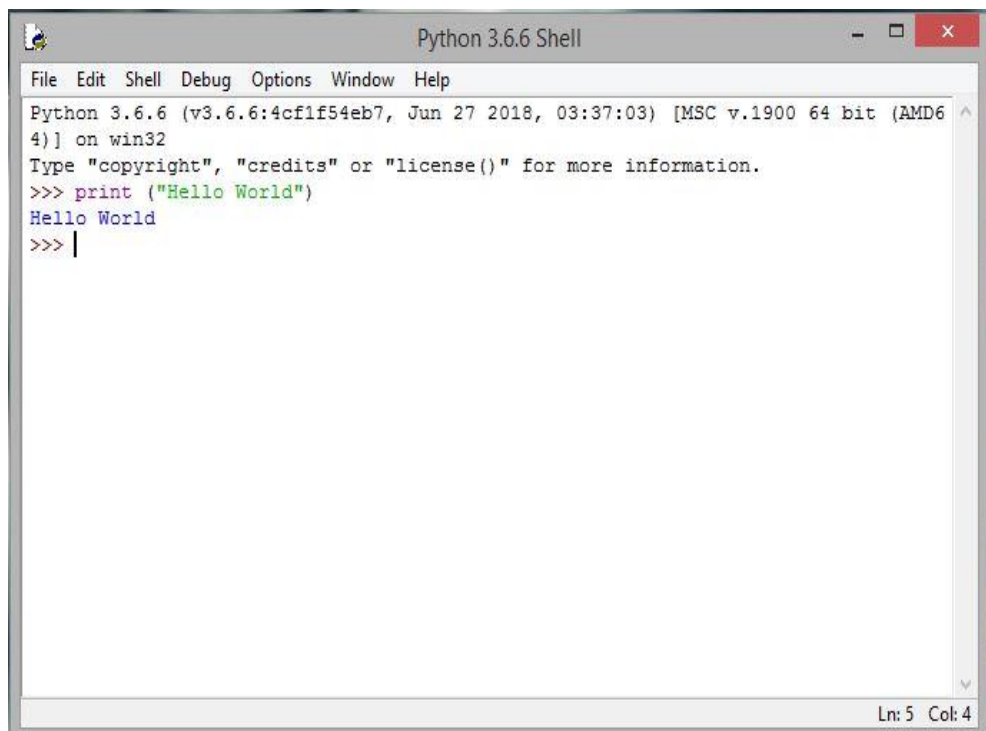


Figure 7

- h) After opening the python shell type following code “**print ('Hello World')**” and press “**Enter**”. If result below the code is “Hello World” then the python is working correctly.



1.2 Python 3.6 in MAC OS

1.2.1 Downloading

- Click [Python website](#), to browse python website
- The following browser shown in Figure 8 will appear in the browser. Click on **“Mac OS X”** to find python for Mac operating system

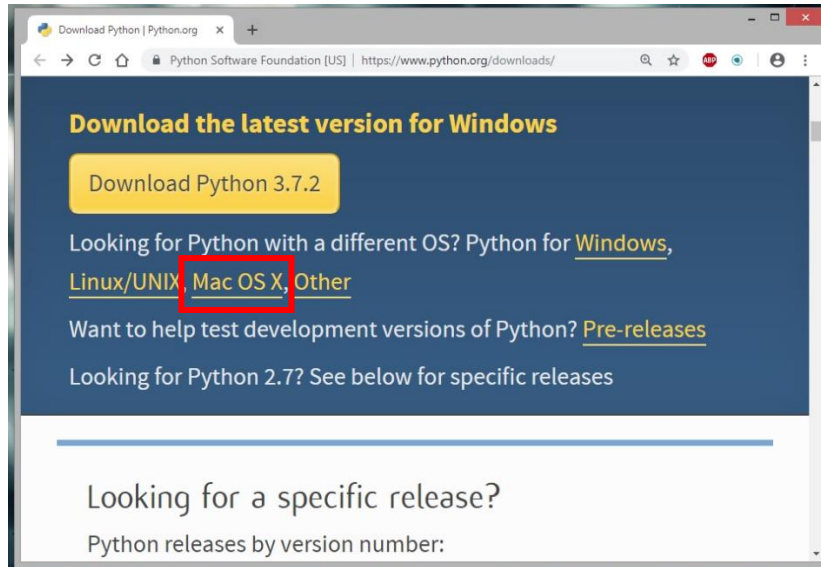


Figure 8

- Click on **“64-bit/32-bit installer”** to download installation file for 32 – bit Mac operating system or click on **“64-bit installer”** to download installation file for 64 – bit mac operating system as shown in Figure 9.

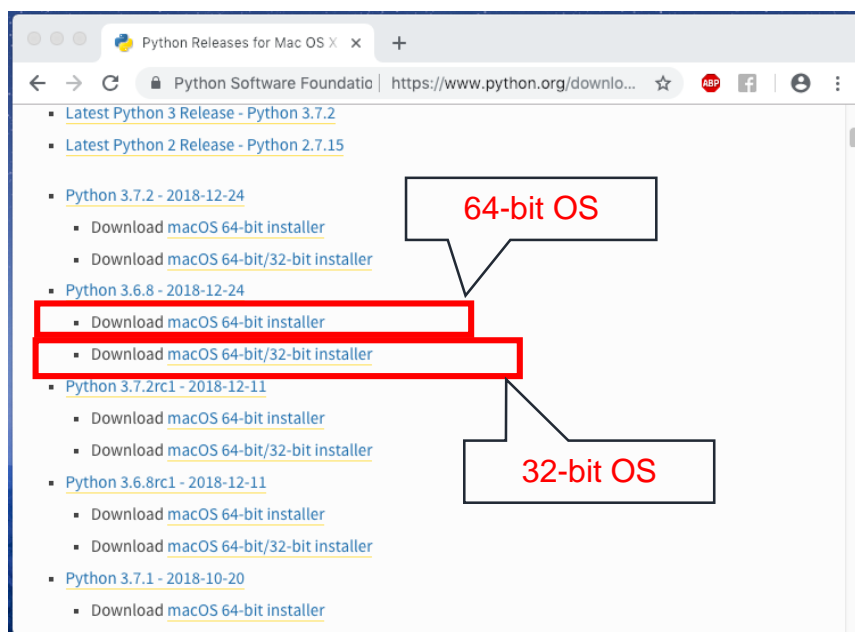


Figure 9

d) After downloading, an executable setup file is ready as shown in the Figure 10

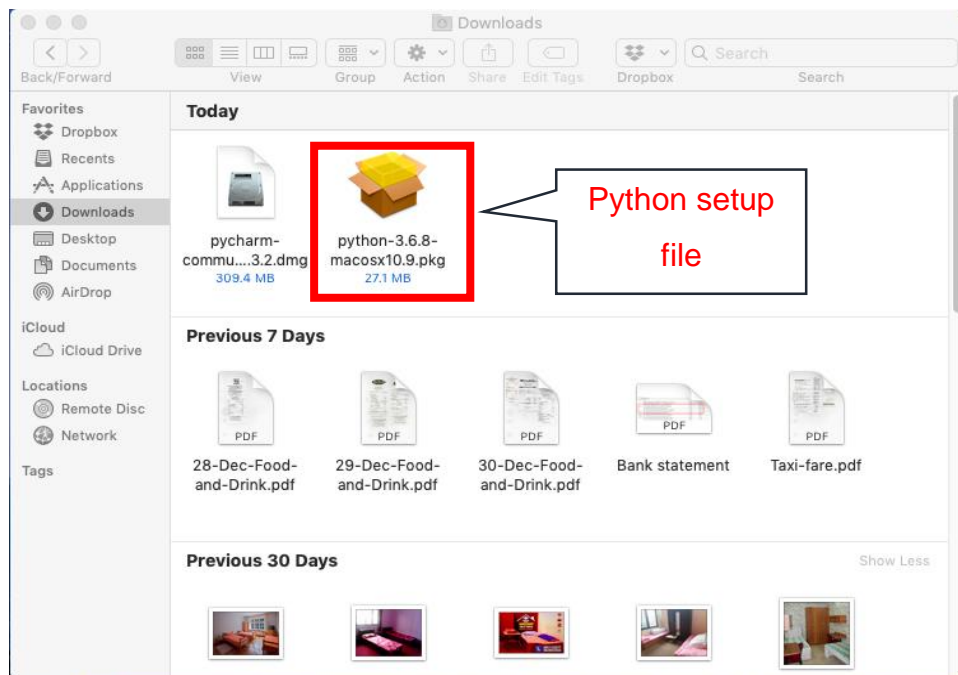


Figure 10

1.2.2 Installing

- a) Double click the “**setup file**” previously downloaded as shown in Figure 10
- b) A Python setup pop-up window will appear as shown in Figure 11. Click on “**Continue**”

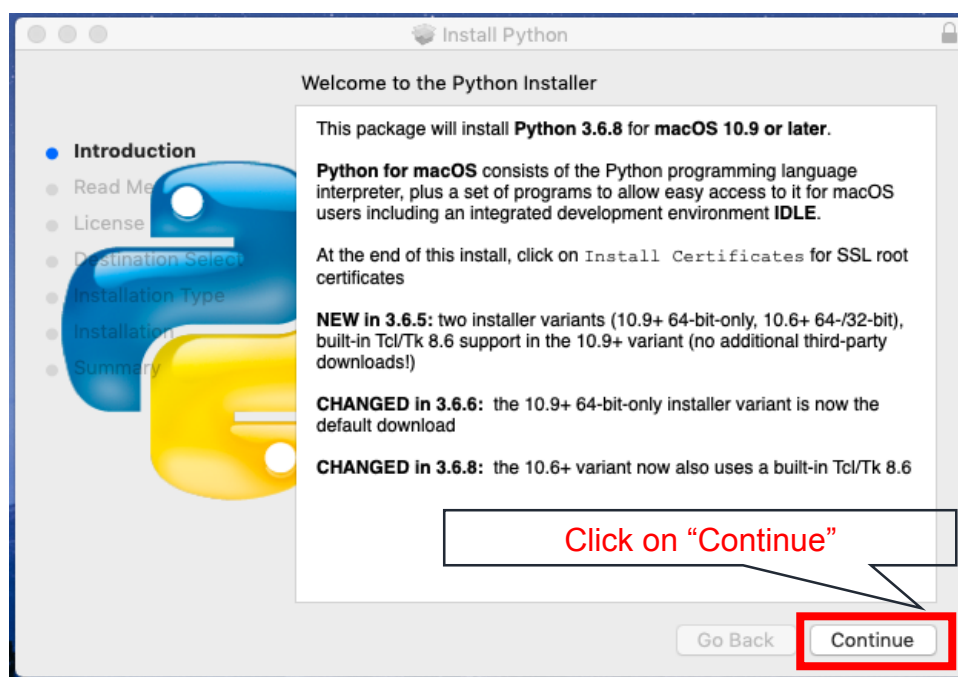


Figure 11

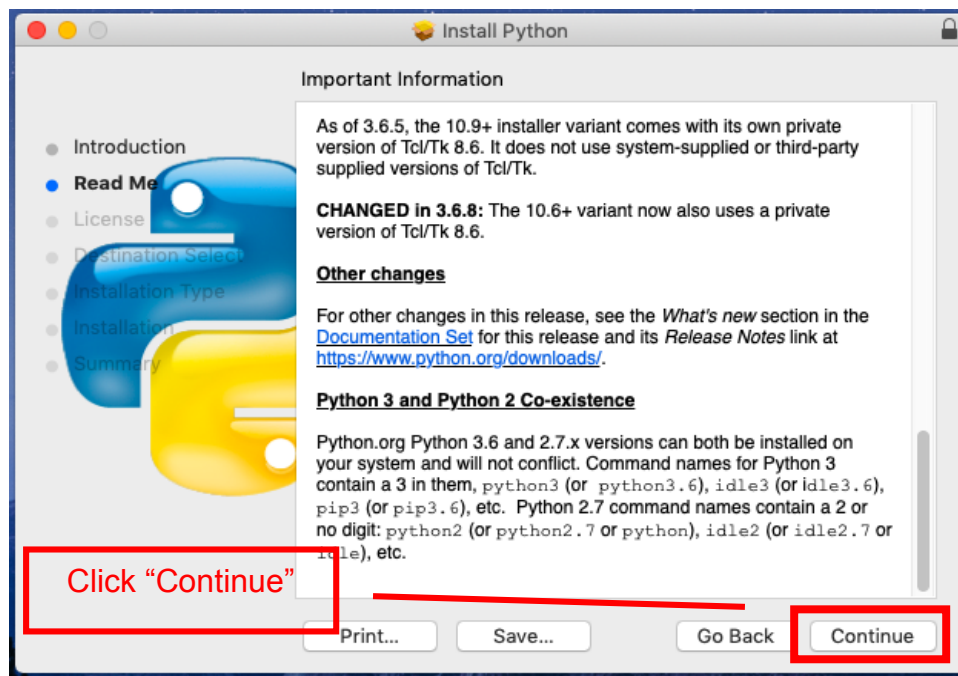


Figure 12

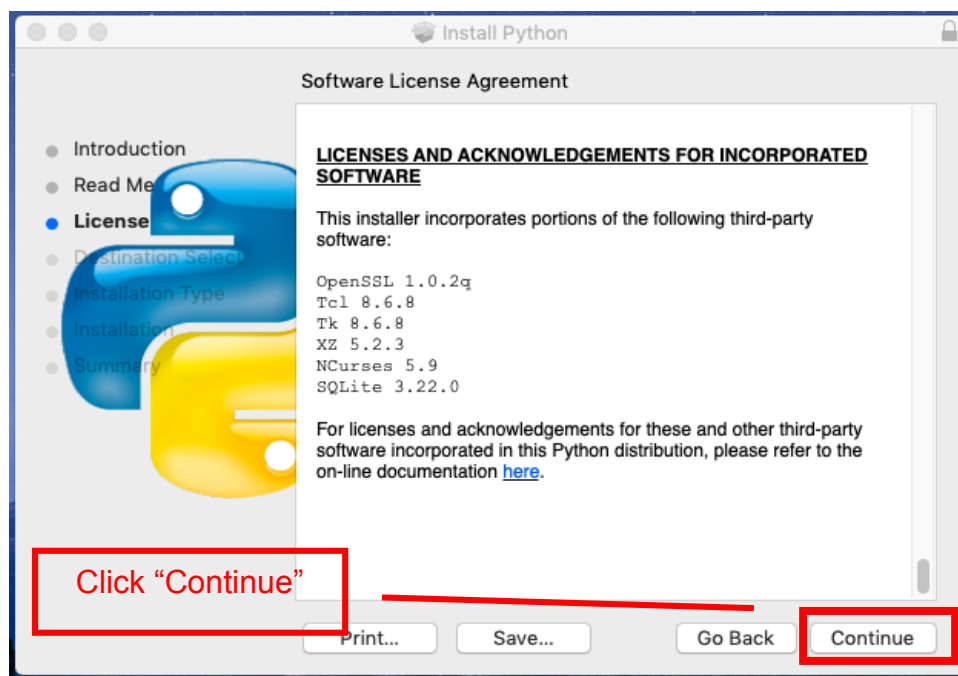


Figure 13

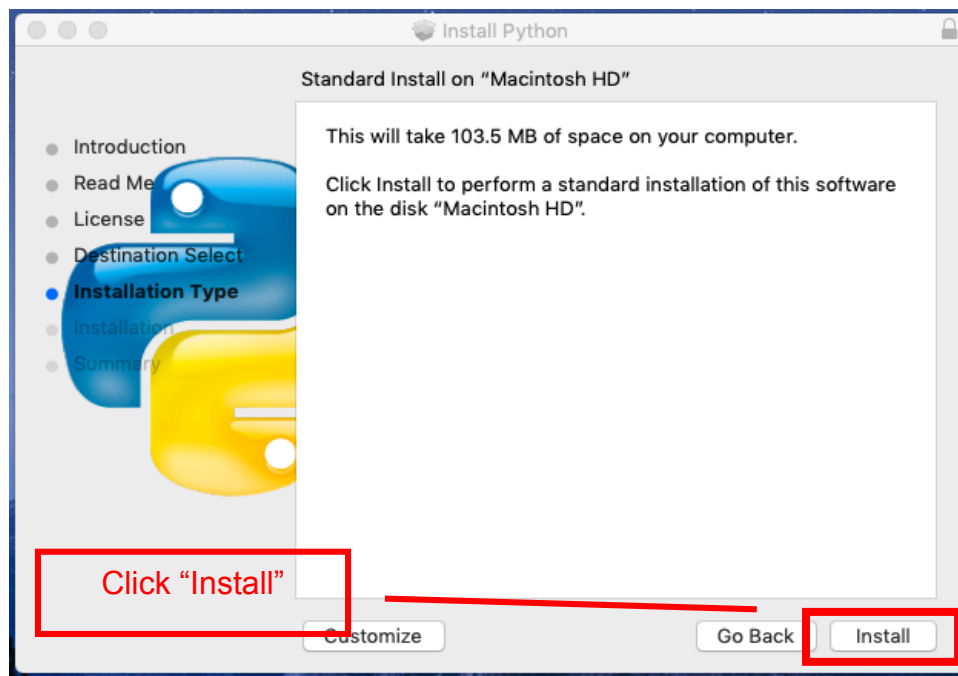


Figure 14

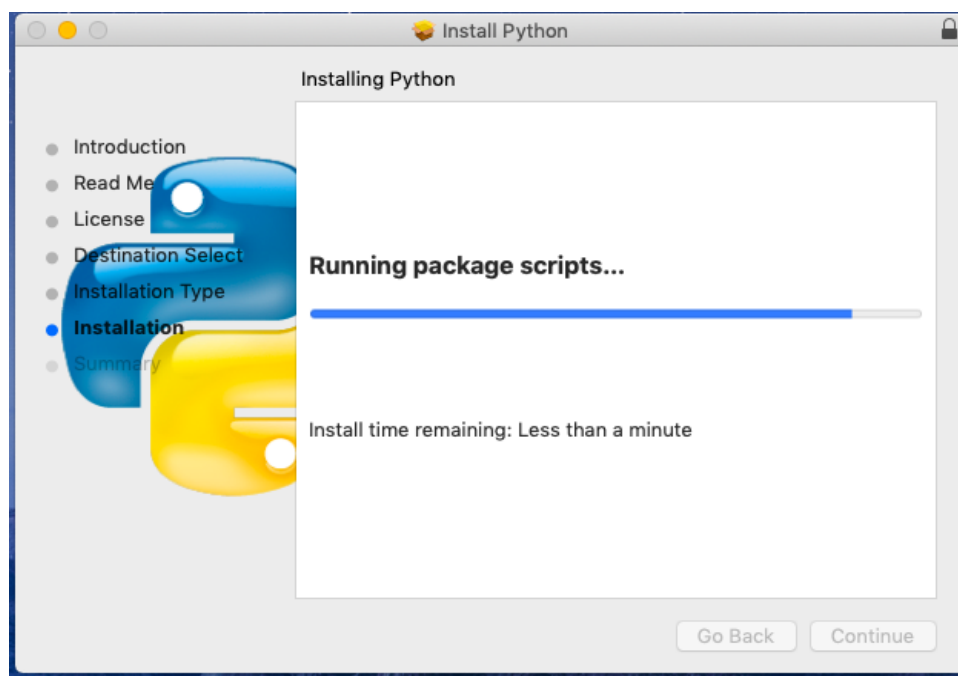


Figure 15

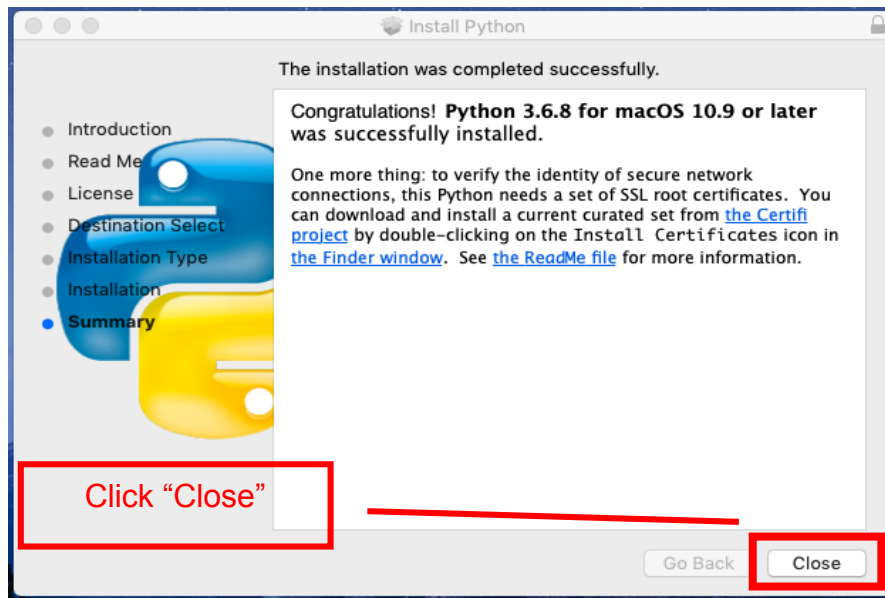


Figure 16

- c) To **verify** if python is installed correctly search “**IDLE**” python shell program in launch pad and open the program as shown in Figure 17.

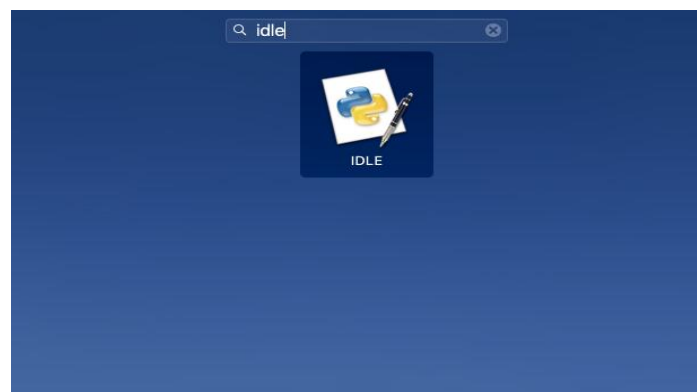


Figure 17

- d) After opening the python shell type following code “**print ('Hello World')**” and press “**Enter**”. If result below the code is “**Hello World**” then the python is working correctly as shown in Figure 18.

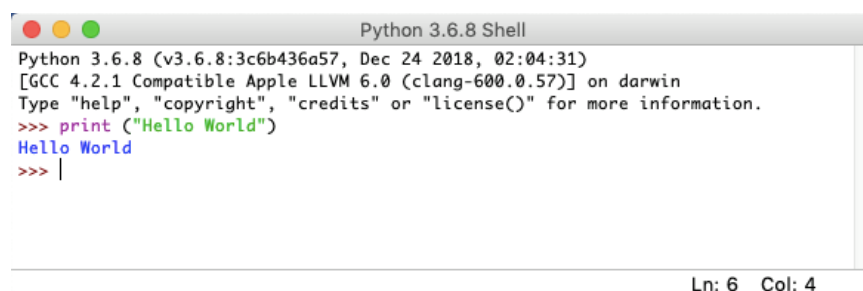


Figure 18

1.3 Python 3.6 in Linux

- a) Download "**Python-3.6.8.tgz**" from python website
- b) Un-tar the downloaded file. (Right click on tar file and select "**Extract here**") or run "**Python-3.6.8.tgz**" command in terminal.
- c) Navigate to the folder " **Python-3.6.8.tgz** ", notice a file called "**configure**"
- d) Now run "**./configure**" command
- e) After all the process is over run another command "**make**" in terminal.
- f) It might take a while and after the process is over run "**sudo root**"
- g) Run the final command "**make install**"
- h) To verify run "**Python 3.6**" in terminal which will execute Python IDLE.
- i) You can watch the full process in the link below.
- j) You can watch the full process in the link below. The Python version downloaded in the video is different so download "**Python-3.6.8.tgz**" or higher version for now.
(<https://www.youtube.com/watch?v=-hPG7Qb3Pc>)

2 Installing PyCharm

It is recommended to install Python before installing PyCharm. If you have not installed Python in your computer, please go through installation process of python in previous section for either Windows OS or Mac OS.

2.1 Downloading

- a) Click [Jet brains website](https://www.jetbrains.com/pycharm/), to download PyCharm installation file
- b) Click on **“Download”** button at top left on the website

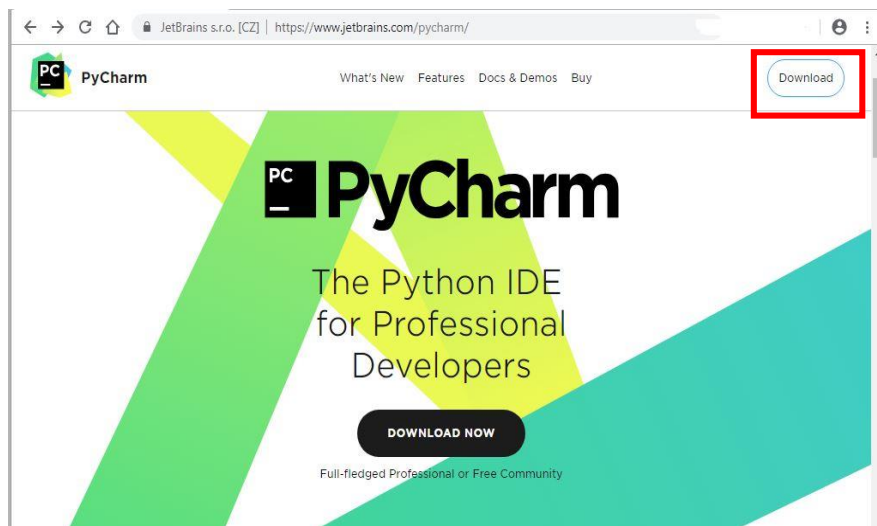


Figure 19

- c) For Windows operating system choose windows option and click **“Download”** link under community edition.

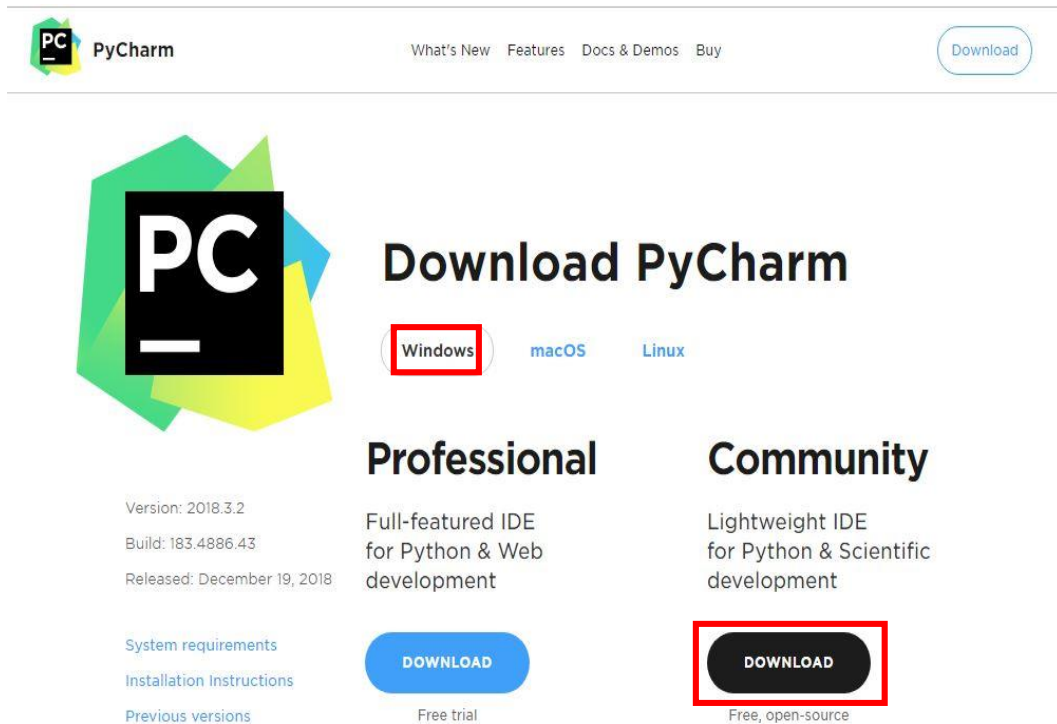


Figure 20

- d) For MAC operating system choose “**macOS**” and click “**Download**” link under community edition

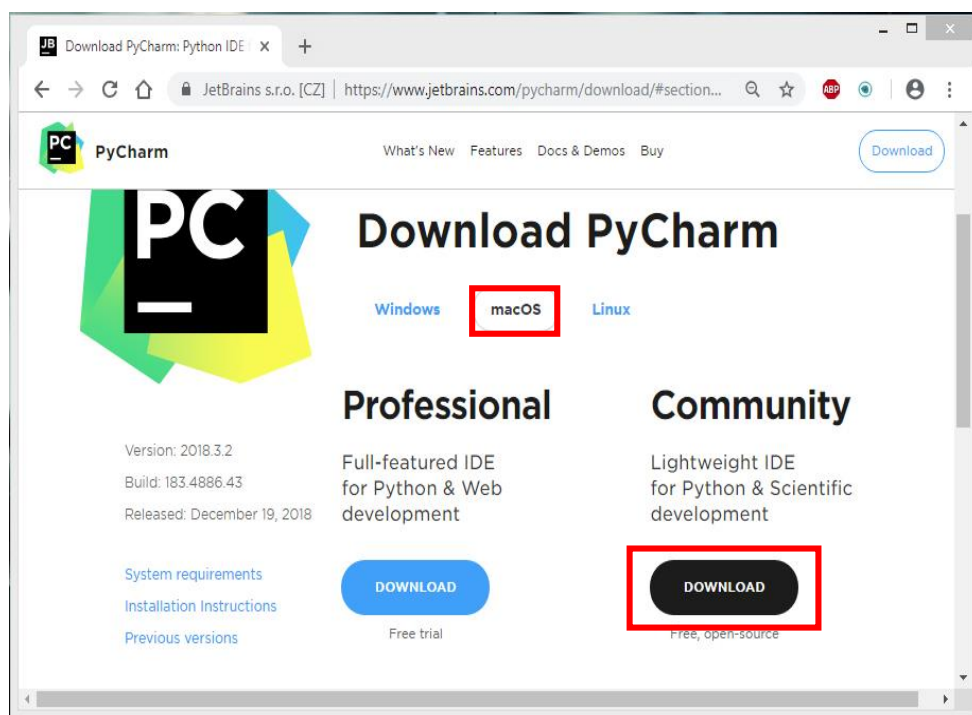


Figure 21

2.2 PyCharm in Windows OS

- a) After downloading, an executable setup file windows operating system is found as shown in the Figure 22.

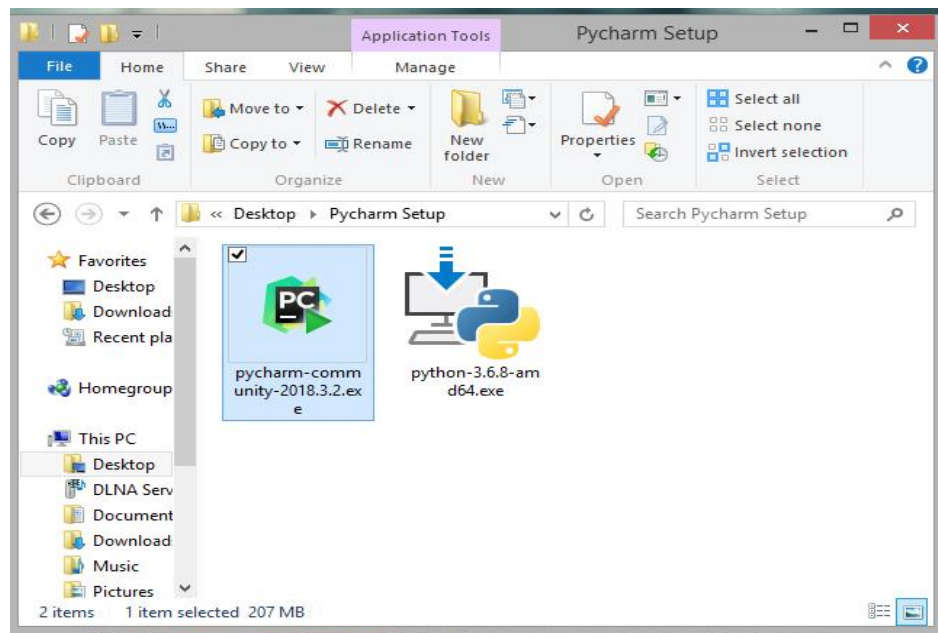


Figure 22

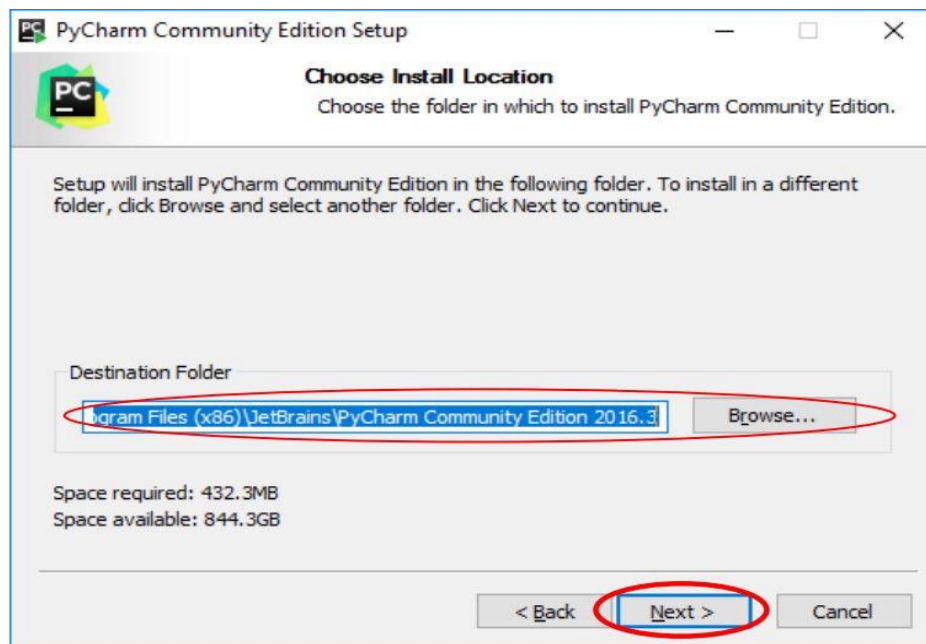
2.2.1 Installing

- a) Double click the “**setup file**” of PyCharm previously downloaded as shown in Figure 22
- b) The setup wizard should have started. Click “**Next**”.



Figure 23

- c) Choose an installation location. It is recommended to install in suggested location. Click **“Browse”** to enter a new location if necessary and click **“Next”** after selecting the location.



- d) Choose the desktop shortcut option depending upon the system type and check on create associations option which means that all python file (one with a .py extension) will open in PyCharm.

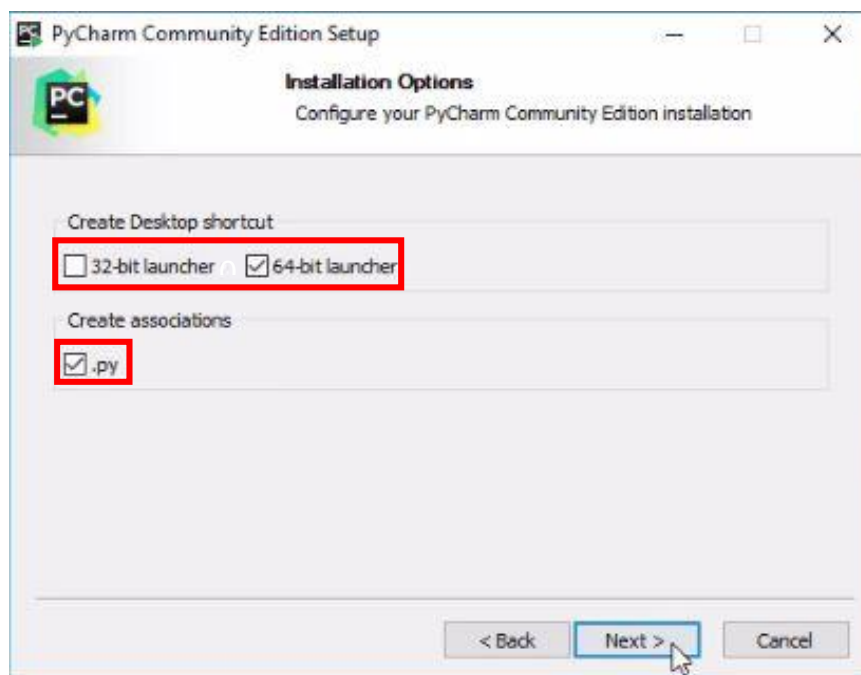


Figure 24

- e) Wait for installation to finish. At the end, a message window that PyCharm is installed will be displayed. Click **“Finish”**, and if you want to go ahead and run it, check on “Run PyCharm Community Edition” box first.

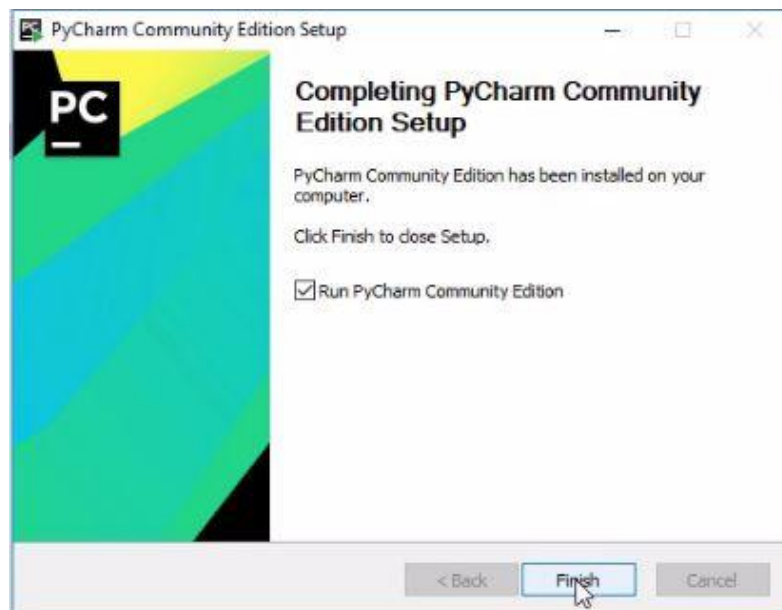


Figure 25

2.2.2 Running PyCharm

- a) The first time you run PyCharm, a message box asking about importing settings is displayed. Select **“I do not have a previous version of PyCharm or I do not want to import my settings”** and click **“OK”**

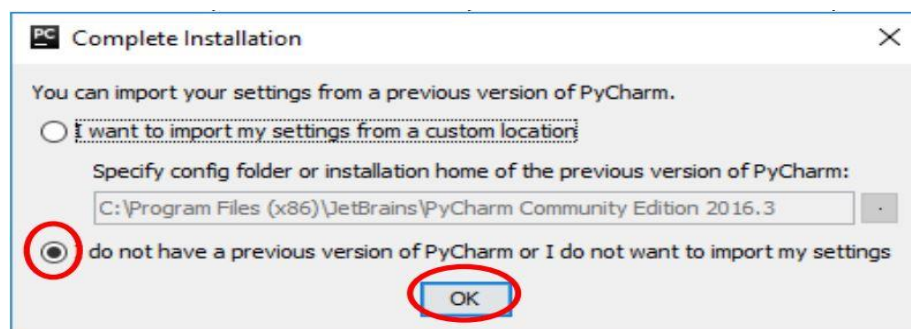


Figure 26

- b) The first time you run PyCharm, you will need to accept the privacy policy



Figure 27

- c) The first time running PyCharm will have some “Initial Configuration” options. Just hit “OK” or change your configuration according to your need.

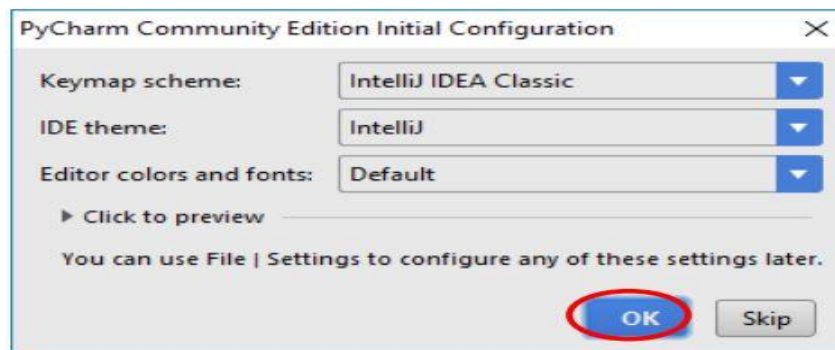


Figure 28

d) Click on “**Configure**” option and select “**Settings**”

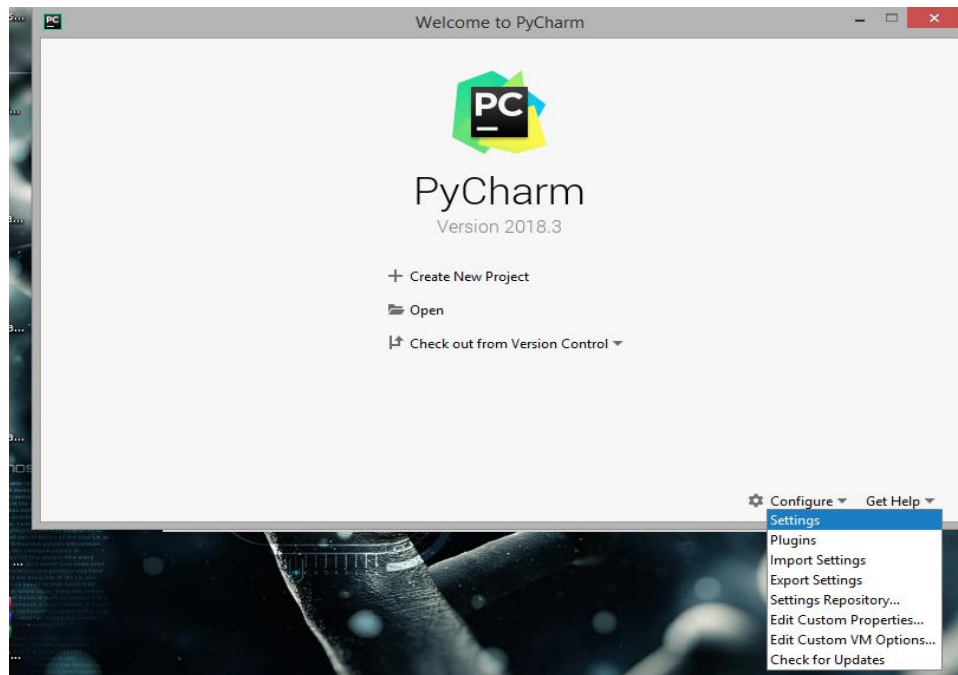


Figure 29

e) Click on “**Project Interpreter**” and click on setting button (⚙️) as shown in the Figure 30

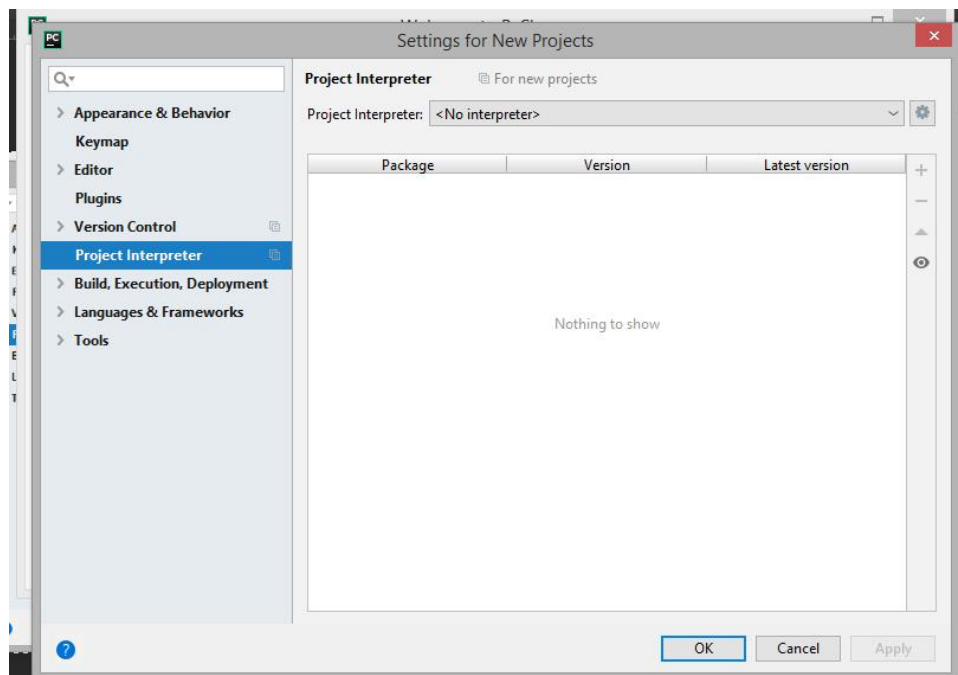


Figure 30

f) Select **“Add”** option

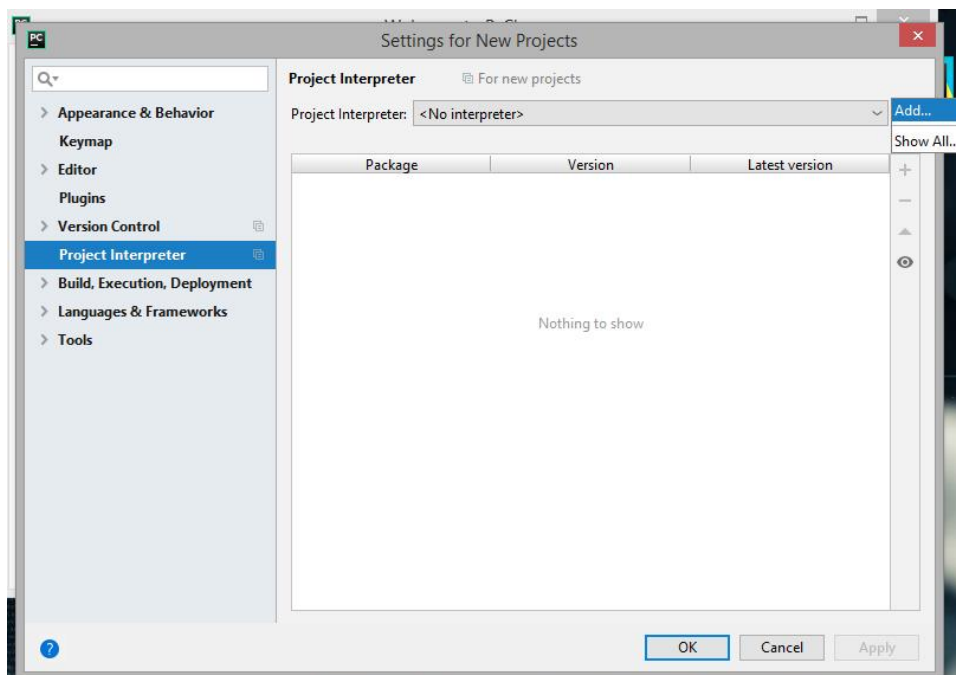


Figure 31

g) Click on **“Virtualenv Environment”**, check the radio button with **“Existing environment”**, browse the location of python executable file select it, in this case, the executable file is found at **“C:\Program Files\Python36\python.exe”** and press **“OK”**

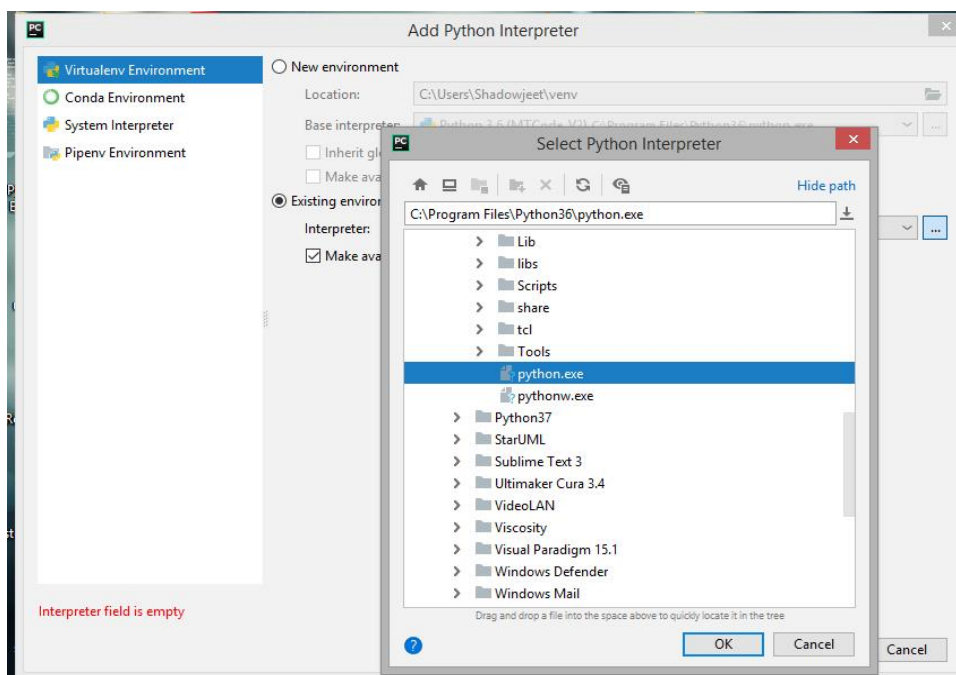


Figure 32

- h) Make sure to check the box of **“Make available to all projects”** so that the interpreter can be used to all other projects and press **“OK”**.

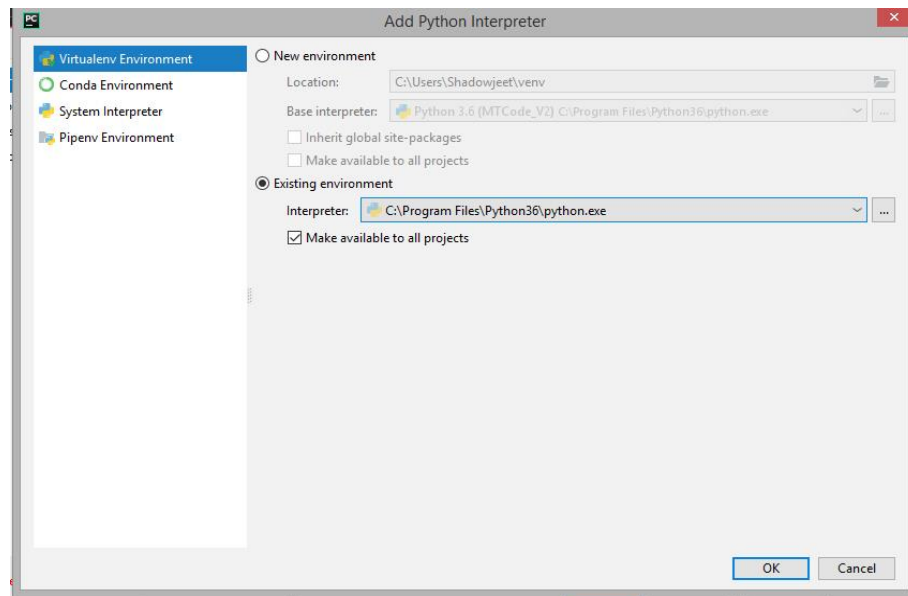


Figure 33

- i) List of packages/libraries are seen if the interpreter is set correctly. (List of packages/libraries can be different from Figure 34)

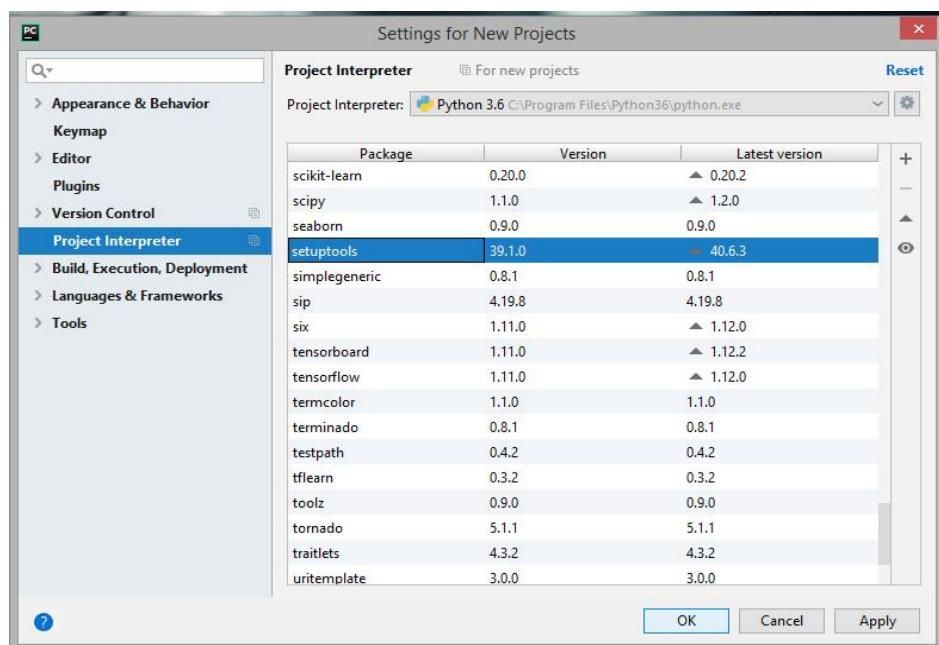


Figure 34

j) Click on “**Create New Project**”

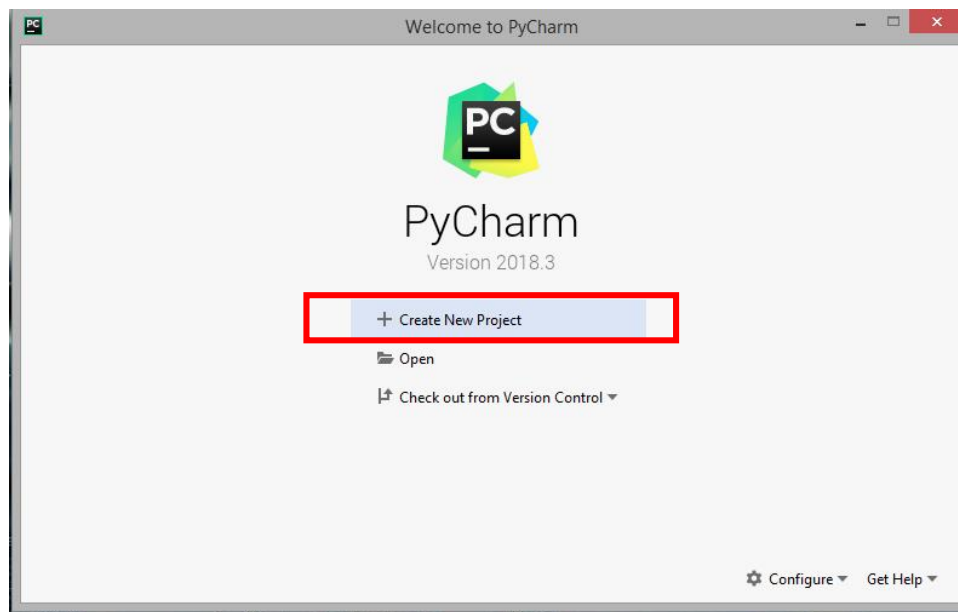


Figure 35

k) Create a new folder and enter its location inside “**Location**” option. It is important to select “**Interpreter**” so we find the location of python that was installed previously and select its path as shown in the Figure 36

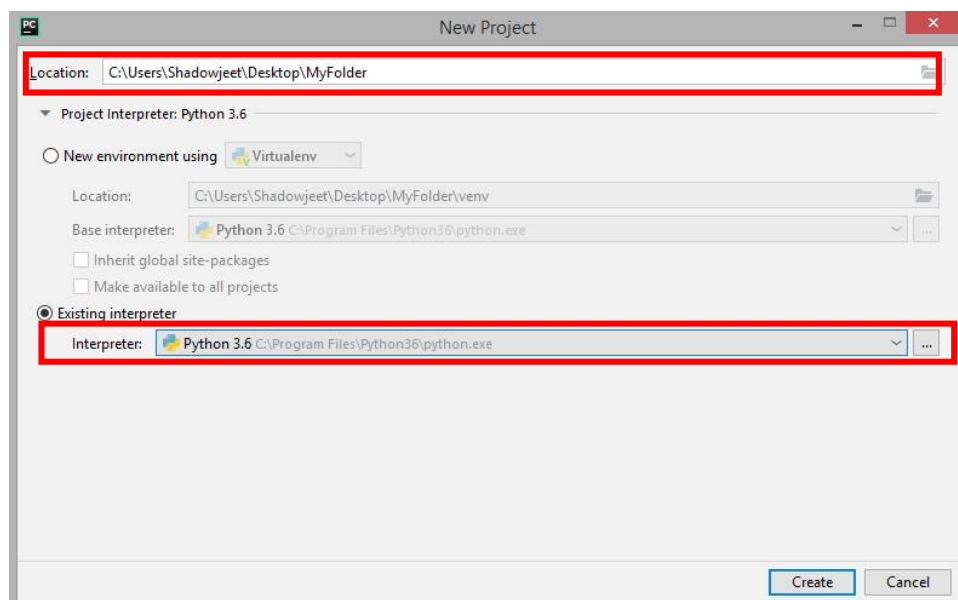


Figure 36

- l) After creating a new project create a new python file inside the project folder as shown in Figure 37. Right click on project folder (example, “**MyFolder**”), select “**New**” and select “**Python File**”.

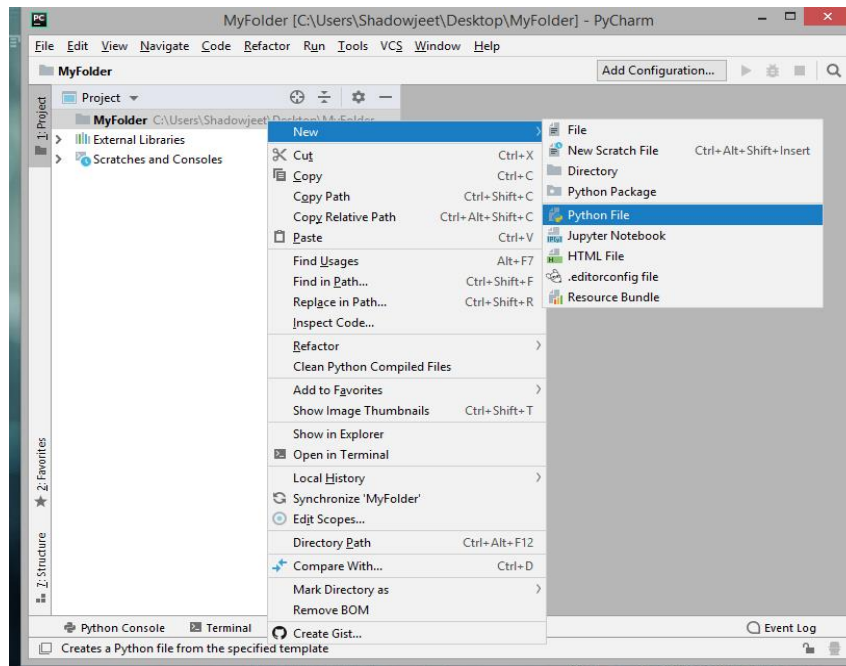


Figure 37

- m) Give an appropriate filename and click “**OK**”

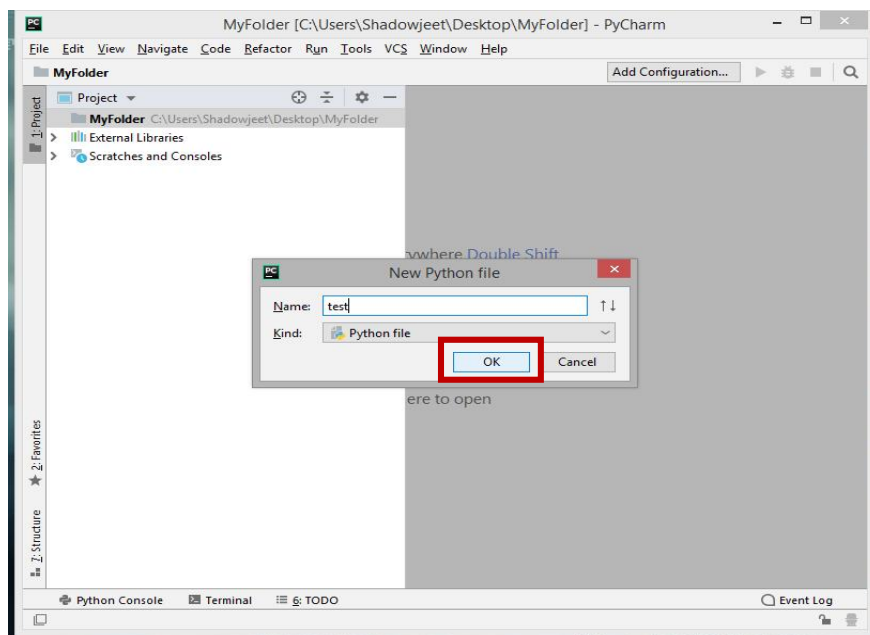


Figure 38

- n) A new screen will open and the python file ready to write the code. Write the following code “**print ('Hello World')**” and run the program as shown in Figure 39.

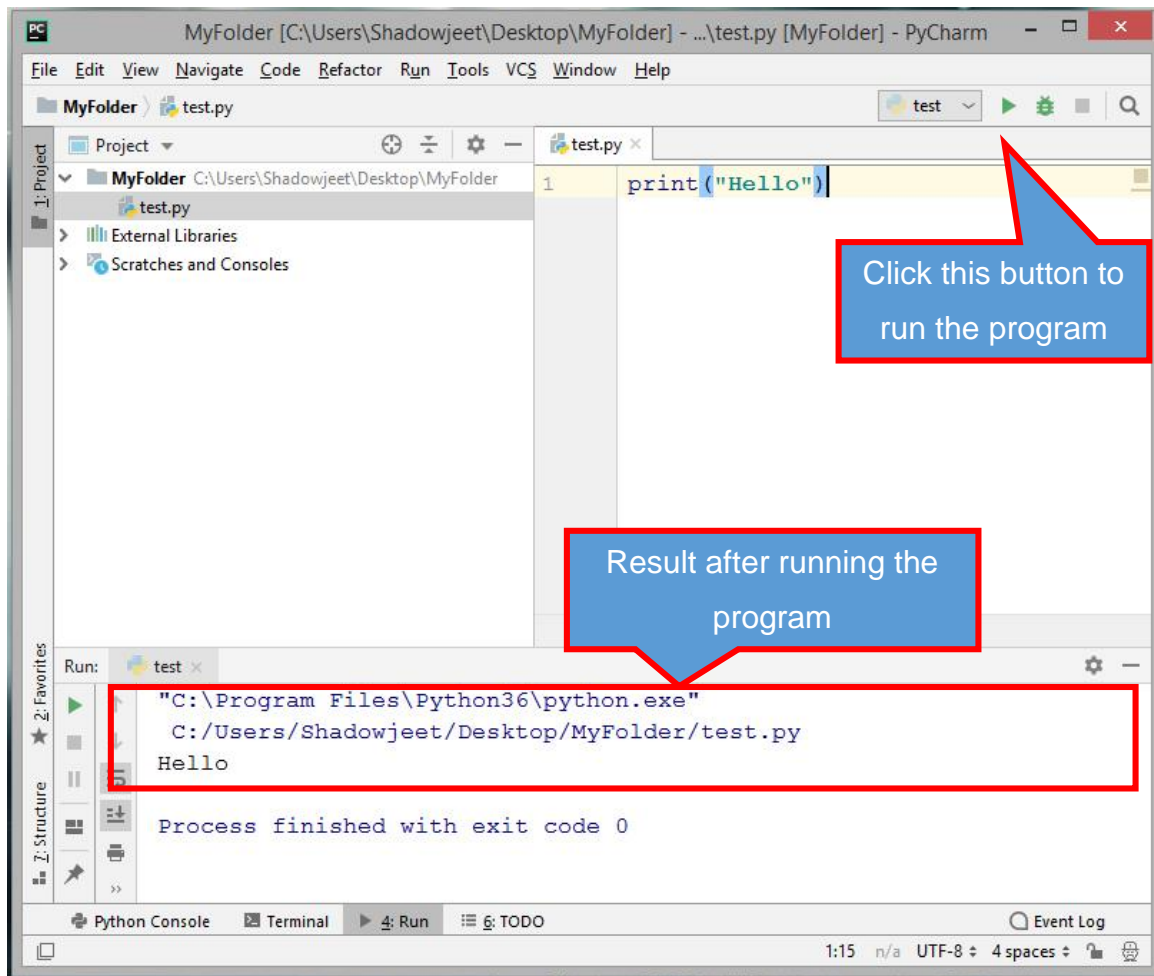


Figure 39

2.3 Pycharm in MAC OS

- a) After downloading, an executable setup file windows operating system is found as shown in the Figure 40.

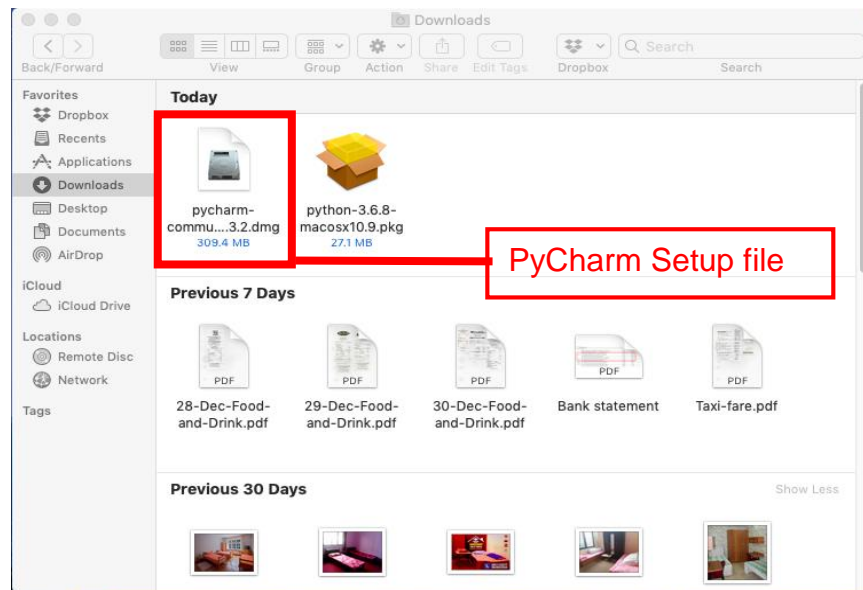


Figure 40

2.3.1 Installing

- a) Double click the “**setup file**” of PyCharm previously downloaded as shown in Figure 40
- b) The setup wizard should have started. Drag **PyCharm CE** to the application folder as shown in Figure 41

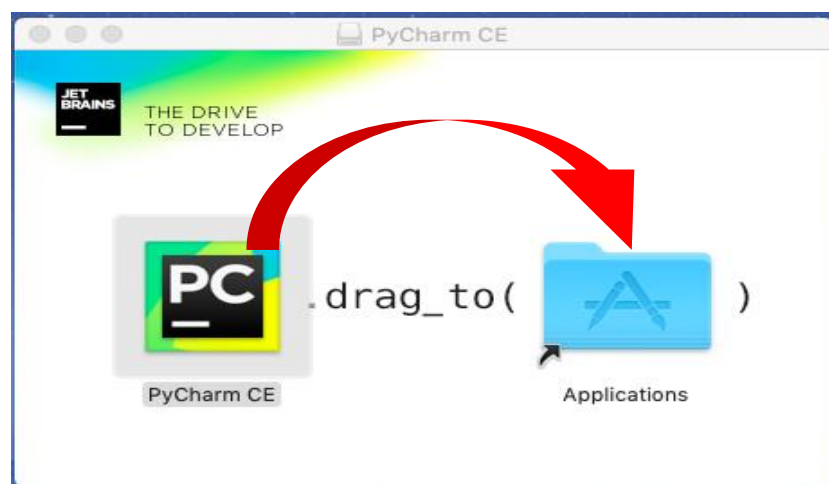
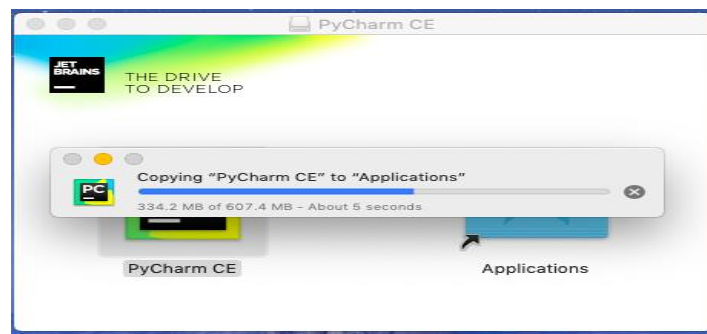


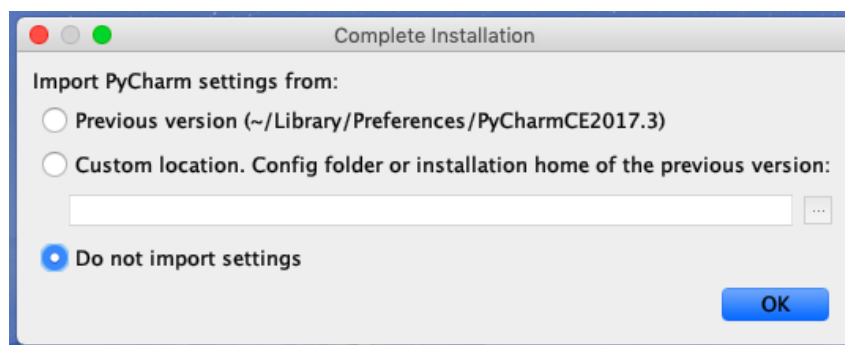
Figure 41

c) Wizard will start copying PyCharm into “**Application**” folder

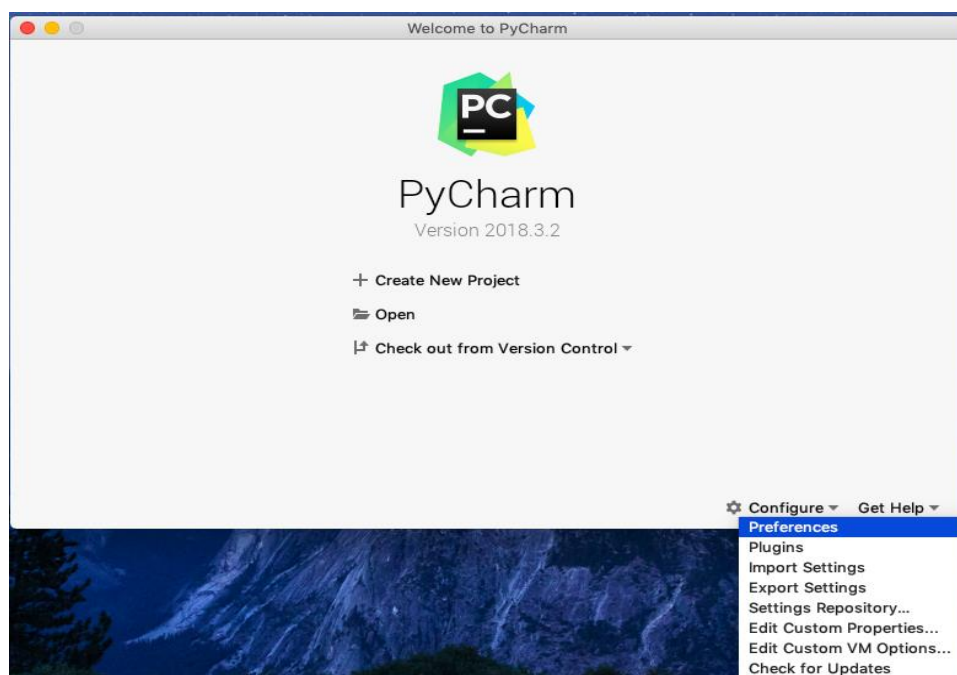


2.3.2 Running PyCharm

a) The first time you run PyCharm, a message box asking about importing settings is displayed. Select “Do not import my settings” and click “OK”



b) Click on “Configure” option and select “Preferences”



- c) Click on “Project Interpreter” and click on setting button (⚙️) as shown in the Figure 42 and select “Add” option.

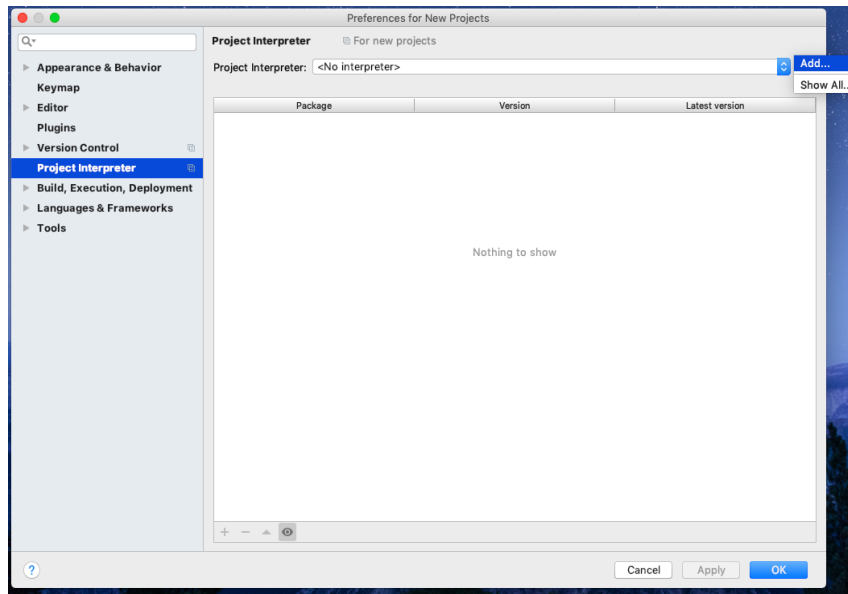


Figure 42

- d) Click on “Virtualenv Environment”, check the radio button with “Existing environment”, browse the location of python executable file and select it, in this case, the executable file is found at “/usr/local/bin/python3.6” and make sure to check the box of “Make available to all projects” so that the interpreter can be used to all other projects and press “OK”.

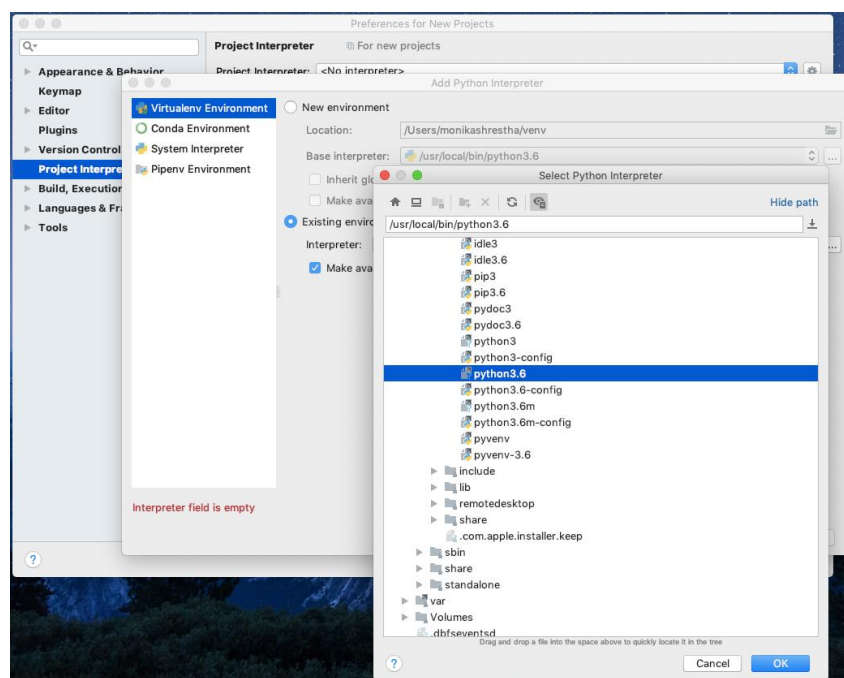


Figure 43

- e) List of packages/libraries are seen if the interpreter is set correctly. (List of packages/libraries can be different from Figure 44)

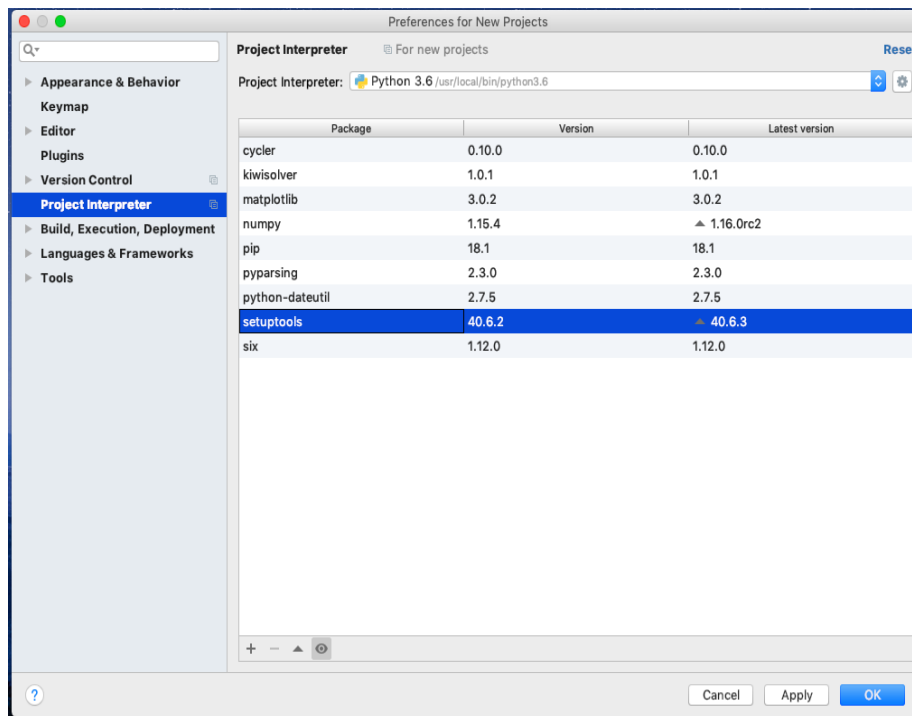


Figure 44

- f) Click on “Create New Project”

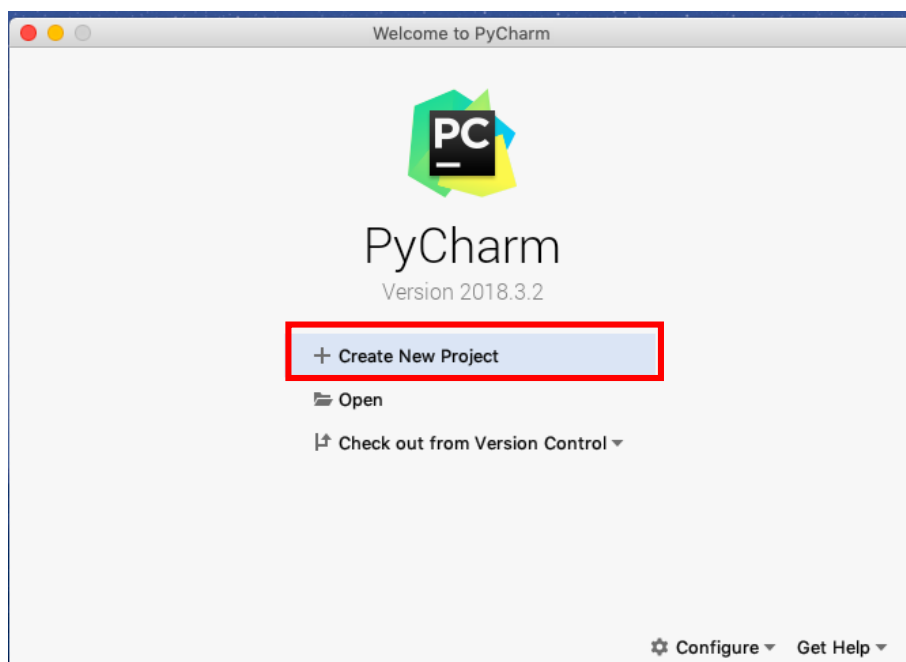


Figure 45

- g) Create a new folder and enter its location inside “**Location**” option. It is important to select “**Interpreter**” so find the location of python interpreter that was installed previously and select its path as shown in the Figure 46

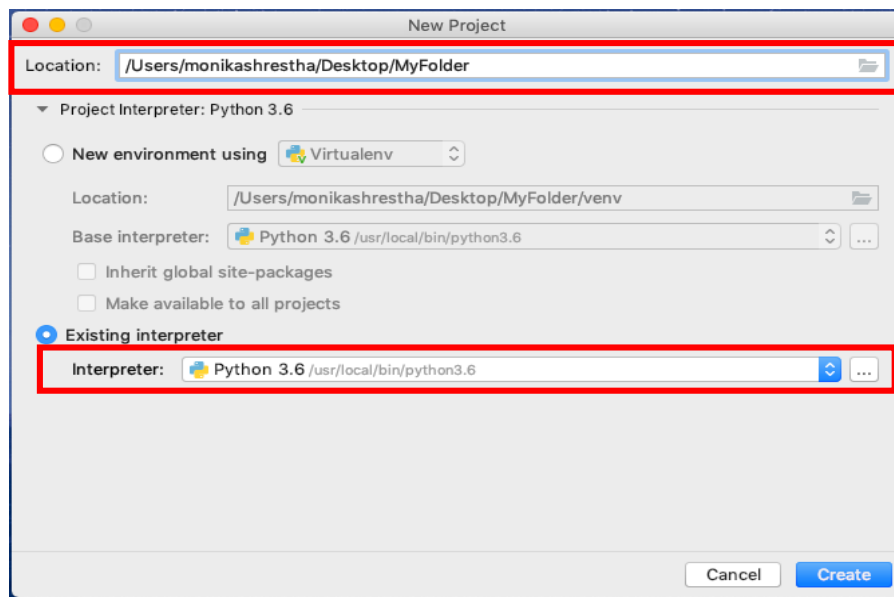


Figure 46

- h) After creating a new project create a new python file inside the project folder as shown in Figure 47. Right click on project folder (example, “**MyFolder**”), select “**New**” and select “**Python File**”.

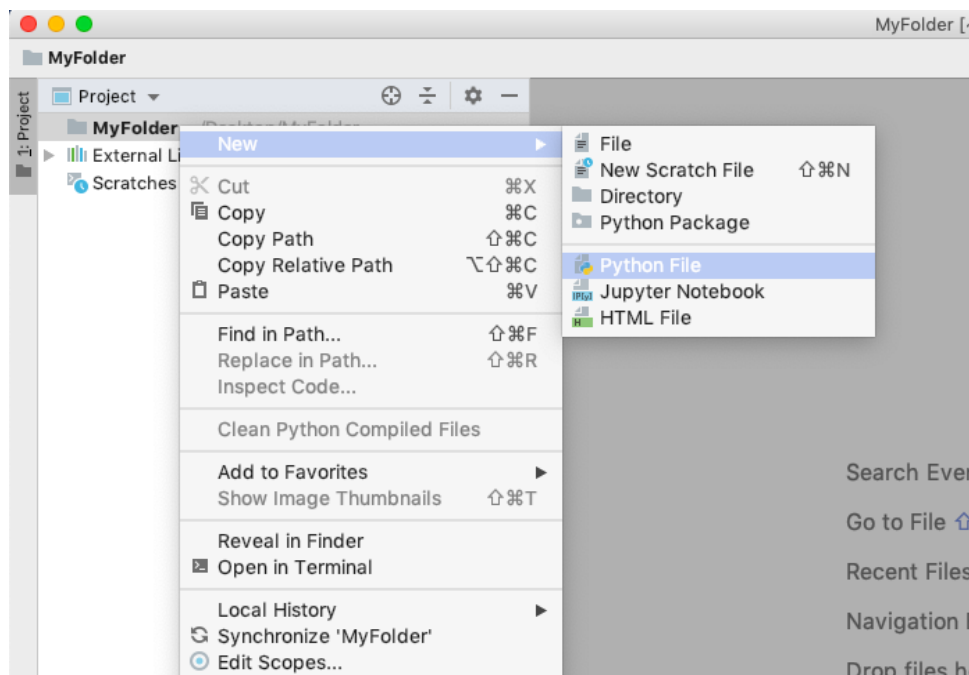


Figure 47

- i) A new screen will open and the python file ready to write the code on. Write the following code “**print ('Hello World')**” and run the program as shown in Figure 48.

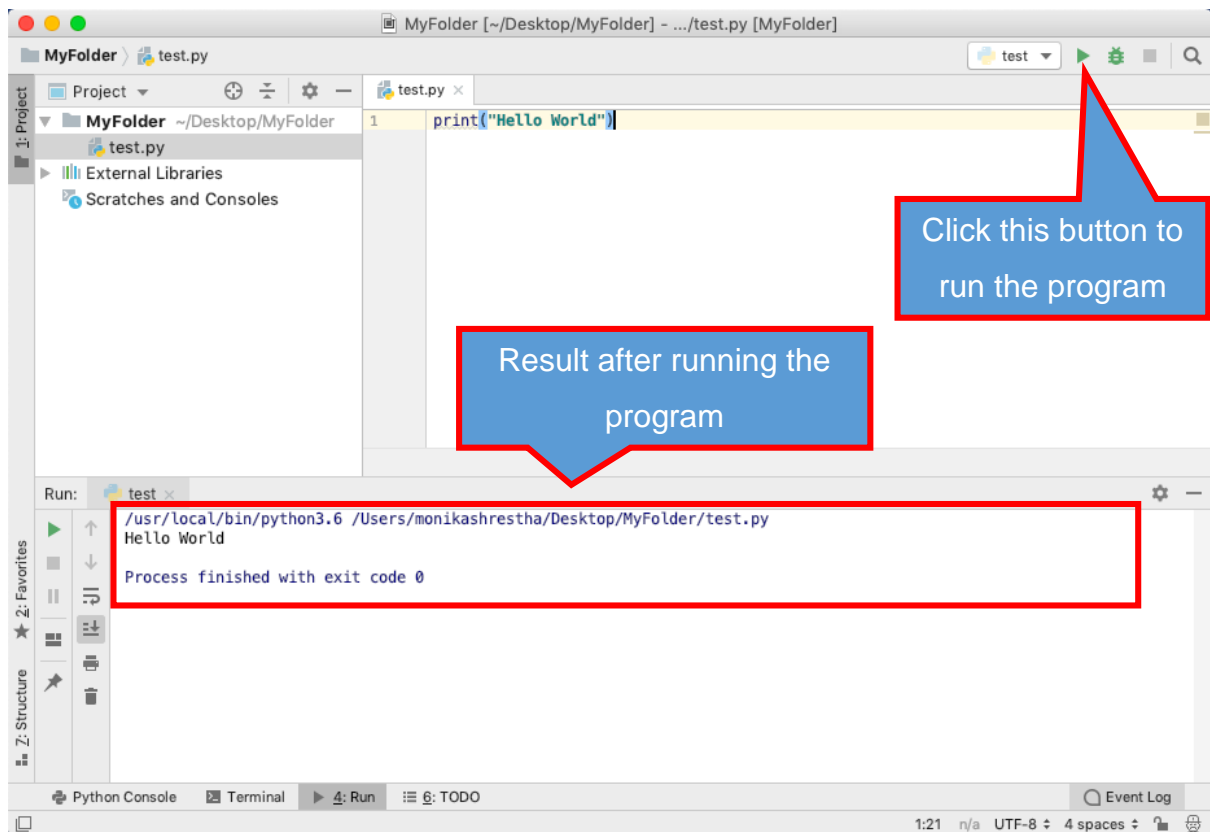


Figure 48

2.4 Pycharm in Linux

- a) Download "**pycharm-community-2018.3.2.tar.gz**" from PyCharm website
- b) Un-tar the downloaded file. (Right click on tar file and select "**Extract here**") or run "**tar pycharm-community-2018.3.2.tar.gz**" command in terminal.
- c) Navigate to the folder "**pycharm-community-2018.3.2**", find another folder called "**bin**"
- d) Inside "**bin**" folder and notice "**pycharm.sh**" file and run the file in terminal.
- e) Open the terminal, run the following command "**cd pycharm-community-2018.3.2**" and again "**cd bin/**", enter "**ls**" command to check if "**pycharm.sh**" is in the bin folder.
- f) Now run "**./pycharm.sh**" command
- g) So the installation will start. Python-3.6.8.tgz
- h) You can watch the full process in the link below. The PyCharm version downloaded in the video is different so download the latest version (i.e. **pycharm-community-2018.3.2.tar.gz** for now).
(https://www.youtube.com/watch?v=96_miUTGhW8)