

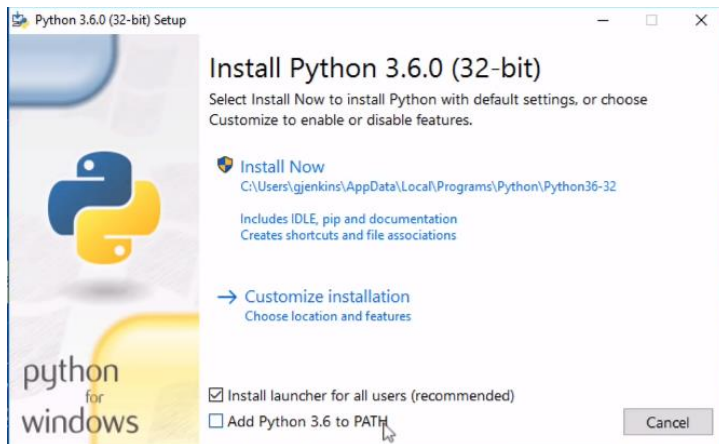
## Python

Note: If at any point you get lost you can refer to this link  
(<https://www.youtube.com/watch?v=puBXzcWJIQ>)

### Step 1: Download and Install Python

Link: <https://www.python.org/downloads/>

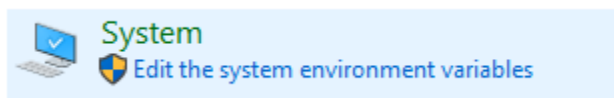
- There are many versions of Python, the two most popular are 2.7 and 3.7. Either one will work, I used 3.7, but if you want to follow along with code academy's Python tutorial they use 2.7. I went through the code academy tutorial and have been able to use Python 3.7 with basically no problem so I'd stick to the newest version.
- By default the download should go to something like C:/Python37. You don't have to save it there but take note of where it's downloaded.
- If prompted during installation setup try checking the box for "Add Python 3.X.X to PATH".



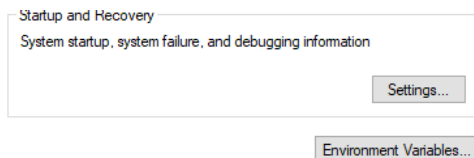
(At the bottom)

### Step 2: Add Python to system variables for Windows. (Skip if done in step 1).

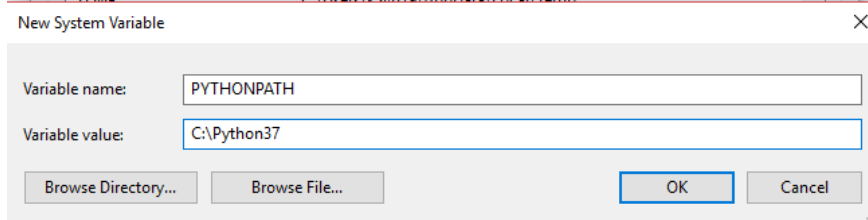
- Open "Control Panel" by searching for it in the start menu.
- Search "system variables", you should get the following. Press the "Edit the system..." link.



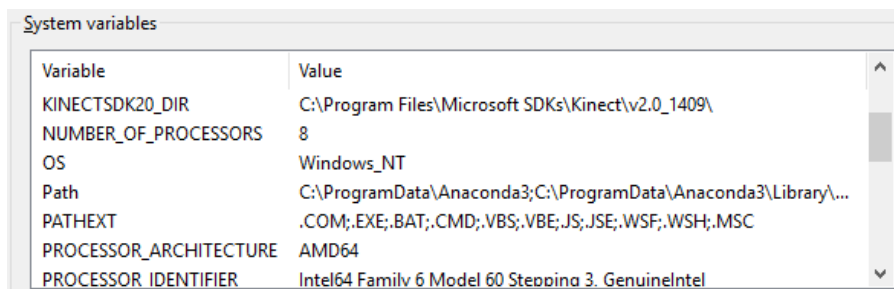
- Press the "Environment Variables..." button.



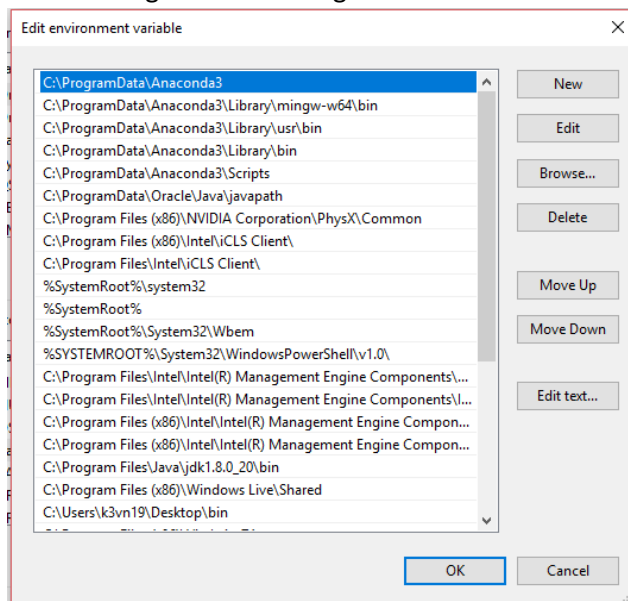
- You should see two sections, “User Variables” and “System Variables”. In the “System Variables” section press “New”.
- Enter a variable name, it can be anything but make it intuitive. Then enter the address of where you downloaded Python. (Here I downloaded 3.7 and placed it in the default location). Press “OK”.



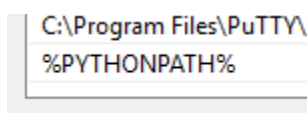
- In the System Variables section from the previous window, find the variable called “Path”. Double click it.



- You should get the following.



- Press the “New” button in the top right. It’ll add a new entry at the bottom of the list. Enter the name of the variable you created previously surrounded in “%” signs, as seen below.



- Press “OK”. And press “OK” on all the other windows you opened doing this, should be 3 in total.
- I don’t remember if I had to do this but you might have to restart your computer.

Step 3: Sanity check that Python installed correctly. (Optional)

- Download sanity.py and put it in your desktop.
- Open command prompt. You can search for it as “cmd” in the start window.
- Type “cd Desktop” and hit enter.
  - “cd” means change directory and it’ll move you from C:\Users\name to C:\Users\name\Desktop
- Type “python hello.py” to run the Python script.
- You should see a print statement that says “Python installed correctly!”

Step 4: Install PyCharm, a Python Integrated Development Environment (IDE)

Link: <https://www.jetbrains.com/pycharm/download/#section=windows>

- Choose the download for “Community”, the free open source version.

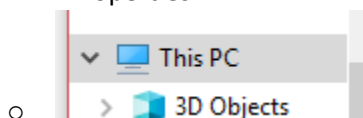
### Community

Lightweight IDE  
for Python & Scientific  
development

DOWNLOAD

Free, open-source

- Run the downloaded .exe.
- When you get to the “Installation Options” check all the options and choose the correct launcher (64bit or 32bit). You can delete the shortcut afterwards but I think you need to initially choose one so it knows your computer architecture.
  - To check system architecture open file explorer, right click on “This PC” and press “Properties”.



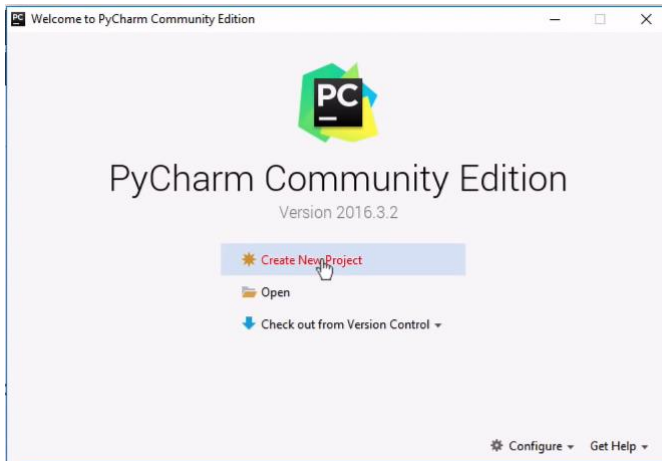
- Under the section “System” check the system type, which in my case is 64-bit.

System	
Manufacturer:	TOSHIBA
Model:	Satellite S55-A
Processor:	Intel(R) Core(TM) i7-4700MQ CPU @ 2.40GHz 2.40 GHz
Installed memory (RAM):	8.00 GB
System type:	64-bit Operating System, x64-based processor
Pen and Touch:	No Pen or Touch Input is available for this Display

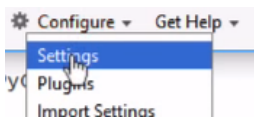
- TOCLIDA support
- Complete the rest of the installation by clicking through next and ok. At the end you might be asked to import settings, just choose the “I do not have a previous version of PyCharm...” option.
- If asked at the end to restart your computer go ahead and do that.

Step 5: Final configurations.

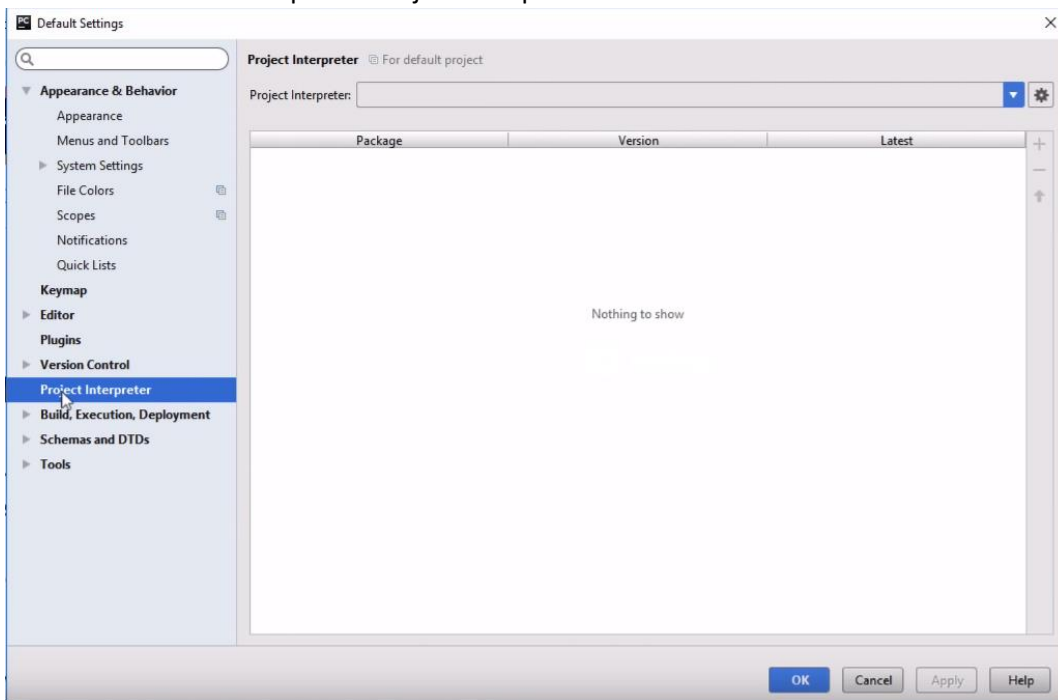
- After rebooting start PyCharm.
- On the first launch it'll ask you to choose some basic settings like the color theme. Choose whatever you think looks best.
- Eventually you'll get to this screen.



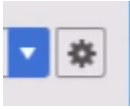
- Before creating a new project go to “Configure” and then “Settings” in the bottom right hand corner.



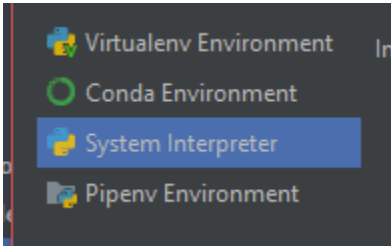
- In the left hand column press “Project Interpreter”



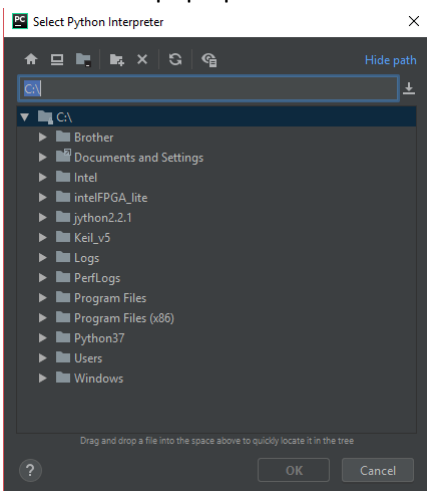
- Press the \*gear\* button in the top right. Then press “Add..”



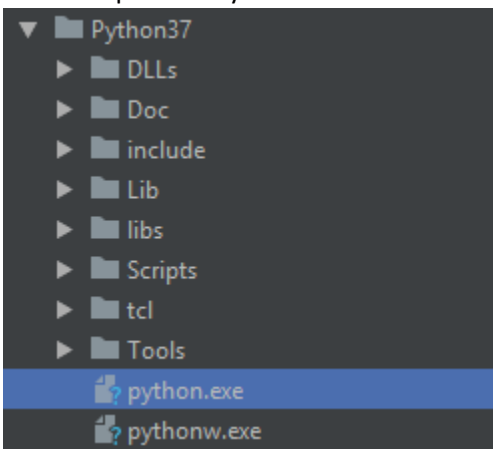
- Press “System Interpreter”.



- Once on that page press the “...” button to the right of the Interpreter field. You should then see this window pop up.



- Navigate to wherever your Python was installed. In my case it was on the C drive so it was easy to find. Open the Python folder and find “python.exe”.

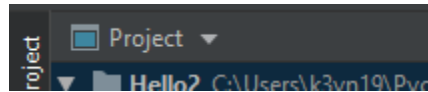


Double click “python.exe”.

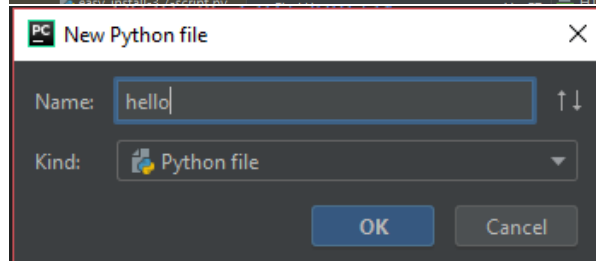
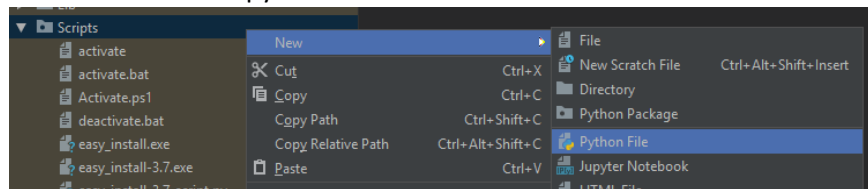
- Then press “ok”. The window should close and the directory path should be the new entry for the interpreter. Press “ok” to close the settings window. There might be some updates/downloads.

#### Step 6: Code!

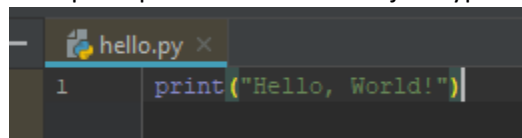
- Now press “Create new project”. A window will appear and you can enter the name of the project. As an example, use “HelloWorld” and press “create” in the bottom right.
  - My project is called “Hello2” but just ignore that in this example.
- The left side column is the project directory, I prefer it to be in the “Project” mode.



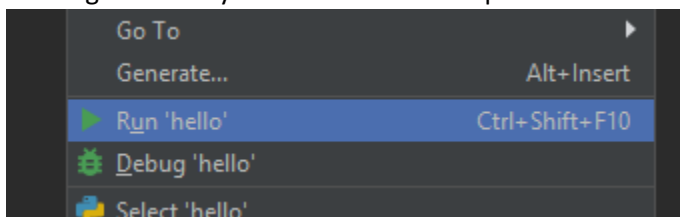
- Open up the folders until you get to “Scripts”. If for some reason folders aren’t automatically made you can ignore this and work directly in “HelloWorld”.
- Right click on the folder “Scripts” (or HelloWorld if its auto created) and press “new” followed by “Python file”.
  - Enter the file name, “hello”
  - You can technically also just press “new” and then “file” but when you name the file remember to add “.py” at the end of the name.



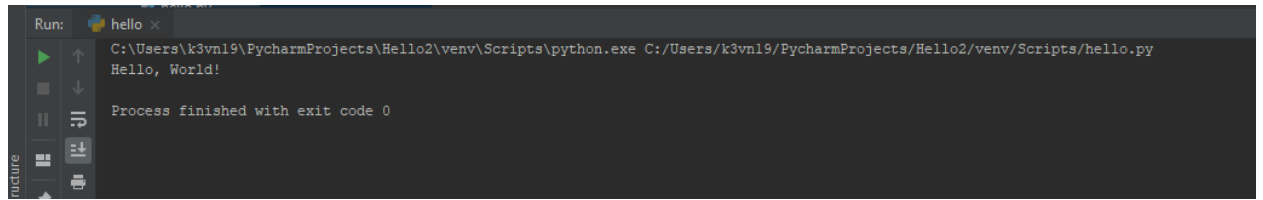
- The file will open up and in the first line just type the following line.



- Now right click anywhere in the file and press “Run ‘hello’” to run the Python script.



- This will be the output



The screenshot shows a PyCharm Run console window. The title bar reads "Run: hello x". The console output displays the command path and the output of the script:

```
C:\Users\k3vn19\PycharmProjects\Hello2\venv\Scripts\python.exe C:/Users/k3vn19/PycharmProjects/Hello2/venv/Scripts/hello.py  
Hello, World!  
  
Process finished with exit code 0
```

On the left side of the console, there is a vertical toolbar with icons for running, debugging, and other actions. The word "Run:" is visible at the top left of the console area.

Congrats, you're done! 😊