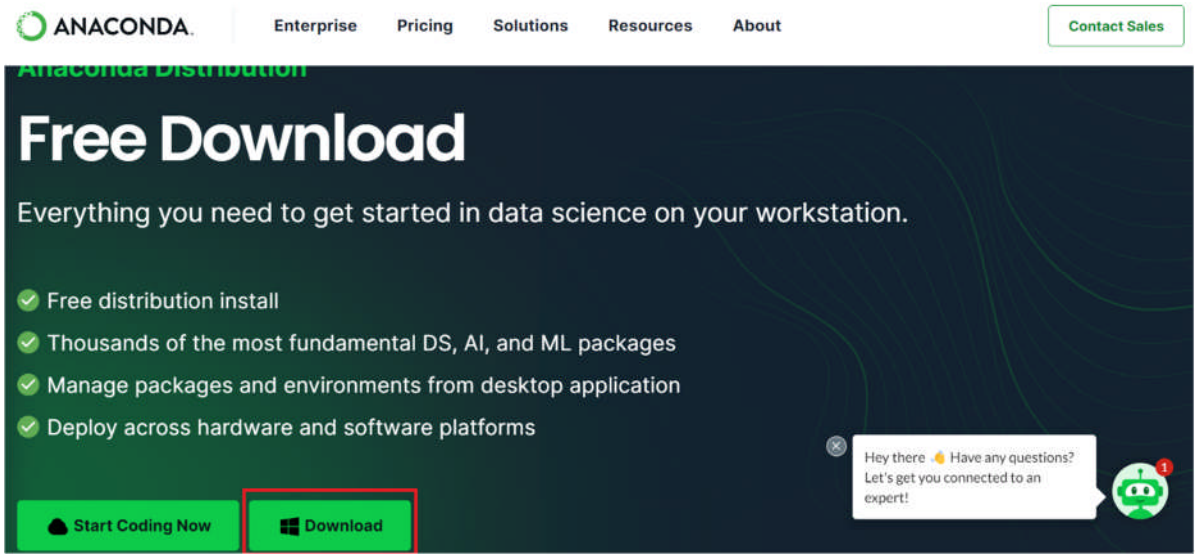
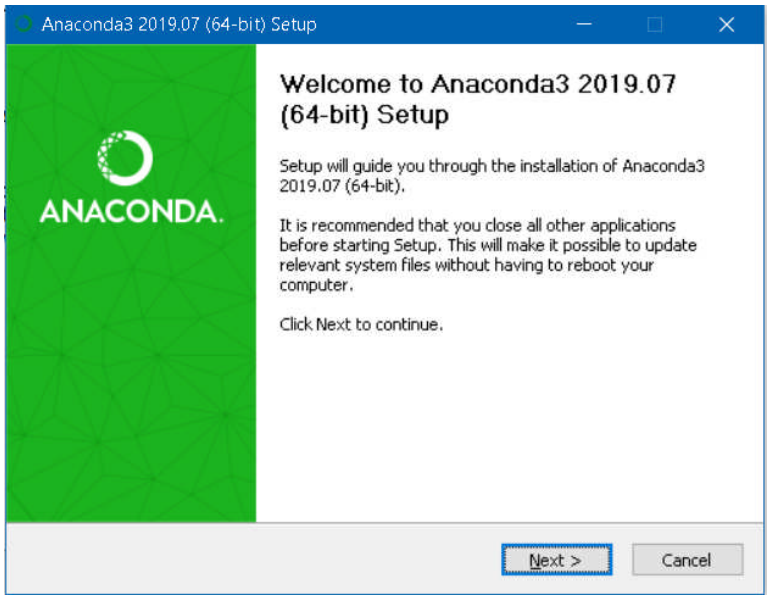
EDUNET FOUNDATION-Class Exercise Notebook

Lab 1 - Demonstration of Anaconda Installation

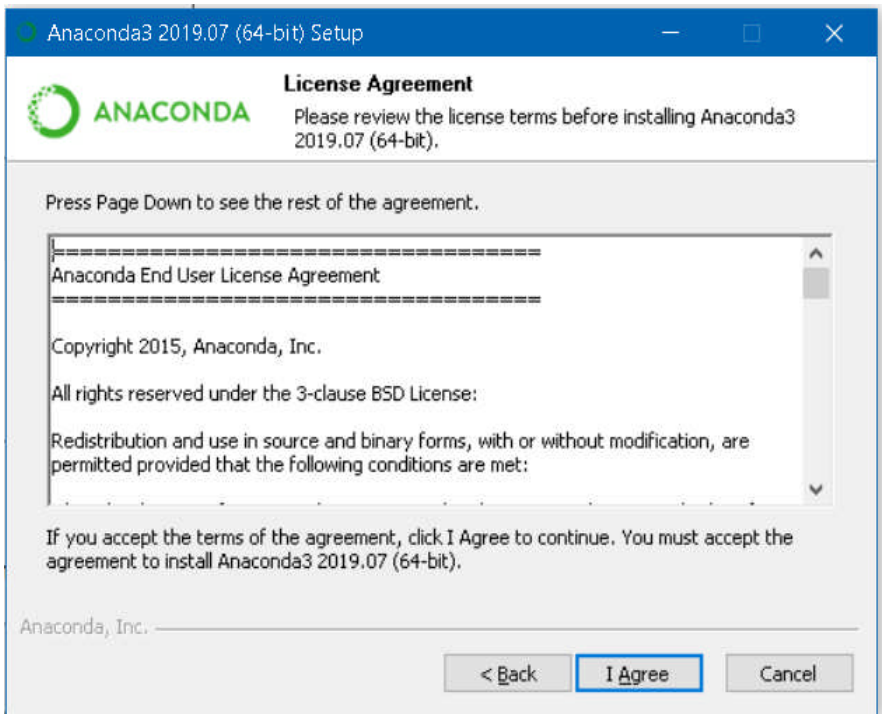
Step 1- At first, visit the following link: https://www.anaconda.com/download and the page will pop up like this, just click on Download.



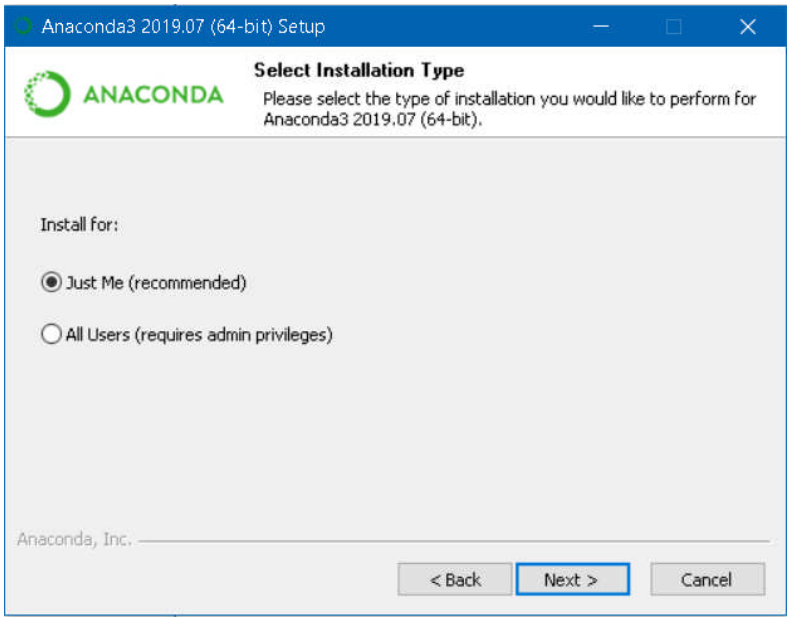
Step 2- After downloading the file, run the file. The file will open, Click **Next**



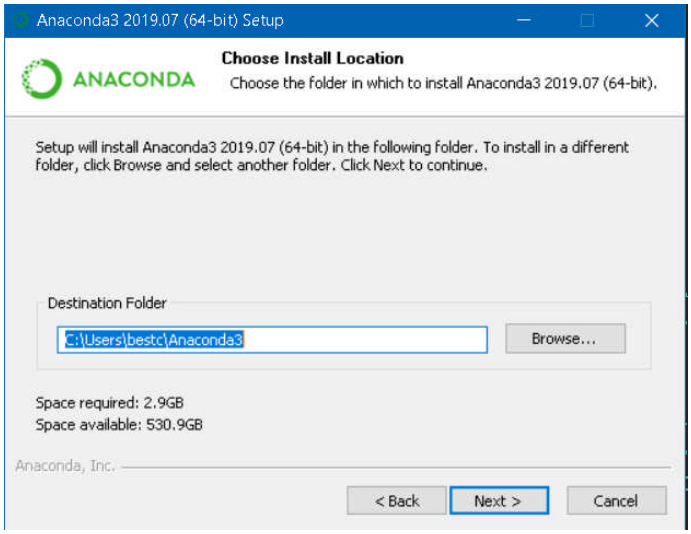
Step 3- And click **I Agree** to the license.



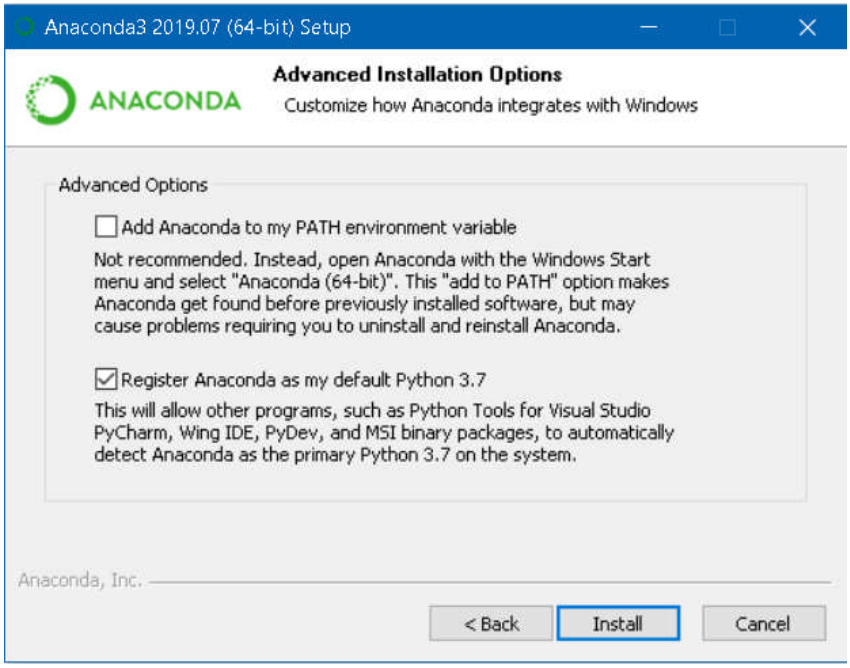
Step 4- Choose Just Me and click Next.



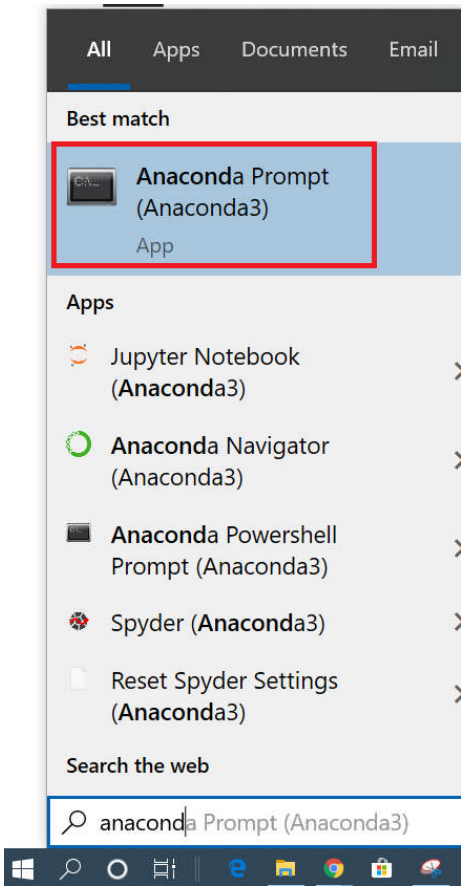
Step 5- Choose the installation location by clicking **Browse or** leave it as it is (default location) and continue to click **Next**.



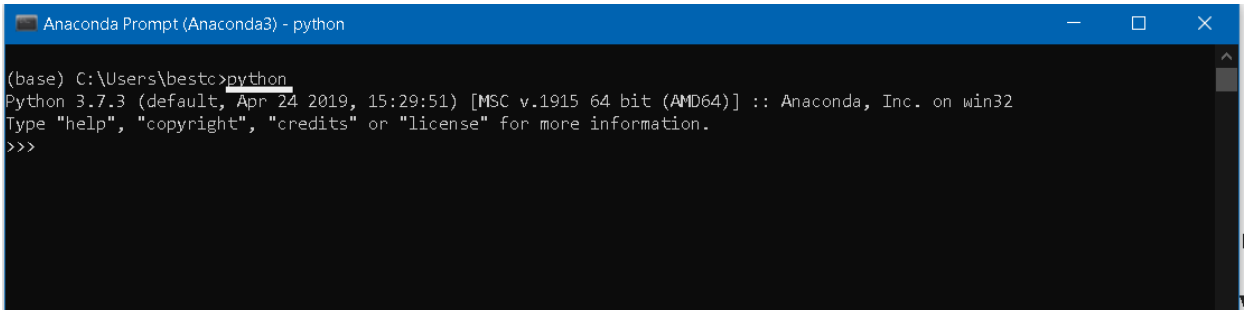
Step 6- Here, it is highly recommended to choose the second one "**Register Anaconda as my default Python 3.7**" and click **Install.**



Step 7- Once the installation is done, open the **Anaconda Prompt** from Windows start menu bar.

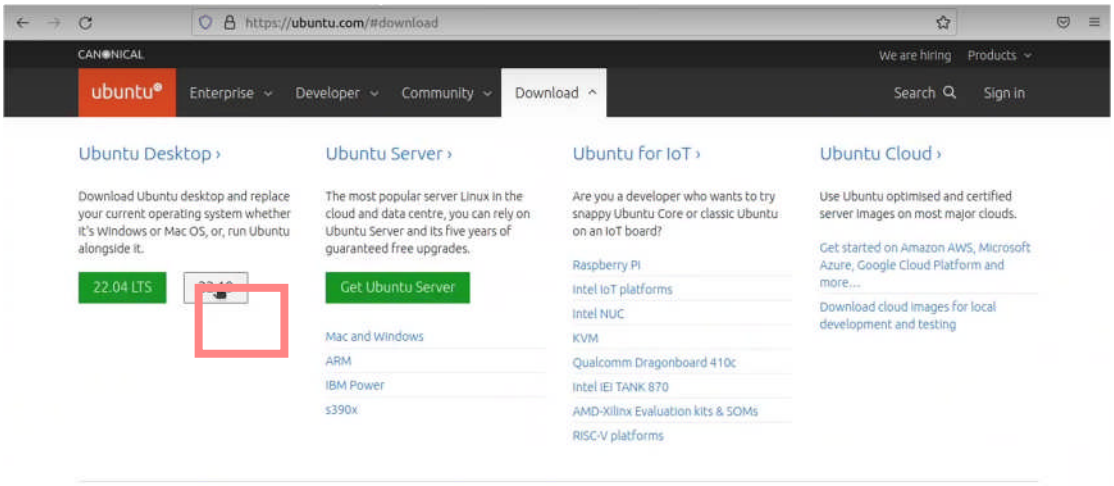


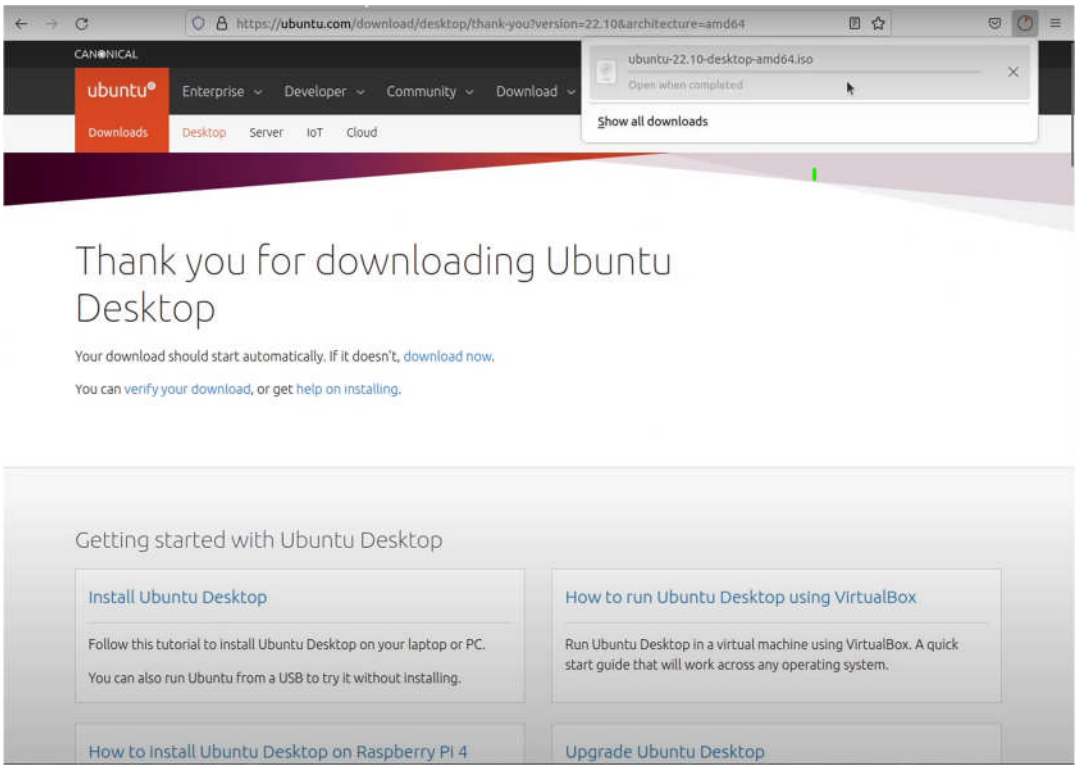
Step 8- Anaconda Prompt is shell similar to Windows Command Prompt (Windows Terminal) powered by Anaconda distribution. To check whether we have successfully installed Anaconda or not, type **python** command in the shell.



1.2.3 Practical - Installing Anaconda on Linux

Step 1- At first, visit the following link: https://ubuntu.com/#download and the page will pop up like this. **Click** 22.10 or whatever version available





Step 3- Once it is downloaded go to Download folder and run .sh file


```
karthick@LinuxShellTips:~/Downloads$ ls -l
total 557480
-rw-rw-r-- 1 karthick karthick 570853747 Jun 22 18:39 Anaconda3-2021.05-Linux-x86_64.sh
karthick@LinuxShellTips:~/Downloads$ sha256sum Anaconda3-2021.05-Linux-x86_64.sh
2751ab3d678ff0277ae80f9e8a74f218cfc70fe9a9cdc7bb1c137d7e47e33d53  Anaconda3-2021.05-Linux-x86_64.sh
```

Step 4- Now run the downloaded `.sh` file to install anaconda. As a first step, it will ask you to read the license agreement once you press enter.

```
bash Anaconda3-2021.05-Linux-x86_64.sh
```

```
karthick@LinuxShellTips:~/Downloads$ bash Anaconda3-2021.05-Linux-x86_64.sh

Welcome to Anaconda3 2021.05

In order to continue the installation process, please review the license
agreement.
Please, press ENTER to continue
>>>
```

Step 5- In the next step, it will ask you to choose a location where the anaconda will be installed. It defaults to your home directory.

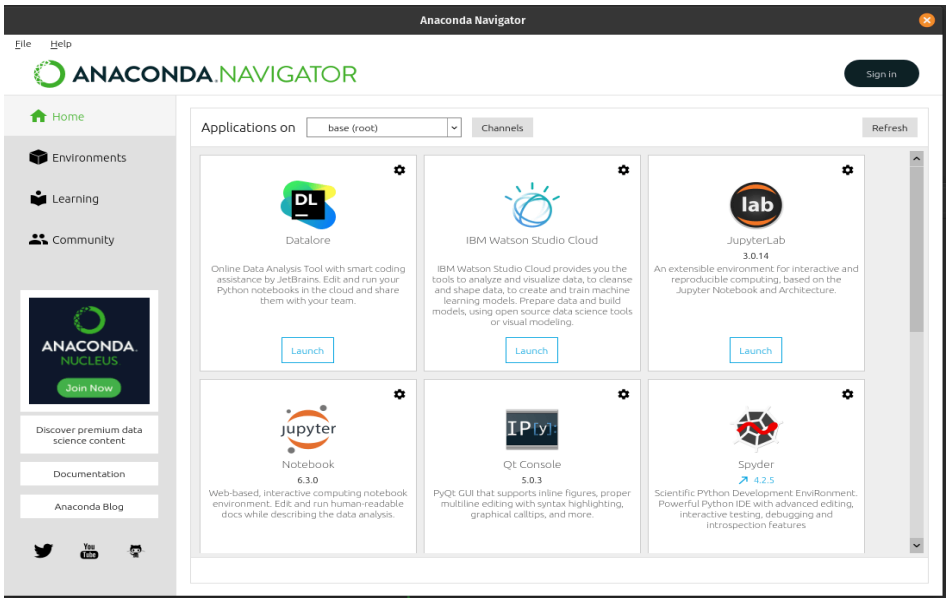
```
Anaconda3 will now be installed into this location:
/home/karthick/anaconda3

  - Press ENTER to confirm the location
  - Press CTRL-C to abort the installation
  - Or specify a different location below

[/home/karthick/anaconda3] >>>
```

Step 6- Packages will be installed and once the installation is completed it will ask to initialize **Anaconda3** by running **conda init**. It defaults to **No**. You can choose **Yes** or **No** depending upon how you need it.


```
Preparing transaction: done
Executing transaction: done
installation finished.
Do you wish the installer to initialize Anaconda3
by running conda init? [yes|no]
[no] >>>

You have chosen to not have conda modify your shell scripts at all.
To activate conda's base environment in your current shell session:

eval "$(/home/karthick/anaconda3/bin/conda shell.YOUR_SHELL_NAME hook)"

To install conda's shell functions for easier access, first activate, then:

conda init

If you'd prefer that conda's base environment not be activated on startup,
   set the auto_activate_base parameter to false:

conda config --set auto_activate_base false

Thank you for installing Anaconda3!

==========================================================================

Working with Python and Jupyter notebooks is a breeze with PyCharm Pro,
designed to be used with Anaconda. Download now and have the best data
tools at your fingertips.

PyCharm Pro for Anaconda is available at: https://www.anaconda.com/pycharm
```

Step 7- Go to the directory where **anaconda** is installed and under the **bin** directory, there is a binary called "**anaconda-navigator**". This will launch the GUI program for anaconda from where you can launch your tools.

```
$ /home/karthick/anaconda3/bin/anaconda-navigator
```

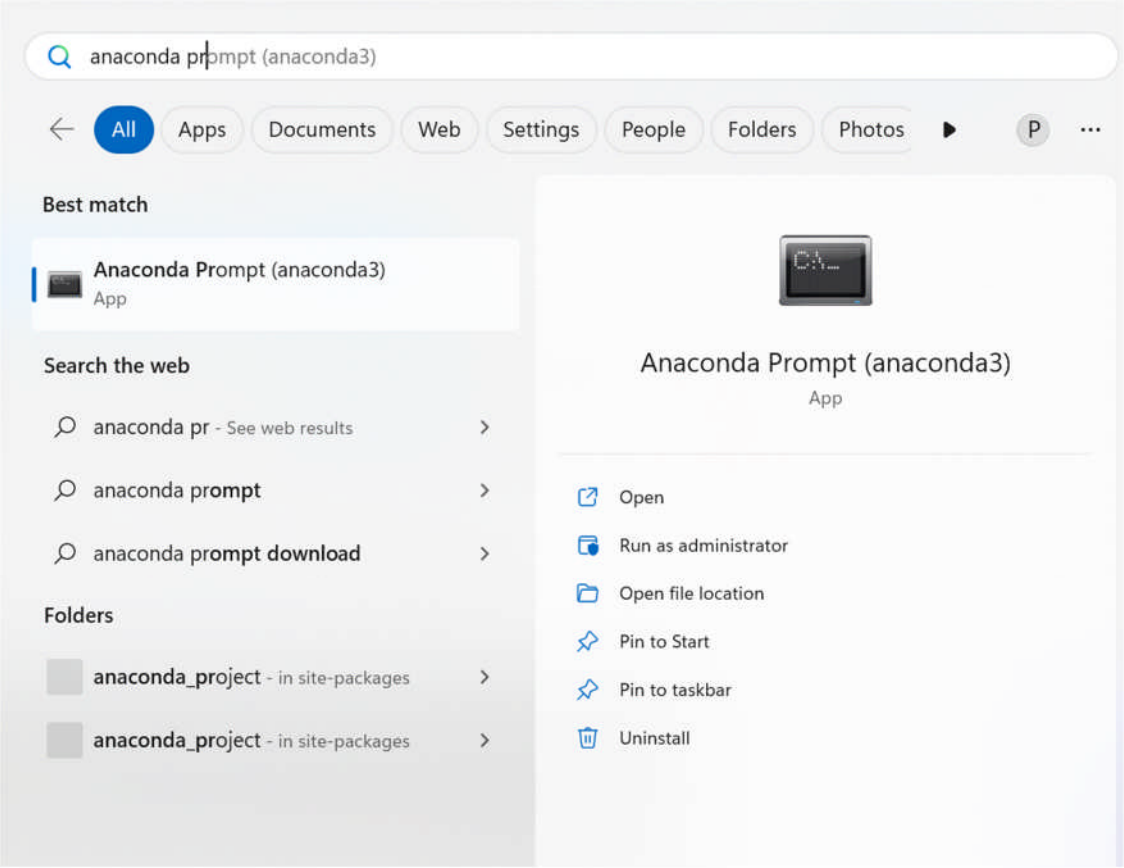


1.2.4 Practical - Familiar with Jupyter Notebook

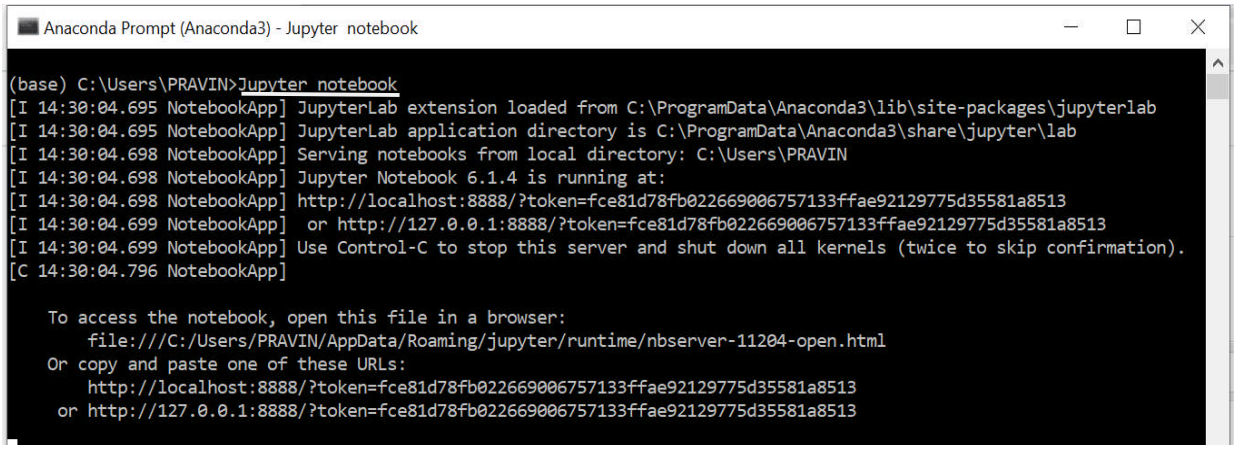
The Jupyter Notebook is an open-source web application that you can use to create and share documents that contain live code, equations, visualizations, and text. Jupyter Notebook is maintained by the people at Project Jupyter.

If you already installed Anaconda in your machine, then it's very easy to use Jupyter notebook

Step 1- Press window key and Just type anaconda prompt and open.

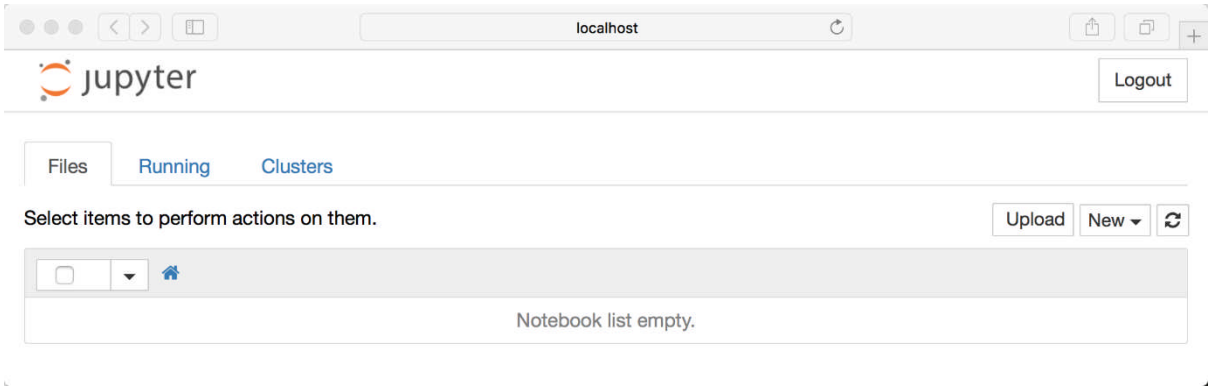


Step 2- Just Run command Jupyter notebook and hit enter



Jupyter notebook will open in your default browser, should start (or open a new tab) to the following URL: http://localhost:8888/tree

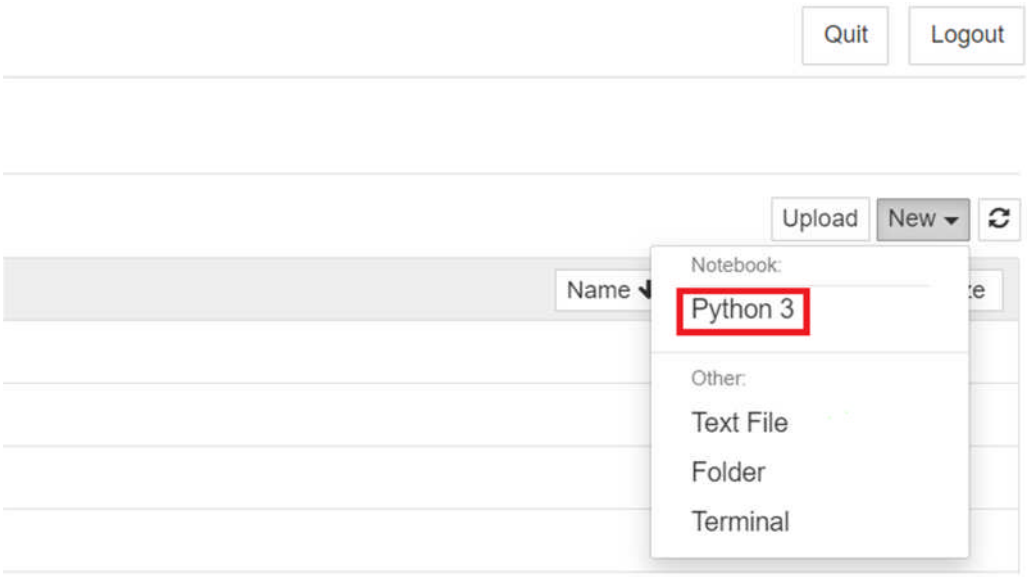
Your browser should now look something like this:



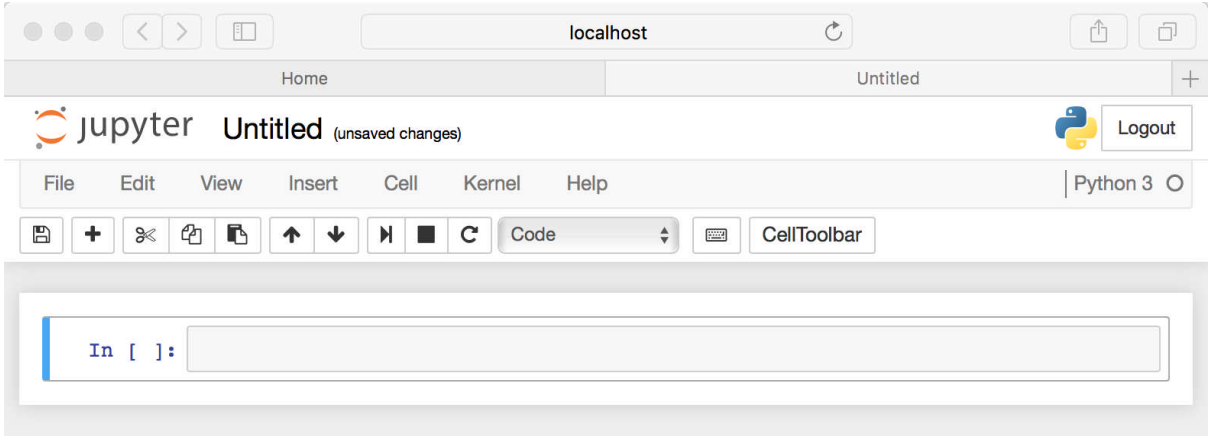
Step 3- To creating a notebook, Click on New and choose Python3

Now that you know how to start a Notebook server, you should probably learn how to create an actual Notebook document.

All you need to do is click on the *new* button (upper right), and it will open up a list of choices. Here choose python2 or Python 3, so we can create a Notebook that uses either of these. For simplicity's sake, let's choose Python 3.



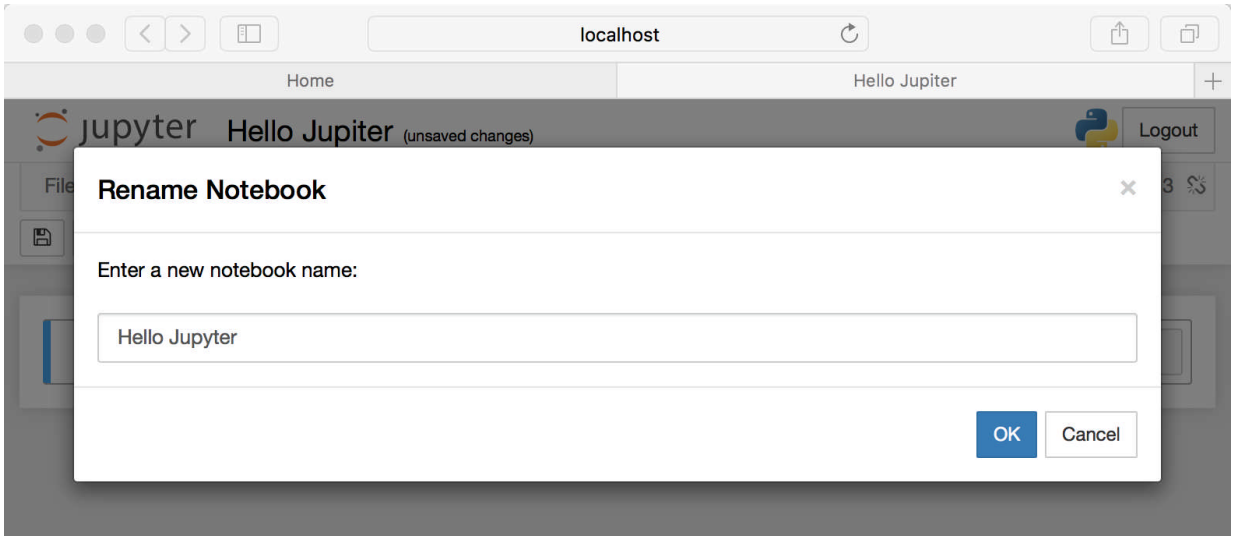
Your web page should now look like this:



Step 4- Naming

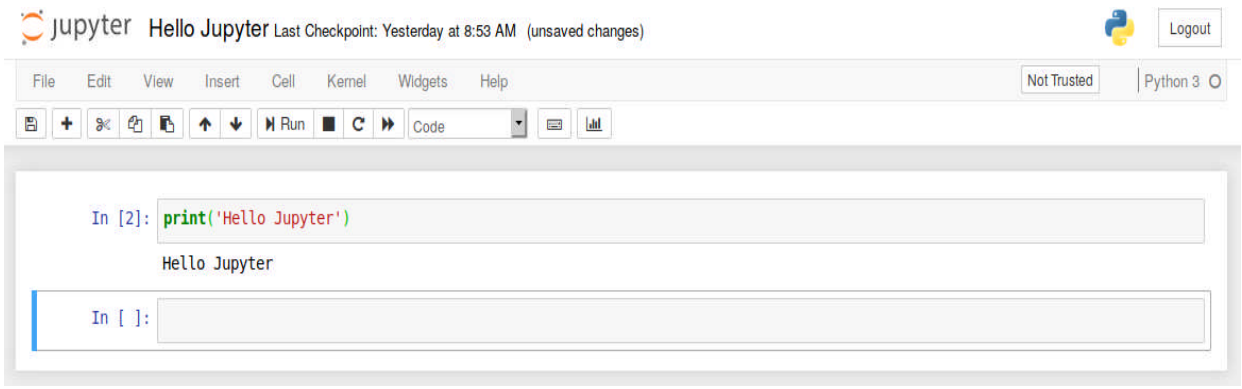
You will notice that at the top of the page is the word Untitled. This is the title for the page and the name of your Notebook. Since that isn't a very descriptive name, let's change it!

Just move your mouse over the word Untitled and click on the text. You should now see an in-browser dialog titled Rename Notebook. Let's rename this one to Hello Jupyter:



Step 5- Running Cells

Running a cell means that you will execute the cell's contents. To execute a cell, you can just select the cell and click the *Run* button that is in the row of buttons along the top. It's towards the middle. If you prefer using your keyboard, you can just **press** `Shift` + `Enter`.



If you have multiple cells in your Notebook, and you run the cells in order, you can share your variables and imports across cells. This makes it easy to separate out your code into logical chunks without needing to reimport libraries or recreate variables or functions in every cell.

