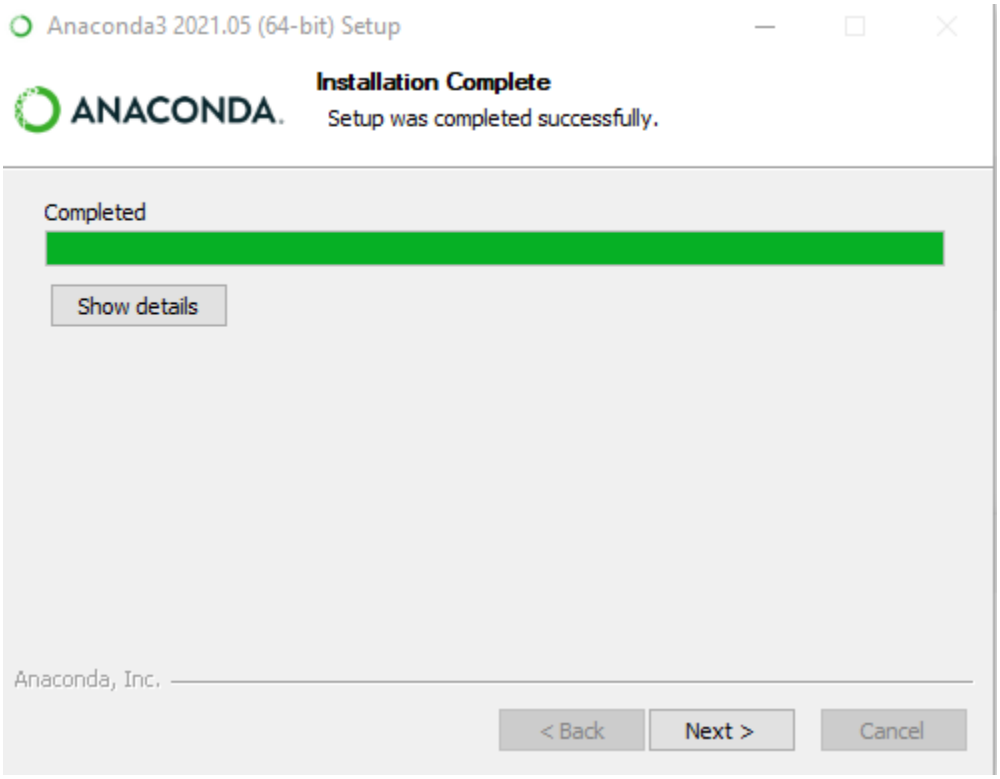
Brief details about Day 0 for Quantum Computing Workshop

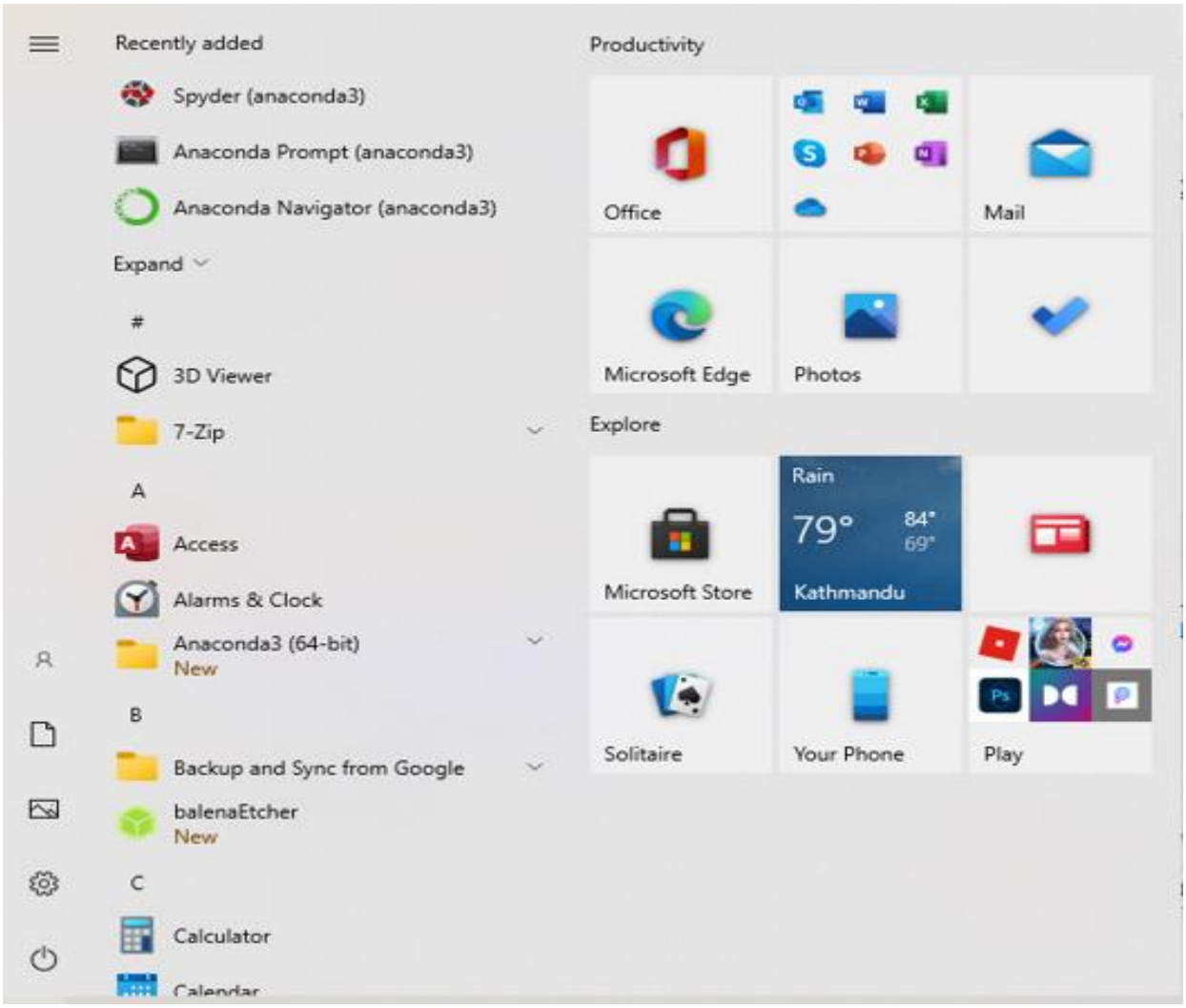
1. Downloading and Installing Anaconda

Link: https://www.anaconda.com/products/individual#Downloads:-

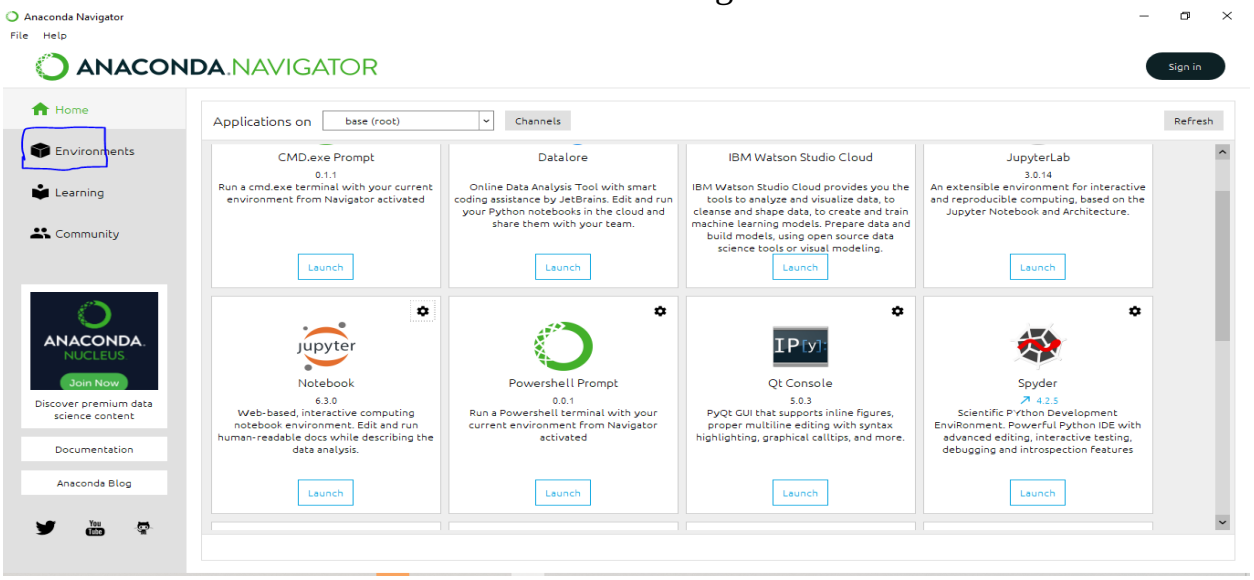
Now you will see the following page:

Choose the operating system and install the application.

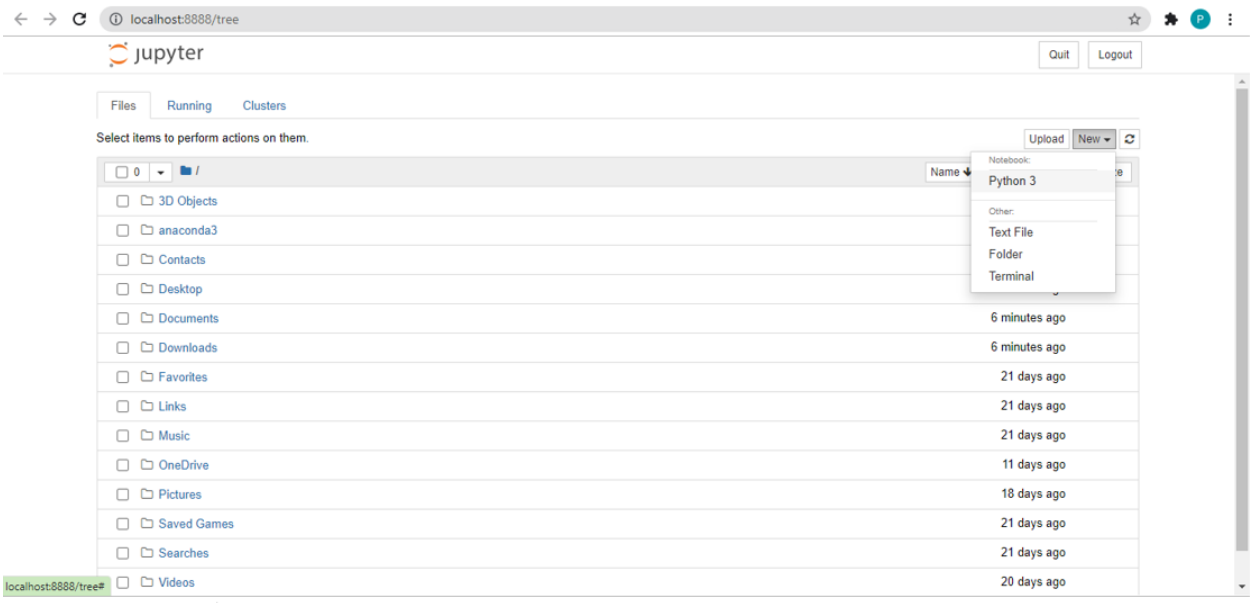



Recently added
Spyder (anaconda3)
Anaconda Prompt (anaconda3)
Anaconda Navigator (anaconda3)
Expand
#
3D Viewer
7-Zip
A
Access
Alarms & Clock
Anaconda3 (64-bit)
New
B
Backup and Sync from Google
balenaEtcher
New
C
Calculator
Productivity
Office
Mail
Microsoft Edge
Photos
Explore
Microsoft Store
Rain
79°
84°
69°
Kathmandu
Solitaire
Your Phone
Play

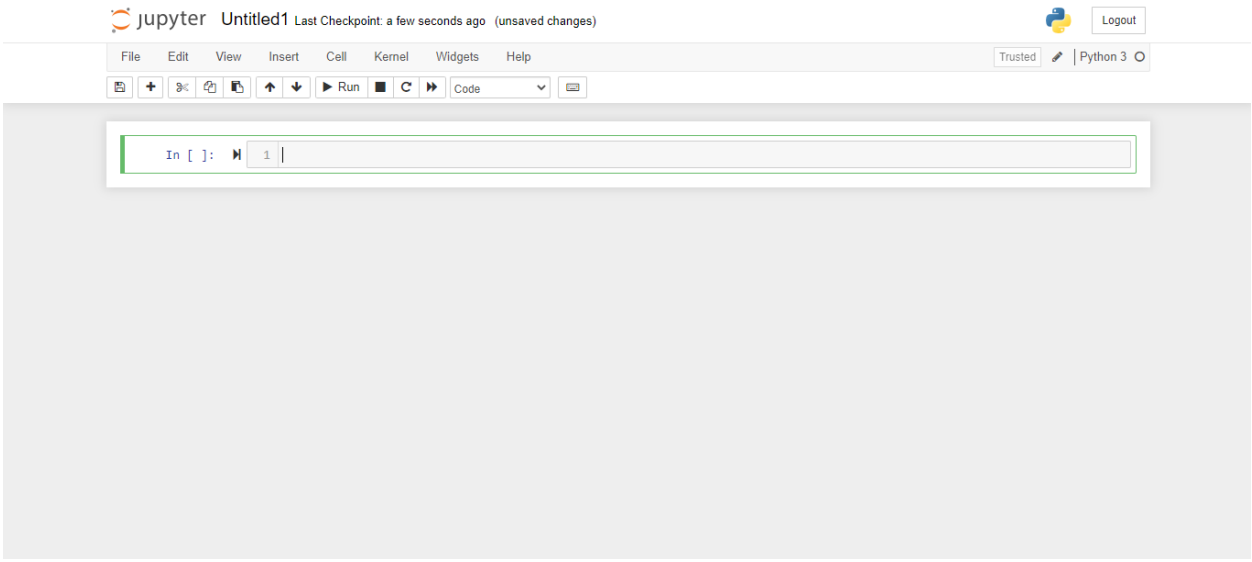
From the start menu choose the Anaconda Navigator.



The above windows will pop open. Then, to use the Jupyter notebook click on the launch.



When you click on the python 3 in the new tab, then the Jupyter notebook is opened in your default internet browser.

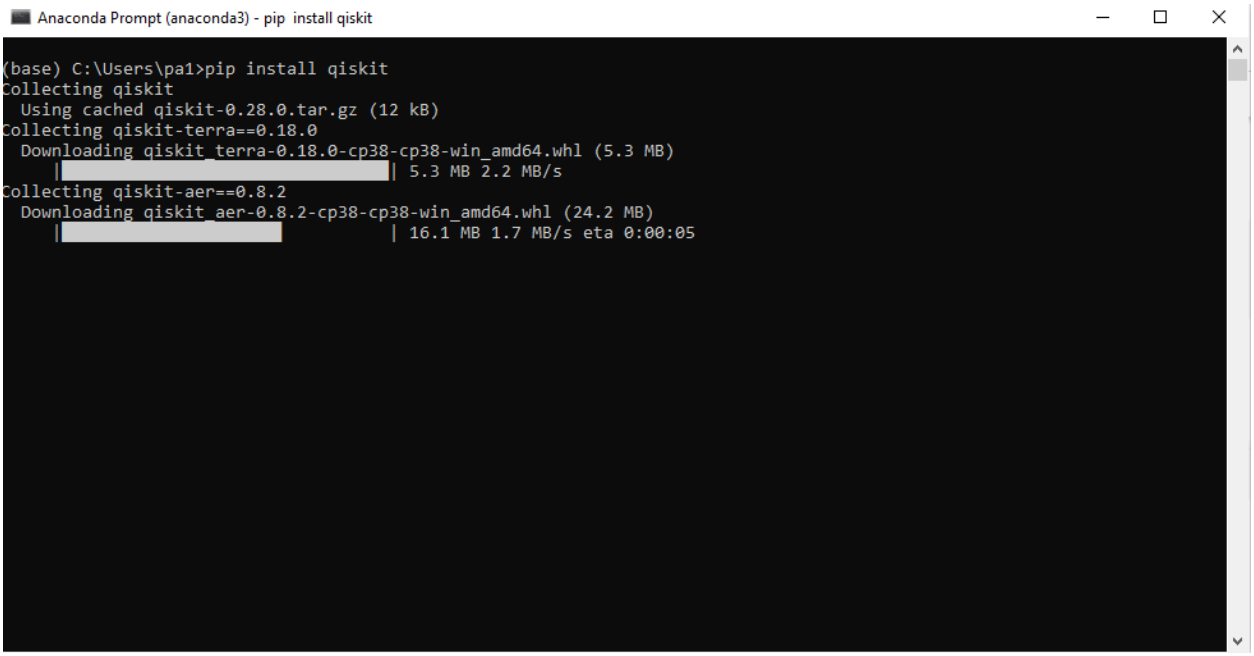


Now anaconda and Jupyter Notebook is successfully setup in your Machine.

2. Installing Qiskit using Anaconda prompt

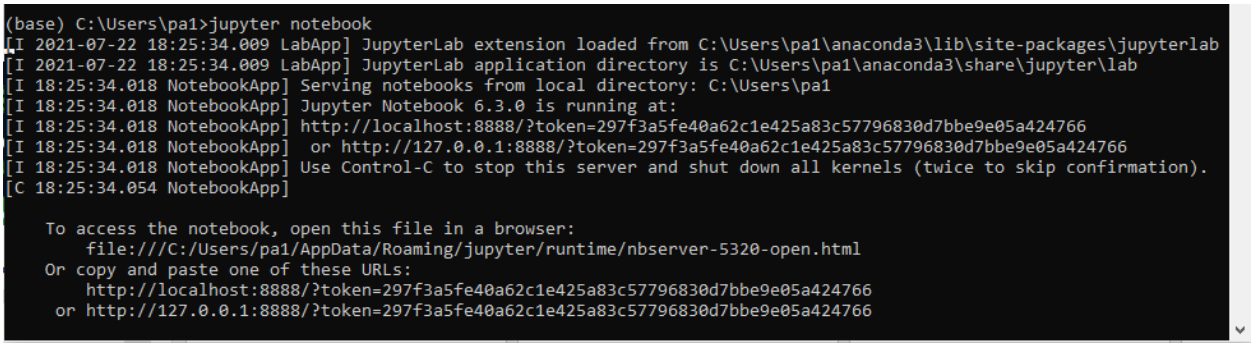
From the start menu in windows click on Anaconda prompt.

To install qiskit: *pip install qiskit*

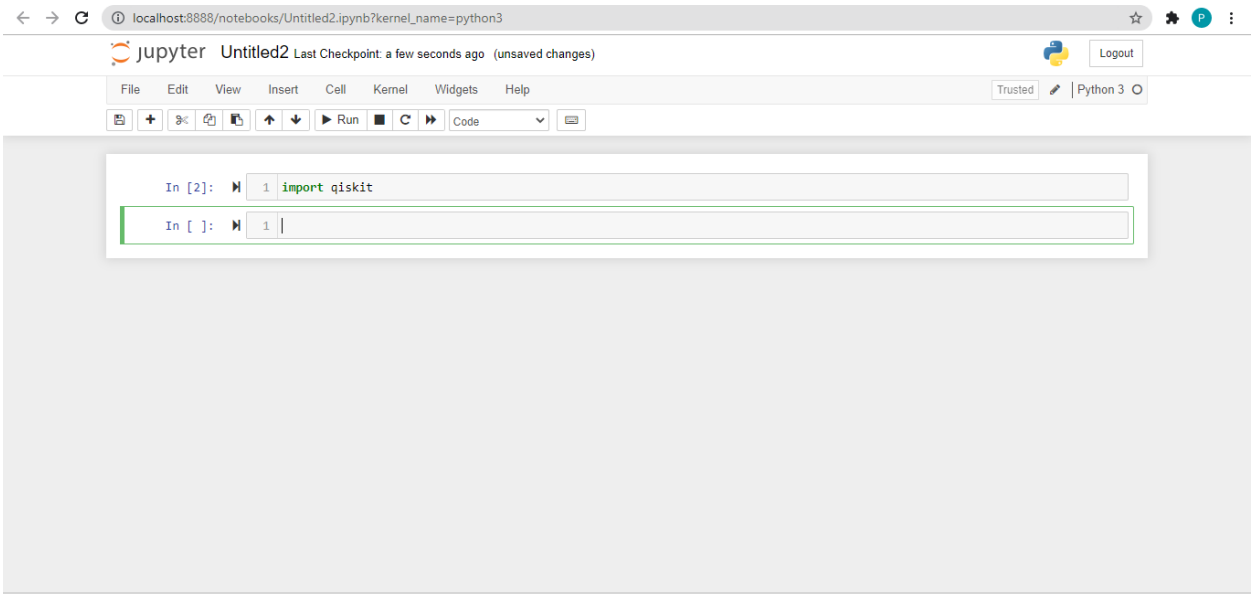


After the installation has been completed. Try to open the Jupyter notebook using the following command.

Command to open notebook: *jupyter notebook*



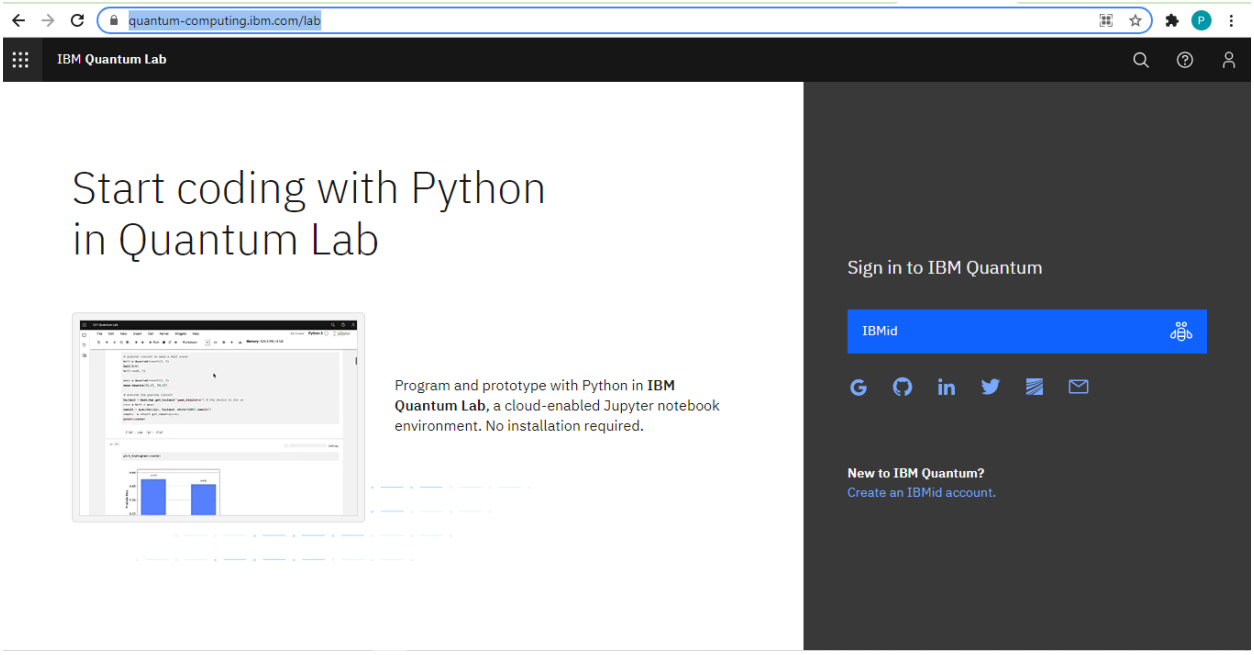
Now open a new file (python3)



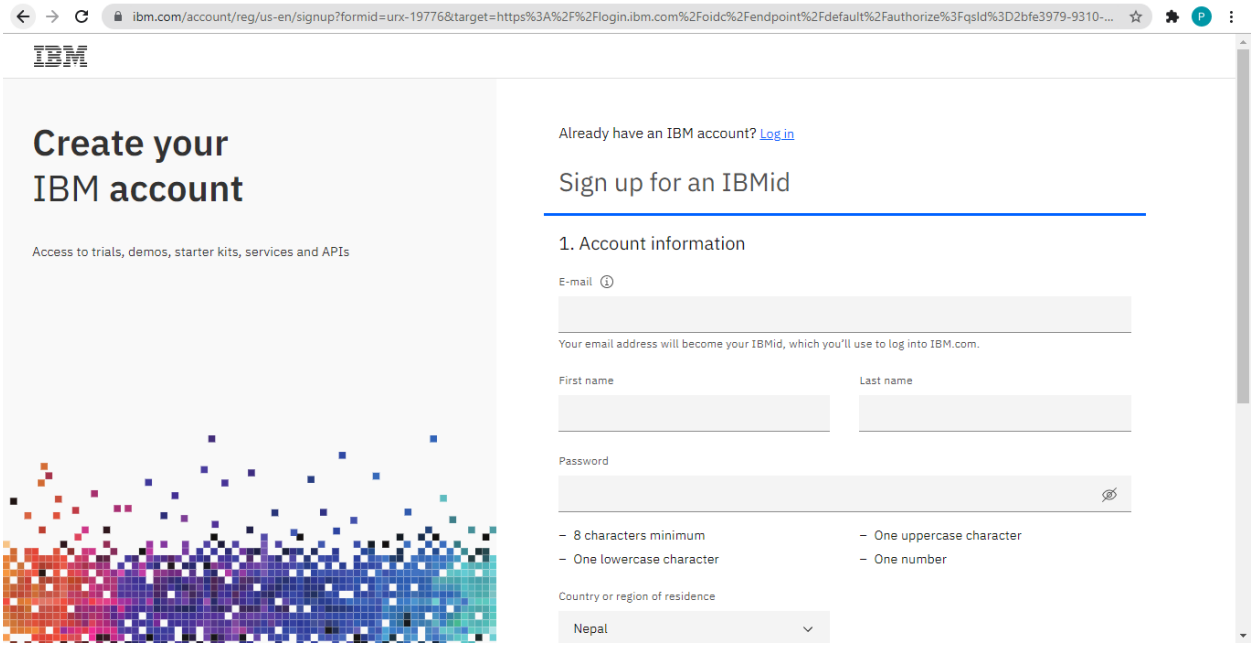
Type import qiskit and run it. If there are no problems then the qiskit has been installed successfully. (To run a cell, you can either click Run or simply use Shift+ Enter key combination in the keyword)

3. Creating the account on IBM

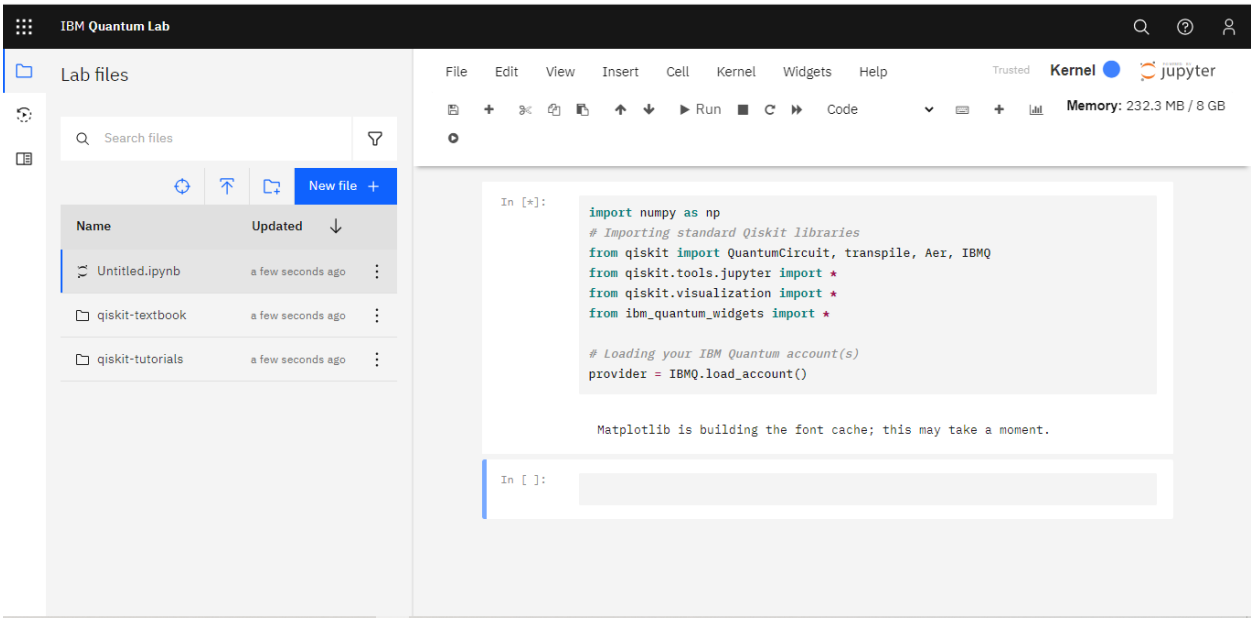
Link: https://quantum-computing.ibm.com/lab



Click on the create IMBid account



Fill it will all the required credentials. Perform the verification process where you are asked to verify the email (Check your email for the codes). After you fill all the things and verified you account. You can have access to labs.



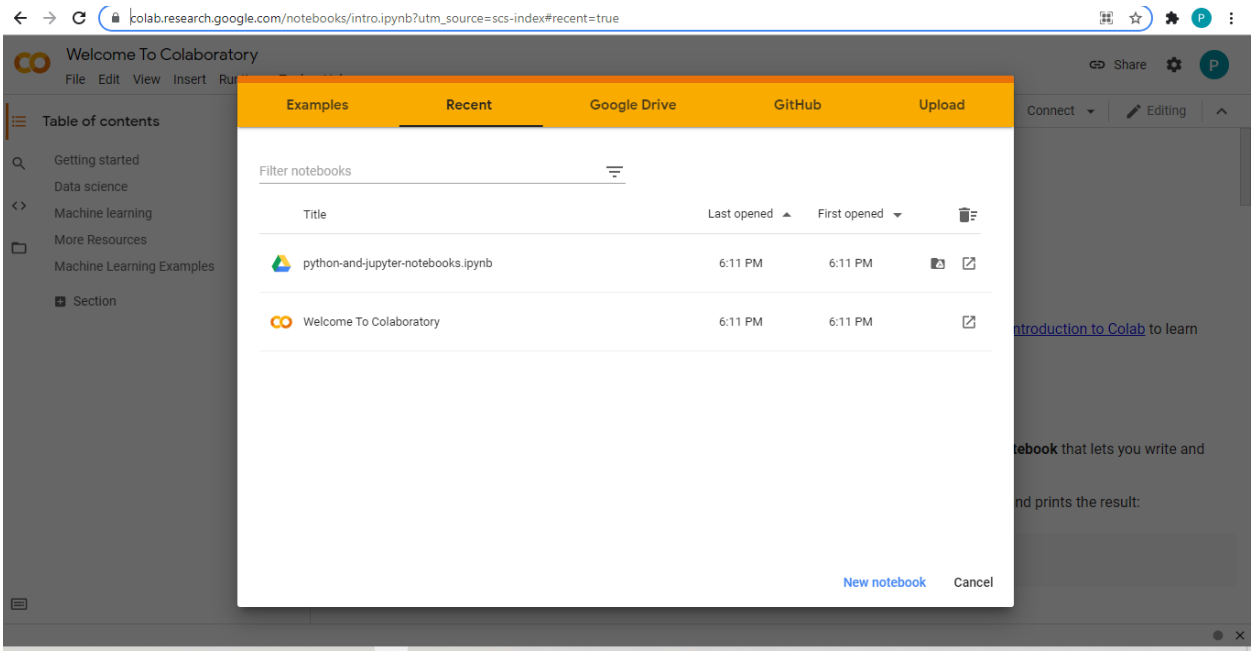
Finally, you are ready to use the Quantum Labs from the IBM.

You can use either the Juypter notebook, Google Collab or IBM Lab to run the different .ipynb files throughout the session. Also note that, Juypter notebook is a local web application and can run without the Internet, whereas Google collab and IBM Lab require internet connection. Moreover, if you are interested in Quantum Computing field, having a IBMid is a mandatory step since it allows you to run the code on an actual quantum computer provisioned by IBM. You will also need to familiarize yourself with the basic concepts of Python since we will be extensively using it throughout the workshop.

4. Using Google Collab

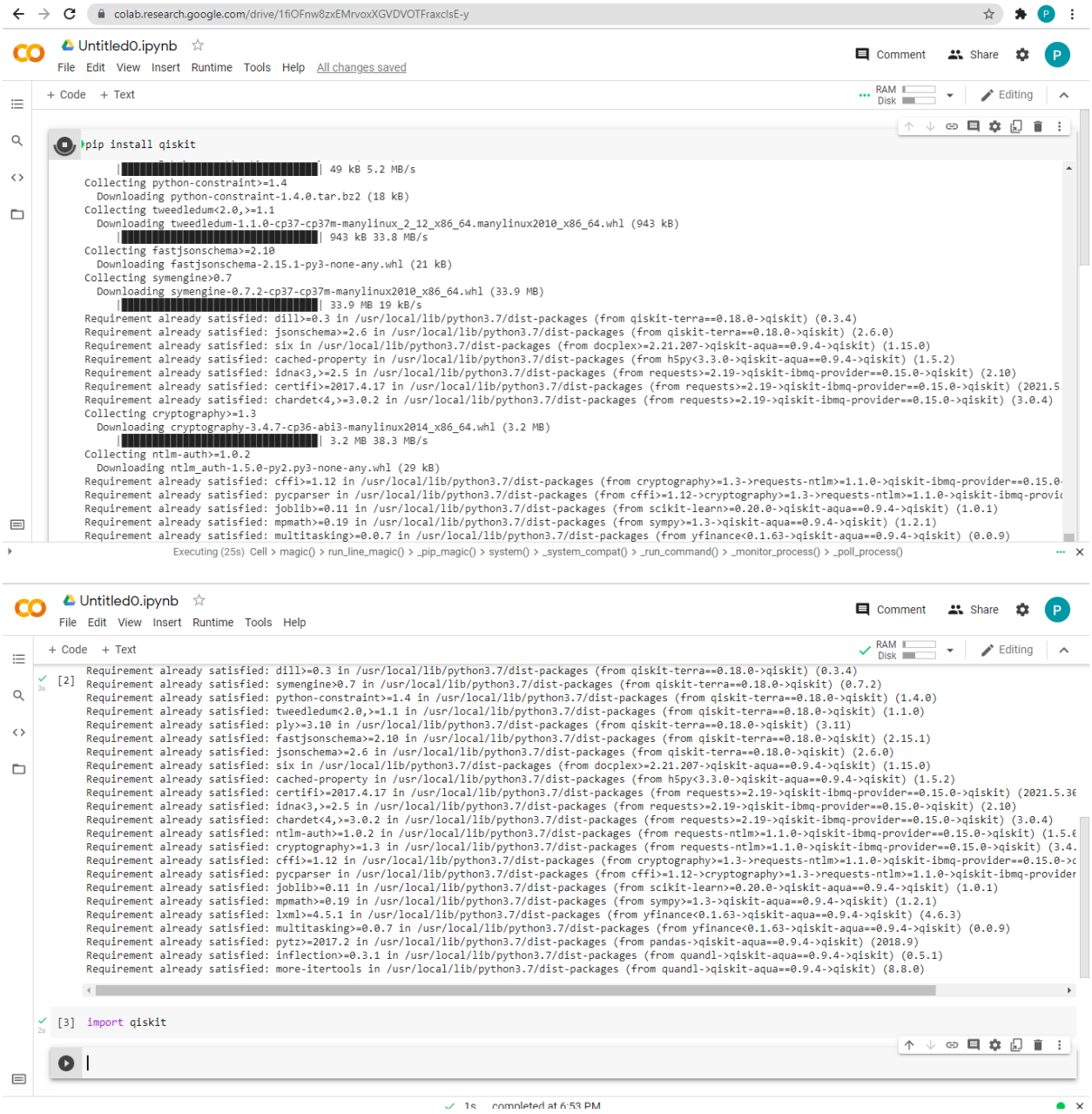
Link: https://colab.research.google.com/

You can use this site to run the ipynb files (jupyter notebook files) on the web.



You can either create a new notebook or upload the. ipynb files.

We first try to install the qiskit in the google collab using the pip which is a very handy tools to install the various python modules and libraries.



Importing the qiskit was successful.

If any problems occur during the installation, you can contact us at email or discord. We will be happy to help you on the journey ahead in this workshop.