JUPYTER NOTEBOOK INSTALLATION USING ANACONDA

Mata kuliah : **Kecerdasan Buatan**

Kelas : **H dan I**

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Asisten : **Ulfah Nur Oktaviana**

PENGANTAR

1. Apa itu Jupyter Notebook

Jupyter (https://jupyter.org/) adalah organisasi non-profit untuk mengembangkan software interaktif dalam berbagai Bahasa pemrograman. Notebook adalah alah satu software buatan Jupyter.

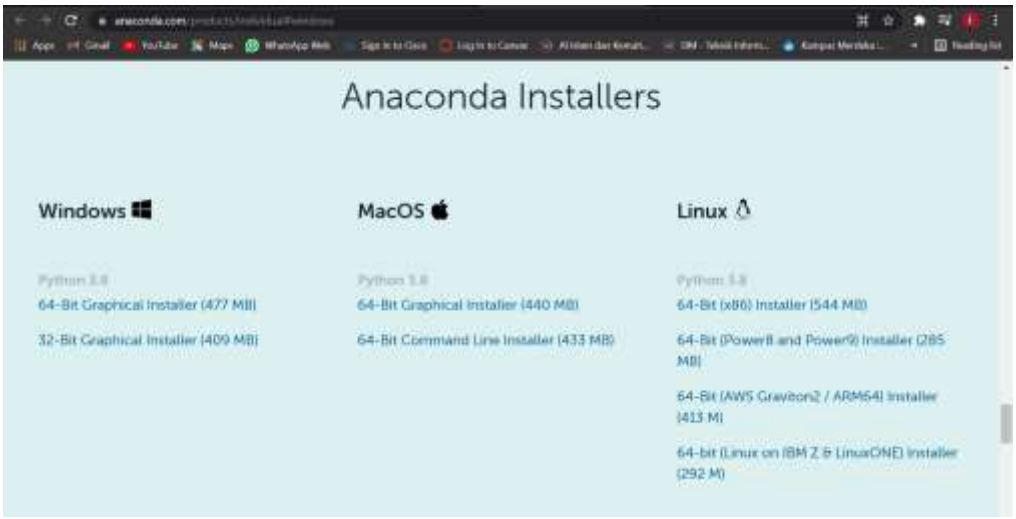
Jupyter Notebook adalah aplikasi web open-source yang memungkinkan anda untuk membuat dan membagi dokumen yang berisi live code, equations, visualizations dan text naratif. Penggunaannya meliputi : data cleansing and transformation, numerical simulation, statistical modelling, data visualization, machine learning, and much more.

2. Lalu apa manfaat Jupyter Notebook ?

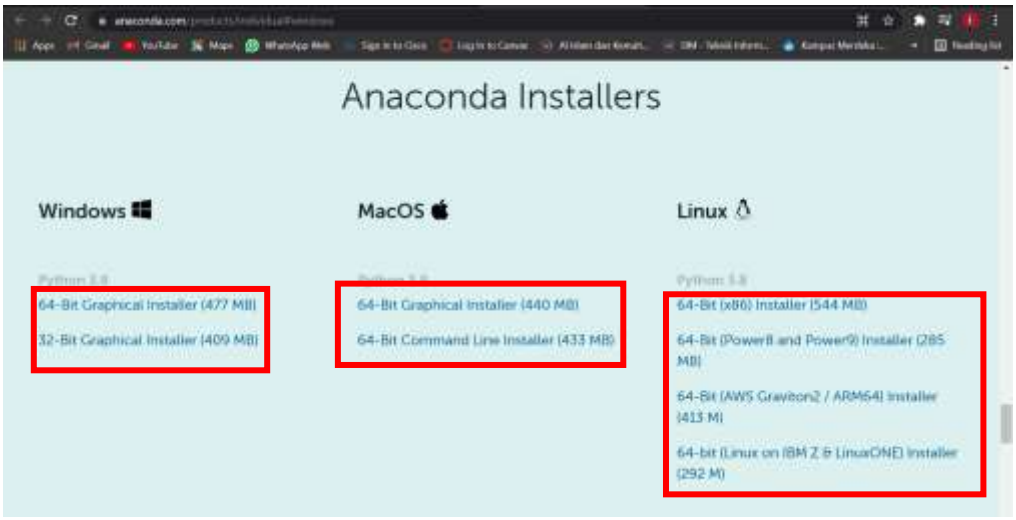
a. Visualisasi Data
b. Memungkinkan untuk berbagi kode
c. Dapat melakukan interaksi langsung dengan kode
d. Dapat mendokumentasikan kode.

INSTALASI JUPYTER NOTEBOOK MENGGUNAKAN ANACONDA

1. **Step 1 : Download dan Install Anaconda**
   - Buka website https://www.anaconda.com/ scroll kebawah hingga menemukan tampilan sebagai berikut

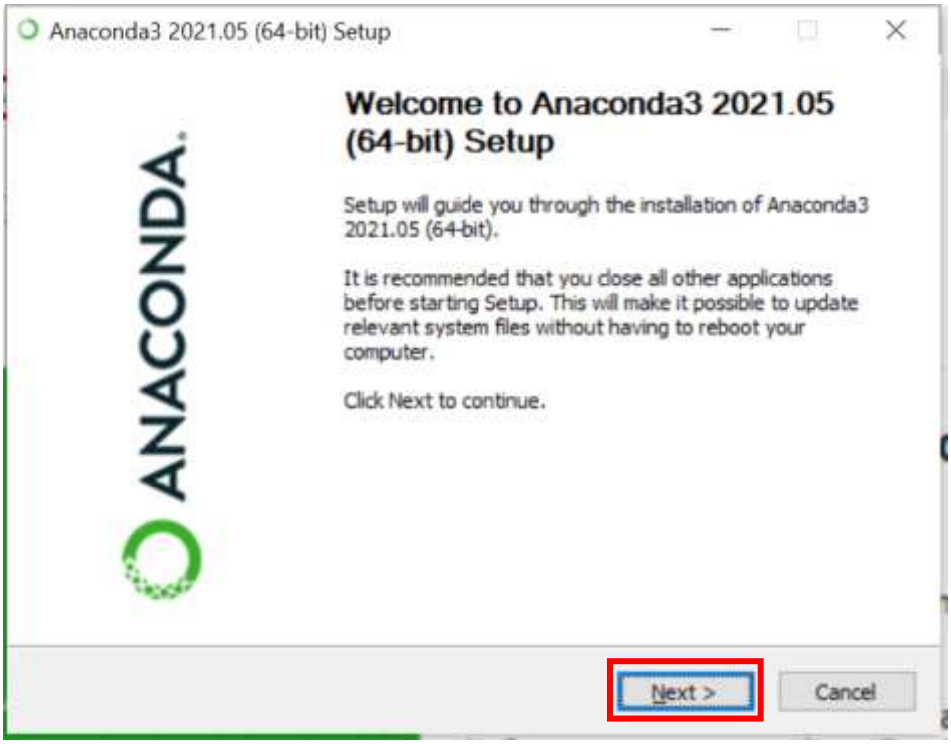


   - Download file anaconda sesuai dengan system operasi yang anda gunakan.

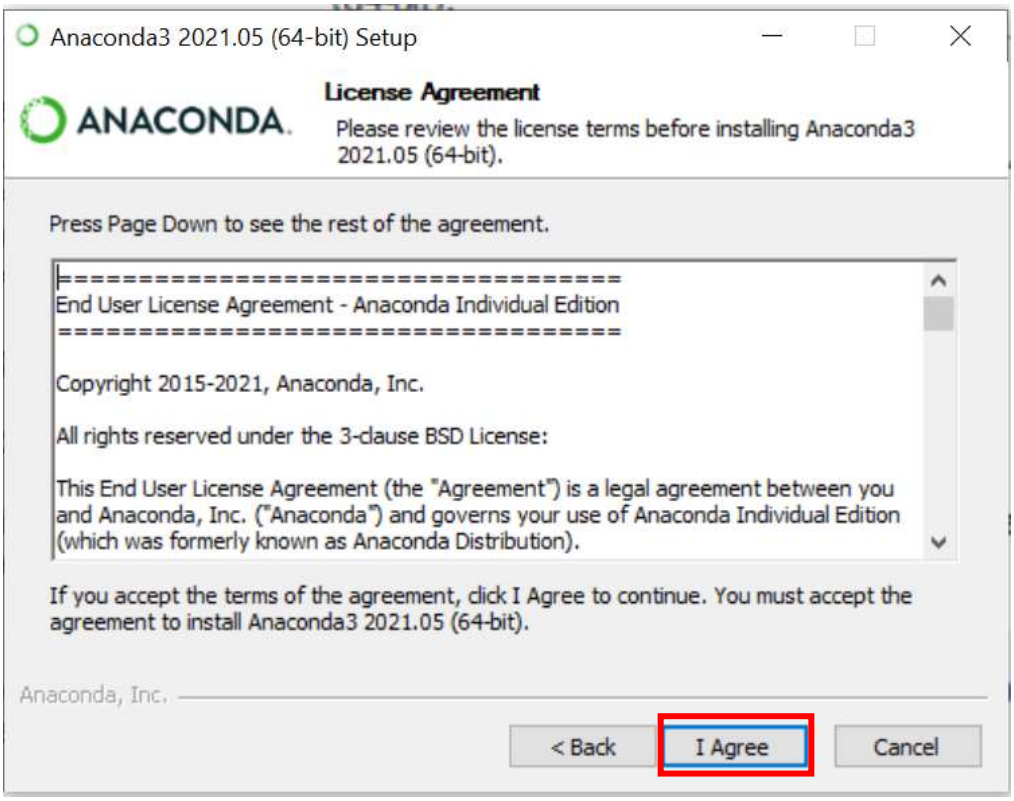


   - Klik 2 kali File anaconda.exe yang sudah berhasil di download

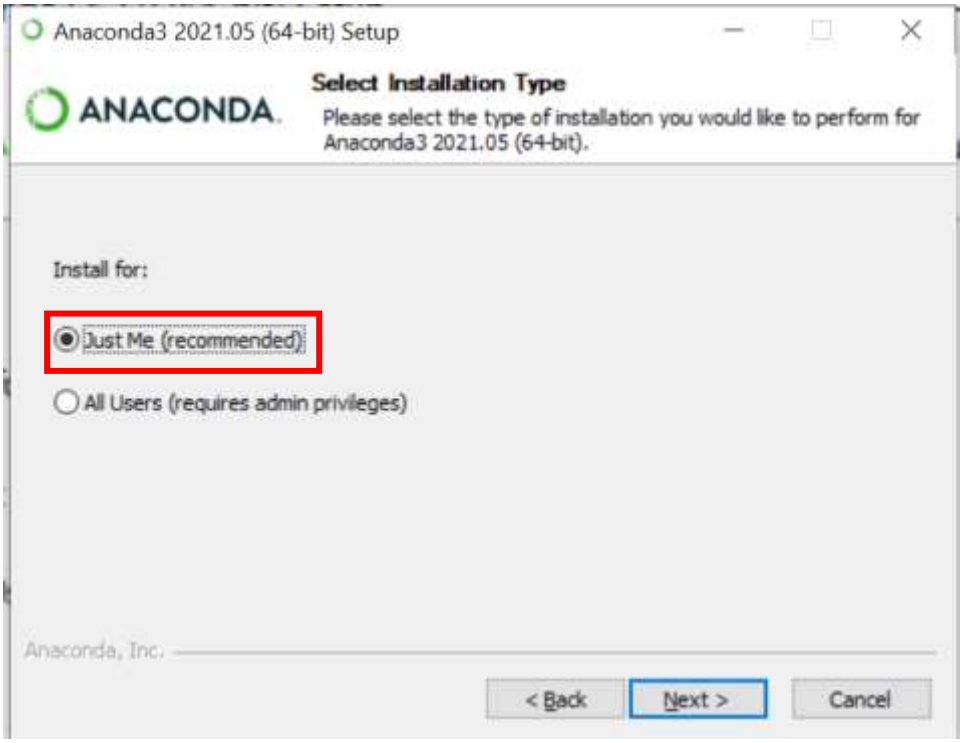
- Klik next seperti pada tampilan dibawah



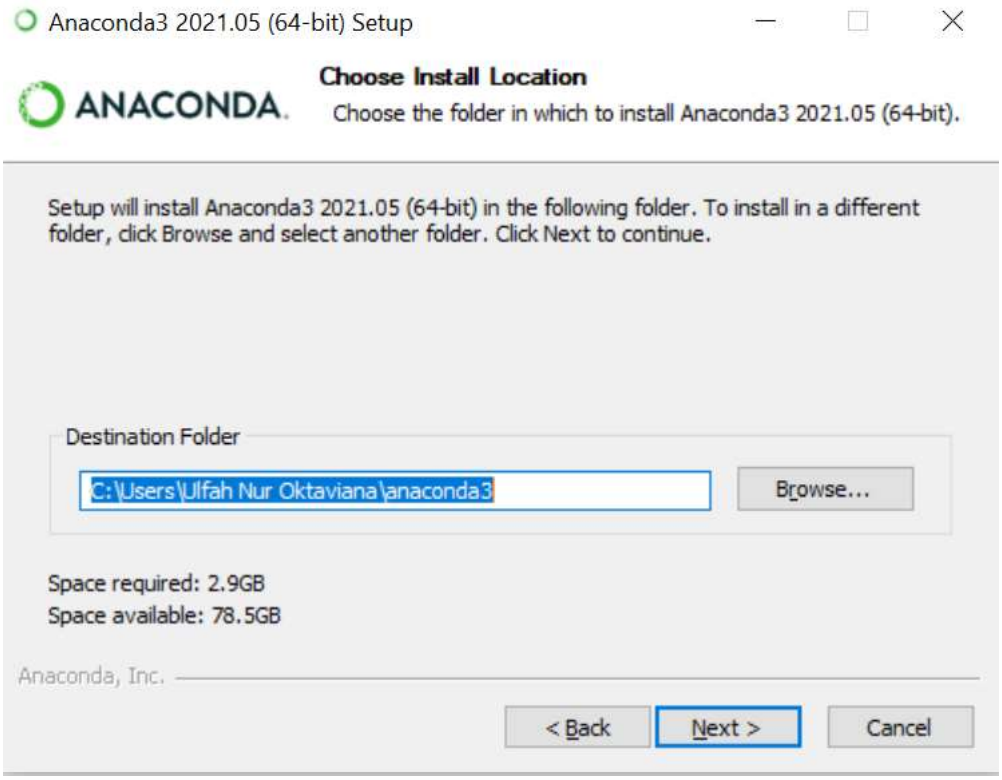
- Klik tombol **I Agree**



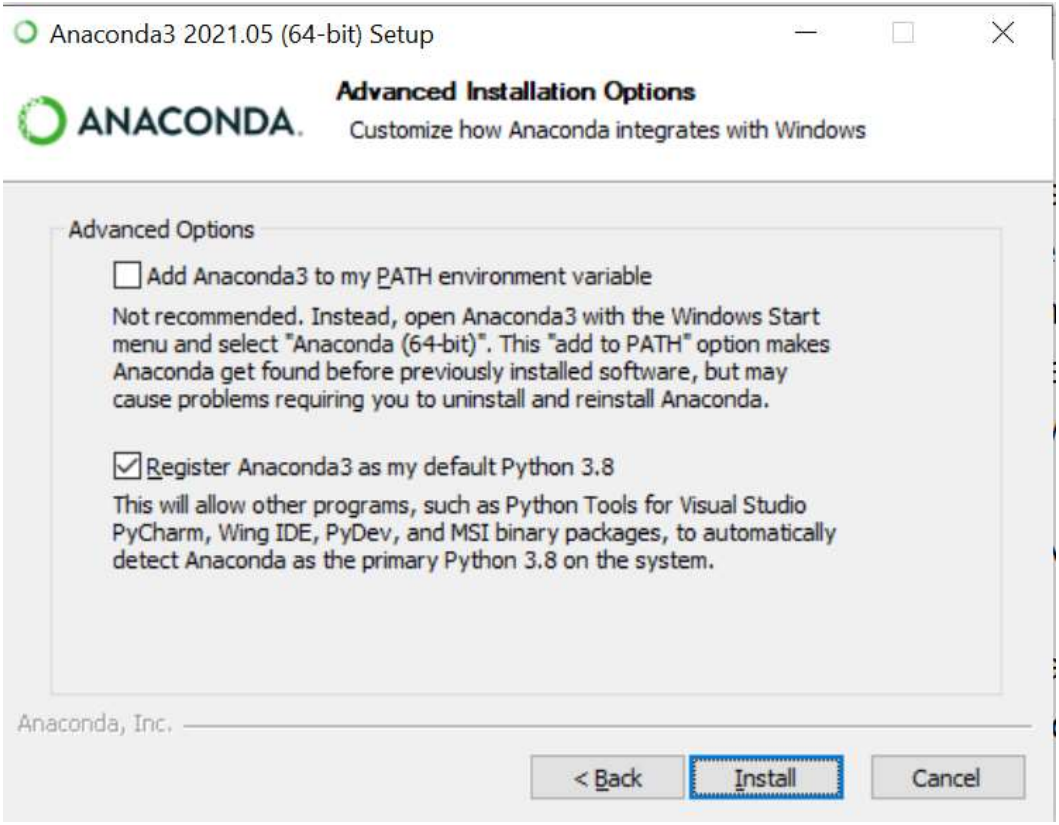
- Kemudian, pilih **Just Me** and Click on **Next**



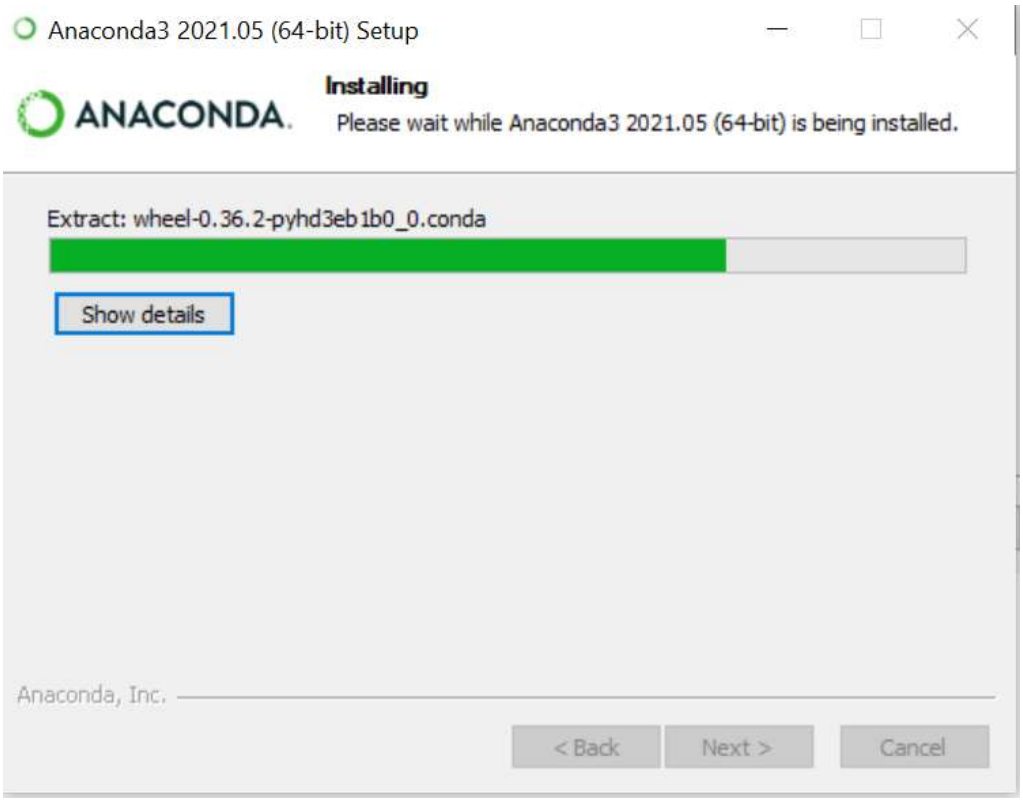
- Pilih Lokasi Intalasi dan klik **Next**



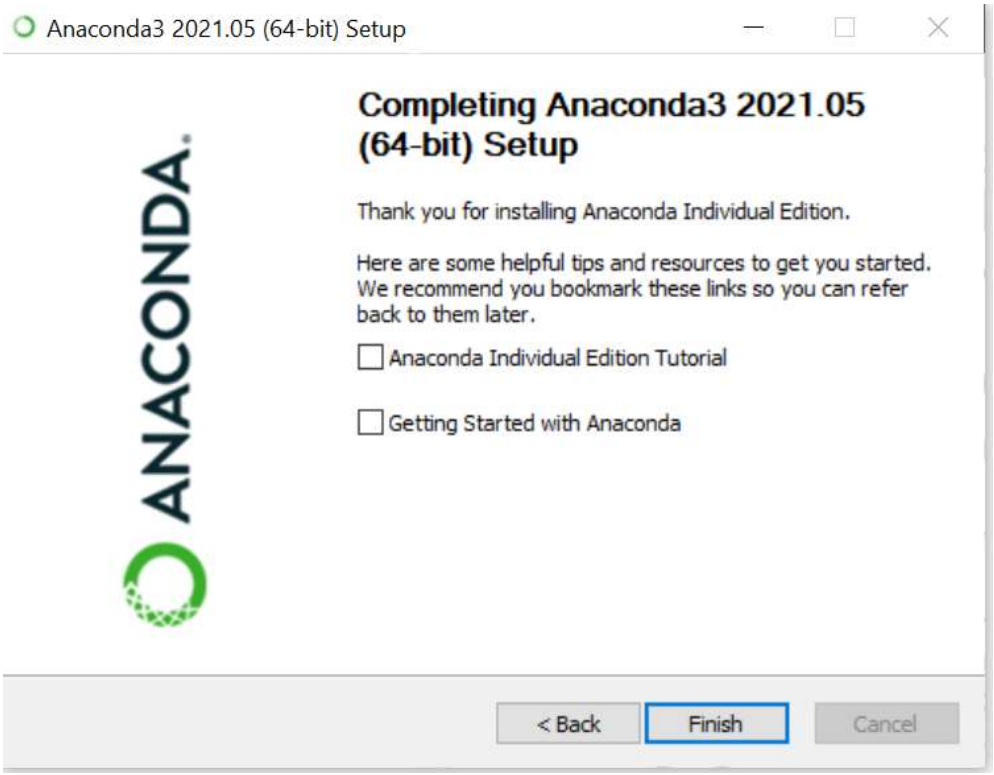
- Pada opsi Advanced Options Pilih “Register Andaconda3 as my default python 3.8”



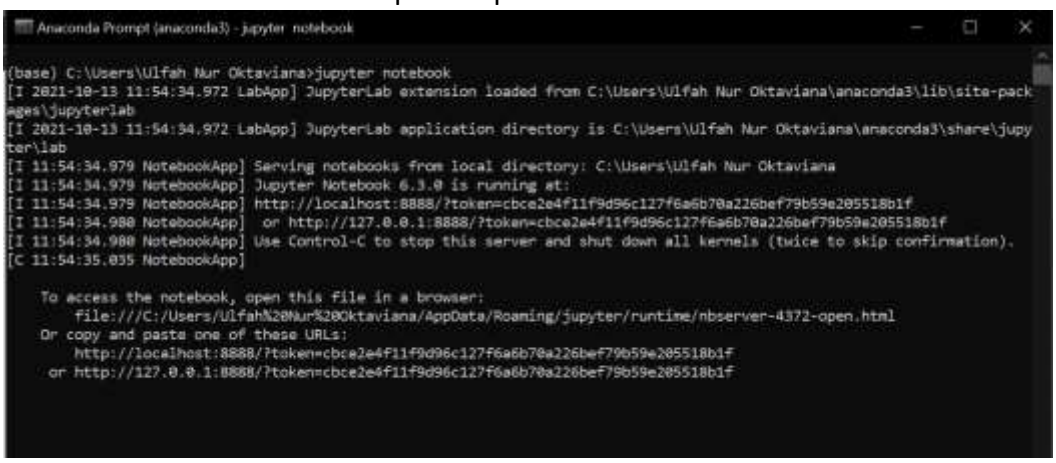
- Tunggu instalasi berjalan hingga selesai



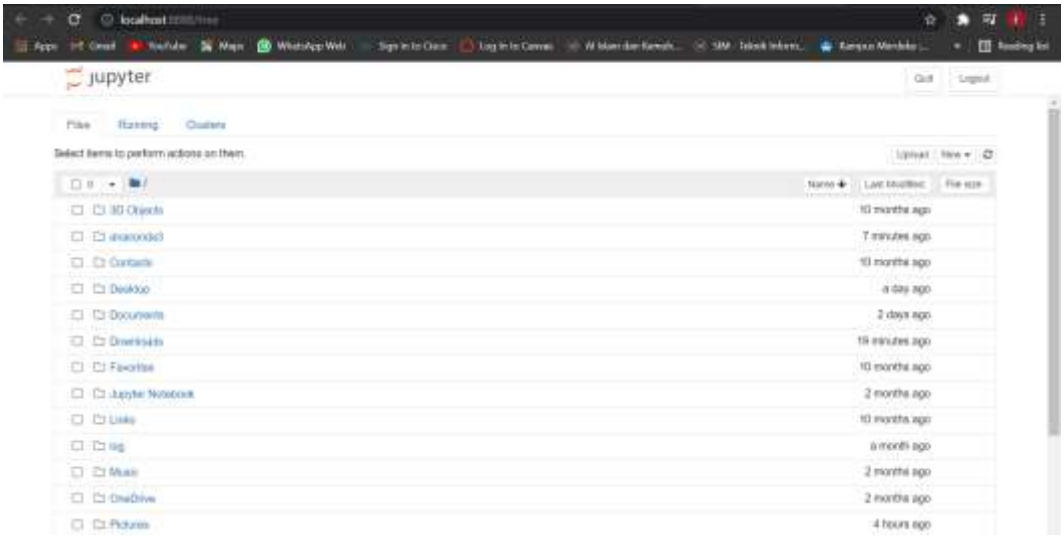
- Tahap terakhir Klik Finish dan instalasi Anaconda telah berhasil



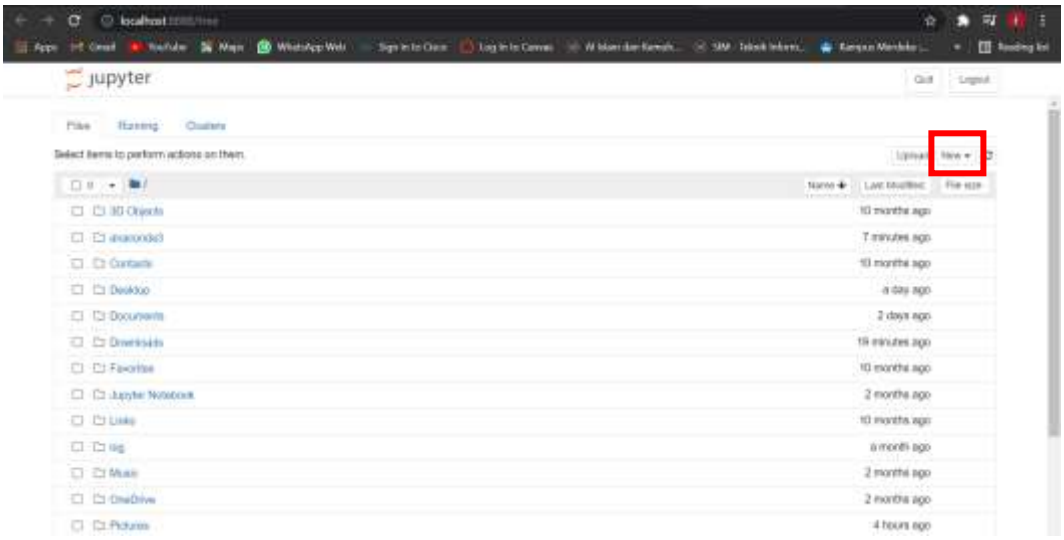
2. **Step 2 : Membuka Jupyter Notebook menggunakan Anaconda Promp**
   - Klik windows dan search “Anaconda Promp” lalu ketikkan “jupyter notebook”, maka akan memunculkan tampilan seperti dibawah ini :



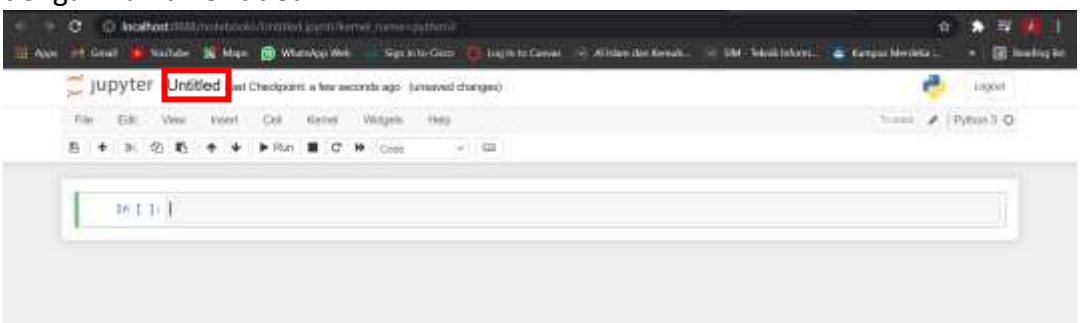
- Ketika tperintah terminal berjalan, jupyter notebook akan terbuka pada local host pada browser.



3. **Step 3 : Membuat file di anaconda**
   - Pilih tombol New pada halaman kanan atas dan pilih “Python 3”

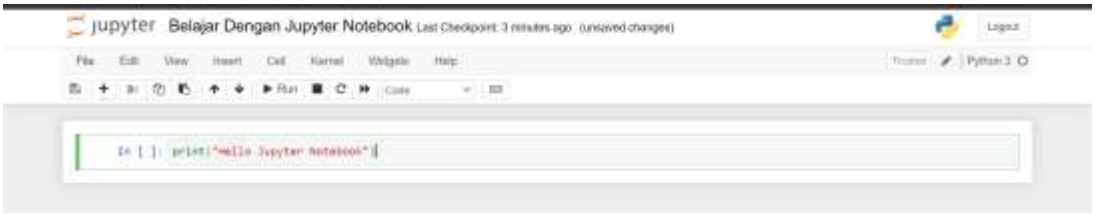


   - Setelah file Notebook berhasil dibuat, rename sesuai keinginan pada tulisan dengan nama “Untitled”.

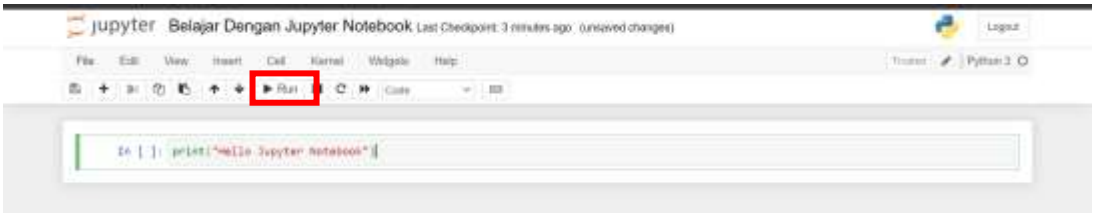


- Ganti nama file lalu klik **Rename**

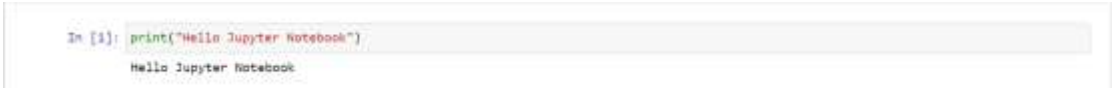
4. **Step 4 : Lets'Code with Jupyter Notebook**
   - Tulis code pada window code



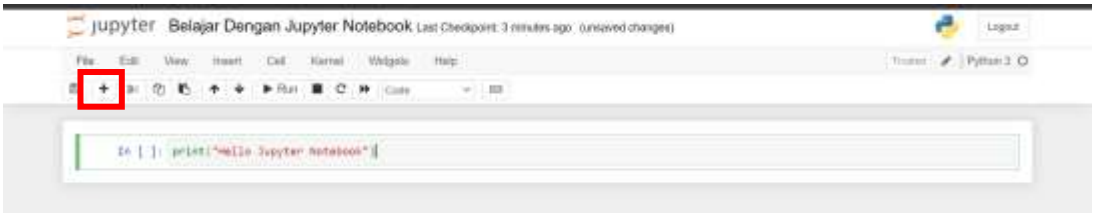
   - Untuk menjalankan tekan tombol **Run** pada bagian atas.



   - Output dari eksekusi code akan tampil dibawah window code.



   - Untuk menambahkan window code tekan tombol **+ (plus)**



5. Step 5 : Install Library yang dibutuhkan

Note : Didalam jupyter notebook tidak banyak disediakan library yang sudah terinclude. Salah satu cara menggunakan library yaitu menginstall terlebih dahulu dengan menggunakan perintah “!pip install (nama library)”. Namun, penginstalan library dapat dilakukan dengan menggunakan anaconda. Lihat link berikut untuk lebih lengkapnya (https://docs.anaconda.com/anaconda/navigator/tutorials/pandas/).

- Install Pandas

```
In [2]: !pip install pandas

        Requirement already satisfied: pandas in c:\users\ulfah nur oktaviana\anaconda3\lib\site-packages (1.2.4)
        Requirement already satisfied: pytz>=2017.3 in c:\users\ulfah nur oktaviana\anaconda3\lib\site-packages (from pandas) (2021.1)
        Requirement already satisfied: numpy>=1.16.5 in c:\users\ulfah nur oktaviana\anaconda3\lib\site-packages (from pandas) (1.20.1)
        Requirement already satisfied: python-dateutil>=2.7.3 in c:\users\ulfah nur oktaviana\anaconda3\lib\site-packages (from pandas)
        (2.8.1)
        Requirement already satisfied: six>=1.5 in c:\users\ulfah nur oktaviana\anaconda3\lib\site-packages (from python-dateutil>=2.7.
        3->pandas) (1.15.0)

In [3]: import pandas as pd

In [5]: print(pd.__version__)

        1.2.4
```

- Numpy

```
In [6]: !pip install numpy

        Requirement already satisfied: numpy in c:\users\ulfah nur oktaviana\anaconda3\lib\site-packages (1.20.1)

In [8]: import numpy as np

In [9]: print(np.__version__)

        1.20.1
```

- Scipy

```
In [10]: !pip install scipy

         Requirement already satisfied: scipy in c:\users\ulfah nur oktaviana\anaconda3\lib\site-packages (1.6.2)
         Requirement already satisfied: numpy<1.23.0,>=1.16.5 in c:\users\ulfah nur oktaviana\anaconda3\lib\site-packages (from scipy)
         (1.20.1)

In [15]: import scipy as sys

In [16]: print(sys.__version__)

         1.6.2
```

- Matplotlib

```
In [17]: !pip install matplotlib

         Requirement already satisfied: matplotlib in c:\users\ulfah nur oktaviana\anaconda3\lib\site-packages (3.3.4)
         Requirement already satisfied: kiwisolver>=1.0.1 in c:\users\ulfah nur oktaviana\anaconda3\lib\site-packages (from matplotlib)
         (1.3.1)
         Requirement already satisfied: pillow>=6.2.0 in c:\users\ulfah nur oktaviana\anaconda3\lib\site-packages (from matplotlib) (8.
         2.0)
         Requirement already satisfied: numpy>=1.15 in c:\users\ulfah nur oktaviana\anaconda3\lib\site-packages (from matplotlib) (1.20.
         1)
         Requirement already satisfied: cycler>=0.10 in c:\users\ulfah nur oktaviana\anaconda3\lib\site-packages (from matplotlib) (0.1
         0.0)
         Requirement already satisfied: python-dateutil>=2.1 in c:\users\ulfah nur oktaviana\anaconda3\lib\site-packages (from matplotli
         b) (2.8.1)
         Requirement already satisfied: pyparsing!=2.0.4,!=2.1.2,!=2.1.6,>=2.0.3 in c:\users\ulfah nur oktaviana\anaconda3\lib\site-pack
         ages (from matplotlib) (2.4.7)
         Requirement already satisfied: six in c:\users\ulfah nur oktaviana\anaconda3\lib\site-packages (from cycler>=0.10->matplotlib)
         (1.15.0)

In [18]: import matplotlib as plt

In [27]: print(plt.__version__)

         3.3.4
```

- Seaborn

```
In [20]: !pip install seaborn

         Requirement already satisfied: seaborn in c:\users\ulfah nur oktaviana\anaconda3\lib\site-packages (0.11.1)
         Requirement already satisfied: numpy>=1.15 in c:\users\ulfah nur oktaviana\anaconda3\lib\site-packages (from seaborn) (1.20.1)
         Requirement already satisfied: scipy>=1.0 in c:\users\ulfah nur oktaviana\anaconda3\lib\site-packages (from seaborn) (1.6.2)
         Requirement already satisfied: matplotlib>=2.2 in c:\users\ulfah nur oktaviana\anaconda3\lib\site-packages (from seaborn) (3.3.
         4)
         Requirement already satisfied: pandas>=0.23 in c:\users\ulfah nur oktaviana\anaconda3\lib\site-packages (from seaborn) (1.2.4)
         Requirement already satisfied: python-dateutil>=2.1 in c:\users\ulfah nur oktaviana\anaconda3\lib\site-packages (from matplotli
         b>=2.2->seaborn) (2.8.1)
         Requirement already satisfied: kiwisolver>=1.0.1 in c:\users\ulfah nur oktaviana\anaconda3\lib\site-packages (from matplotlib>=
         3.2->seaborn) (1.3.1)
         Requirement already satisfied: pillow>=6.2.0 in c:\users\ulfah nur oktaviana\anaconda3\lib\site-packages (from matplotlib>=3.2-
         >seaborn) (8.2.0)
         Requirement already satisfied: pyparsing!=2.0.4,!=2.1.2,!=2.1.6,>=2.0.3 in c:\users\ulfah nur oktaviana\anaconda3\lib\site-pack
         ages (from matplotlib>=2.2->seaborn) (2.4.7)
         Requirement already satisfied: cycler>=0.10 in c:\users\ulfah nur oktaviana\anaconda3\lib\site-packages (from matplotlib>=2.2->
         seaborn) (0.10.0)
         Requirement already satisfied: six in c:\users\ulfah nur oktaviana\anaconda3\lib\site-packages (from cycler>=0.10->matplotlib>=
         2.2->seaborn) (1.15.0)
         Requirement already satisfied: pytz>=2017.3 in c:\users\ulfah nur oktaviana\anaconda3\lib\site-packages (from pandas>=0.23->sea
         born) (2021.1)

In [21]: import seaborn as sns

In [22]: print(sns.__version__)

         0.11.1
```

- Sklearn

```
In [28]: !pip install sklearn

         Collecting sklearn
           Using cached sklearn-0.0.tar.gz (1.1 kB)
         Requirement already satisfied: scikit-learn in c:\users\ulfah nur oktaviana\anaconda3\lib\site-packages (from sklearn) (0.24.1)
         Requirement already satisfied: scipy>=0.19.1 in c:\users\ulfah nur oktaviana\anaconda3\lib\site-packages (from scikit-learn->sk
         learn) (1.6.2)
         Requirement already satisfied: threadpoolctl>=2.0.0 in c:\users\ulfah nur oktaviana\anaconda3\lib\site-packages (from scikit-le
         arn->sklearn) (2.1.0)
         Requirement already satisfied: numpy>=1.13.3 in c:\users\ulfah nur oktaviana\anaconda3\lib\site-packages (from scikit-learn->sk
         learn) (1.20.1)
         Requirement already satisfied: joblib>=0.11 in c:\users\ulfah nur oktaviana\anaconda3\lib\site-packages (from scikit-learn->skl
         earn) (1.0.1)
         Building wheels for collected packages: sklearn
           Building wheel for sklearn (setup.py): started
           Building wheel for sklearn (setup.py): finished with status 'done'
           Created wheel for sklearn: filename=sklearn-0.0-py2.py3-none-any.whl size=1316 sha256=08882acddcc73b5f1aec6fd2e882e99b4bfdf5e
         5410441b5865dc54acd9a491f
           Stored in directory: c:\users\ulfah nur oktaviana\appdata\local\pip\cache\wheels\22\86\48\fd3f795caaaafb4c6cb7386c1f98188ba1a
         573a96bddfc8b7
         Successfully built sklearn
         Installing collected packages: sklearn
         Successfully installed sklearn-0.0

In [29]: from sklearn import svm

In [32]: from sklearn import datasets
```