Lab 1

Objective: of this lab Manual is to get hands on experience with the tool used for Artificial Intelligence for this course we will be working on Anaconda.

Background: Students should know the basics of python and use of computers.

Assessment tools: The assessment is according to the student participation in the lab.

Introduction to AI and Its Application Using Python

Python is widely used for artificial intelligence, with packages for a number of applications including General AI, Machine Learning, Natural Language Processing and Neural Networks. Haskell is also a very good programming language for AI. Python is a general-purpose interpreted, interactive, object-oriented, and high-level programming language.

Python is Interpreted− Python is processed at run time by the interpreter. You do not need to compile your program before executing it. This is similar to PERL and PHP.

Python is Interactive − you can actually sit at a Python prompt and interact with the interpreter directly to write your programs.

Python is Object-Oriented − Python supports Object-Oriented style or technique of programming that encapsulates code within objects.

Python is a Beginner's Language − Python is a great language for the beginner-level programmers and supports the development of a wide range of applications from simple text processing to WWW browsers to games.

A Python program is read by a parser. Python was designed to be a highly readable language. The syntax of the Python programming language is the set of rules which defines how a Python program will be written.

IDE: Multiple Options available for example VSCode, jupyter notebook, spyder

anaconda–An Introduction:

Anaconda offers the easiest way to perform Python machine learning on a single machine. Start working with thousands of open-source packages and libraries today.

Learn more at https://www.anaconda.com/

Now we will start Installing anaconda in Windows

Download the Anaconda installer.

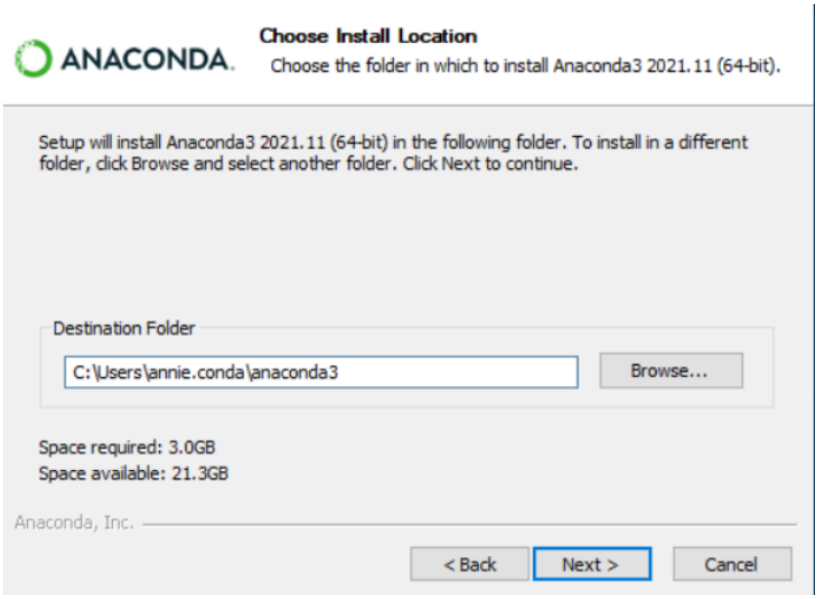
https://repo.anaconda.com/archive/Anaconda3-2022.05-Windows-x86_64.exe

Step1: Read the licensing terms and click I Agree.

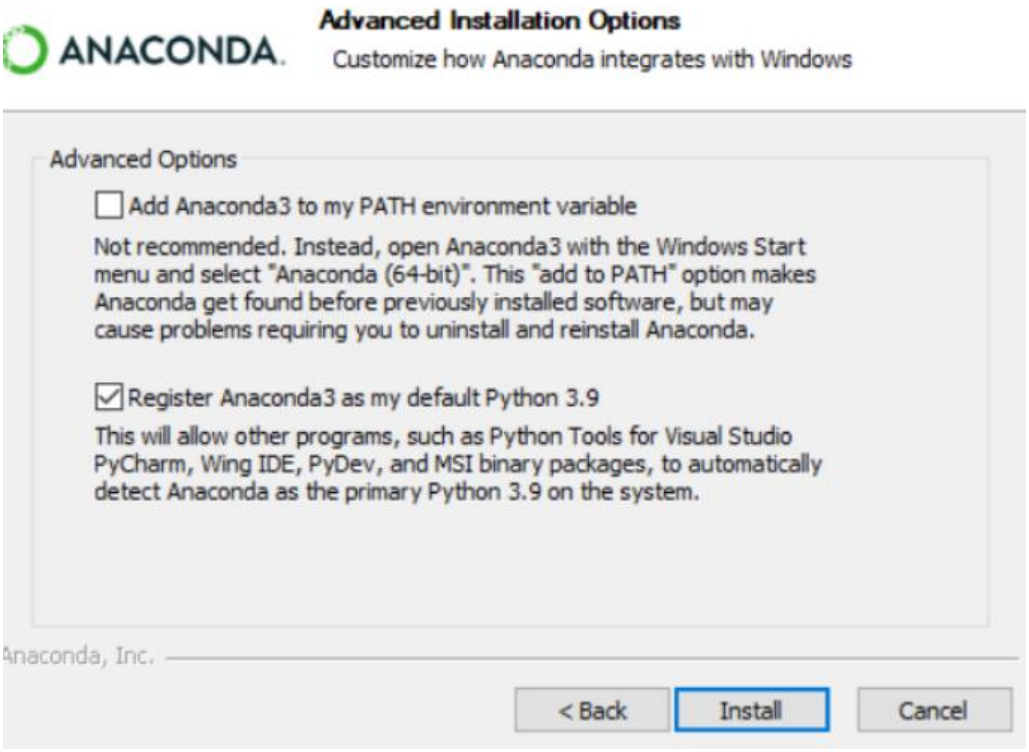
Step 2: It is recommended that you install for Just Me

Step 3: Click Next.

Step4: Select a destination folder to install Anaconda and click Next.



Step6: choose to add Anaconda to your PATH environment variable or register Anaconda as your default Python. Check both options



Step 7: Click Install. If you want to watch the packages Anaconda is installing, click Show Details.

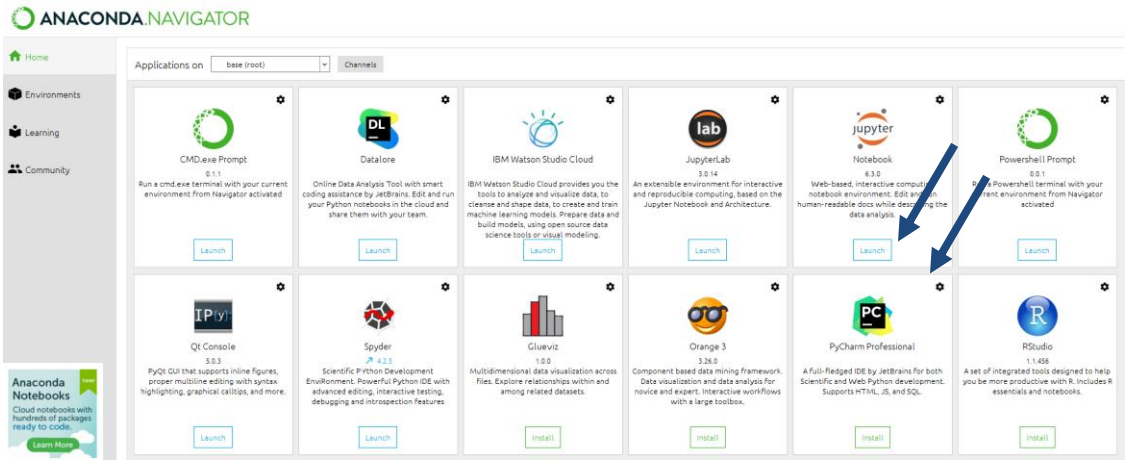
Step 8:Click Next.

Optional: To install Dataspell for Anaconda, click https://www.anaconda.com/dataspell.

Step 9: click Next.

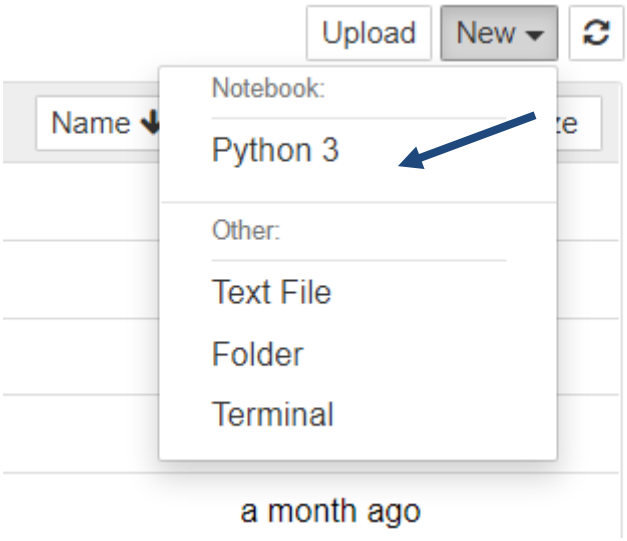
After a successful installation you will see the “Thanks for installing Anaconda” dialog box:
Step 10: Click the Finish button.

Anaconda Navigator:

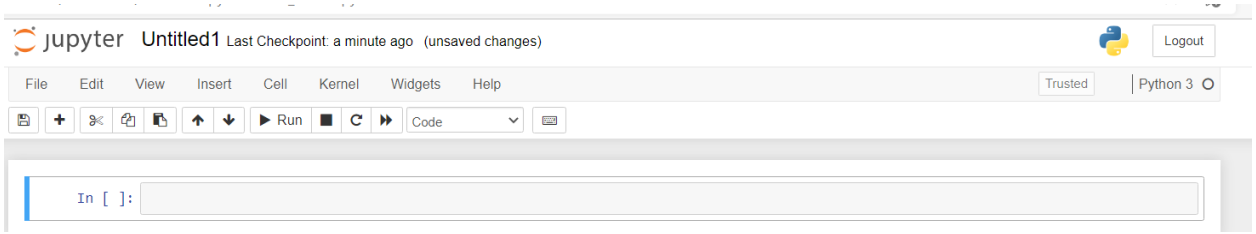


Click on launch

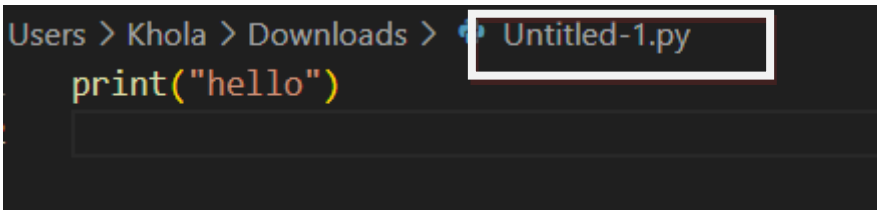
Click on new



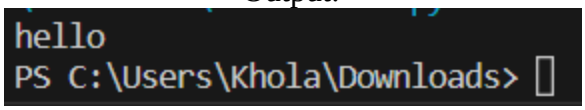
A new python file will be created.



Vs code:



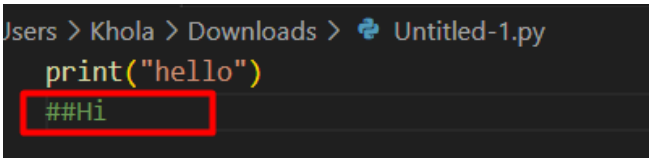
Output:



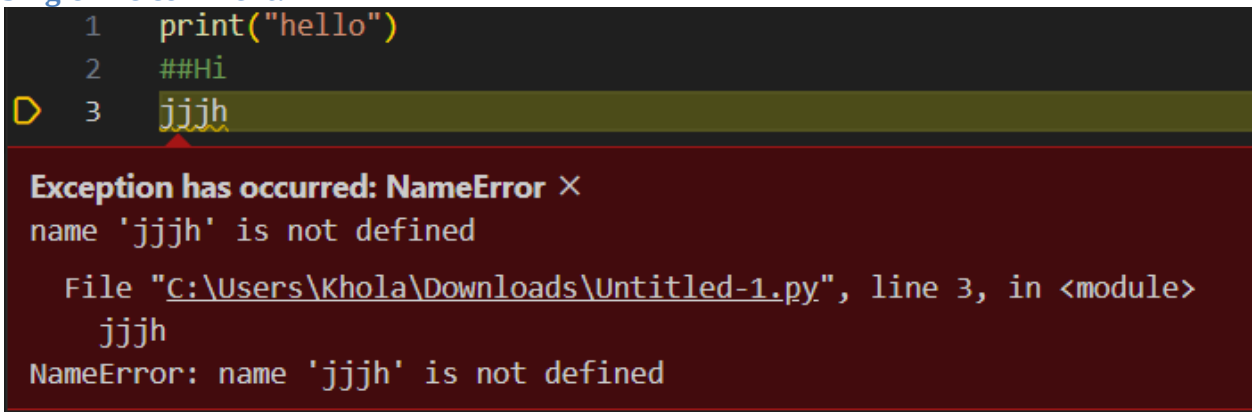
File Extension:
py or ipynb

Python Commands

- **Comments:**
  A comment begins with a hash character(#) which is not a part of the string literal and ends at the end of the physical line. All characters after the # character up to the end of the line are part of the comment and the Python interpreter ignores them. See the following example.

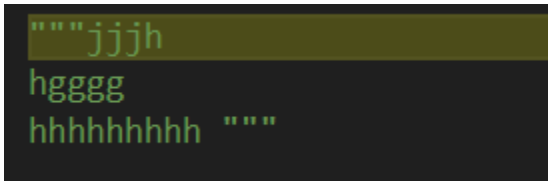


Single line comment:



Multiple Line comments:

""" Comment"""



Lecture: 1-2 Lab