

Environment Setting

講者：Isaac

Outline

- ▶ Anaconda introduction
- ▶ Jupyter Notebook introduction



Anaconda introduction



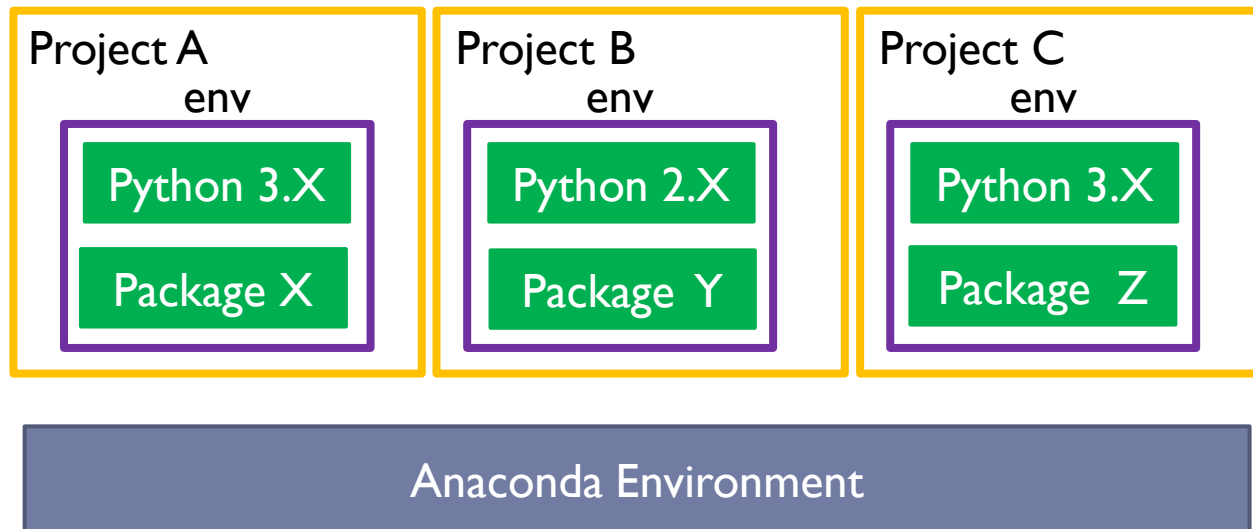
What's Anaconda

- ▶ a free and open-source distribution of the Python and R programming languages for scientific computing
 - ▶ simplify package management
 - ▶ can support Windows, Linux, and MacOS



Anaconda Environment

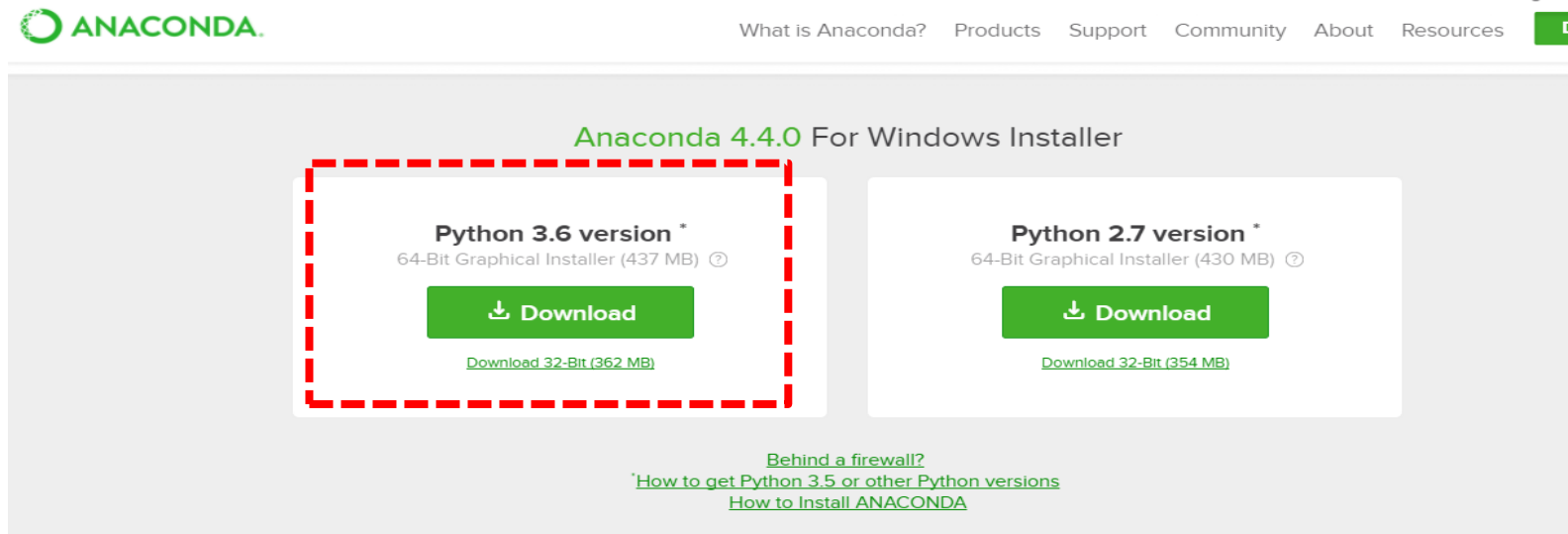
- ▶ User can create different anaconda environments for different projects
 - ▶ easy to manage different project
 - ▶ avoid software conflict problem among doing multiple projects at the same time



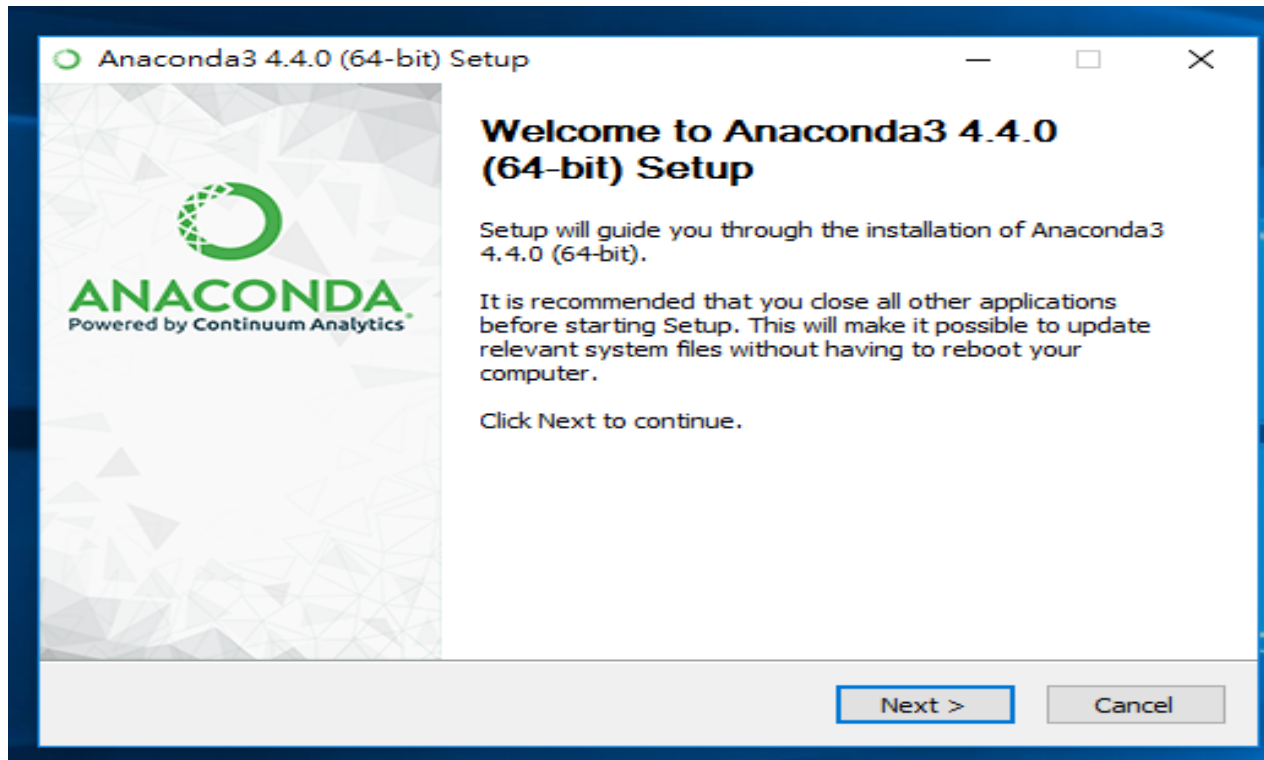
Install Anaconda

Download link

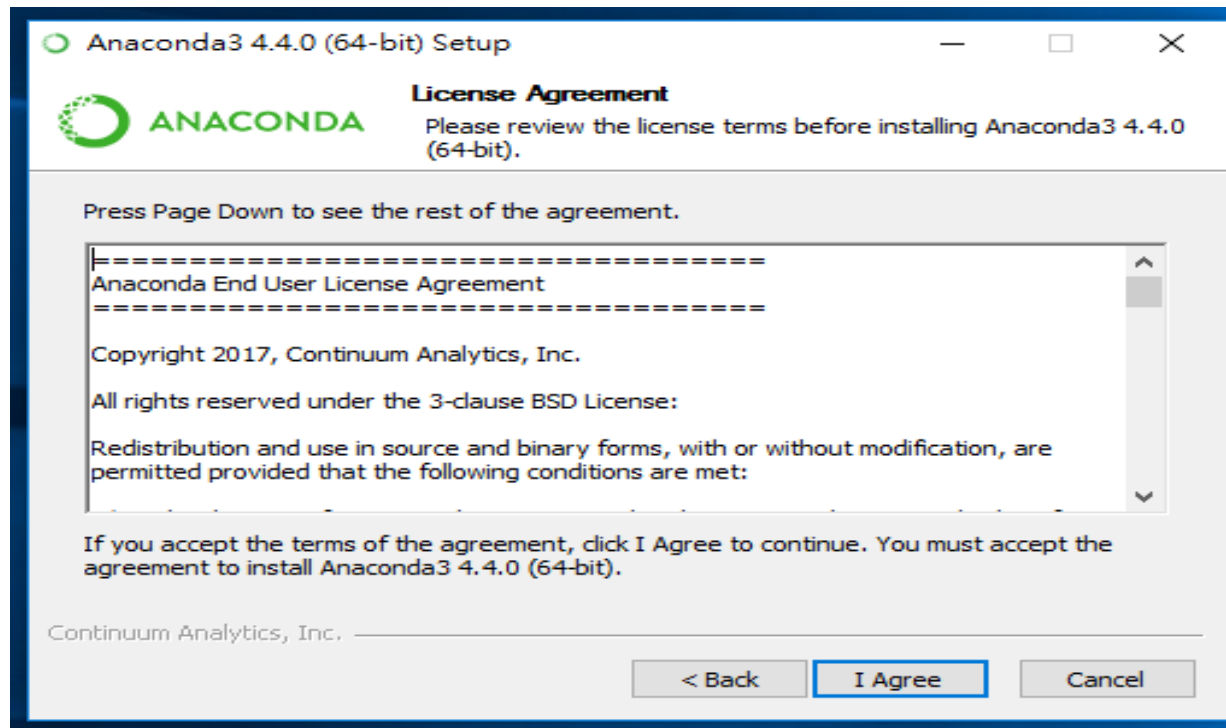
<https://www.anaconda.com/download/>



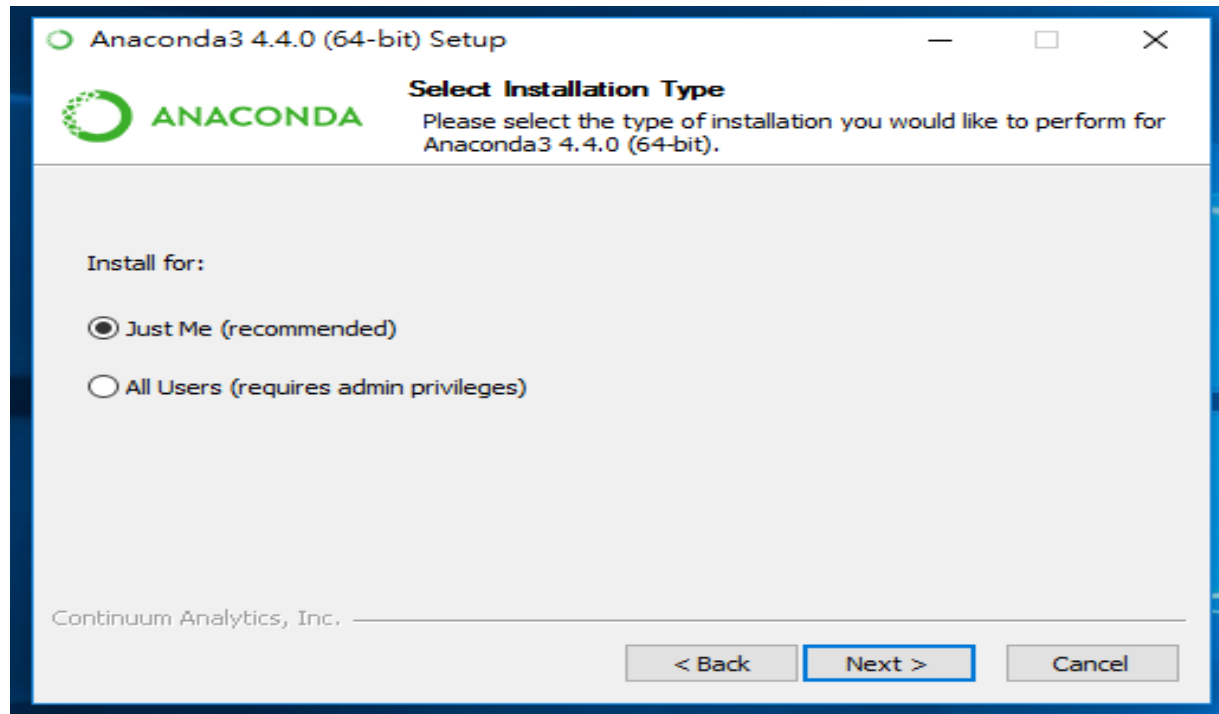
Install Anaconda



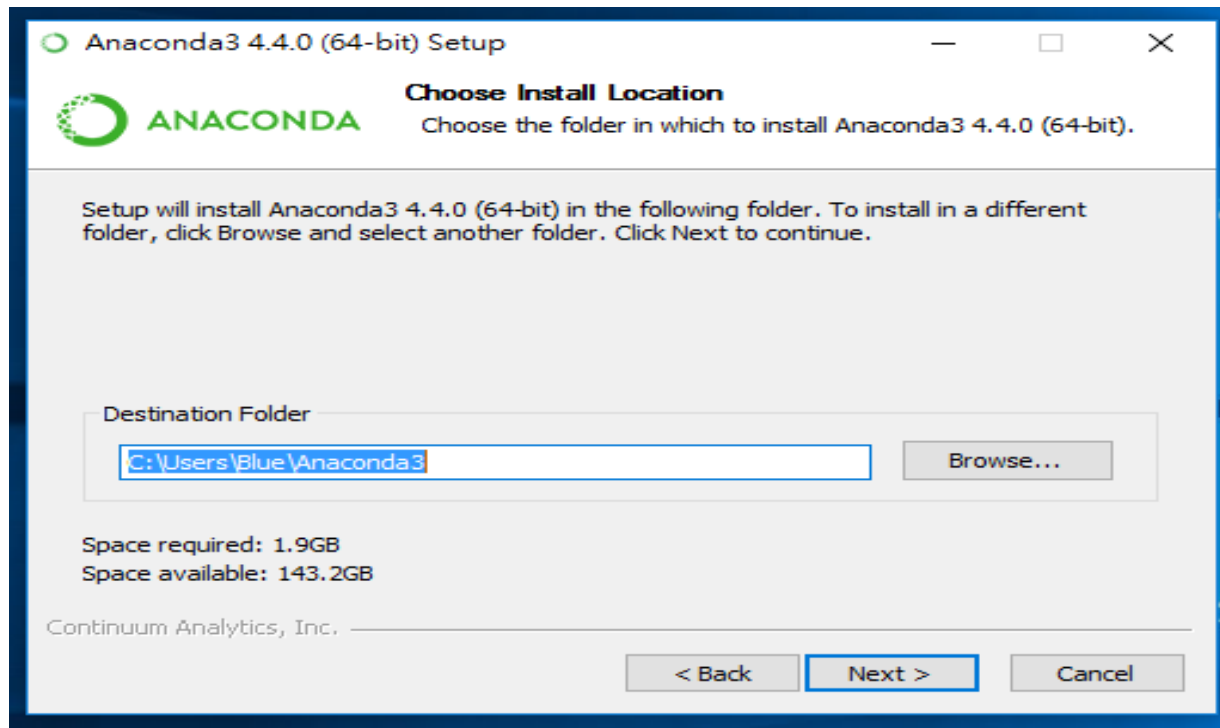
Install Anaconda



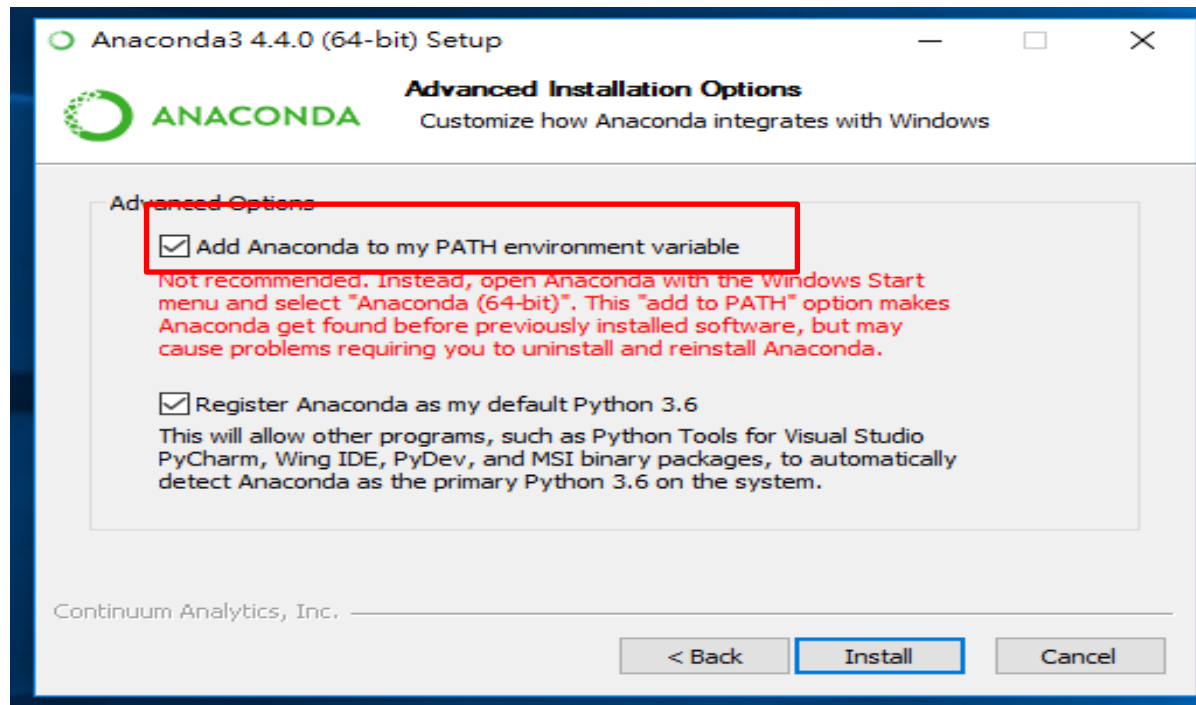
Install Anaconda



Install Anaconda



Install Anaconda

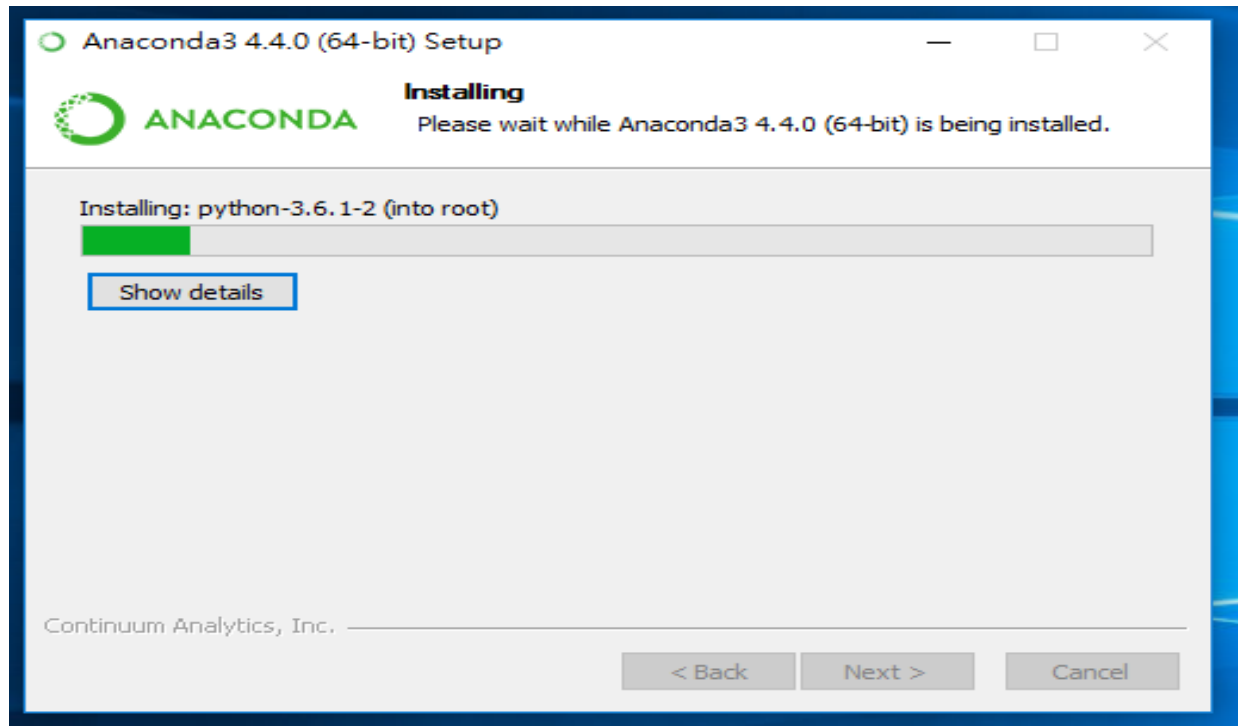


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Please select “Add Anaconda to my PATH environment variable”

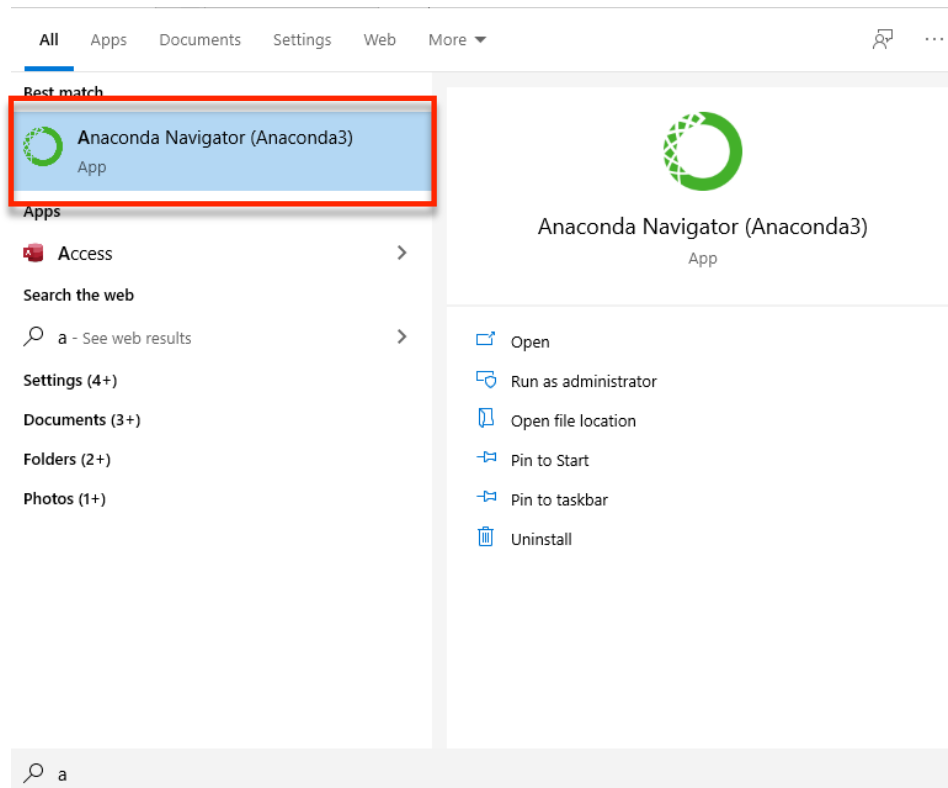


Install Anaconda

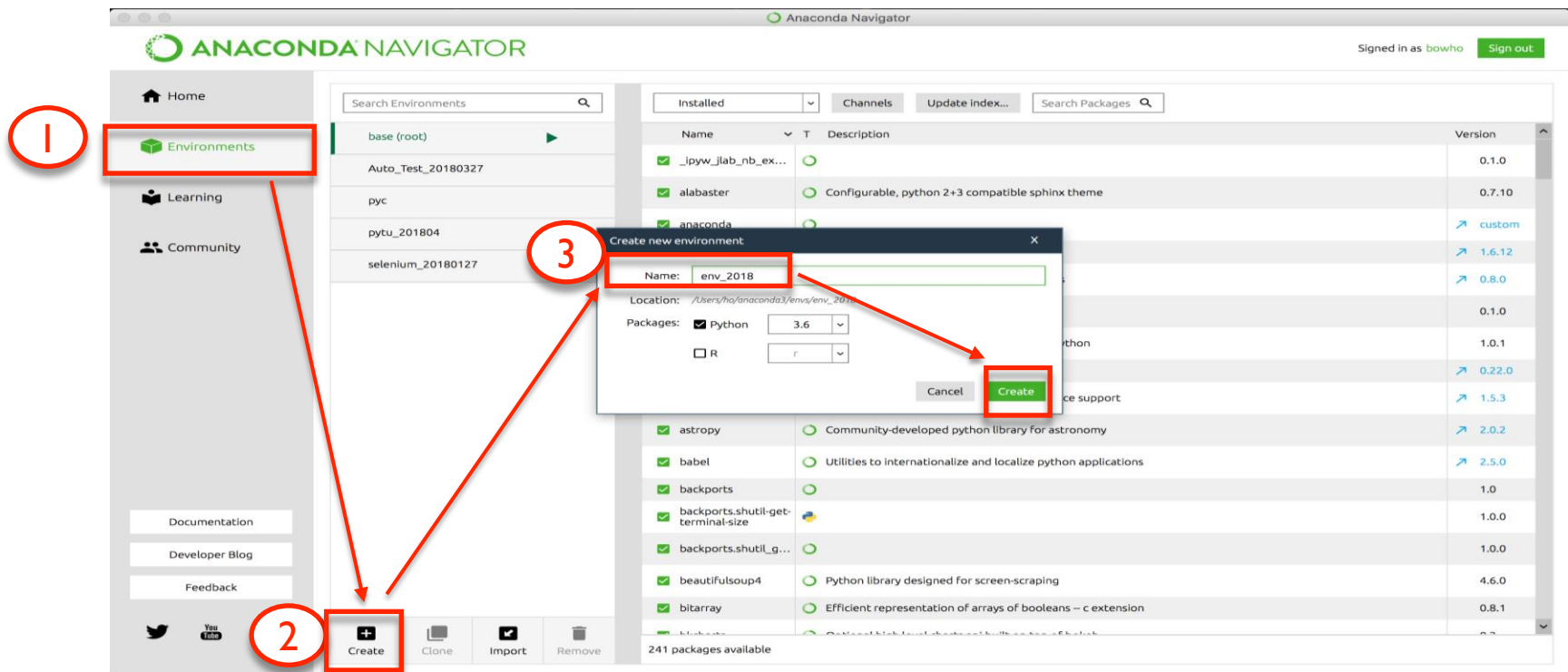


Open Anaconda Navigator

- ▶ search “Anaconda Navigator” on command terminal and open Anaconda

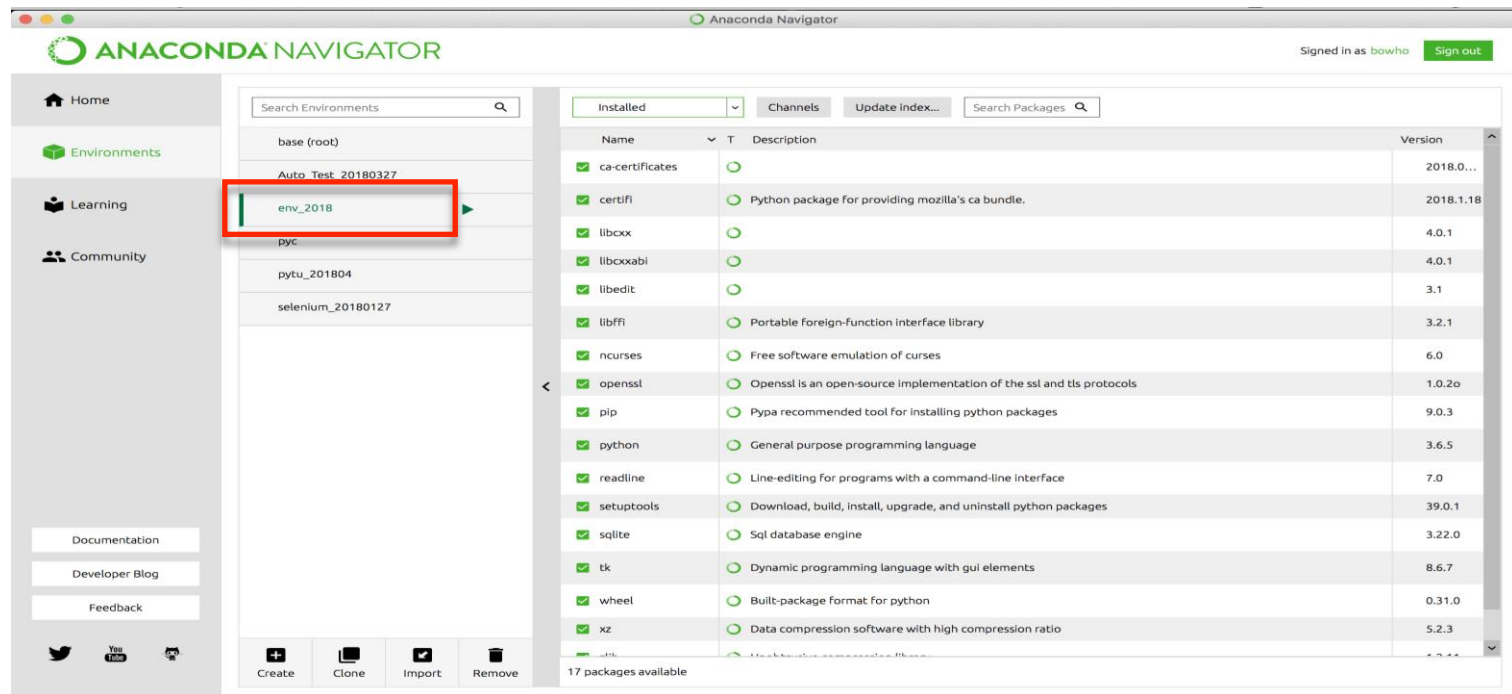


Create environment by GUI



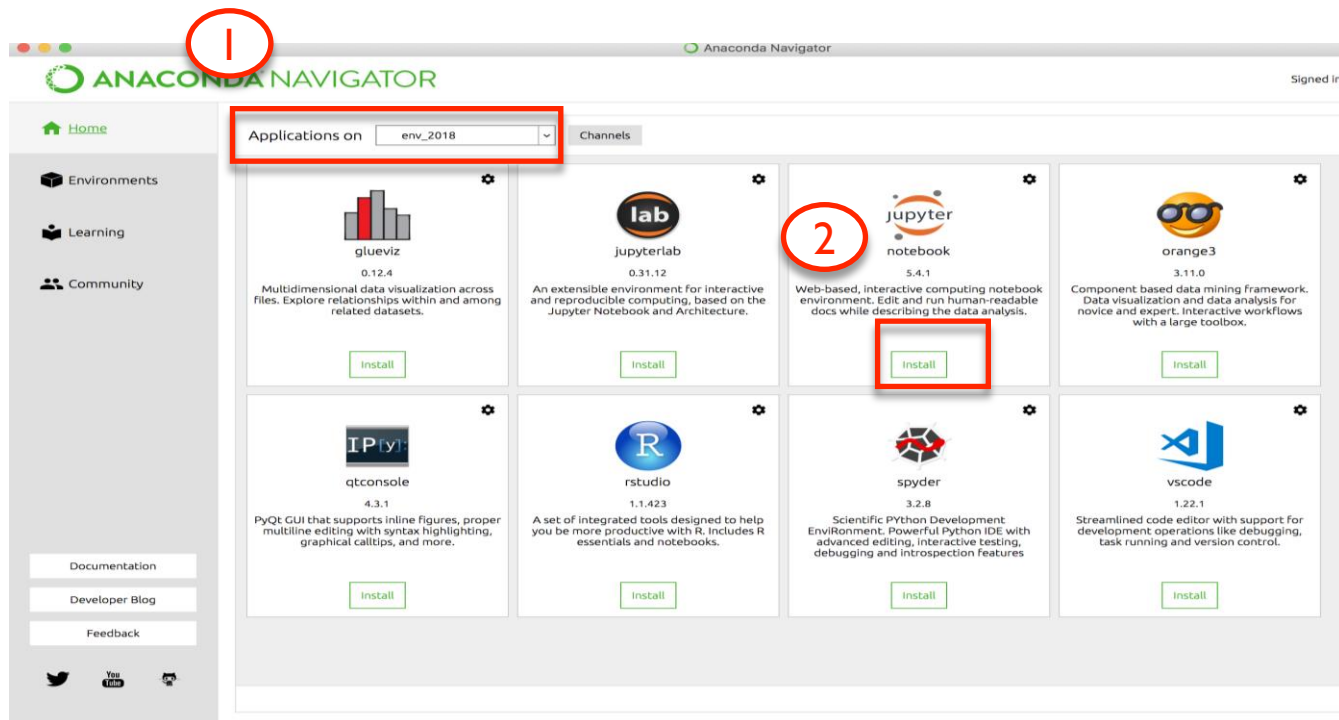
Create environment by GUI

When this showed means the environment is finish building



Install and open Jupyter Notebook

Select your environment and install jupyter notebook



Install and open Jupyter Notebook

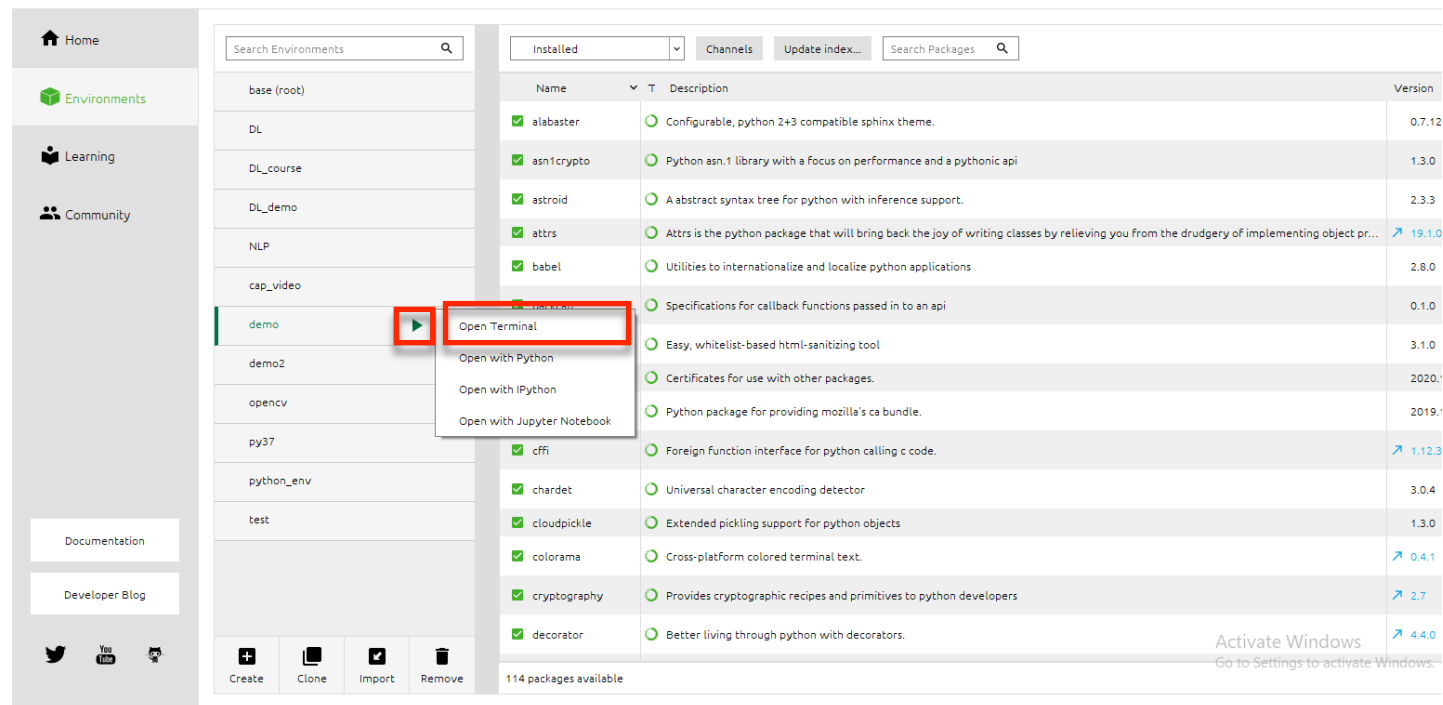


The screenshot shows the JupyterLab file browser interface. At the top left is the Jupyter logo. To the right are 'Quit' and 'Logout' buttons. Below the logo are tabs for 'Files', 'Running', and 'Clusters'. A message 'Select items to perform actions on them.' is displayed. To the right of this message are 'Upload', 'New', and a refresh icon. Below this is a table of files and folders. The table has columns for 'Name', 'Last Modified', and 'File size'. The 'Name' column is sorted by name. The table lists several folders: '3D Objects', 'Anaconda3', 'Contacts', 'Desktop', 'Documents', 'Downloads', 'Favorites', 'gensim-data', and 'Links'. Each folder has a checkbox to its left and a timestamp to its right.

	Name	Last Modified	File size
<input type="checkbox"/>	0		
<input type="checkbox"/>	/		
<input type="checkbox"/>	3D Objects	1 個月前	
<input type="checkbox"/>	Anaconda3	7 個月前	
<input type="checkbox"/>	Contacts	1 個月前	
<input type="checkbox"/>	Desktop	6 天前	
<input type="checkbox"/>	Documents	9 天前	
<input type="checkbox"/>	Downloads	11 小時前	
<input type="checkbox"/>	Favorites	1 個月前	
<input type="checkbox"/>	gensim-data	1 個月前	
<input type="checkbox"/>	Links	1 個月前	

Install package in Anaconda Environment

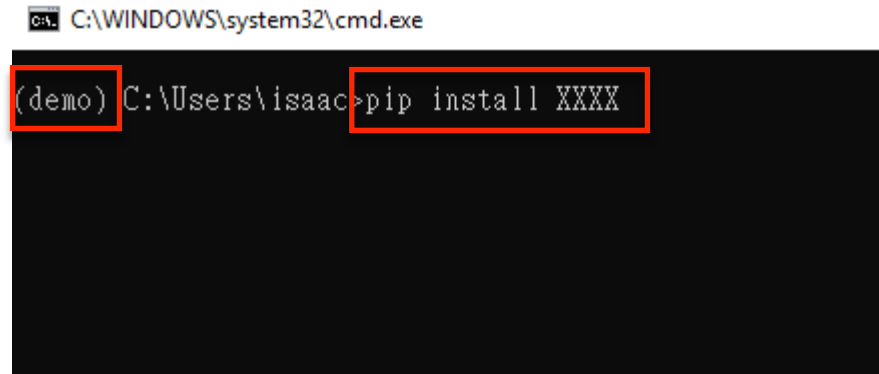
- ▶ Switch back to Environments in Anaconda
- ▶ Left click green arrow on your environment and click “open terminal”



Install package in Anaconda Environment

- ▶ Install your package by
 - ▶ `pip install [package_name]`
 - ▶ `conda install [package_name]`

your environment name



A screenshot of a Windows command prompt window. The title bar at the top reads "C:\WINDOWS\system32\cmd.exe". The command prompt shows the text "(demo) C:\Users\isaac>pip install XXXX". The text "(demo)" is enclosed in a red rectangular box, and the text "pip install XXXX" is also enclosed in a red rectangular box.

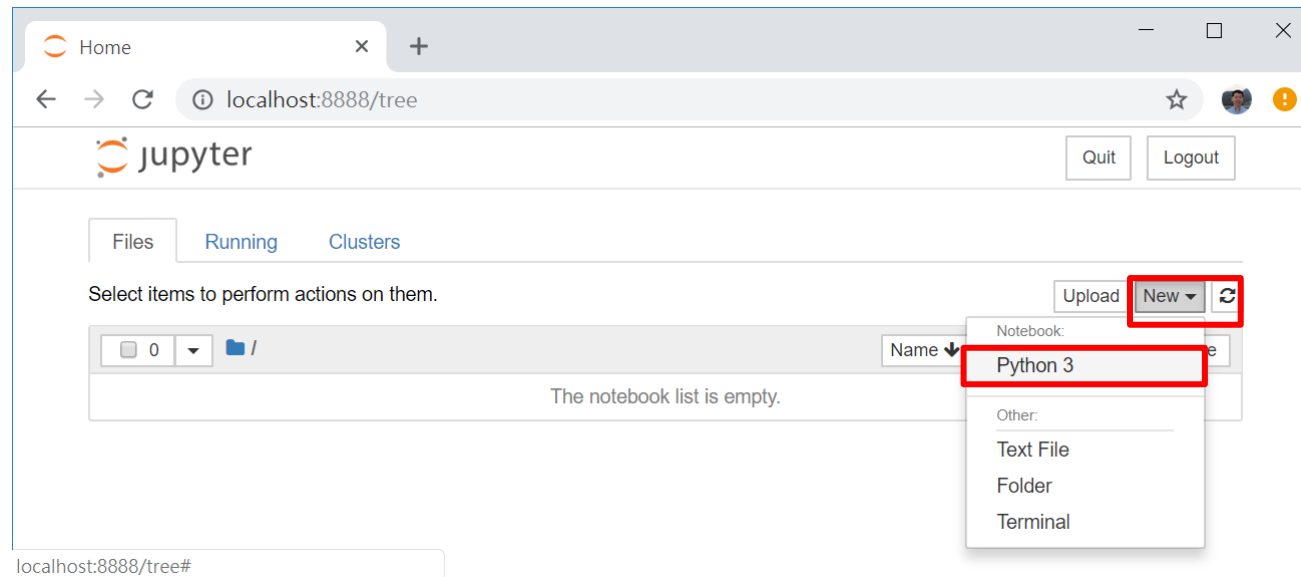
Jupyter Notebook introduction



What's Jupyter Notebook

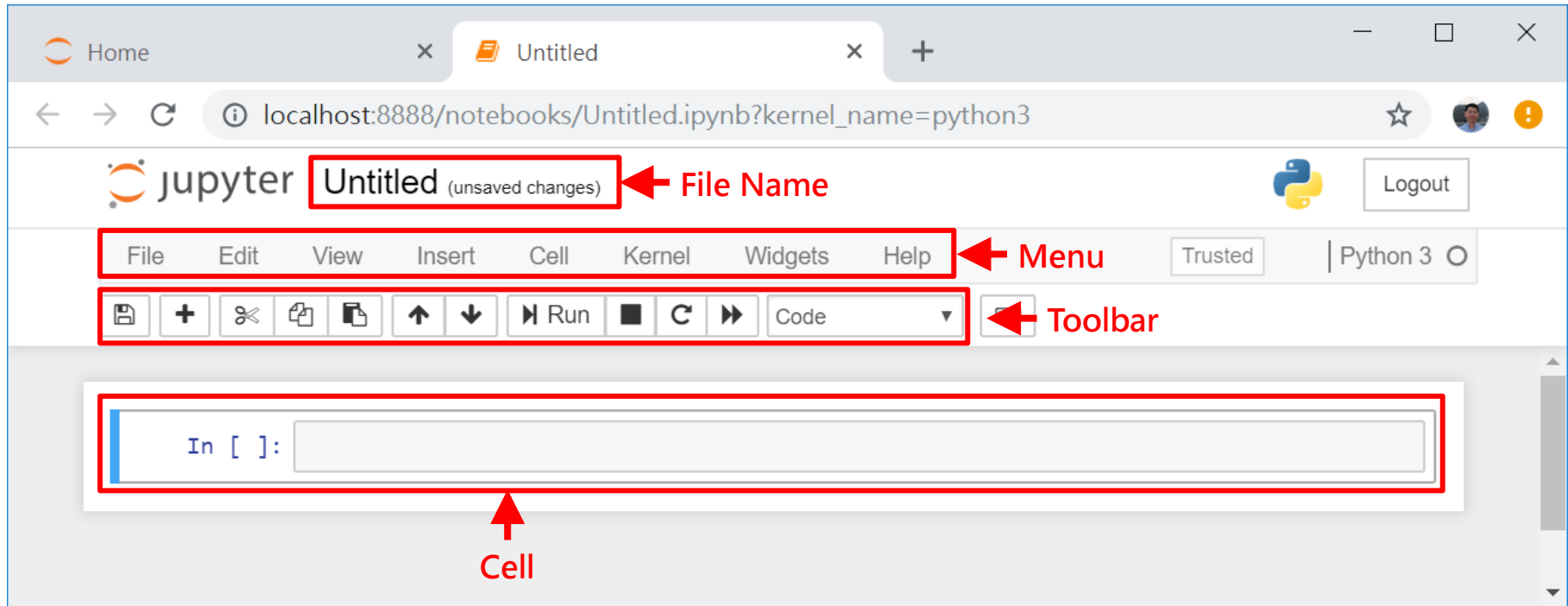
- ▶ a web-based interactive computational environment for creating Jupyter notebook documents
 - ▶ can be used to program python language
 - ▶ File extension is .ipynb
 - ▶ Jupyter notebook would autosave file while programming python

Create New Jupyter Notebook(.ipynb)



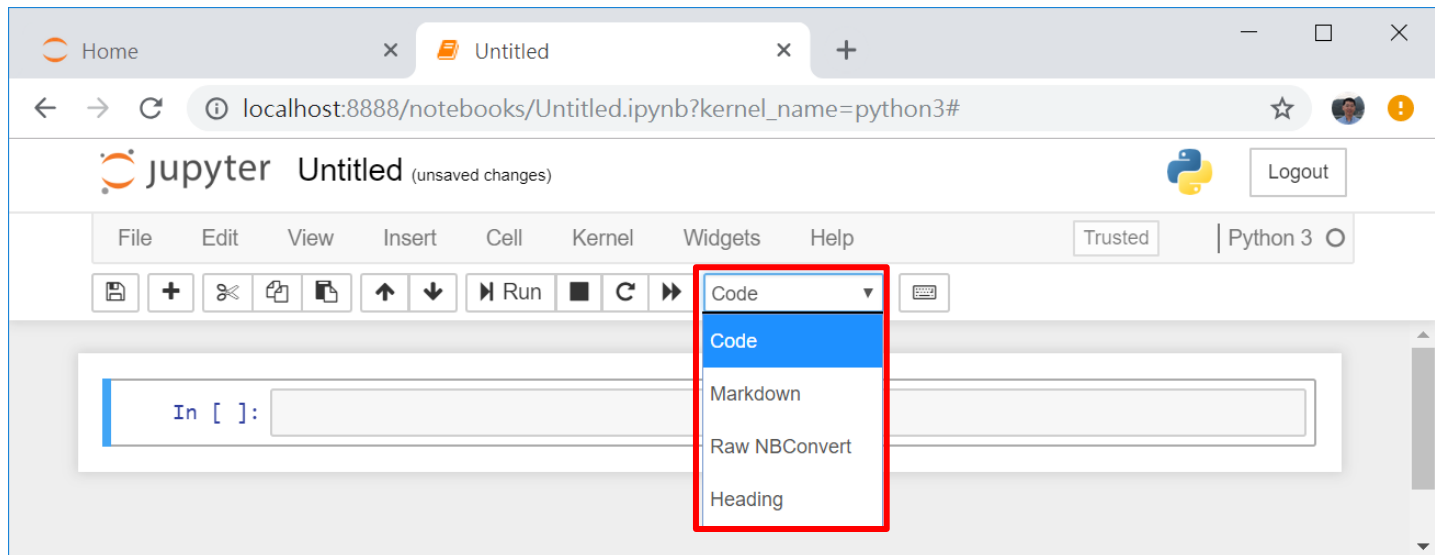
open a new python3 jupyter notebook file

Jupyter Notebook user interface



Cell Type

- ▶ There are two common cells we usually used in python programming
 - ▶ Code cells
 - ▶ Markdown cells



Code Cell

- ▶ Code cell can be used to write code

symbol	meaning
<code>ln[]</code>	Program not execute yet
<code>ln[num]</code>	After program execution
<code>ln[*]</code>	Program execution now

After program execution

Program not execute yet

jupyter codecell (unsaved changes) Logout

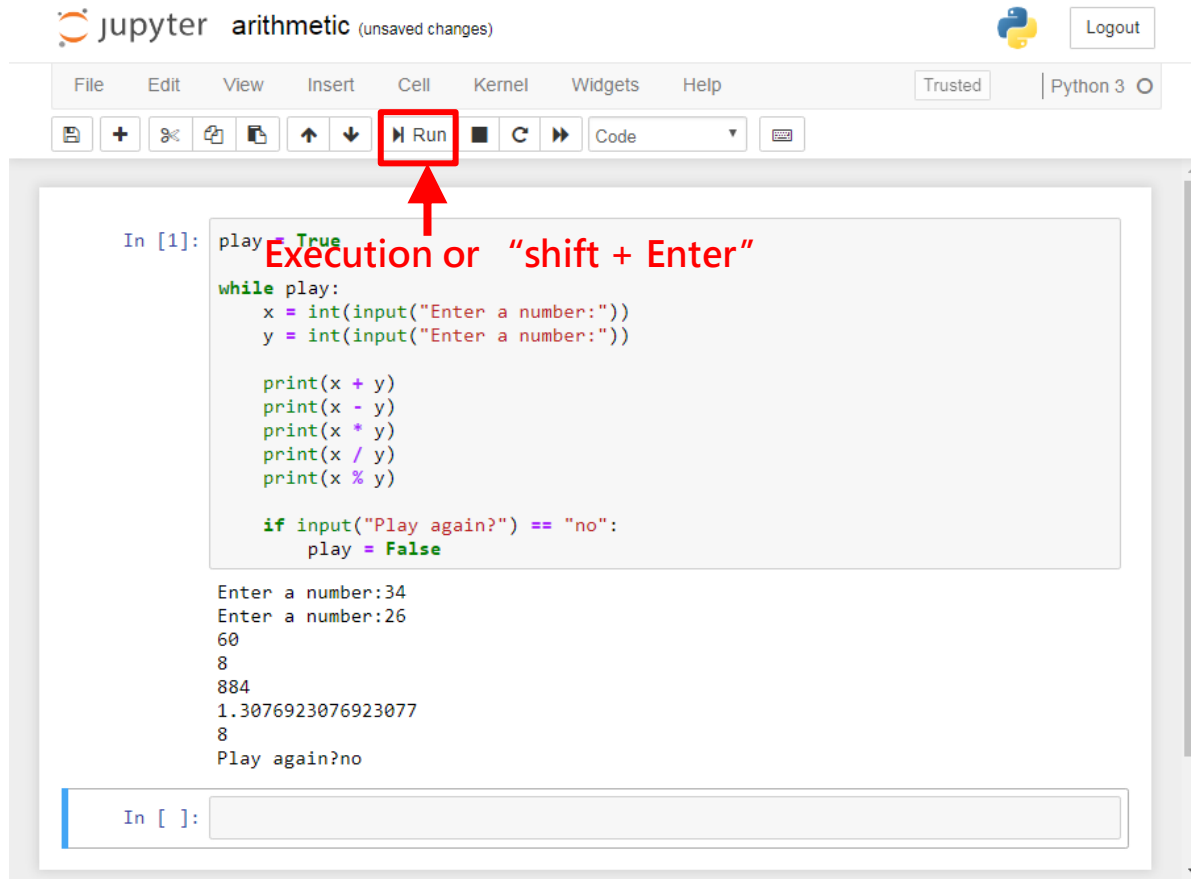
File Edit View Insert Cell Kernel Widgets Help Trusted Python 3

Run

→ In [1]: `print("Hello World")`
Hello World

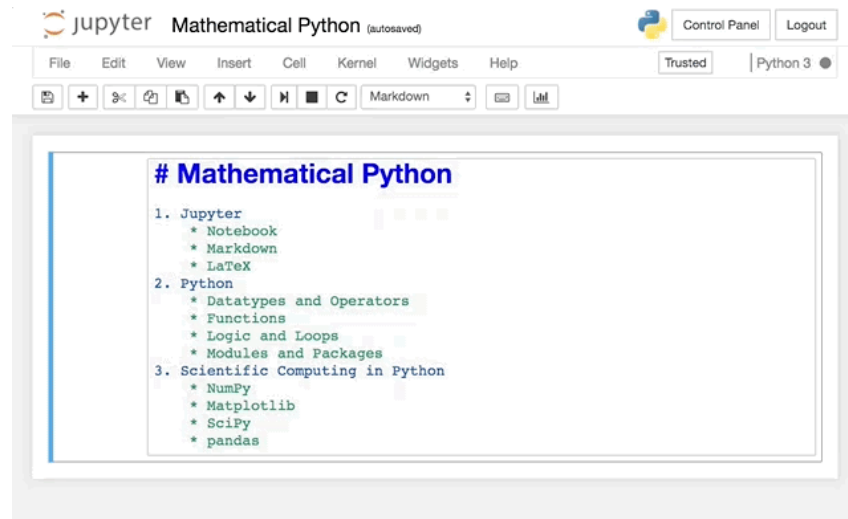
→ In []: `fruits = ["apple", "banana", "cherry"]`
`for x in fruits:`
 `print(x)`

Execution program Jupyter Notebook



Markdown Cell

- ▶ A lightweight markup language with plain-text-formatting syntax
 - ▶ can be transformed into valid html document
- ▶ content of markdown include
 - ▶ markdown, HTML, Latex, images, videos,.....



Markdown reference

- ▶ Markdown reference
 - ▶ <https://markdown.tw/>

Convert .ipynb to .py or .html file

