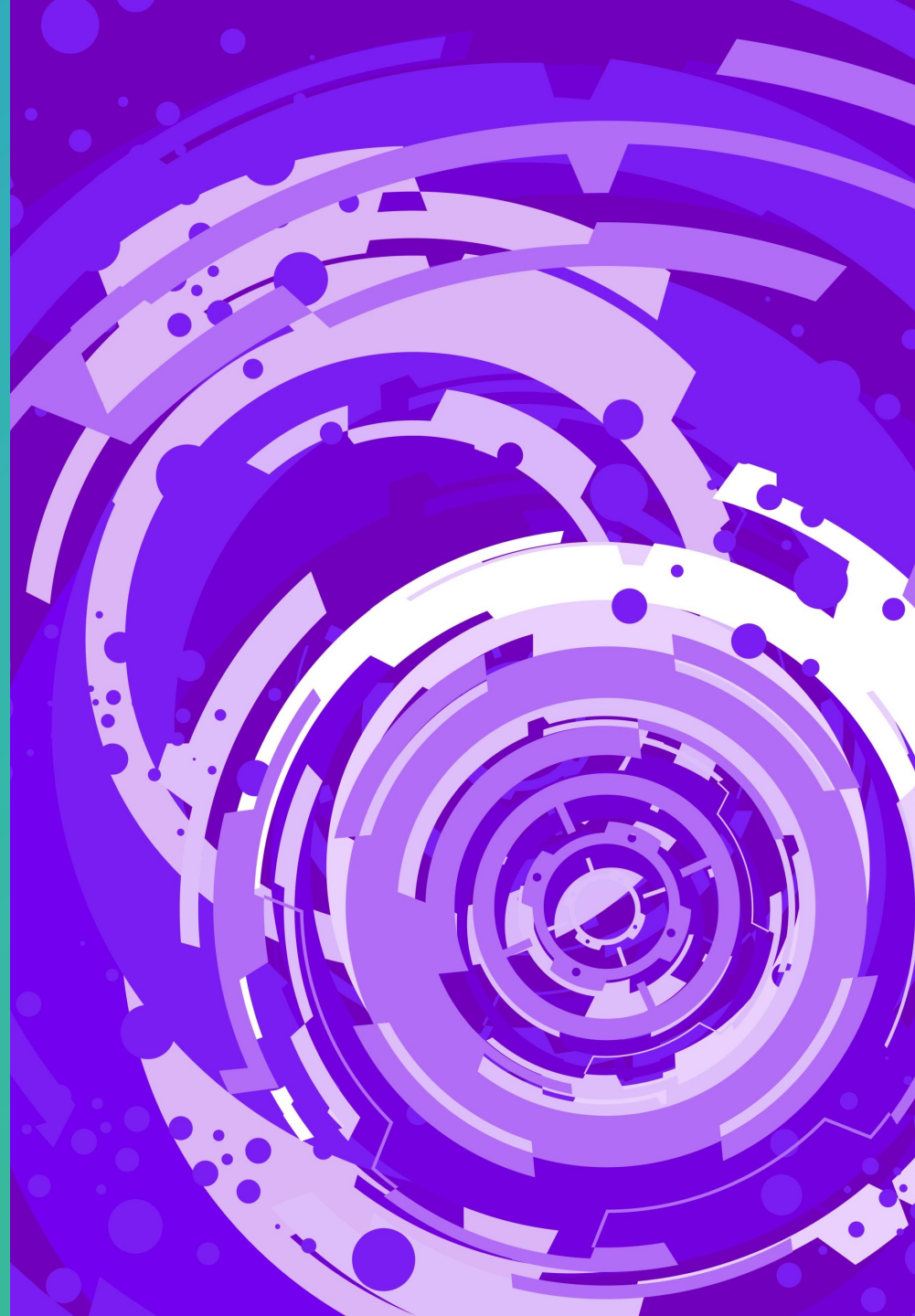
URBAN GEOGRAPHIC INFORMATION SYSTEM

Python Environment Settings

Chun-Hsiang Chan
Department of Geography,
National Taiwan Normal University



Outline

- Anaconda Install
- Hello World
- Terminal/ Windows Powershell
- Git

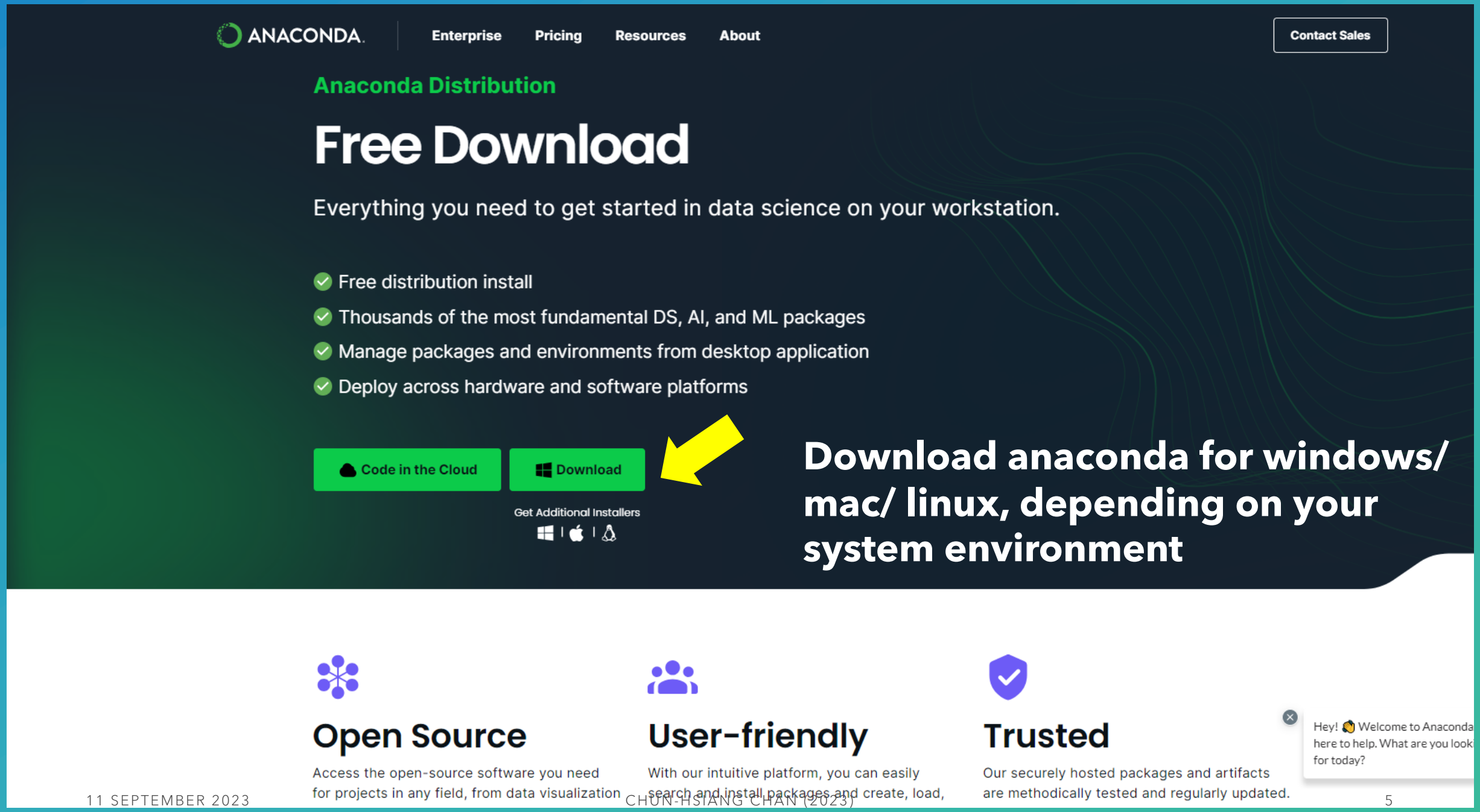
Download Anaconda

- We will use ipython notebook through out the course.
- Here is the download link: https://www.anaconda.com/download
- If your computer has no sufficient space for install anaconda, you may consider the light version – miniconda, as follows,

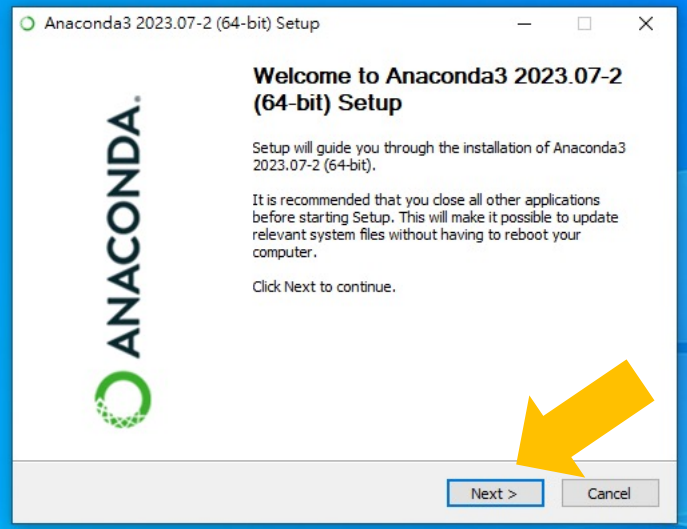
  https://docs.conda.io/projects/miniconda/en/latest/miniconda-install.html

Download Anaconda

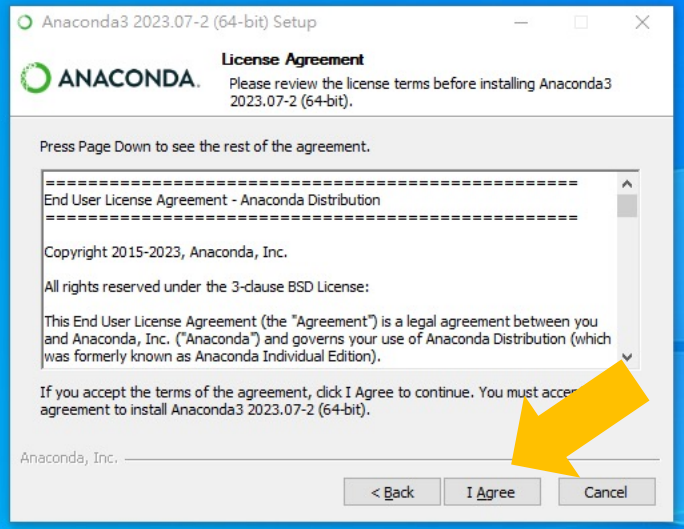
- If you only have limited space for python, and then I suggest you may install the following software in order, python, pip, and jupyter.
- Python: https://www.python.org/downloads/
- pip: https://pip.pypa.io/en/stable/installation/
- Jupyter: https://jupyter.org/install


ANACONDA.
Enterprise
Pricing
Resources
About
Contact Sales
Anaconda Distribution
Free Download
Everything you need to get started in data science on your workstation.
Free distribution install
Thousands of the most fundamental DS, AI, and ML packages
Manage packages and environments from desktop application
Deploy across hardware and software platforms
Code in the Cloud
Download
Get Additional Installers
Download anaconda for windows/ mac/ linux, depending on your system environment
Open Source
Access the open-source software you need for projects in any field, from data visualization
User-friendly
With our intuitive platform, you can easily search and install packages and create, load,
Trusted
Our securely hosted packages and artifacts are methodically tested and regularly updated.
Hey! Welcome to Anaconda
here to help. What are you look
for today?

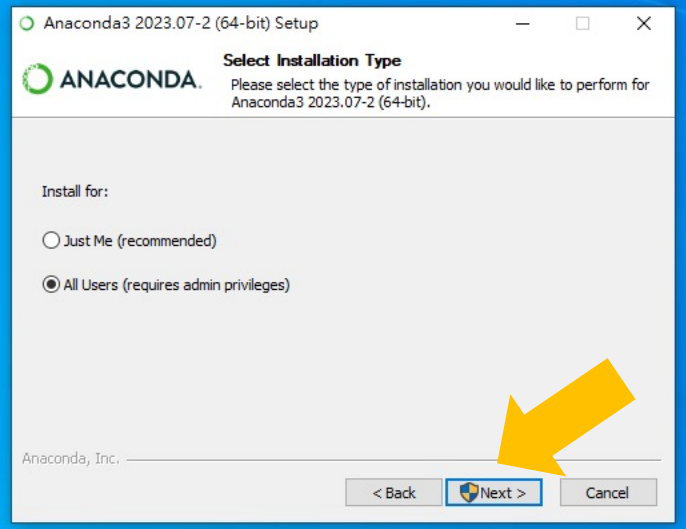
Open the .exe (by Run As Administrator/系統管理員) or .dmg files
Click Next



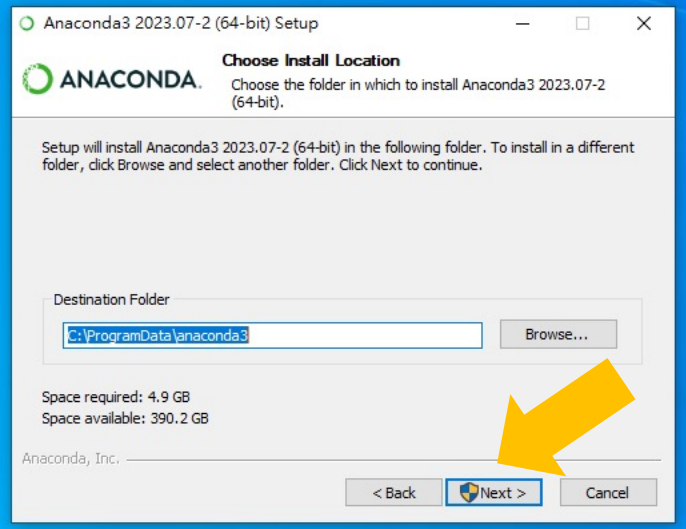
Click "I Agree"



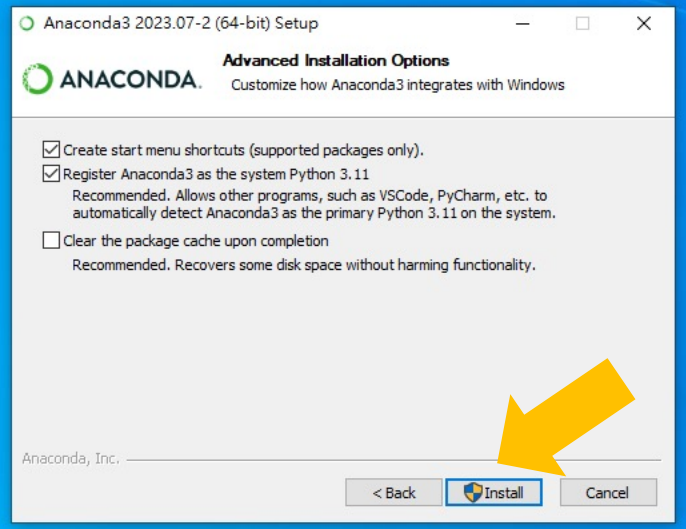
Click "Next"


Anaconda3 2023.07-2 (64-bit) Setup
ANACONDA.
Select Installation Type
Please select the type of installation you would like to perform for Anaconda3 2023.07-2 (64-bit).
Install for:
Just Me (recommended)
All Users (requires admin privileges)
Anaconda, Inc.
< Back
Next >
Cancel

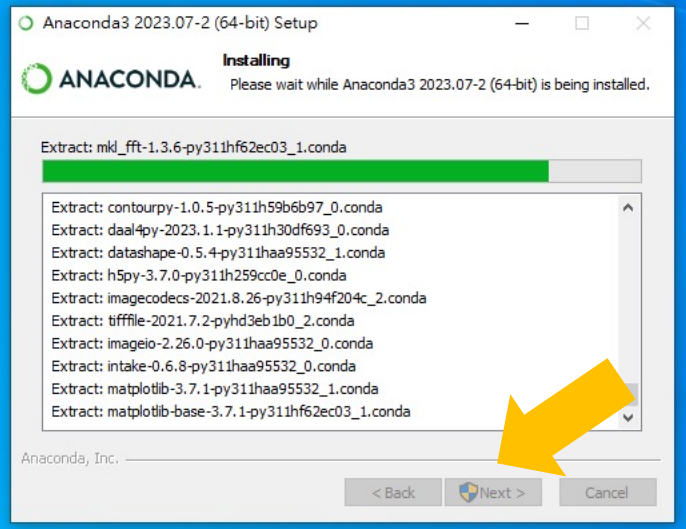
Click "Next"


Anaconda3 2023.07-2 (64-bit) Setup
ANACONDA.
Choose Install Location
Choose the folder in which to install Anaconda3 2023.07-2 (64-bit).
Setup will install Anaconda3 2023.07-2 (64-bit) in the following folder. To install in a different folder, click Browse and select another folder. Click Next to continue.
Destination Folder
C:\ProgramData\anaconda3
Browse...
Space required: 4.9 GB
Space available: 390.2 GB
Anaconda, Inc.
< Back
Next >
Cancel

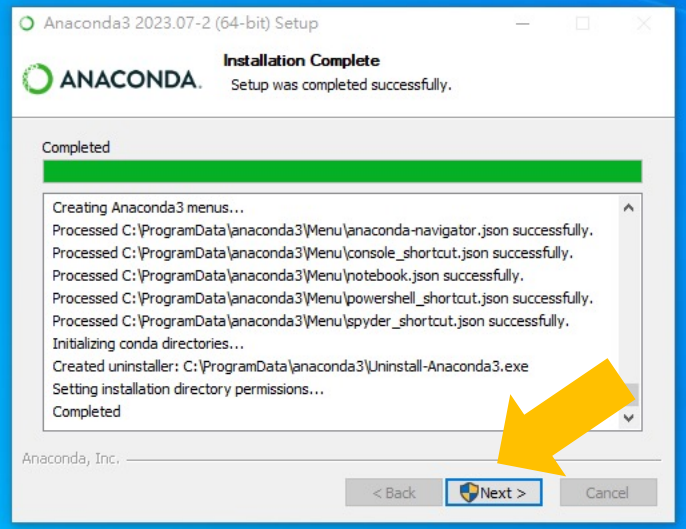
Click "Install"



Click "Next"


Anaconda3 2023.07-2 (64-bit) Setup
ANACONDA.
Installing
Please wait while Anaconda3 2023.07-2 (64-bit) is being installed.
Extract: mkl_fft-1.3.6-py311hf62ec03_1.conda
Extract: contourpy-1.0.5-py311h59b6b97_0.conda
Extract: daal4py-2023.1.1-py311h30df693_0.conda
Extract: datashape-0.5.4-py311haa95532_1.conda
Extract: h5py-3.7.0-py311h259cc0e_0.conda
Extract: imagecodecs-2021.8.26-py311h94f204c_2.conda
Extract: tifffile-2021.7.2-pyhd3eb1b0_2.conda
Extract: imageio-2.26.0-py311haa95532_0.conda
Extract: intake-0.6.8-py311haa95532_0.conda
Extract: matplotlib-3.7.1-py311haa95532_1.conda
Extract: matplotlib-base-3.7.1-py311hf62ec03_1.conda
Anaconda, Inc.
< Back
Next >
Cancel

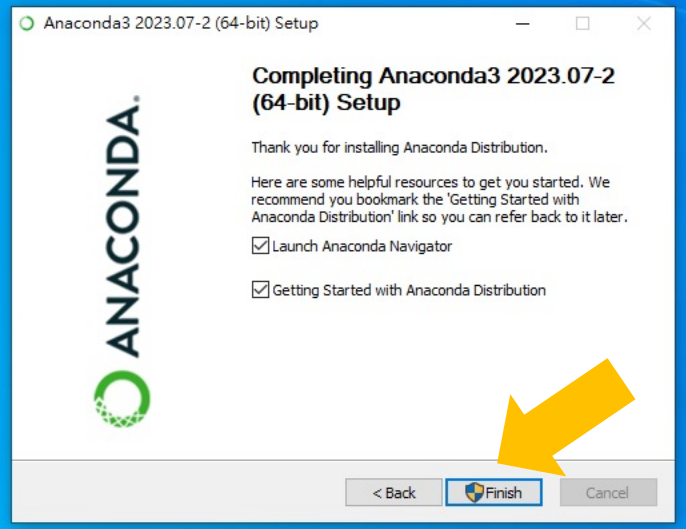
Click "Next"


Anaconda3 2023.07-2 (64-bit) Setup
ANACONDA.
Installation Complete
Setup was completed successfully.
Completed
Creating Anaconda3 menus...
Processed C:\ProgramData\anaconda3\Menu\anaconda-navigator.json successfully.
Processed C:\ProgramData\anaconda3\Menu\console_shortcut.json successfully.
Processed C:\ProgramData\anaconda3\Menu\notebook.json successfully.
Processed C:\ProgramData\anaconda3\Menu\powershell_shortcut.json successfully.
Processed C:\ProgramData\anaconda3\Menu\spyder_shortcut.json successfully.
Initializing conda directories...
Created uninstaller: C:\ProgramData\anaconda3\Uninstall-Anaconda3.exe
Setting installation directory permissions...
Completed
Anaconda, Inc.
< Back
Next >
Cancel

Click "Next"


Anaconda3 2023.07-2 (64-bit) Setup
ANACONDA.
Anaconda3 2023.07-2 (64-bit)
Code with Anaconda in the Cloud
Everything you love about Anaconda now available from the cloud with Anaconda's fully-loaded Jupyter notebook.
No setup required. Get started for free.
Code in the cloud with Anaconda Notebooks
ANACONDA.
Anaconda, Inc.
< Back
Next >
Cancel

Click "Finish"



Anaconda Navigator

File Help

ANACONDA.NAVIGATOR

Connect

Click "Launch"

Home

Environments

Learning

Community

All applications on base (root) Channels

DataSpell

DataSpell is an IDE for exploratory data analysis and prototyping machine learning models. It combines the interactivity of Jupyter notebooks with the intelligent Python and R coding assistance of PyCharm in one user-friendly environment.

Install

Anaconda Notebooks

Cloud-hosted notebook service from Anaconda. Launch a preconfigured environment with hundreds of packages and store project files with persistent cloud storage.

Launch

CMD.exe Prompt

0.1.1

Run a cmd.exe terminal with your current environment from Navigator activated

Launch

JupyterLab

3.6.3

An extensible environment for interactive and reproducible computing, based on the Jupyter Notebook and Architecture.

Launch

Notebook

6.5.4

Web-based, interactive computing notebook environment. Edit and run human-readable docs while describing the data analysis.

Launch

Powershell Prompt

0.0.1

Run a Powershell terminal with your current environment from Navigator activated

Launch

Qt Console

5.4.2

PyQt GUI that supports inline figures, proper multiline editing with syntax highlighting, graphical calltips, and more.

Launch

Spyder

5.4.3

Scientific PYthon Development EnviRonment. Powerful Python IDE with advanced editing, interactive testing, debugging and introspection features

Launch

Datalore

Kick-start your data science projects in seconds in a pre-configured environment. Enjoy coding assistance for Python, SQL, and R in Jupyter notebooks and benefit from no-code automations. Use Datalore online for free.

Launch

IBM Watson Studio Cloud

IBM Watson Studio Cloud provides you the tools to analyze and visualize data, to cleanse and shape data, to create and train machine learning models. Prepare data and build models, using open source data science tools or visual modeling.

Launch

Oracle Data Science Service

OCI Data Science offers a machine learning platform to build, train, manage, and deploy your machine learning models on the cloud with your favorite open-source tools

Launch

console_shortcut_miniconda

0.1.1

Install

Glueviz

1.2.4

Multidimensional data visualization across files. Explore relationships within and among related datasets.

Orange 3

3.34.0

Component based data mining framework. Data visualization and data analysis for novice and expert. Interactive workflows with a large toolbox.

powershell_shortcut_miniconda

0.0.1

PyCharm Professional

A full-fledged IDE by JetBrains for both Scientific and Web Python development. Supports HTML, JS, and SQL.

RStudio

1.1.456

A set of integrated tools designed to help you be more productive with R. Includes R essentials and notebooks.

Anaconda Notebooks

New!

Cloud notebooks with hundreds of packages ready to code.

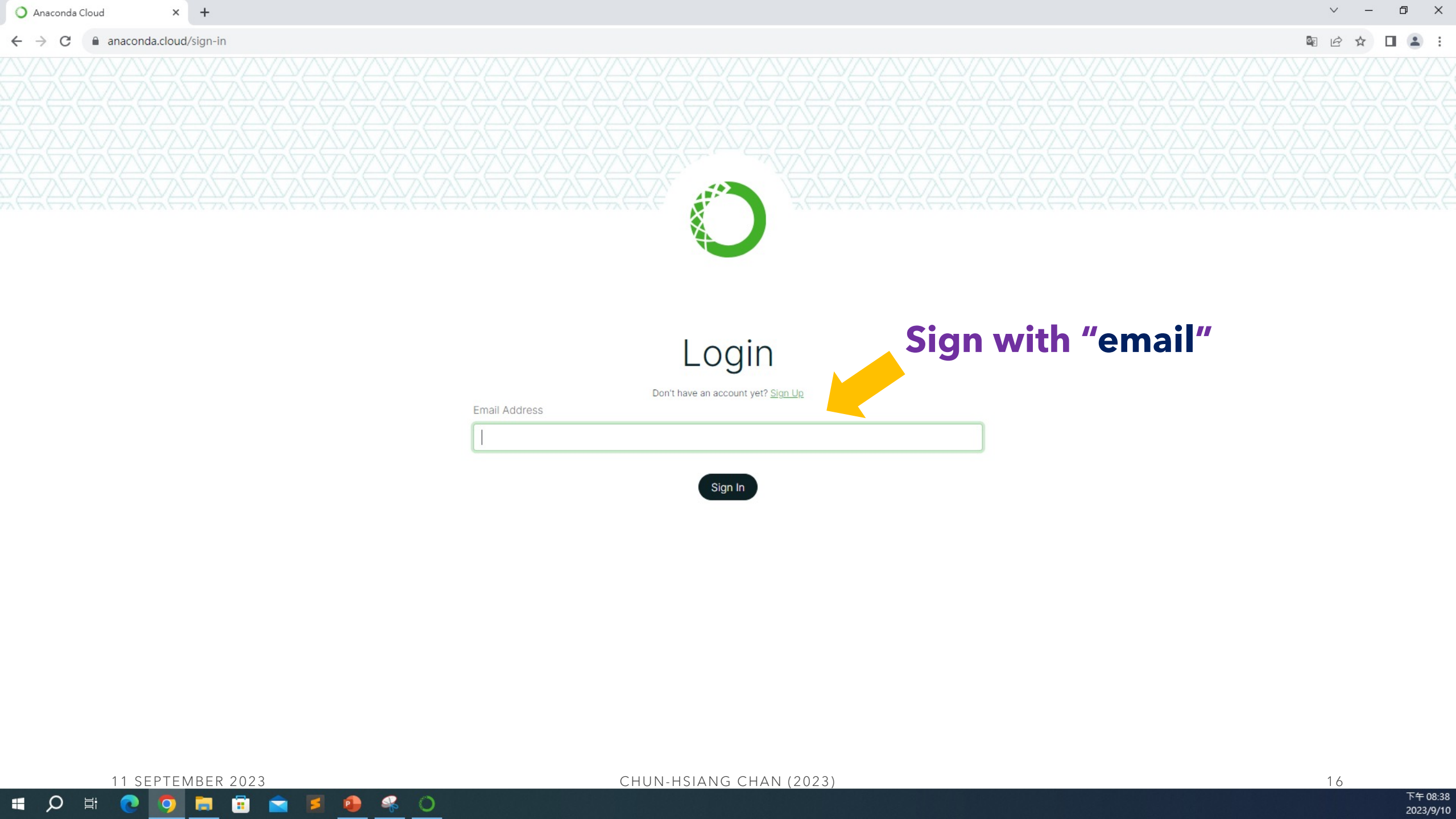
Learn More

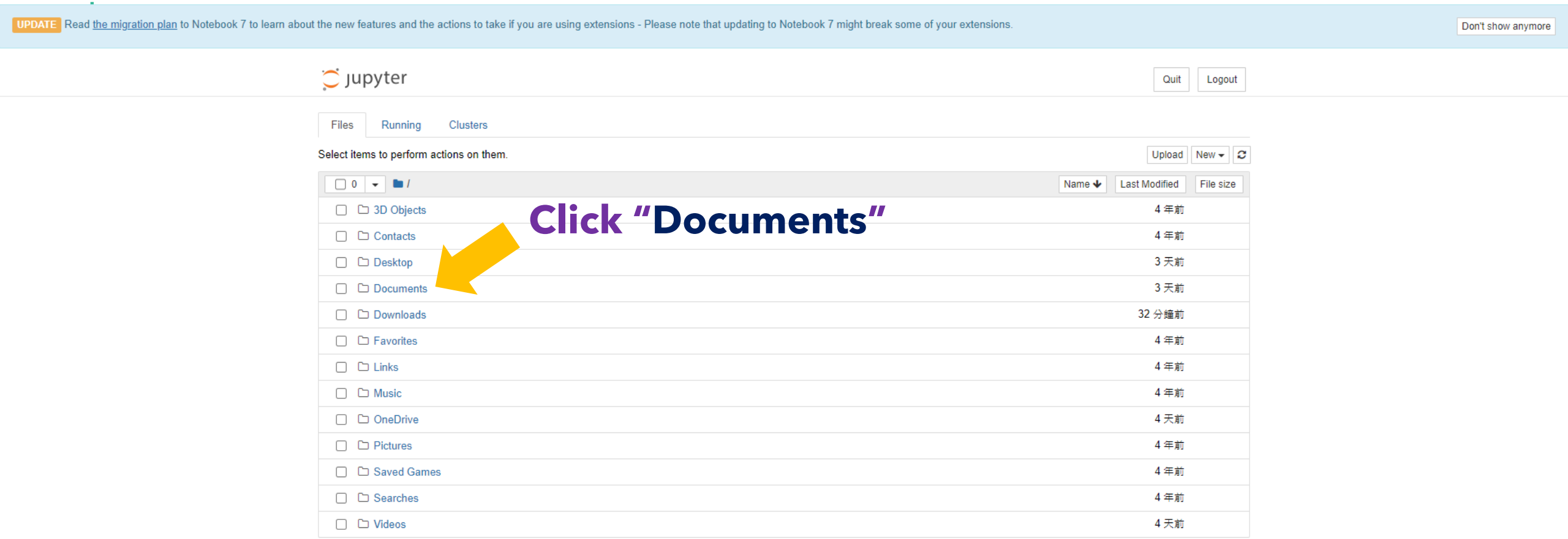
A full Python IDE directly from the browser

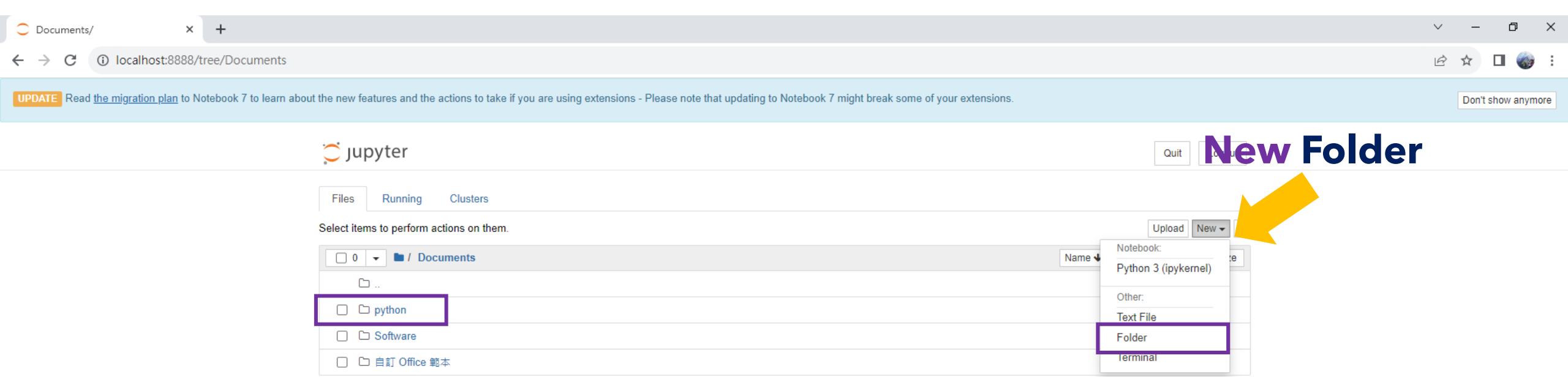
Documentation

Anaconda Blog

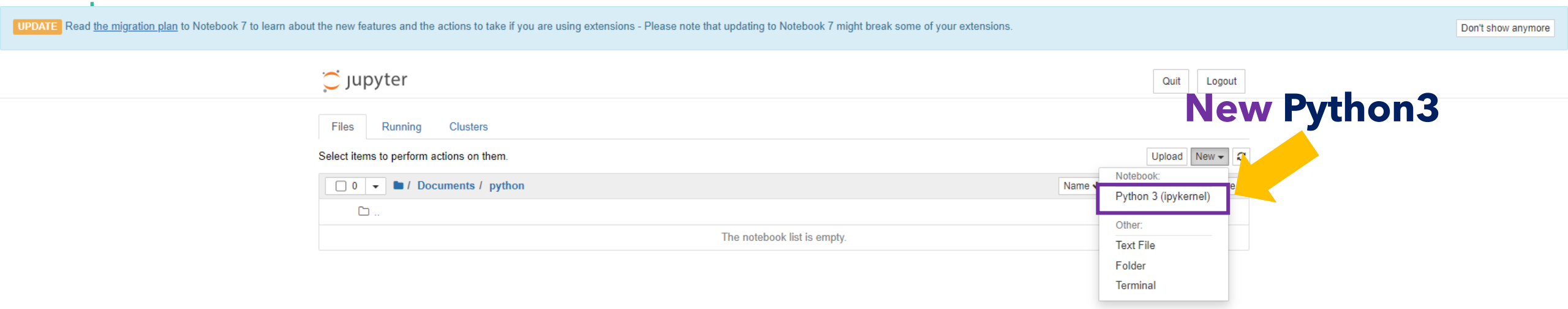
下午 08:37
2023/9/10


Anaconda Cloud
anaconda.cloud/sign-in
Login
Don't have an account yet? Sign Up
Email Address
Sign In
Sign with "email"

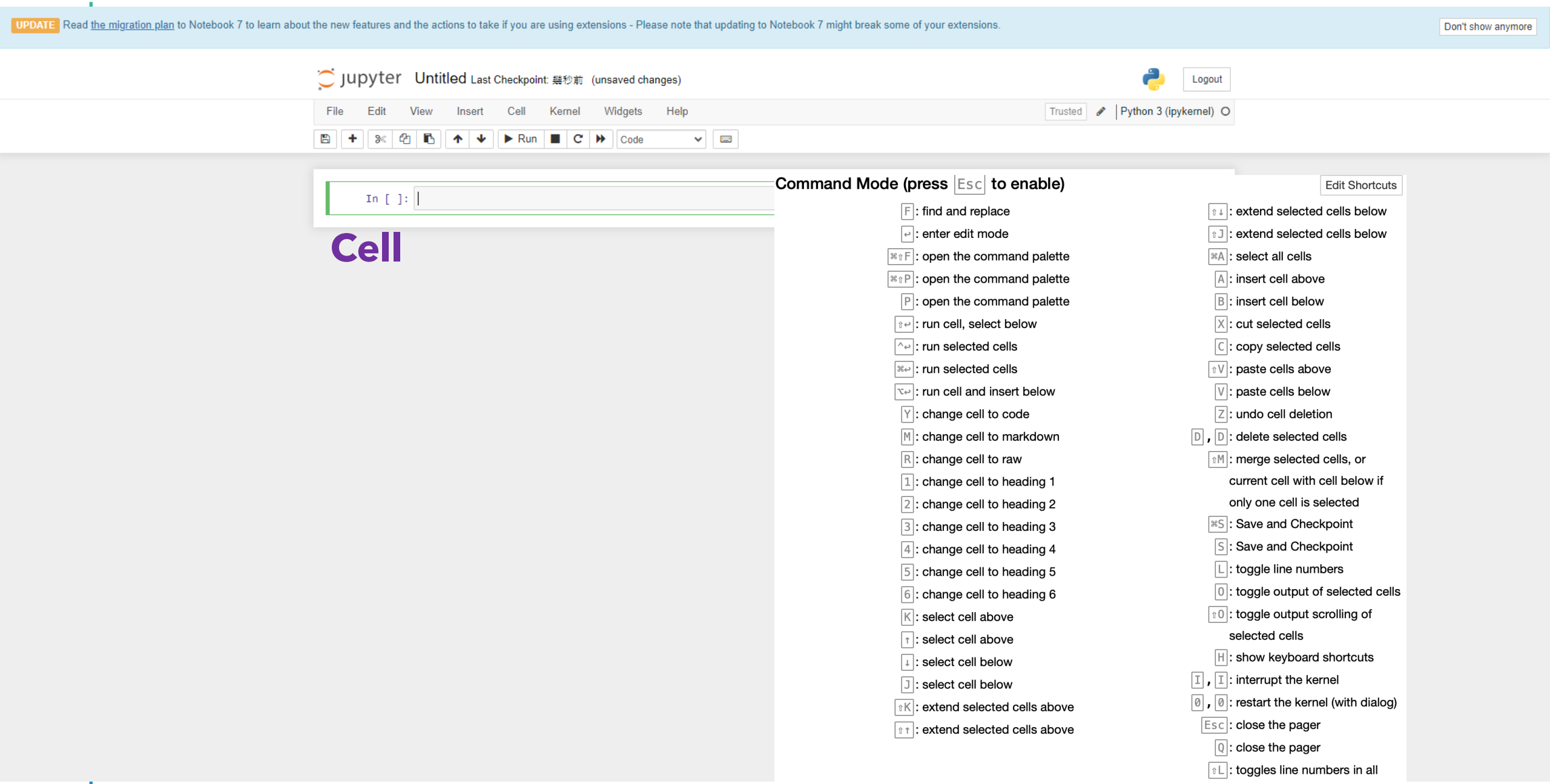

UPDATE Read the migration plan to Notebook 7 to learn about the new features and the actions to take if you are using extensions - Please note that updating to Notebook 7 might break some of your extensions.
Don't show anymore
jupyter
Quit
Logout
Files
Running
Clusters
Select items to perform actions on them.
Upload
New
0
/
Name
Last Modified
File size
3D Objects 4 年前
Contacts 4 年前
Desktop 3 天前
Documents 3 天前
Downloads 32 分鐘前
Favorites 4 年前
Links 4 年前
Music 4 年前
OneDrive 4 天前
Pictures 4 年前
Saved Games 4 年前
Searches 4 年前
Videos 4 天前
Click "Documents"


Documents/
localhost:8888/tree/Documents
UPDATE Read the migration plan to Notebook 7 to learn about the new features and the actions to take if you are using extensions - Please note that updating to Notebook 7 might break some of your extensions.
Don't show anymore
jupyter
Quit
Files
Running
Clusters
Select items to perform actions on them.
Upload
New
Notebook:
Python 3 (ipykernel)
Other:
Text File
Folder
Terminal
0
/ Documents
Name
..
python
Software
自訂 Office 範本

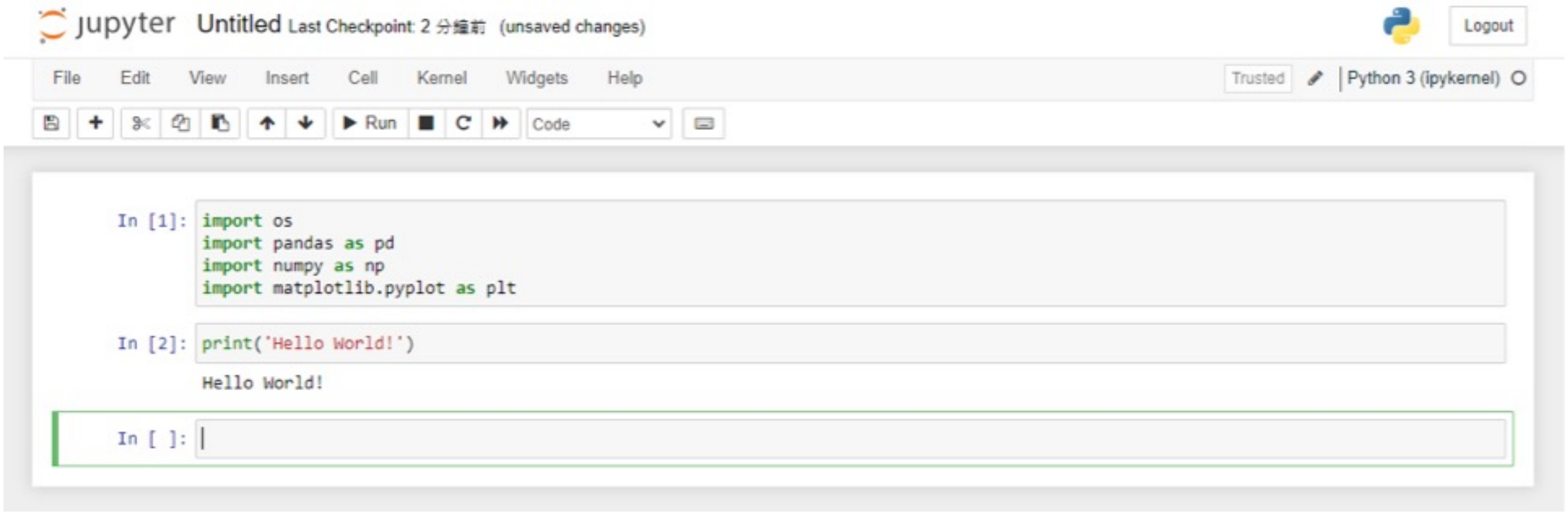
New Folder

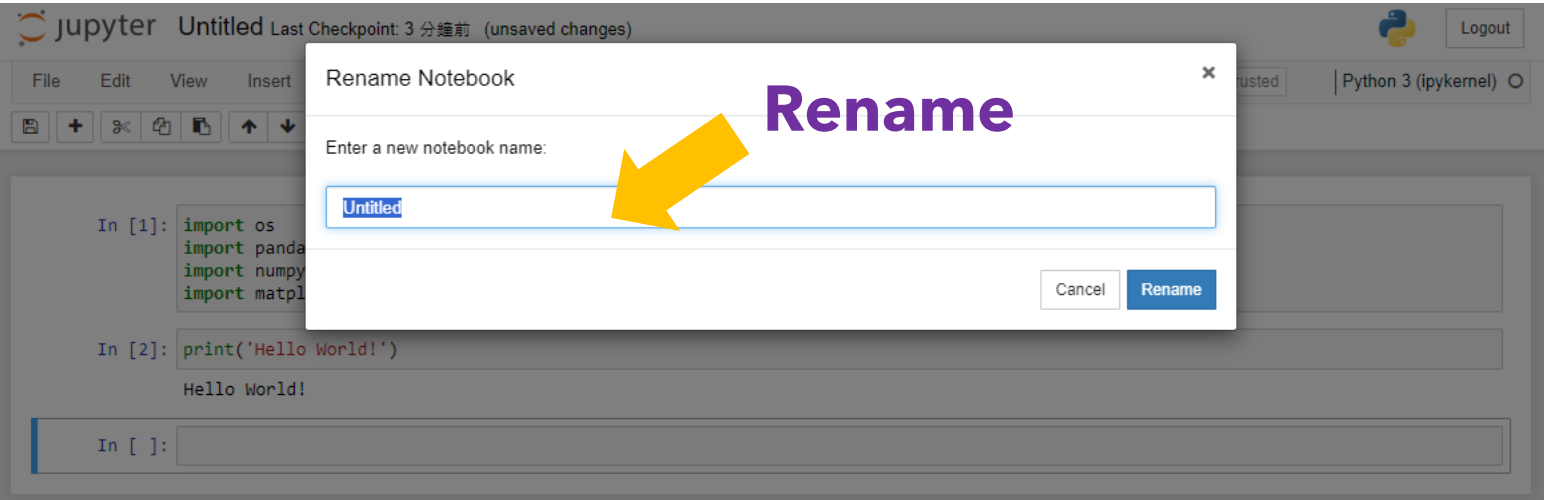

UPDATE Read the migration plan to Notebook 7 to learn about the new features and the actions to take if you are using extensions - Please note that updating to Notebook 7 might break some of your extensions.
Don't show anymore
jupyter
Quit
Logout
Files
Running
Clusters
Select items to perform actions on them.
Upload
New
0
/ Documents / python
Name
..
The notebook list is empty.
Notebook:
Python 3 (ipykernel)
Other:
Text File
Folder
Terminal

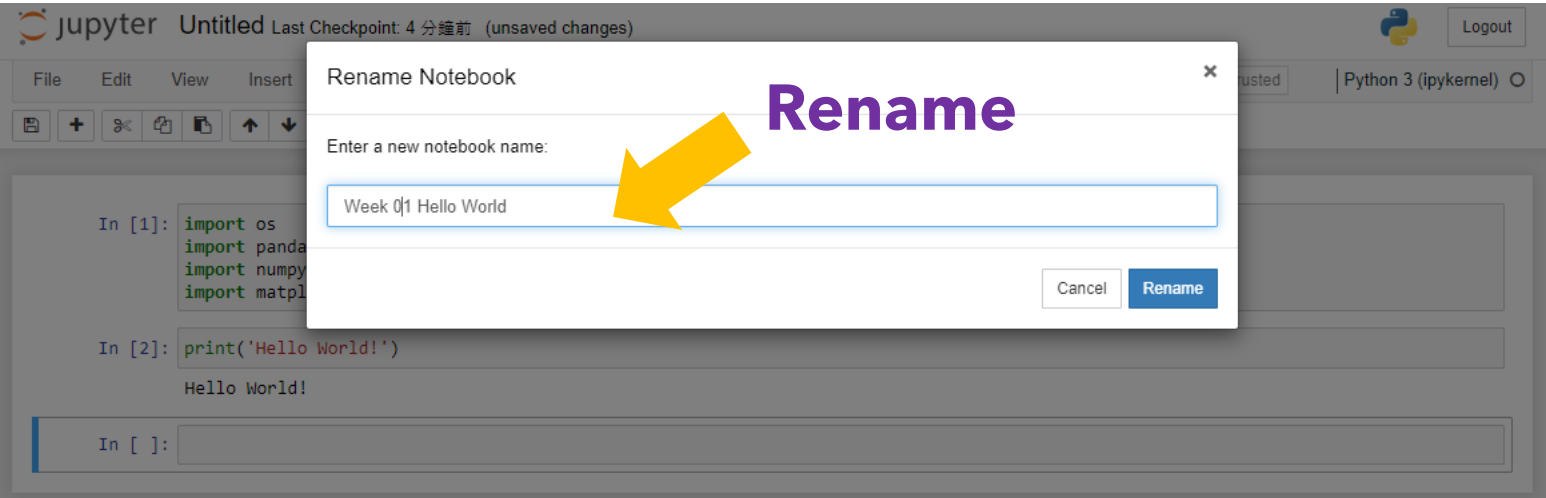
New Python3


UPDATE Read the migration plan to Notebook 7 to learn about the new features and the actions to take if you are using extensions - Please note that updating to Notebook 7 might break some of your extensions.
Don't show anymore
jupyter Untitled Last Checkpoint: 幾秒前 (unsaved changes)
Logout
File Edit View Insert Cell Kernel Widgets Help
Trusted
Python 3 (ipykernel)
Run
Code
In [ ]:
Cell
Command Mode (press Esc to enable)
Edit Shortcuts
F : find and replace
↵ : enter edit mode
⌘⇧F : open the command palette
⌘⇧P : open the command palette
P : open the command palette
⇧↵ : run cell, select below
^↵ : run selected cells
⌘↵ : run selected cells
⌥↵ : run cell and insert below
Y : change cell to code
M : change cell to markdown
R : change cell to raw
1 : change cell to heading 1
2 : change cell to heading 2
3 : change cell to heading 3
4 : change cell to heading 4
5 : change cell to heading 5
6 : change cell to heading 6
K : select cell above
↑ : select cell above
↓ : select cell below
J : select cell below
⇧K : extend selected cells above
⇧↑ : extend selected cells above
⇧↓ : extend selected cells below
⇧J : extend selected cells below
⌘A : select all cells
A : insert cell above
B : insert cell below
X : cut selected cells
C : copy selected cells
⇧V : paste cells above
V : paste cells below
Z : undo cell deletion
D , D : delete selected cells
⇧M : merge selected cells, or current cell with cell below if only one cell is selected
⌘S : Save and Checkpoint
S : Save and Checkpoint
L : toggle line numbers
O : toggle output of selected cells
⇧O : toggle output scrolling of selected cells
H : show keyboard shortcuts
I , I : interrupt the kernel
0 , 0 : restart the kernel (with dialog)
Esc : close the pager
Q : close the pager
⇧L : toggles line numbers in all

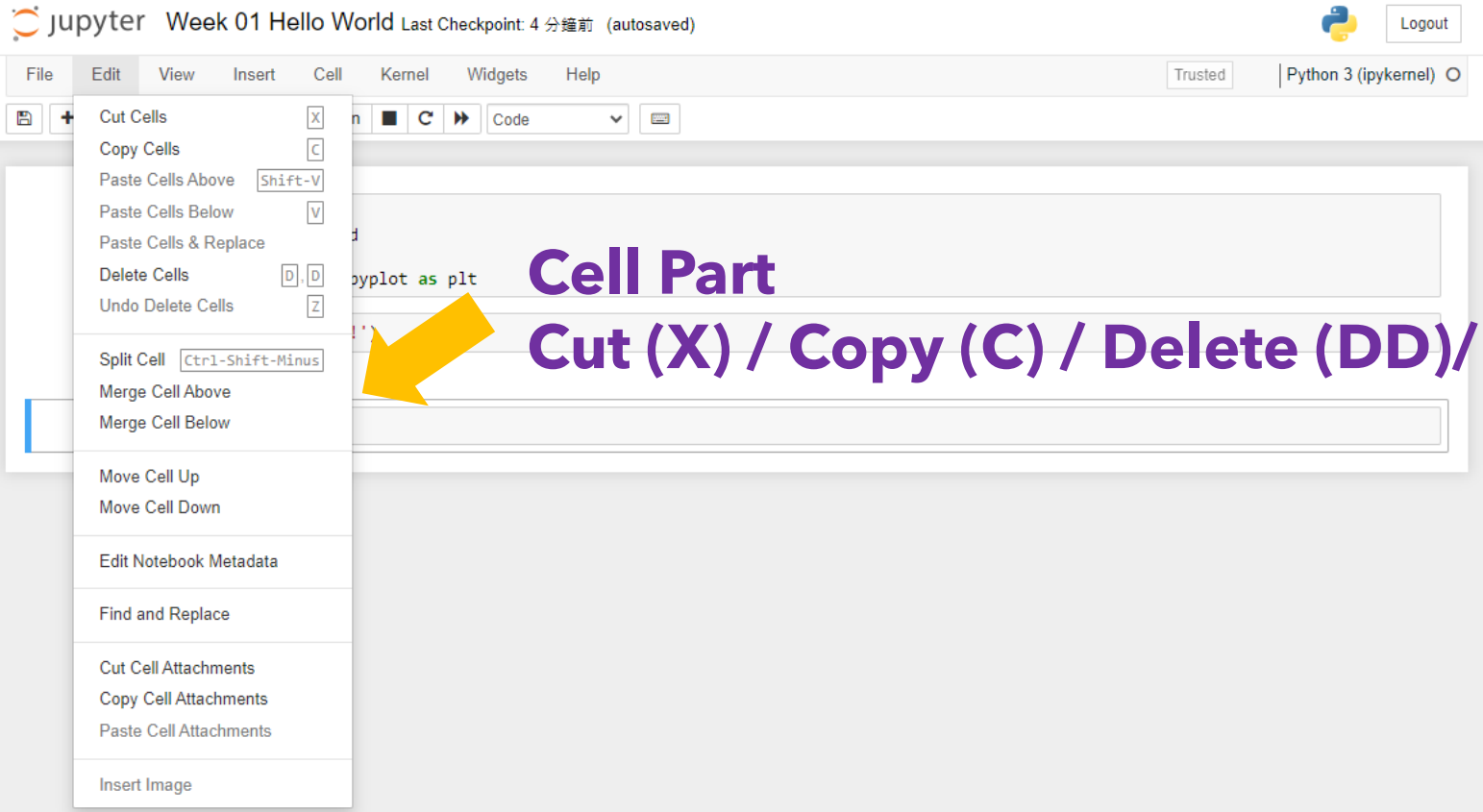
Hello World


jupyter Untitled Last Checkpoint: 2 分鐘前 (unsaved changes)
Logout
File Edit View Insert Cell Kernel Widgets Help
Trusted
Python 3 (ipykernel)
Run
Code
In [1]:
import os
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
In [2]:
print('Hello World!')
Hello World!
In [ ]:


jupyter Untitled Last Checkpoint: 3 分鐘前 (unsaved changes)
Logout
File Edit View Insert
Python 3 (ipykernel)
Rename Notebook
Rename
Enter a new notebook name:
Untitled
Cancel
Rename
In [1]: import os
import panda
import numpy
import matpl
In [2]: print('Hello World!')
Hello World!
In [ ]:

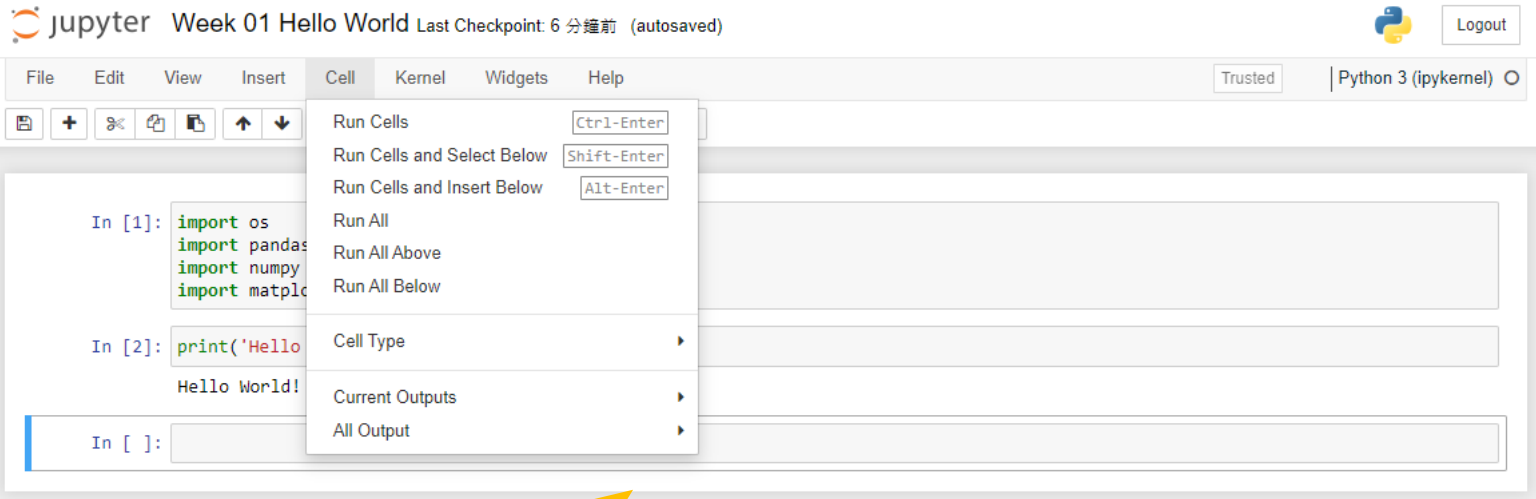

jupyter Untitled Last Checkpoint: 4 分鐘前 (unsaved changes)
Logout
File Edit View Insert
Python 3 (ipykernel)
Rename Notebook
Rename
Enter a new notebook name:
Week 01 Hello World
Cancel
Rename
In [1]: import os
import panda
import numpy
import matpl
In [2]: print('Hello World!')
Hello World!
In [ ]:


jupyter Week 01 Hello World Last Checkpoint: 4 分鐘前 (autosaved)
Logout
File Edit View Insert Cell Kernel Widgets Help
Trusted
Python 3 (ipykernel)
New Notebook
Open...
Make a Copy...
Save as...
Rename...
Save and Checkpoint Ctrl-S
Revert to Checkpoint
Print Preview
Download as
Trusted Notebook
Close and Halt
Run
as np
tlib.pyplot as plt
World!')
Open/ Save/ Copy/ Download
Download as ... PDF / HTML / ...

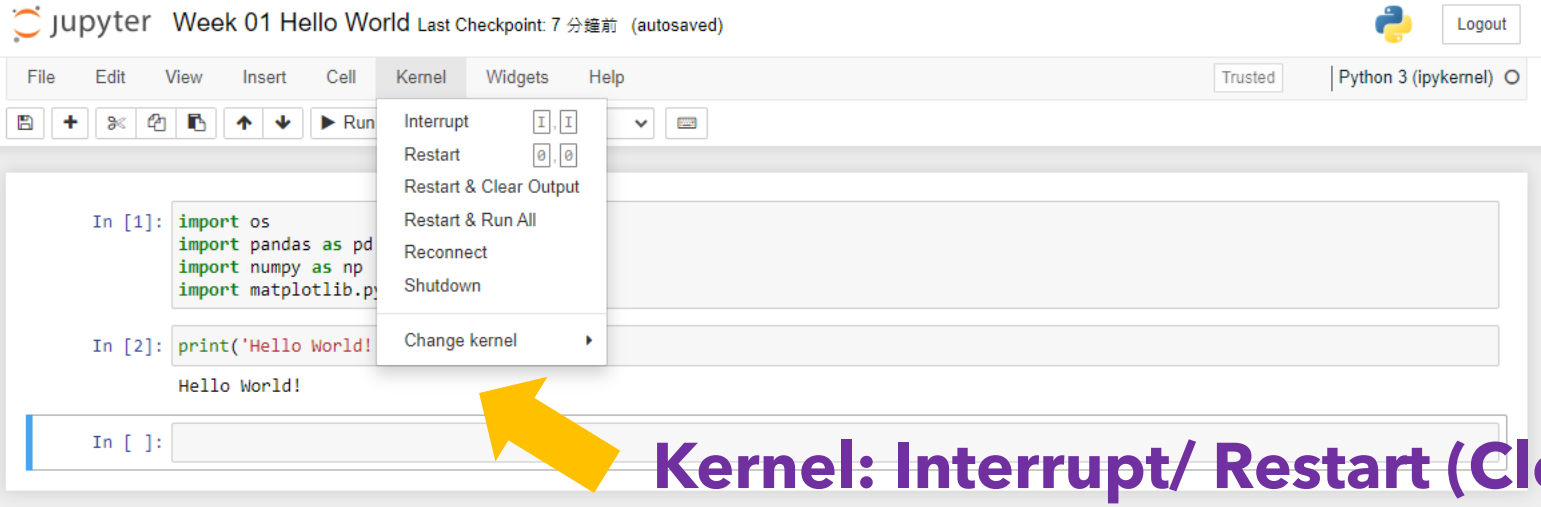


Cell Part

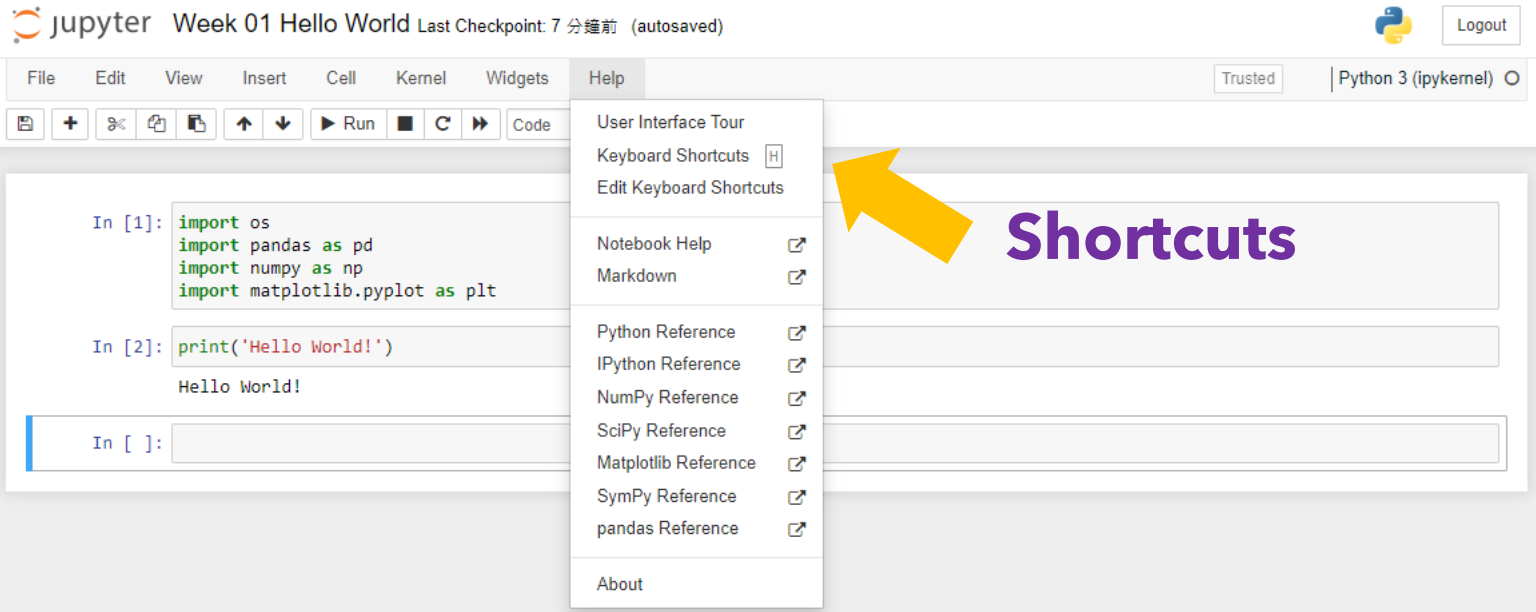
Cut (X) / Copy (C) / Delete (DD)/ Paste (V)/ …



Run Cell/ Run All (Above/ Below)



Kernel: Interrupt/ Restart (Clear/ All)/ Reconnect/ Shutdown


jupyter Week 01 Hello World Last Checkpoint: 7 分鐘前 (autosaved)
Logout
File Edit View Insert Cell Kernel Widgets Help
Trusted
Python 3 (ipykernel)
Run
Code
User Interface Tour
Keyboard Shortcuts H
Edit Keyboard Shortcuts
Notebook Help
Markdown
Python Reference
IPython Reference
NumPy Reference
SciPy Reference
Matplotlib Reference
SymPy Reference
pandas Reference
About
In [1]:
import os
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
In [2]:
print('Hello World!')
Hello World!
In [ ]:
Shortcuts

jupyter Week 01 Hello World Last Checkpoint: 1 分鐘前 (unsaved changes)

Logout

File Edit View Insert Cell Kernel Widgets Help

Trusted | Python 3 (ipykernel)

Run Code

```
import matplotlib.pyplot as plt
```

In [2]:
```
print('Hello World!')
```

```
Hello World!
```

In [3]:
```
a = [0,1,2,3,4,5,6]
b = [2,4,6,8,10,11,12]
```

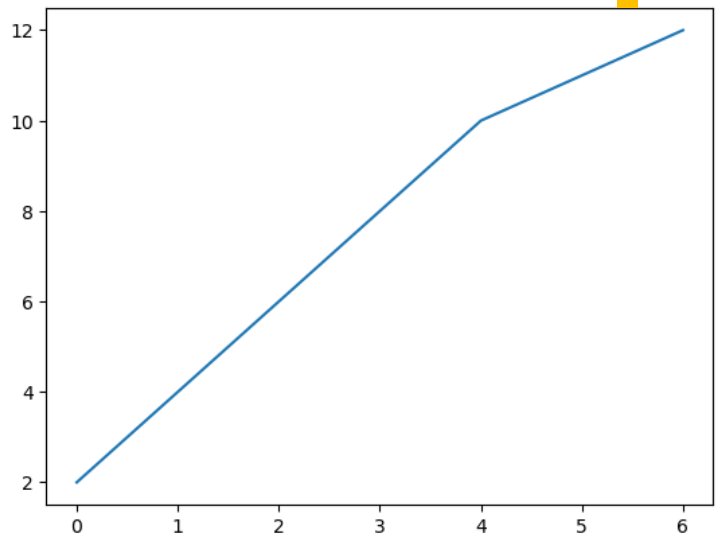
In [4]:
```
print(a)
```

```
[0, 1, 2, 3, 4, 5, 6]
```

In [5]:
```
a
```

Out[5]:
```
[0, 1, 2, 3, 4, 5, 6]
```

In [6]:
```
plt.plot(a, b)
plt.show()
```



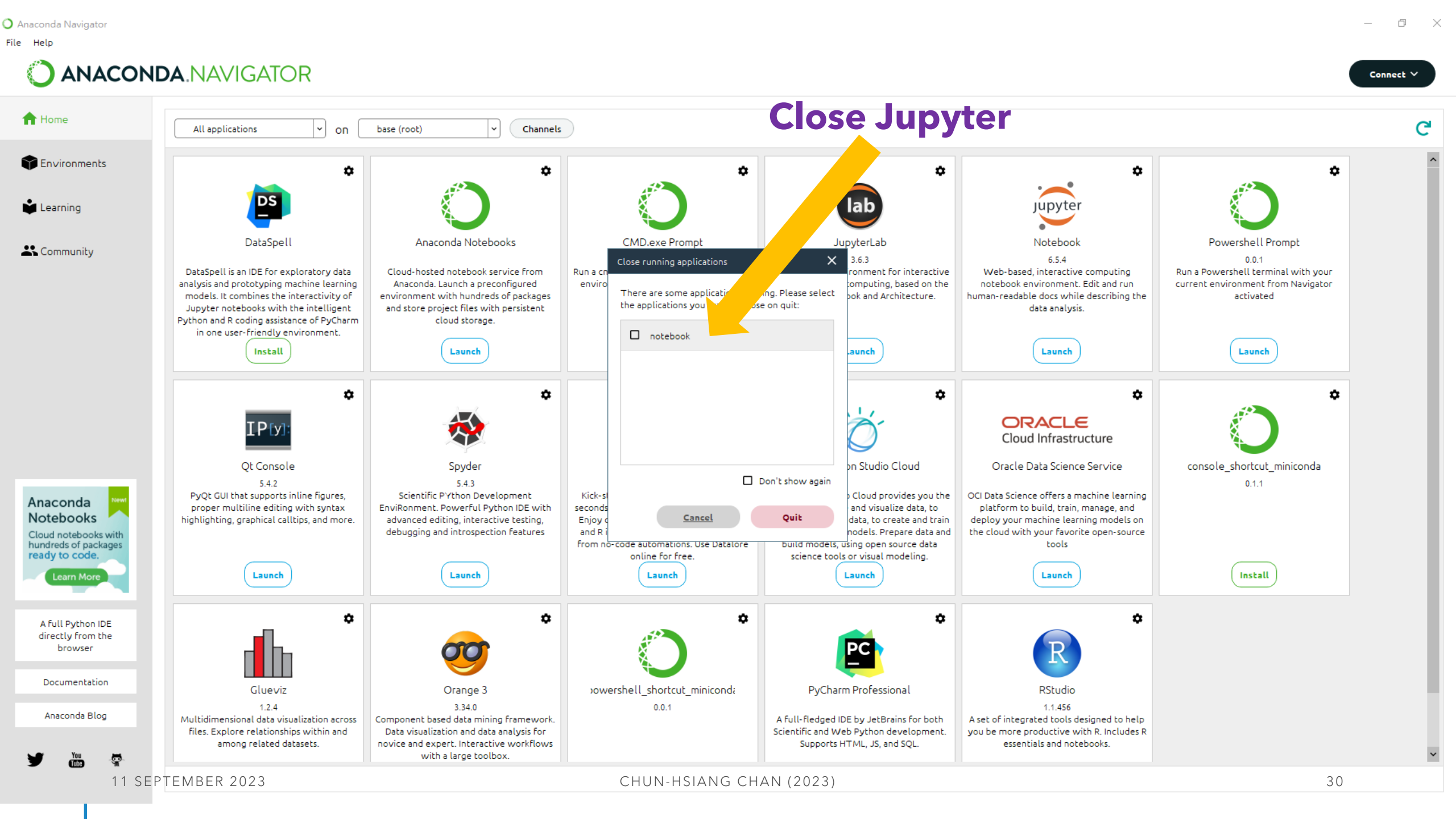
list

Print variable

View variable

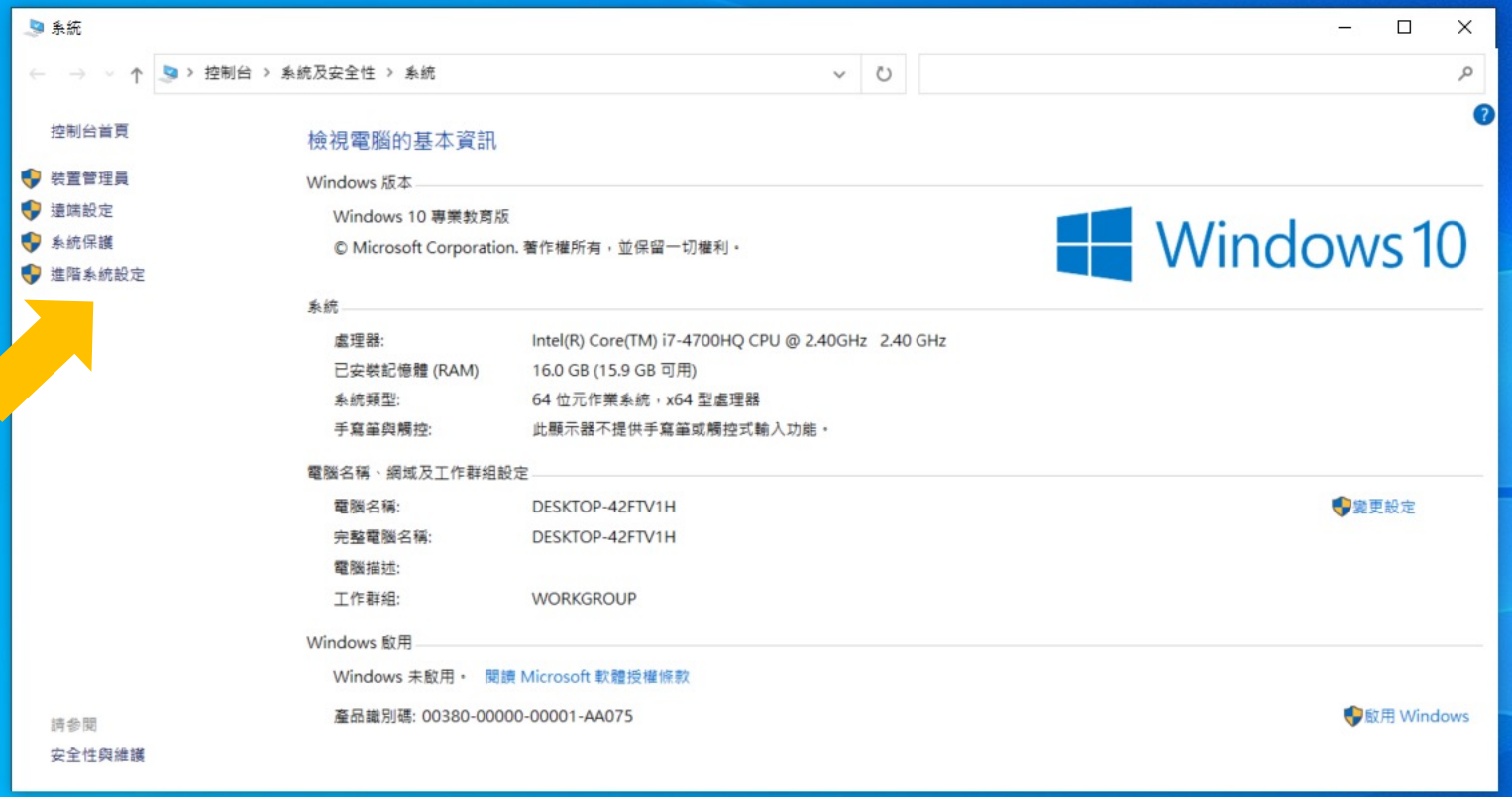
Plot variable

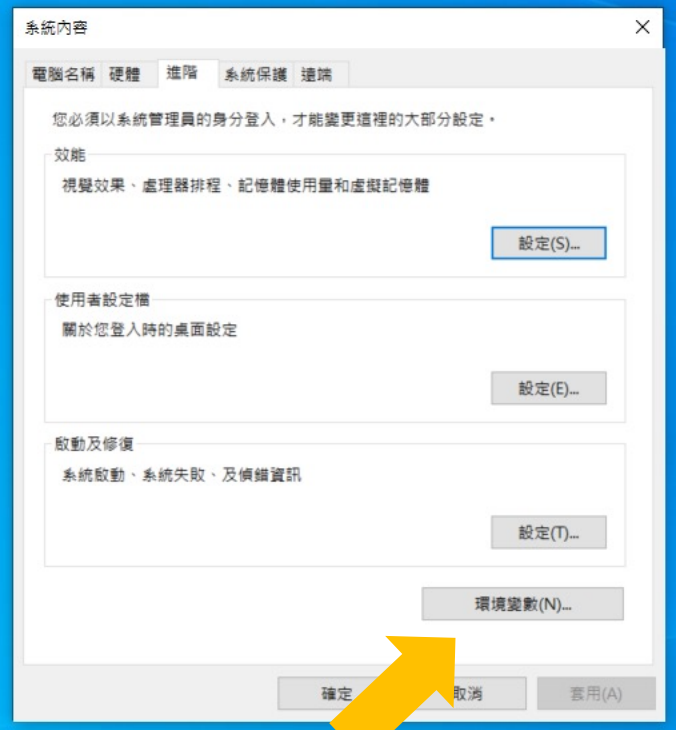
Run few codes for fun


Close Jupyter
Anaconda Navigator
File Help
ANACONDA.NAVIGATOR
Connect
Home
Environments
Learning
Community
All applications
on
base (root)
Channels
DataSpell
DataSpell is an IDE for exploratory data analysis and prototyping machine learning models. It combines the interactivity of Jupyter notebooks with the intelligent Python and R coding assistance of PyCharm in one user-friendly environment.
Install
Anaconda Notebooks
Cloud-hosted notebook service from Anaconda. Launch a preconfigured environment with hundreds of packages and store project files with persistent cloud storage.
Launch
CMD.exe Prompt
Launch
JupyterLab
Launch
Notebook
6.5.4
Web-based, interactive computing notebook environment. Edit and run human-readable docs while describing the data analysis.
Launch
Powershell Prompt
0.0.1
Run a Powershell terminal with your current environment from Navigator activated
Launch
Close running applications
There are some applicati ng. Please select the applications you se on quit:
notebook
Don't show again
Cancel
Quit
Qt Console
5.4.2
PyQt GUI that supports inline figures, proper multiline editing with syntax highlighting, graphical calltips, and more.
Launch
Spyder
5.4.3
Scientific PYthon Development EnviRonment. Powerful Python IDE with advanced editing, interactive testing, debugging and introspection features
Launch
Launch
n Studio Cloud
Launch
Oracle Data Science Service
OCI Data Science offers a machine learning platform to build, train, manage, and deploy your machine learning models on the cloud with your favorite open-source tools
Launch
console_shortcut_miniconda
0.1.1
Install
Anaconda Notebooks
Cloud notebooks with hundreds of packages ready to code.
Learn More
A full Python IDE directly from the browser
Documentation
Anaconda Blog
Glueviz
1.2.4
Multidimensional data visualization across files. Explore relationships within and among related datasets.
Orange 3
3.34.0
Component based data mining framework. Data visualization and data analysis for novice and expert. Interactive workflows with a large toolbox.
owershell_shortcut_minicond
0.0.1
PyCharm Professional
A full-fledged IDE by JetBrains for both Scientific and Web Python development. Supports HTML, JS, and SQL.
RStudio
1.1.456
A set of integrated tools designed to help you be more productive with R. Includes R essentials and notebooks.

The duration of opening anaconda for jupyter notebook is quite long. Here, we may open jupyter in terminal ... but for windows users ...

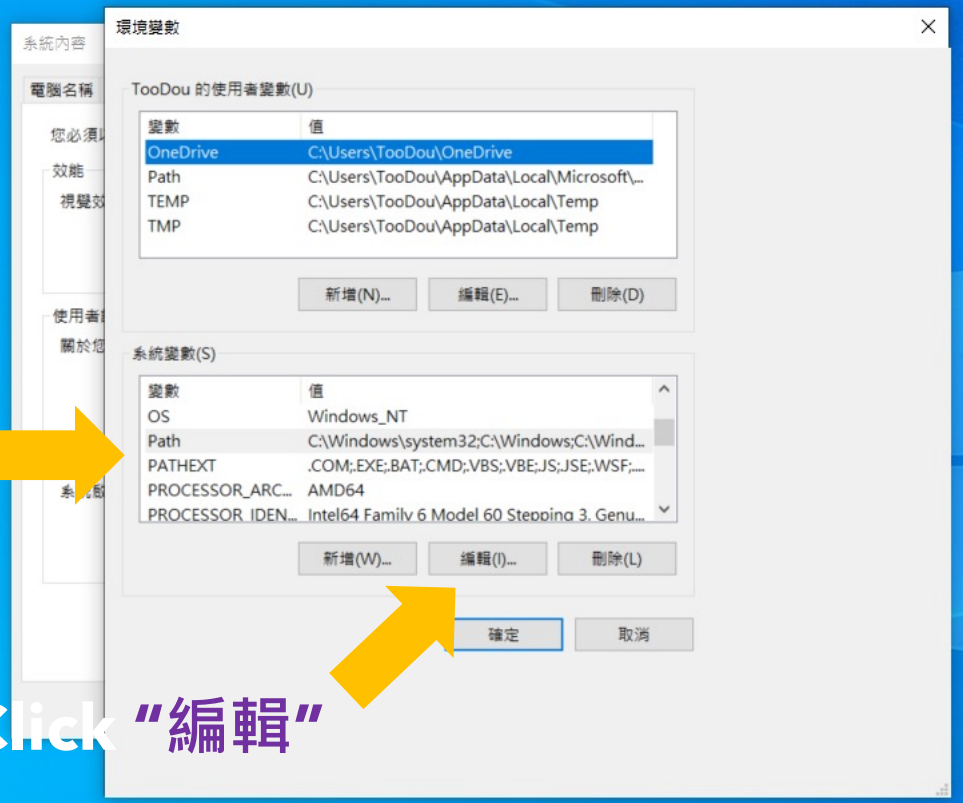
Set System Env




系統內容
電腦名稱
硬體
進階
系統保護
遠端
您必須以系統管理員的身分登入，才能變更這裡的大部分設定。
效能
視覺效果、處理器排程、記憶體使用量和虛擬記憶體
設定(S)...
使用者設定檔
關於您登入時的桌面設定
設定(E)...
啟動及修復
系統啟動、系統失敗、及偵錯資訊
設定(T)...
環境變數(N)...
確定
取消
套用(A)

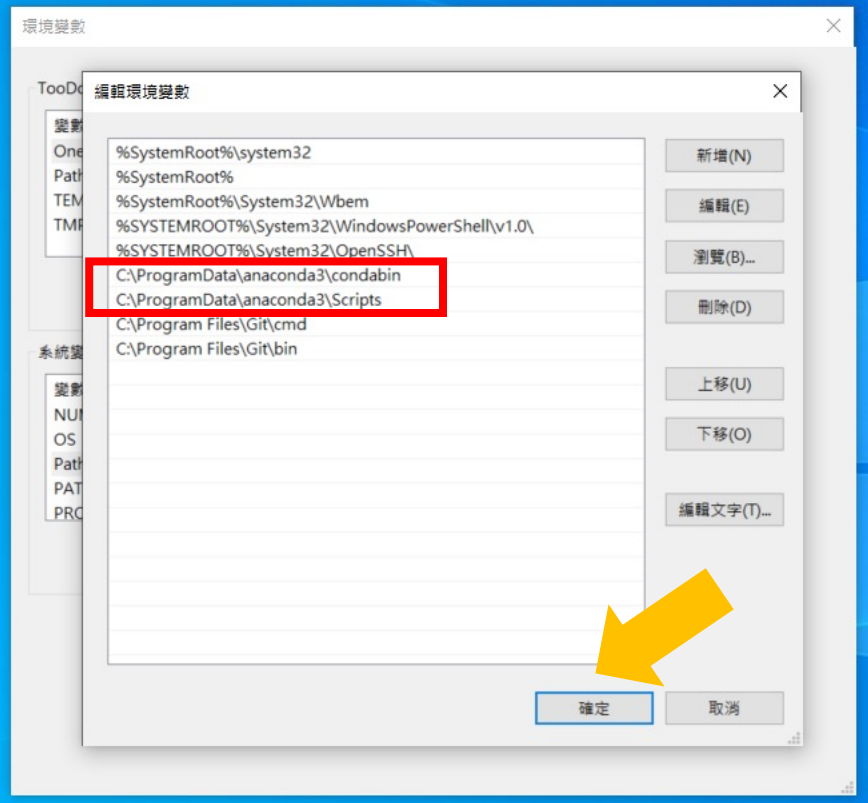
Click “環境變數”

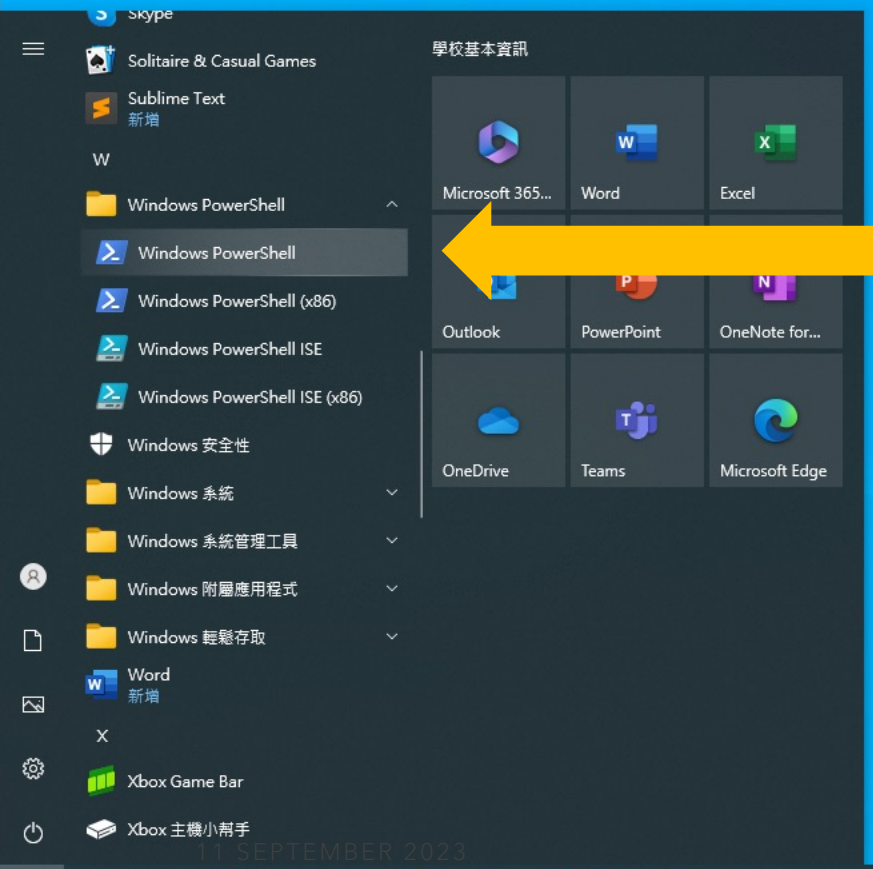
Select “Path”



Click “編輯”

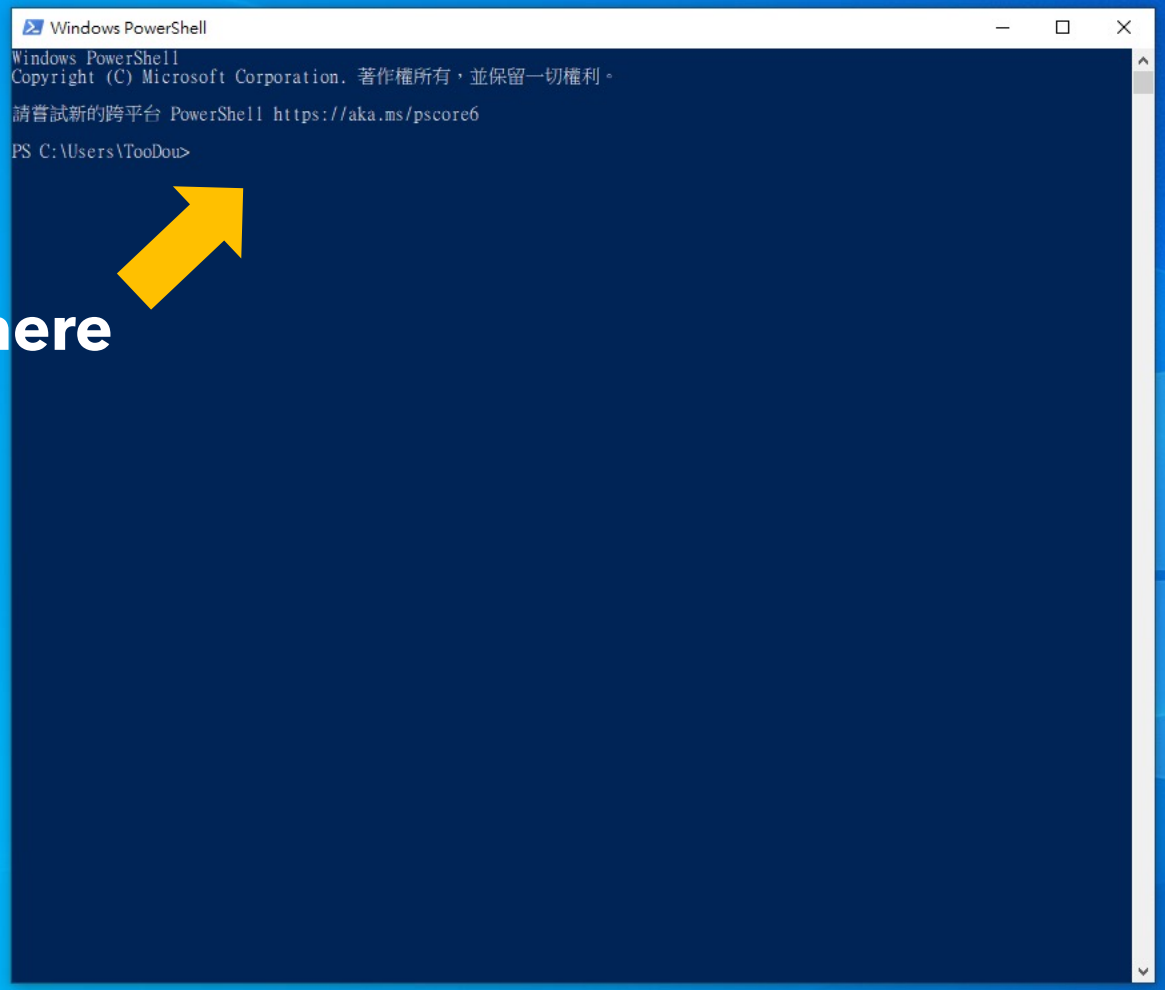
Set “環境變數” (environmental variables)

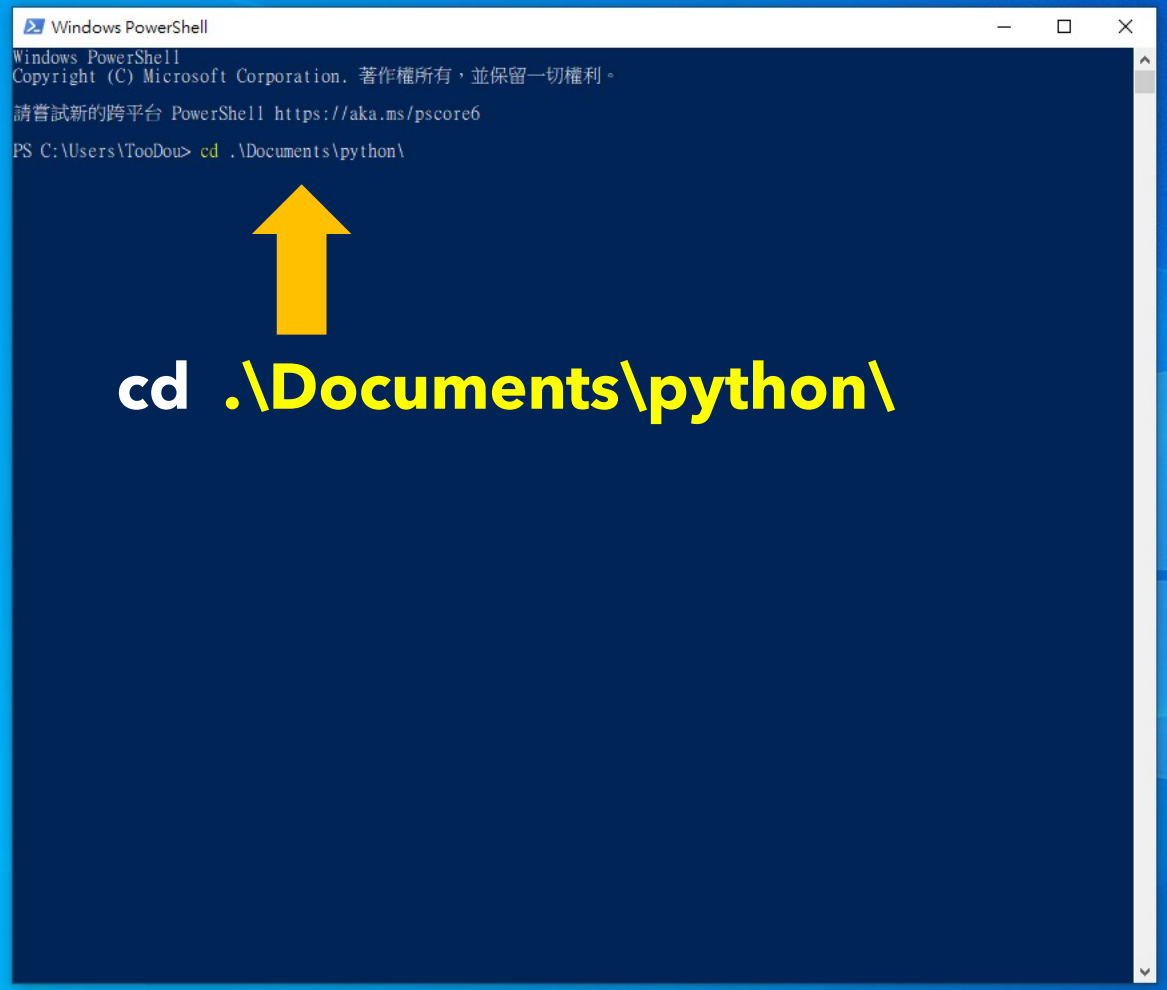




Open “Windows PowerShell”

Type here


Windows PowerShell
Windows PowerShell
Copyright (C) Microsoft Corporation. 著作權所有，並保留一切權利。
請嘗試新的跨平台 PowerShell https://aka.ms/pscore6
PS C:\Users\TooDou>


Windows PowerShell
Windows PowerShell
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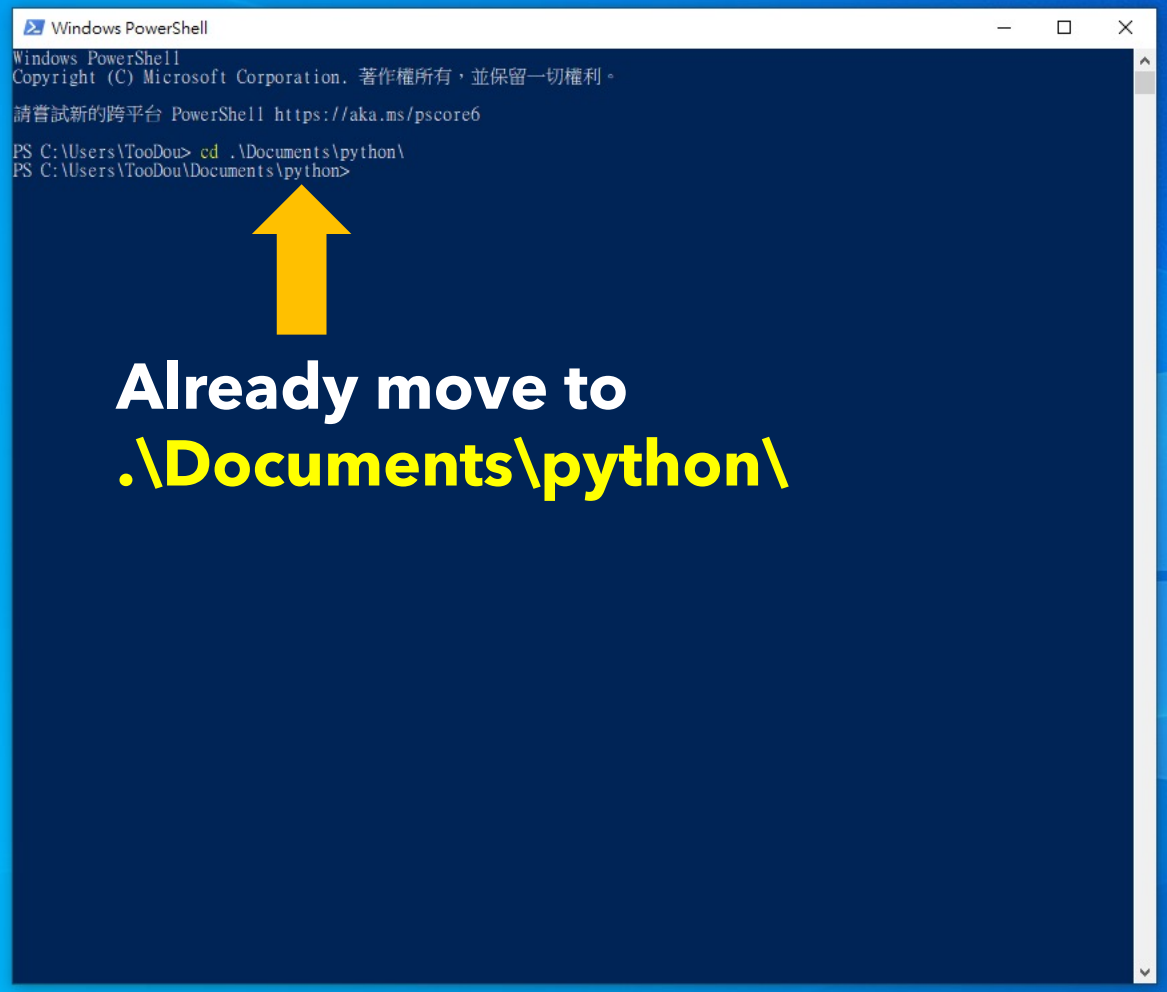
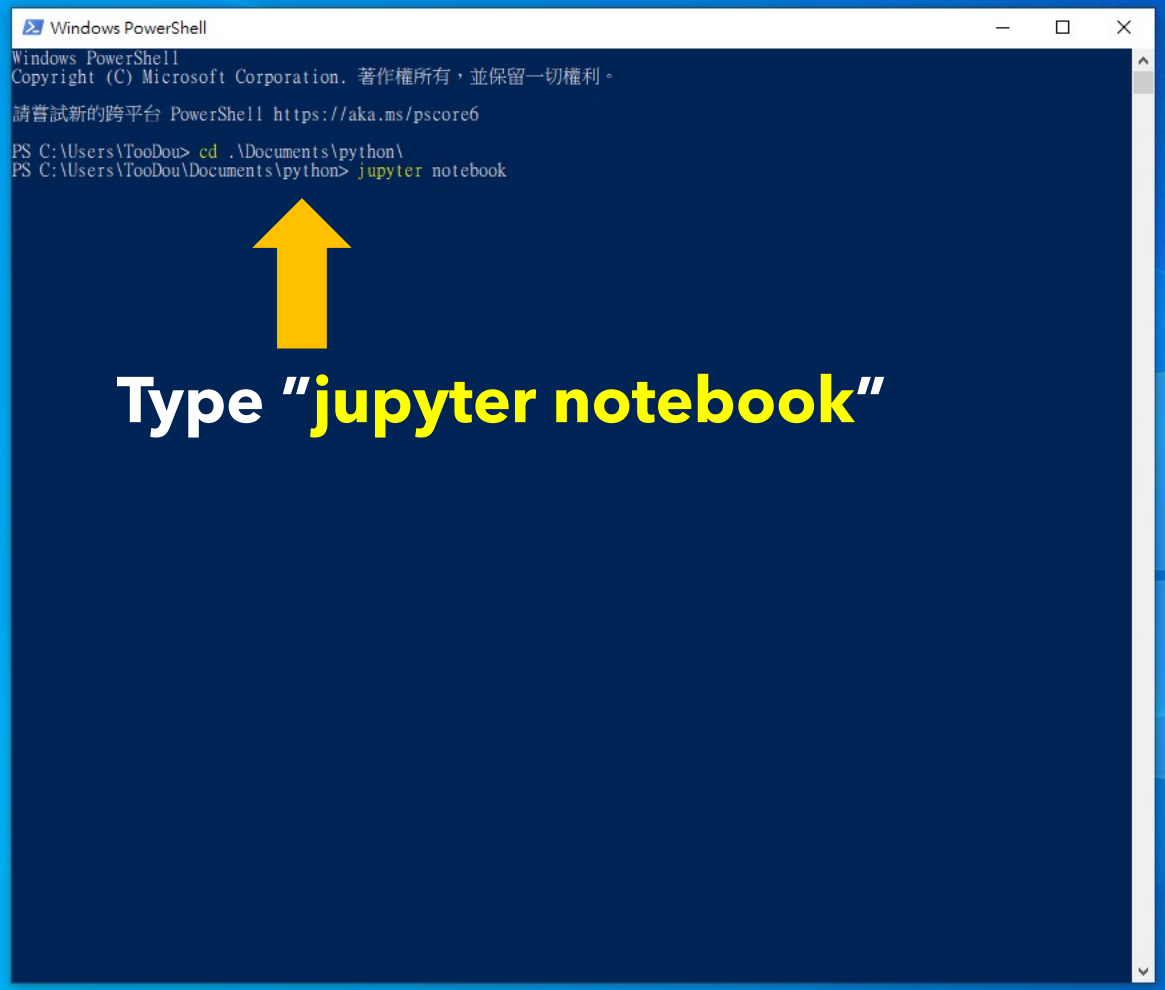
請嘗試新的跨平台 PowerShell https://aka.ms/pscore6
PS C:\Users\TooDou> cd .\Documents\python\
cd .\Documents\python\


Windows PowerShell
Windows PowerShell
Copyright (C) Microsoft Corporation. 著作權所有，並保留一切權利。
請嘗試新的跨平台 PowerShell https://aka.ms/pscore6
PS C:\Users\TooDou> cd .\Documents\python\
PS C:\Users\TooDou\Documents\python>
Already move to
.\Documents\python\


Windows PowerShell
Windows PowerShell
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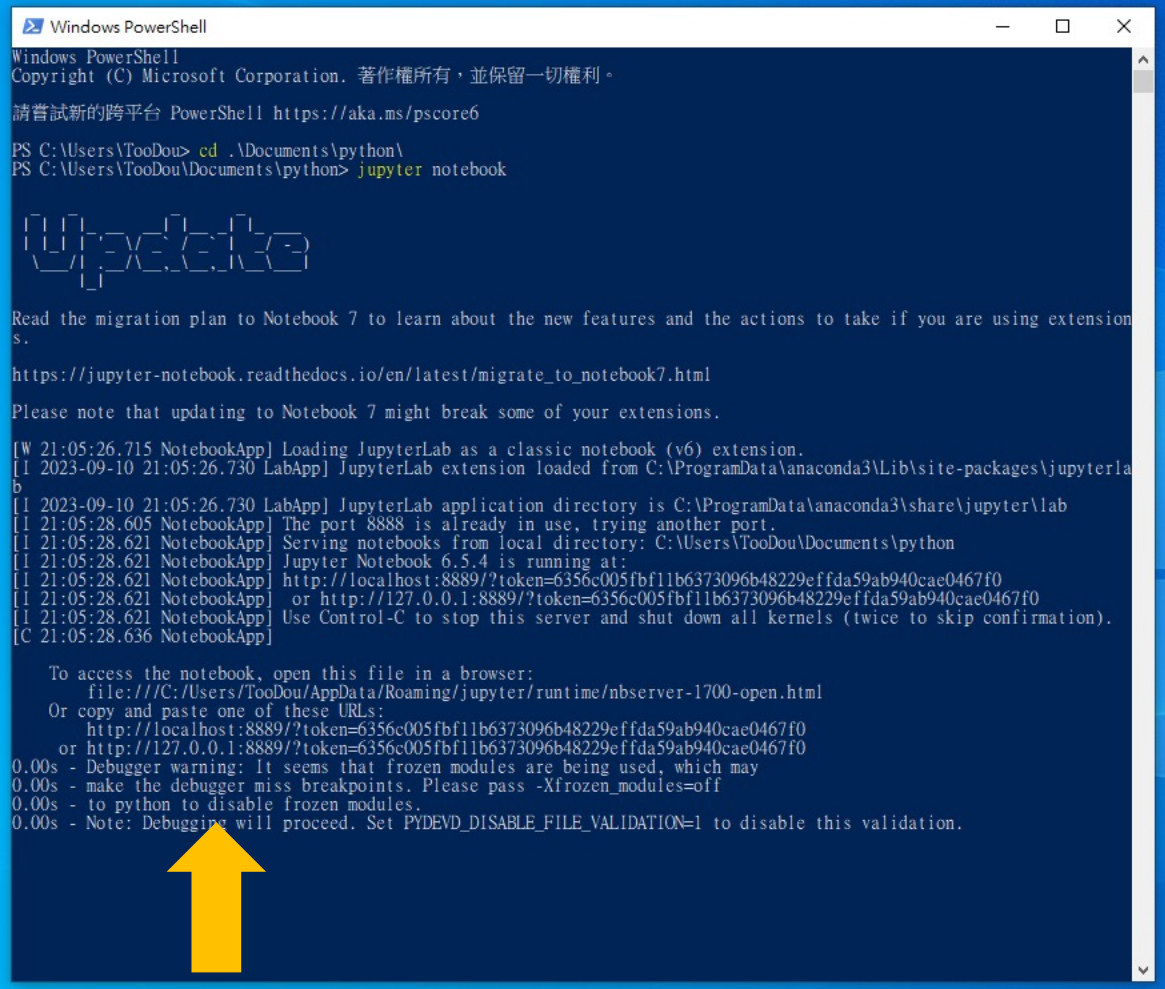
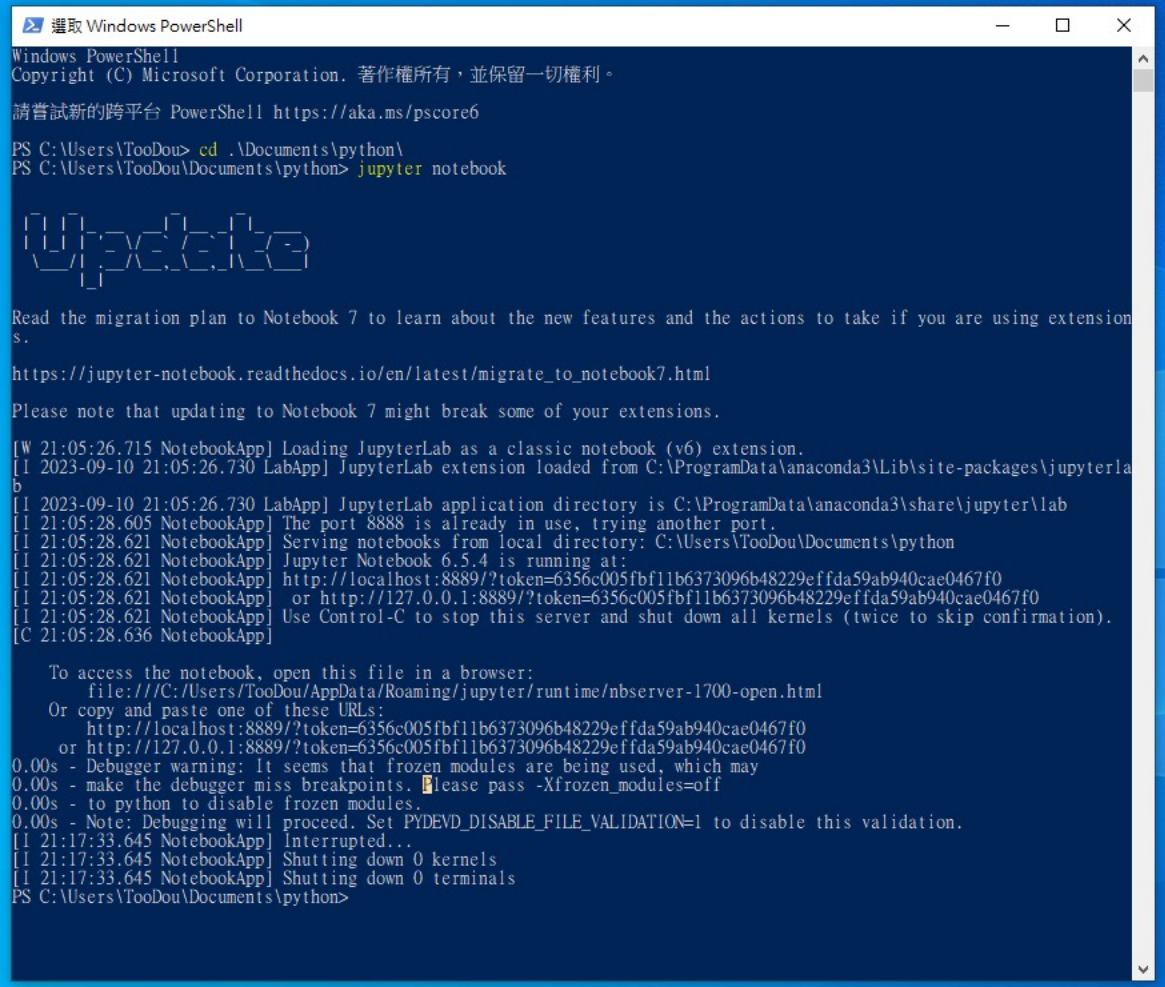
請嘗試新的跨平台 PowerShell https://aka.ms/pscore6
PS C:\Users\TooDou> cd .\Documents\python\
PS C:\Users\TooDou\Documents\python> jupyter notebook
Type "jupyter notebook"



Successfully Open


選取 Windows PowerShell
Windows PowerShell
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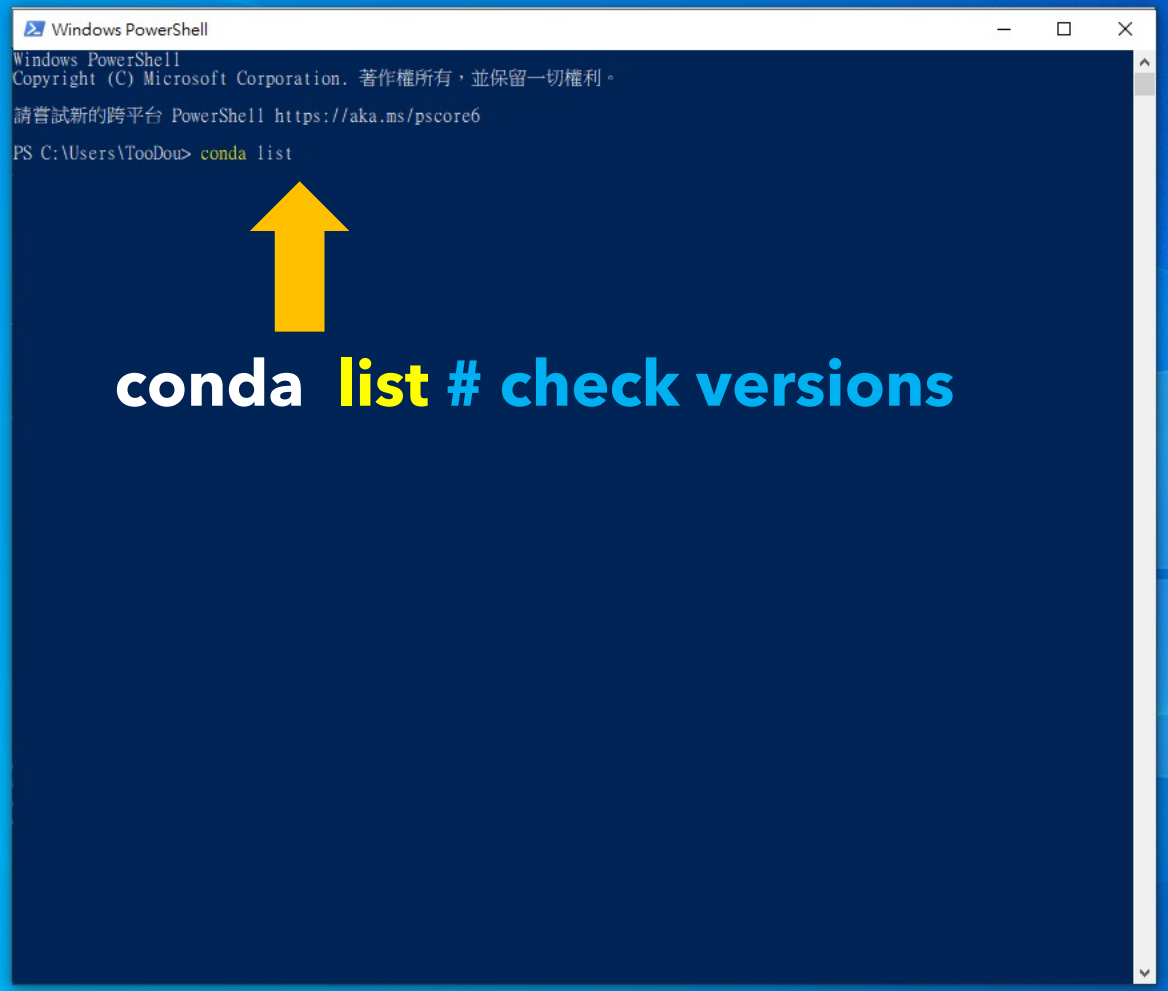
請嘗試新的跨平台 PowerShell https://aka.ms/pscore6
PS C:\Users\TooDou> cd .\Documents\python\
PS C:\Users\TooDou\Documents\python> jupyter notebook
Read the migration plan to Notebook 7 to learn about the new features and the actions to take if you are using extensions.
https://jupyter-notebook.readthedocs.io/en/latest/migrate_to_notebook7.html
Please note that updating to Notebook 7 might break some of your extensions.
[W 21:05:26.715 NotebookApp] Loading JupyterLab as a classic notebook (v6) extension.
[I 2023-09-10 21:05:26.730 LabApp] JupyterLab extension loaded from C:\ProgramData\anaconda3\Lib\site-packages\jupyterlab
[I 2023-09-10 21:05:26.730 LabApp] JupyterLab application directory is C:\ProgramData\anaconda3\share\jupyter\lab
[I 21:05:28.605 NotebookApp] The port 8888 is already in use, trying another port.
[I 21:05:28.621 NotebookApp] Serving notebooks from local directory: C:\Users\TooDou\Documents\python
[I 21:05:28.621 NotebookApp] Jupyter Notebook 6.5.4 is running at:
[I 21:05:28.621 NotebookApp] http://localhost:8889/?token=6356c005fbf11b6373096b48229effda59ab940cae0467f0
[I 21:05:28.621 NotebookApp] or http://127.0.0.1:8889/?token=6356c005fbf11b6373096b48229effda59ab940cae0467f0
[I 21:05:28.621 NotebookApp] Use Control-C to stop this server and shut down all kernels (twice to skip confirmation).
[C 21:05:28.636 NotebookApp]
To access the notebook, open this file in a browser:
file:///C:/Users/TooDou/AppData/Roaming/jupyter/runtime/nbserver-1700-open.html
Or copy and paste one of these URLs:
http://localhost:8889/?token=6356c005fbf11b6373096b48229effda59ab940cae0467f0
or http://127.0.0.1:8889/?token=6356c005fbf11b6373096b48229effda59ab940cae0467f0
0.00s - Debugger warning: It seems that frozen modules are being used, which may
0.00s - make the debugger miss breakpoints. Please pass -Xfrozen_modules=off
0.00s - to python to disable frozen modules.
0.00s - Note: Debugging will proceed. Set PYDEVD_DISABLE_FILE_VALIDATION=1 to disable this validation.
[I 21:17:33.645 NotebookApp] Interrupted...
[I 21:17:33.645 NotebookApp] Shutting down 0 kernels
[I 21:17:33.645 NotebookApp] Shutting down 0 terminals
PS C:\Users\TooDou\Documents\python>


Windows PowerShell
Windows PowerShell
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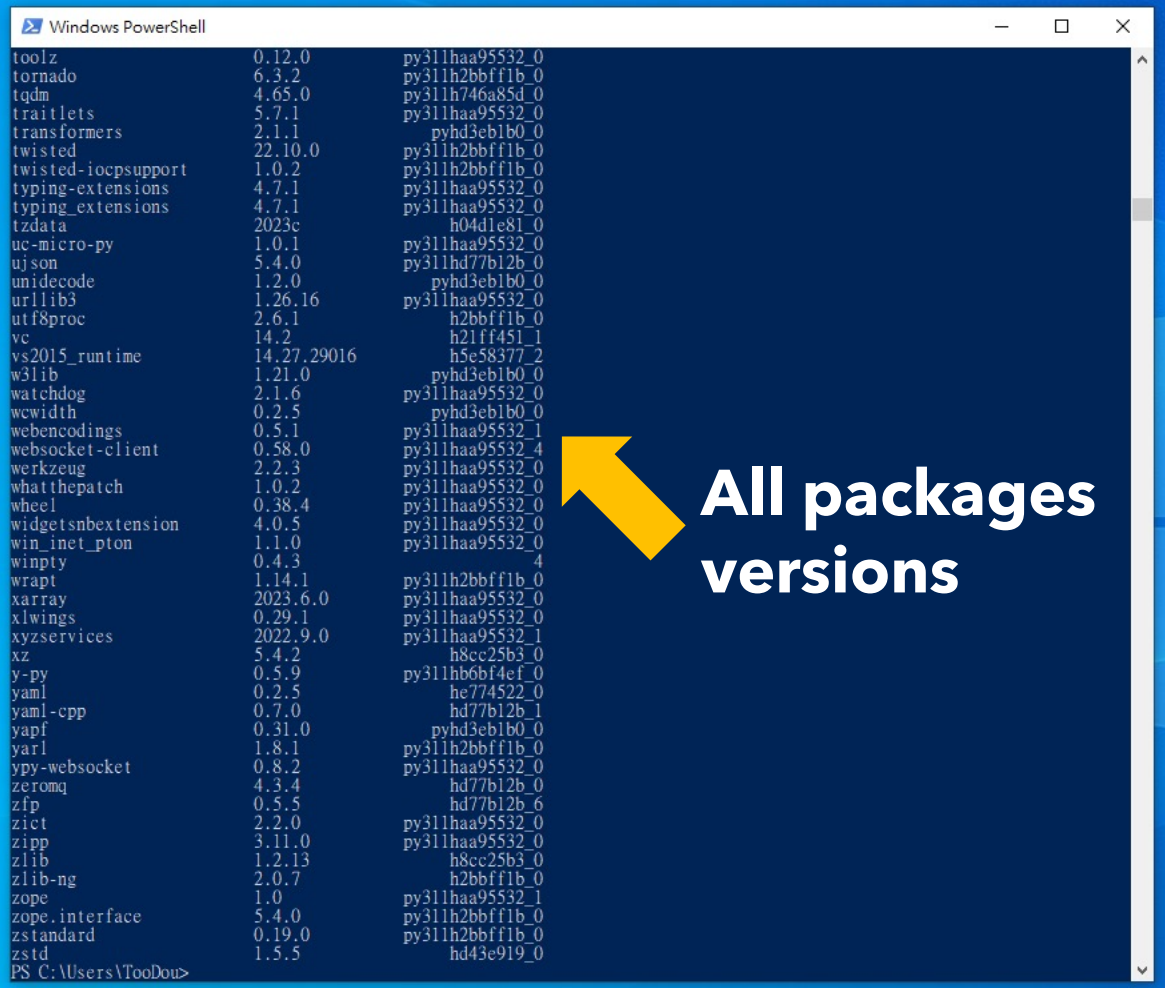
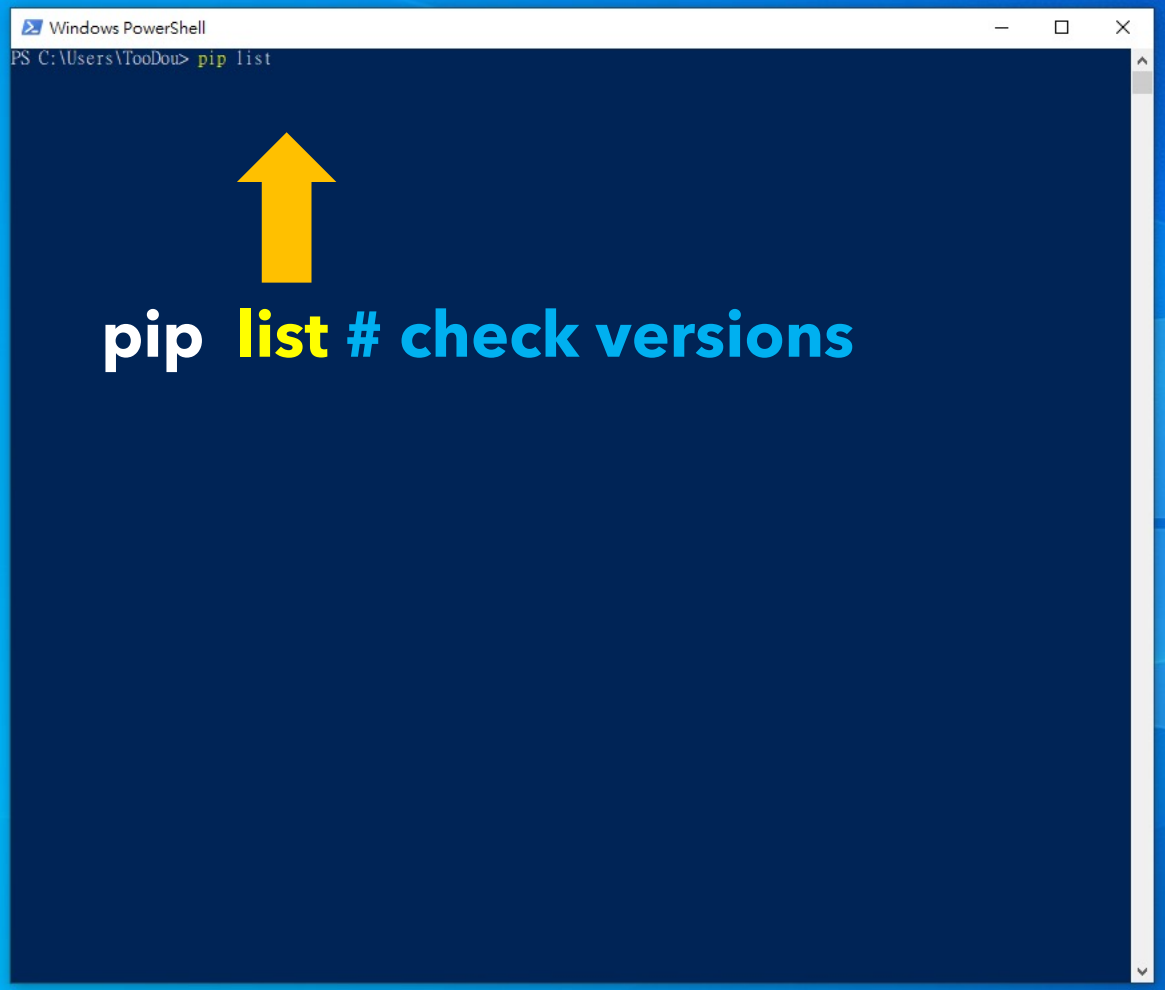
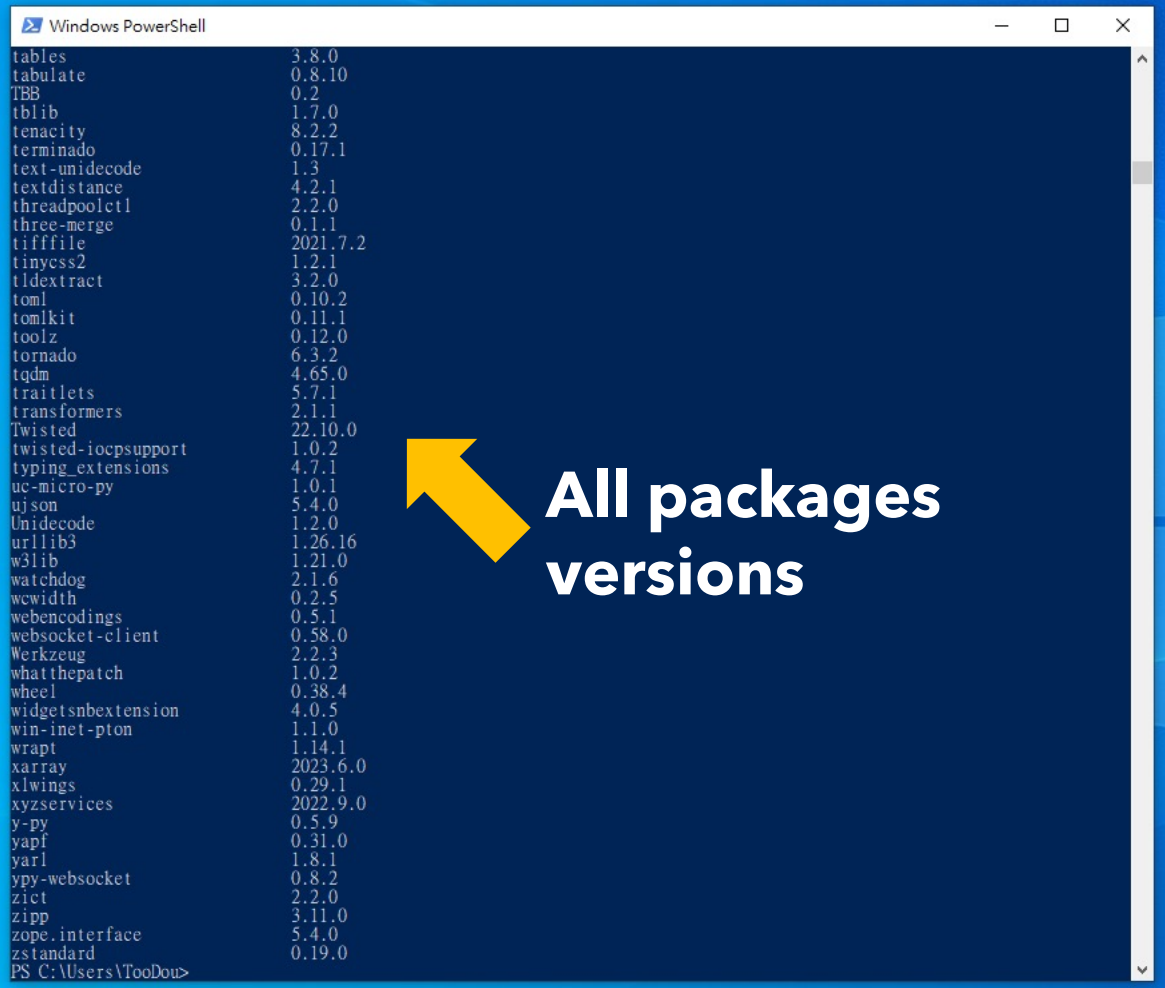
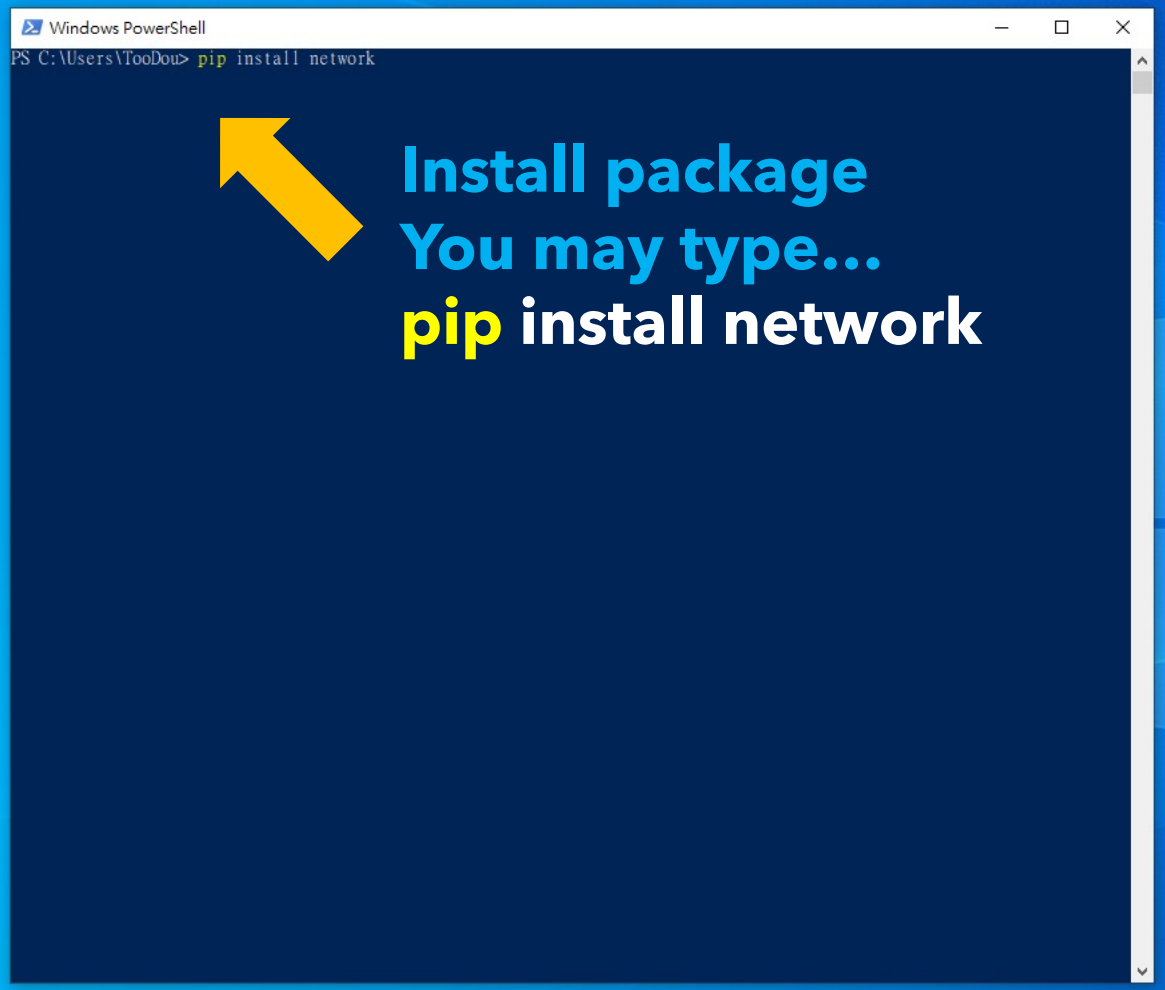
請嘗試新的跨平台 PowerShell https://aka.ms/pscore6
PS C:\Users\TooDou> conda list
conda list # check versions

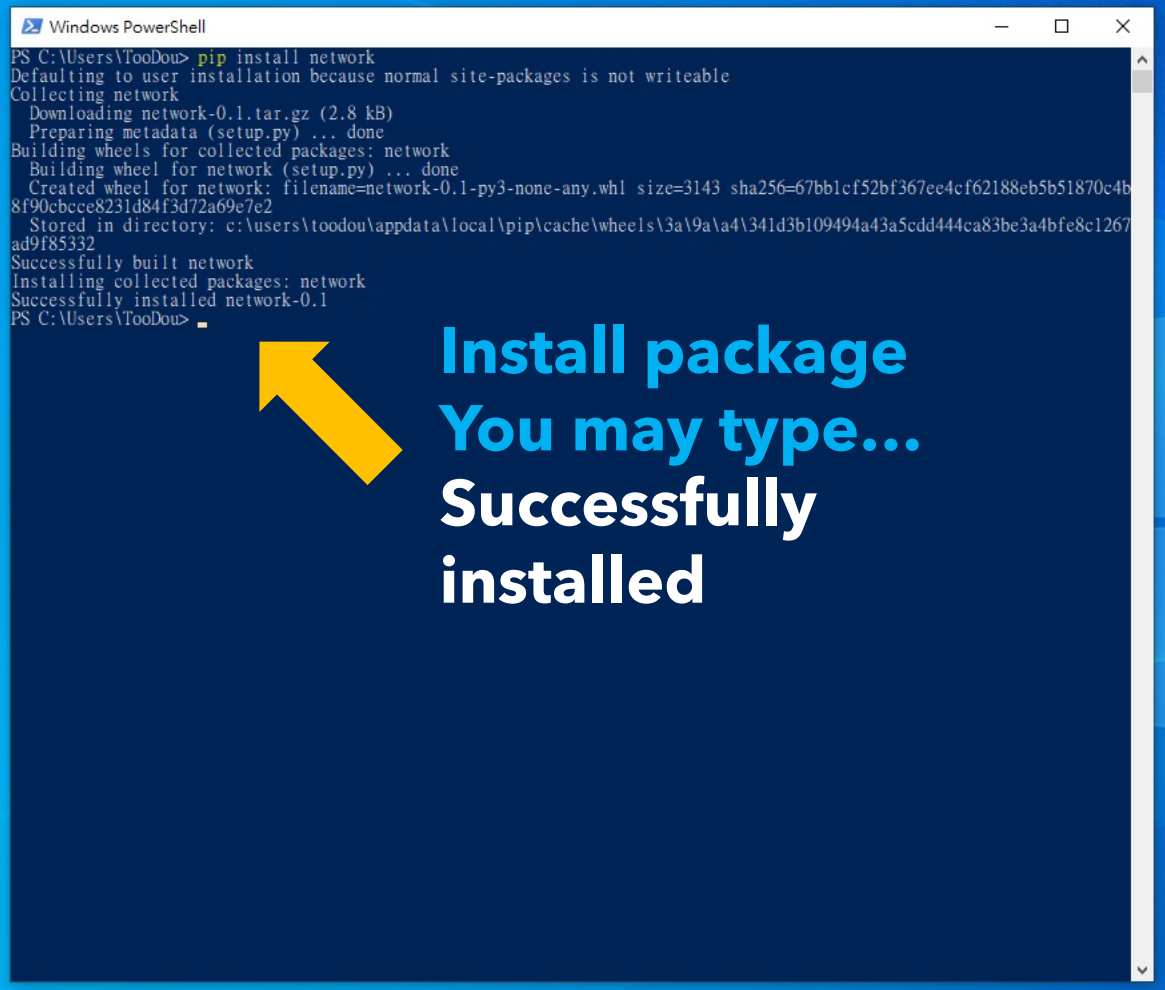

Windows PowerShell
toolz 0.12.0 py311haa95532_0
tornado 6.3.2 py311h2bbff1b_0
tqdm 4.65.0 py311h746a85d_0
traitlets 5.7.1 py311haa95532_0
transformers 2.1.1 pyhd3eb1b0_0
twisted 22.10.0 py311h2bbff1b_0
twisted-iocpsupport 1.0.2 py311h2bbff1b_0
typing-extensions 4.7.1 py311haa95532_0
typing_extensions 4.7.1 py311haa95532_0
tzdata 2023c h04d1e81_0
uc-micro-py 1.0.1 py311haa95532_0
ujson 5.4.0 py311hd77b12b_0
unidecode 1.2.0 pyhd3eb1b0_0
urllib3 1.26.16 py311haa95532_0
utf8proc 2.6.1 h2bbff1b_0
vc 14.2 h21ff451_1
vs2015_runtime 14.27.29016 h5e58377_2
w3lib 1.21.0 pyhd3eb1b0_0
watchdog 2.1.6 py311haa95532_0
wcwidth 0.2.5 pyhd3eb1b0_0
webencodings 0.5.1 py311haa95532_1
websocket-client 0.58.0 py311haa95532_4
werkzeug 2.2.3 py311haa95532_0
whatthepatch 1.0.2 py311haa95532_0
wheel 0.38.4 py311haa95532_0
widgetsnbextension 4.0.5 py311haa95532_0
win_inet_pton 1.1.0 py311haa95532_0
winpty 0.4.3 4
wrapt 1.14.1 py311h2bbff1b_0
xarray 2023.6.0 py311haa95532_0
xlwings 0.29.1 py311haa95532_0
xyzservices 2022.9.0 py311haa95532_1
xz 5.4.2 h8cc25b3_0
y-py 0.5.9 py311hb6bf4ef_0
yaml 0.2.5 he774522_0
yaml-cpp 0.7.0 hd77b12b_1
yapf 0.31.0 pyhd3eb1b0_0
yarl 1.8.1 py311h2bbff1b_0
ypy-websocket 0.8.2 py311haa95532_0
zeromq 4.3.4 hd77b12b_0
zfp 0.5.5 hd77b12b_6
zict 2.2.0 py311haa95532_0
zipp 3.11.0 py311haa95532_0
zlib 1.2.13 h8cc25b3_0
zlib-ng 2.0.7 h2bbff1b_0
zope 1.0 py311haa95532_1
zope.interface 5.4.0 py311h2bbff1b_0
zstandard 0.19.0 py311h2bbff1b_0
zstd 1.5.5 hd43e919_0
PS C:\Users\TooDou>
All packages versions

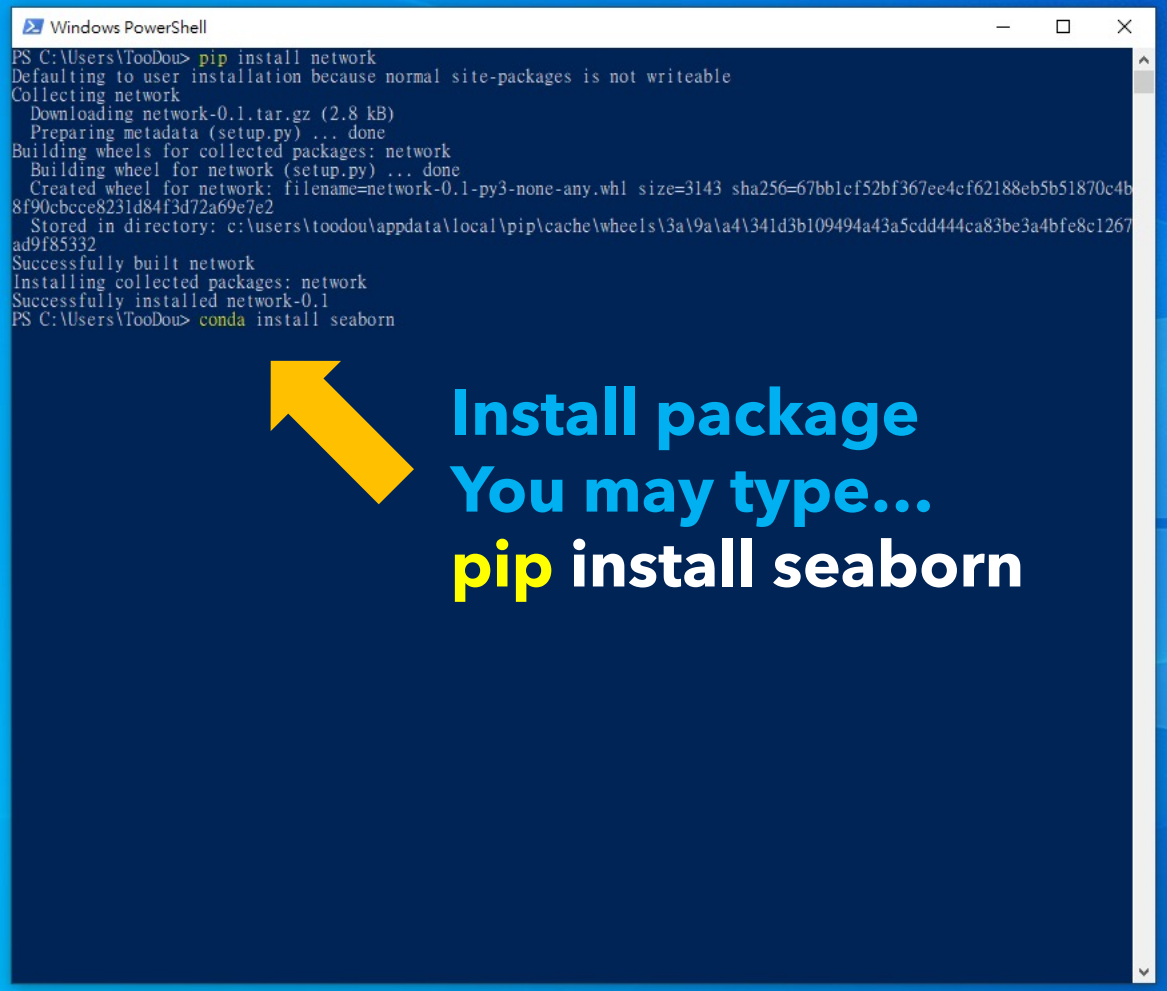

Windows PowerShell
PS C:\Users\TooDou> pip list
pip list # check versions

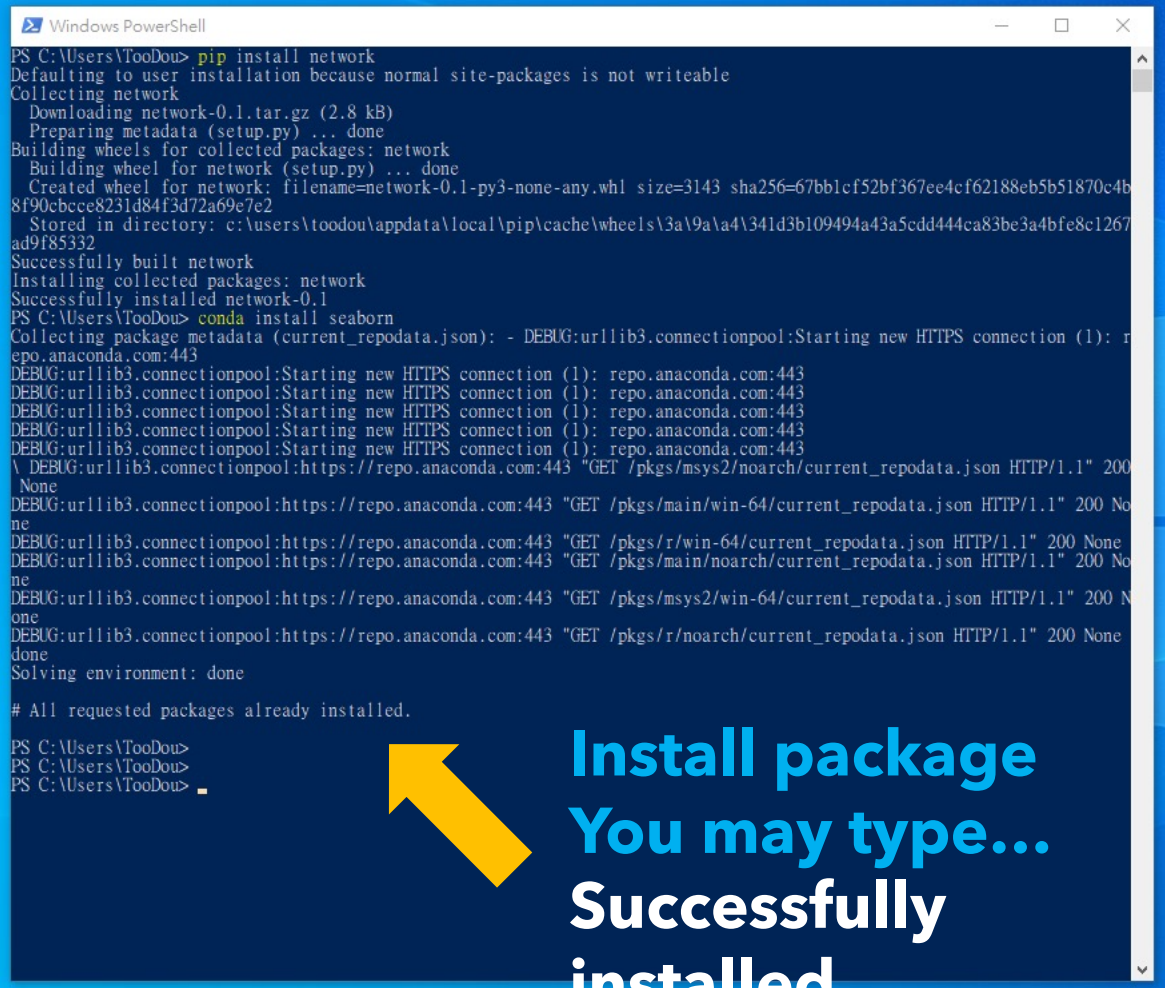


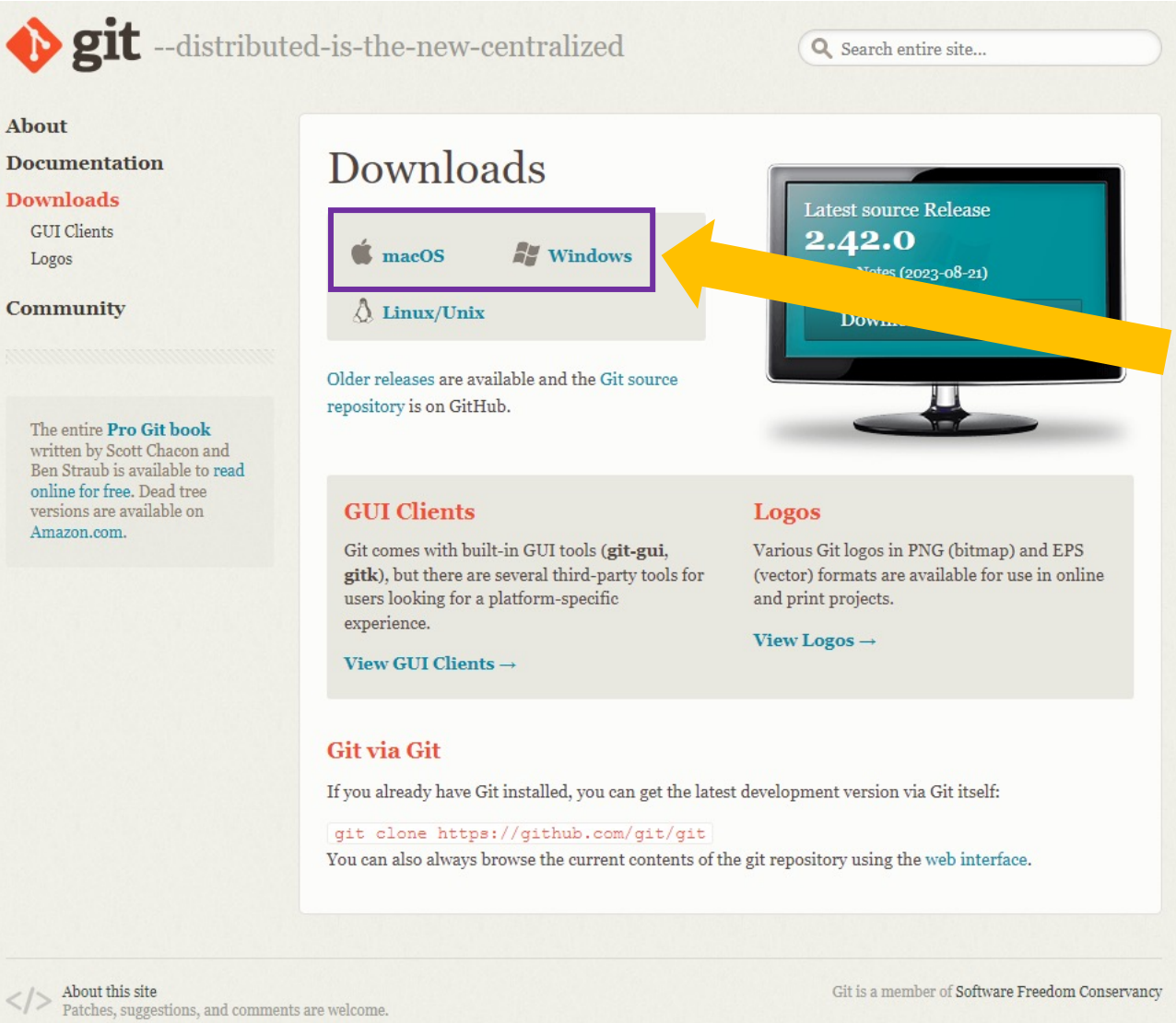
All packages versions


Windows PowerShell
PS C:\Users\TooDou> pip install network
Install package
You may type...
pip install network

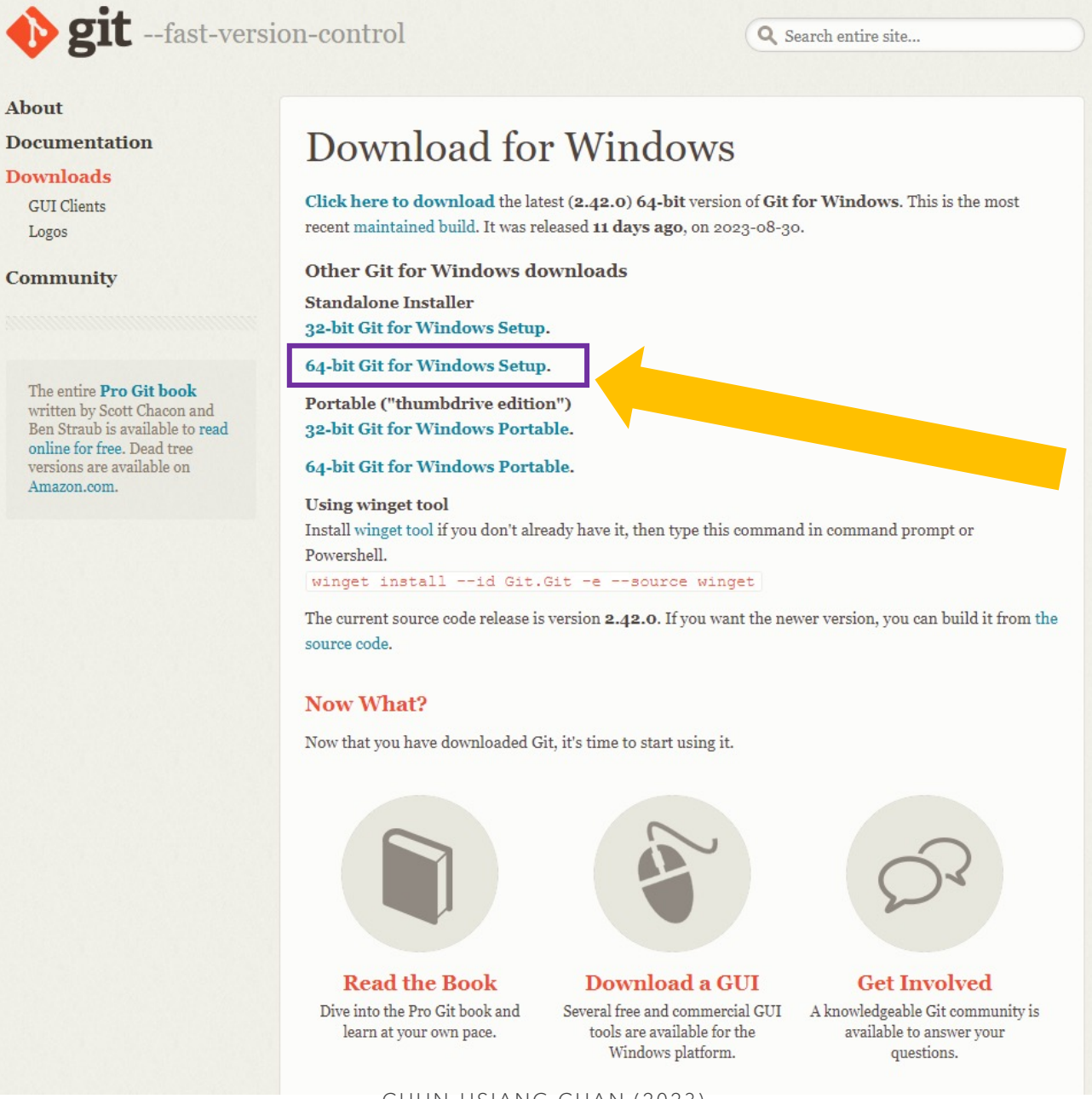

Windows PowerShell
PS C:\Users\TooDou> pip install network
Defaulting to user installation because normal site-packages is not writeable
Collecting network
Downloading network-0.1.tar.gz (2.8 kB)
Preparing metadata (setup.py) ... done
Building wheels for collected packages: network
Building wheel for network (setup.py) ... done
Created wheel for network: filename=network-0.1-py3-none-any.whl size=3143 sha256=67bb1cf52bf367ee4cf62188eb5b51870c4b8f90cbcce8231d84f3d72a69e7e2
Stored in directory: c:\users\toodou\appdata\local\pip\cache\wheels\3a\9a\a4\341d3b109494a43a5cdd444ca83be3a4bfe8c1267ad9f85332
Successfully built network
Installing collected packages: network
Successfully installed network-0.1
PS C:\Users\TooDou>
Install package
You may type...
Successfully installed


Windows PowerShell
PS C:\Users\TooDou> pip install network
Defaulting to user installation because normal site-packages is not writeable
Collecting network
Downloading network-0.1.tar.gz (2.8 kB)
Preparing metadata (setup.py) ... done
Building wheels for collected packages: network
Building wheel for network (setup.py) ... done
Created wheel for network: filename=network-0.1-py3-none-any.whl size=3143 sha256=67bb1cf52bf367ee4cf62188eb5b51870c4b8f90cbcce8231d84f3d72a69e7e2
Stored in directory: c:\users\toodou\appdata\local\pip\cache\wheels\3a\9a\a4\341d3b109494a43a5cdd444ca83be3a4bfe8c1267ad9f85332
Successfully built network
Installing collected packages: network
Successfully installed network-0.1
PS C:\Users\TooDou> conda install seaborn
Install package
You may type...
pip install seaborn


Windows PowerShell
PS C:\Users\TooDou> pip install network
Defaulting to user installation because normal site-packages is not writeable
Collecting network
Downloading network-0.1.tar.gz (2.8 kB)
Preparing metadata (setup.py) ... done
Building wheels for collected packages: network
Building wheel for network (setup.py) ... done
Created wheel for network: filename=network-0.1-py3-none-any.whl size=3143 sha256=67bb1cf52bf367ee4cf62188eb5b51870c4b8f90cbcce8231d84f3d72a69e7e2
Stored in directory: c:\users\toodou\appdata\local\pip\cache\wheels\3a\9a\a4\341d3b109494a43a5cdd444ca83be3a4bfe8c1267ad9f85332
Successfully built network
Installing collected packages: network
Successfully installed network-0.1
PS C:\Users\TooDou> conda install seaborn
Collecting package metadata (current_repodata.json): - DEBUG:urllib3.connectionpool:Starting new HTTPS connection (1): repo.anaconda.com:443
DEBUG:urllib3.connectionpool:Starting new HTTPS connection (1): repo.anaconda.com:443
DEBUG:urllib3.connectionpool:Starting new HTTPS connection (1): repo.anaconda.com:443
DEBUG:urllib3.connectionpool:Starting new HTTPS connection (1): repo.anaconda.com:443
DEBUG:urllib3.connectionpool:Starting new HTTPS connection (1): repo.anaconda.com:443
DEBUG:urllib3.connectionpool:Starting new HTTPS connection (1): repo.anaconda.com:443
\ DEBUG:urllib3.connectionpool:https://repo.anaconda.com:443 "GET /pkgs/msys2/noarch/current_repodata.json HTTP/1.1" 200 None
DEBUG:urllib3.connectionpool:https://repo.anaconda.com:443 "GET /pkgs/main/win-64/current_repodata.json HTTP/1.1" 200 None
DEBUG:urllib3.connectionpool:https://repo.anaconda.com:443 "GET /pkgs/r/win-64/current_repodata.json HTTP/1.1" 200 None
DEBUG:urllib3.connectionpool:https://repo.anaconda.com:443 "GET /pkgs/main/noarch/current_repodata.json HTTP/1.1" 200 None
DEBUG:urllib3.connectionpool:https://repo.anaconda.com:443 "GET /pkgs/msys2/win-64/current_repodata.json HTTP/1.1" 200 None
DEBUG:urllib3.connectionpool:https://repo.anaconda.com:443 "GET /pkgs/r/noarch/current_repodata.json HTTP/1.1" 200 None
done
Solving environment: done
All requested packages already installed.
PS C:\Users\TooDou>
PS C:\Users\TooDou>
PS C:\Users\TooDou>
Install package
You may type...
Successfully installed

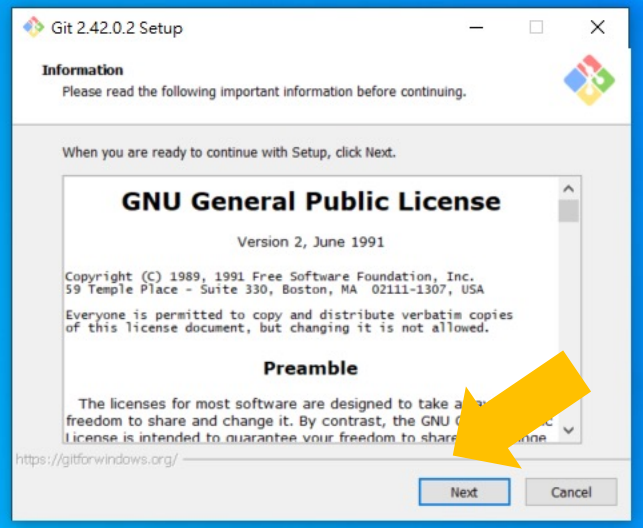


When you need something from GitHub, and you will need this …

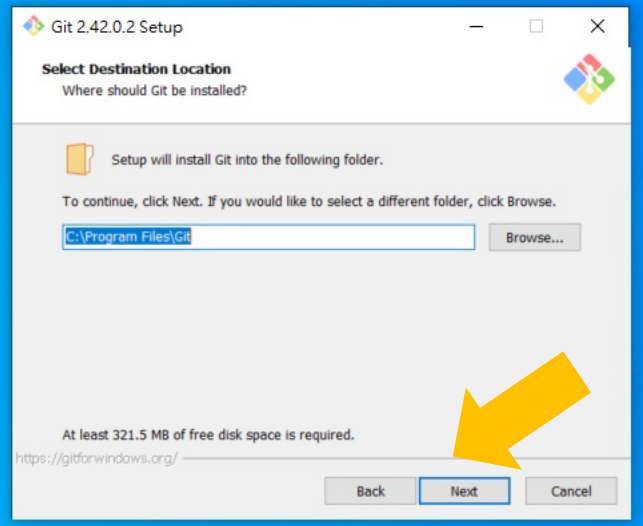


Download here
If your computer is windows ...

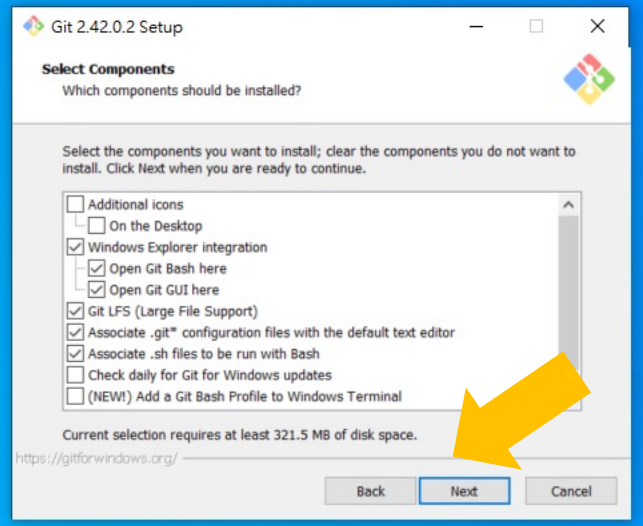
Click “Next”


Git 2.42.0.2 Setup
Information
Please read the following important information before continuing.
When you are ready to continue with Setup, click Next.
GNU General Public License
Version 2, June 1991
Copyright (C) 1989, 1991 Free Software Foundation, Inc.
59 Temple Place - Suite 330, Boston, MA 02111-1307, USA
Everyone is permitted to copy and distribute verbatim copies
of this license document, but changing it is not allowed.
Preamble
The licenses for most software are designed to take a
freedom to share and change it. By contrast, the GNU
License is intended to guarantee your freedom to share
https://gitforwindows.org/
Next
Cancel

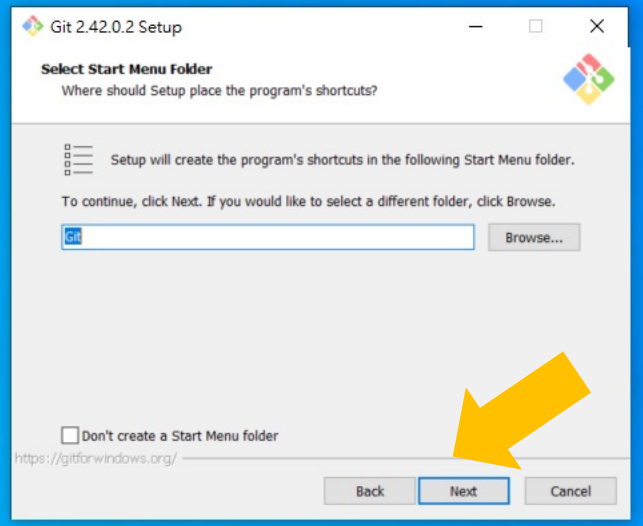
Click “Next”


Git 2.42.0.2 Setup
Select Destination Location
Where should Git be installed?
Setup will install Git into the following folder.
To continue, click Next. If you would like to select a different folder, click Browse.
C:\Program Files\Git
Browse...
At least 321.5 MB of free disk space is required.
https://gitforwindows.org/
Back
Next
Cancel

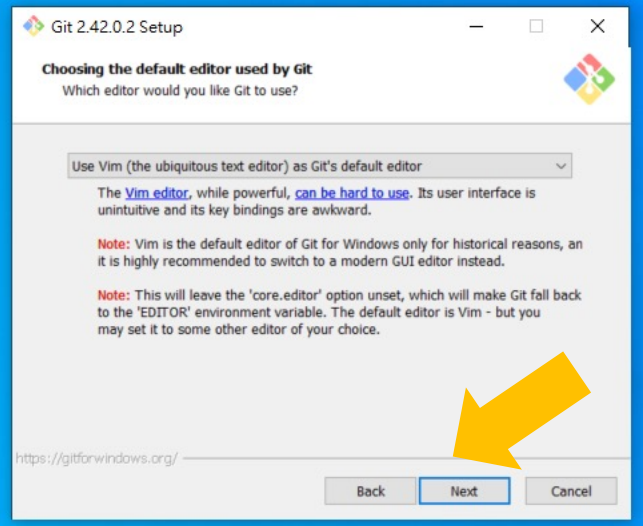
Click “Next”


Git 2.42.0.2 Setup
Select Components
Which components should be installed?
Select the components you want to install; clear the components you do not want to install. Click Next when you are ready to continue.
Additional icons
On the Desktop
Windows Explorer integration
Open Git Bash here
Open Git GUI here
Git LFS (Large File Support)
Associate .git* configuration files with the default text editor
Associate .sh files to be run with Bash
Check daily for Git for Windows updates
(NEW!) Add a Git Bash Profile to Windows Terminal
Current selection requires at least 321.5 MB of disk space.
https://gitforwindows.org/
Back
Next
Cancel

Click “Next”


Git 2.42.0.2 Setup
Select Start Menu Folder
Where should Setup place the program's shortcuts?
Setup will create the program's shortcuts in the following Start Menu folder.
To continue, click Next. If you would like to select a different folder, click Browse.
Git
Browse...
Don't create a Start Menu folder
https://gitforwindows.org/
Back
Next
Cancel

Click “Next”


Git 2.42.0.2 Setup
Choosing the default editor used by Git
Which editor would you like Git to use?
Use Vim (the ubiquitous text editor) as Git's default editor
The Vim editor, while powerful, can be hard to use. Its user interface is unintuitive and its key bindings are awkward.
Note: Vim is the default editor of Git for Windows only for historical reasons, an it is highly recommended to switch to a modern GUI editor instead.
Note: This will leave the 'core.editor' option unset, which will make Git fall back to the 'EDITOR' environment variable. The default editor is Vim - but you may set it to some other editor of your choice.
https://gitforwindows.org/
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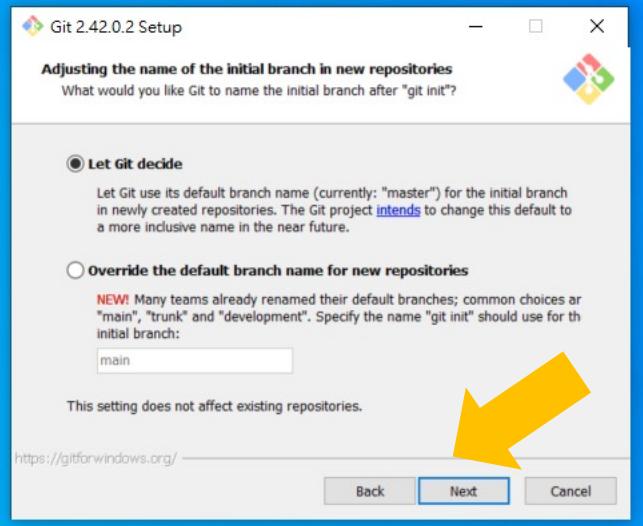
Click “Next”


Git 2.42.0.2 Setup
Adjusting the name of the initial branch in new repositories
What would you like Git to name the initial branch after "git init"?
Let Git decide
Let Git use its default branch name (currently: "master") for the initial branch in newly created repositories. The Git project intends to change this default to a more inclusive name in the near future.
Override the default branch name for new repositories
NEW! Many teams already renamed their default branches; common choices ar "main", "trunk" and "development". Specify the name "git init" should use for th initial branch:
main
This setting does not affect existing repositories.
https://gitforwindows.org/
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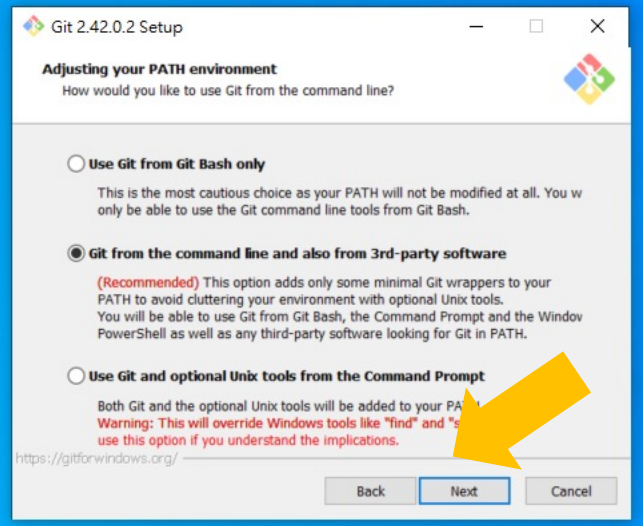
Click “Next”


Git 2.42.0.2 Setup
Adjusting your PATH environment
How would you like to use Git from the command line?
Use Git from Git Bash only
This is the most cautious choice as your PATH will not be modified at all. You w
only be able to use the Git command line tools from Git Bash.
Git from the command line and also from 3rd-party software
(Recommended) This option adds only some minimal Git wrappers to your
PATH to avoid cluttering your environment with optional Unix tools.
You will be able to use Git from Git Bash, the Command Prompt and the Windov
PowerShell as well as any third-party software looking for Git in PATH.
Use Git and optional Unix tools from the Command Prompt
Both Git and the optional Unix tools will be added to your PA
Warning: This will override Windows tools like "find" and "s
use this option if you understand the implications.
https://gitforwindows.org/
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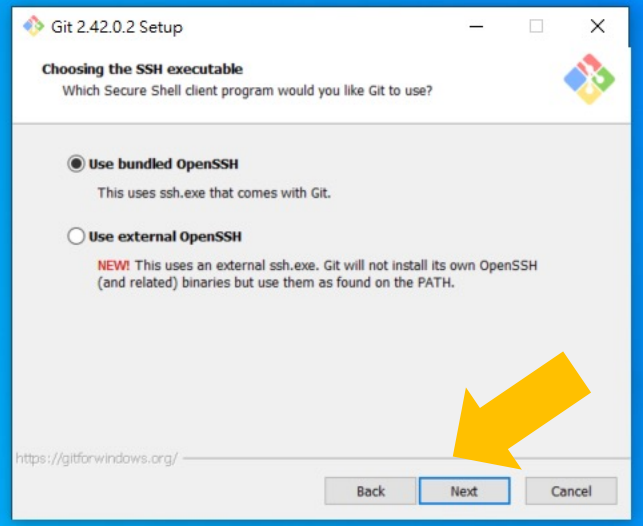
Click “Next”


Git 2.42.0.2 Setup
Choosing the SSH executable
Which Secure Shell client program would you like Git to use?
Use bundled OpenSSH
This uses ssh.exe that comes with Git.
Use external OpenSSH
NEW! This uses an external ssh.exe. Git will not install its own OpenSSH (and related) binaries but use them as found on the PATH.
https://gitforwindows.org/
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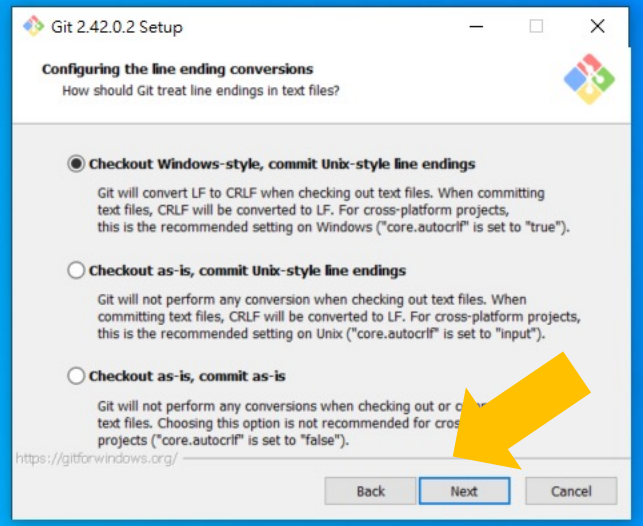
Cancel

Click “Next”


Git 2.42.0.2 Setup
Configuring the line ending conversions
How should Git treat line endings in text files?
Checkout Windows-style, commit Unix-style line endings
Git will convert LF to CRLF when checking out text files. When committing text files, CRLF will be converted to LF. For cross-platform projects, this is the recommended setting on Windows ("core.autocrlf" is set to "true").
Checkout as-is, commit Unix-style line endings
Git will not perform any conversion when checking out text files. When committing text files, CRLF will be converted to LF. For cross-platform projects, this is the recommended setting on Unix ("core.autocrlf" is set to "input").
Checkout as-is, commit as-is
Git will not perform any conversions when checking out or
text files. Choosing this option is not recommended for cros
projects ("core.autocrlf" is set to "false").
https://gitforwindows.org/
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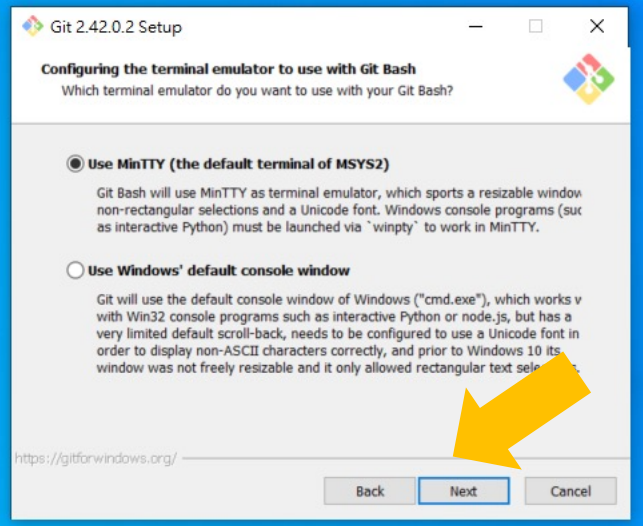
Cancel

Click “Next”


Git 2.42.0.2 Setup
Configuring the terminal emulator to use with Git Bash
Which terminal emulator do you want to use with your Git Bash?
Use MinTTY (the default terminal of MSYS2)
Git Bash will use MinTTY as terminal emulator, which sports a resizable window
non-rectangular selections and a Unicode font. Windows console programs (suc
as interactive Python) must be launched via `winpty` to work in MinTTY.
Use Windows' default console window
Git will use the default console window of Windows ("cmd.exe"), which works v
with Win32 console programs such as interactive Python or node.js, but has a
very limited default scroll-back, needs to be configured to use a Unicode font in
order to display non-ASCII characters correctly, and prior to Windows 10 its
window was not freely resizable and it only allowed rectangular text sele
https://gitforwindows.org/
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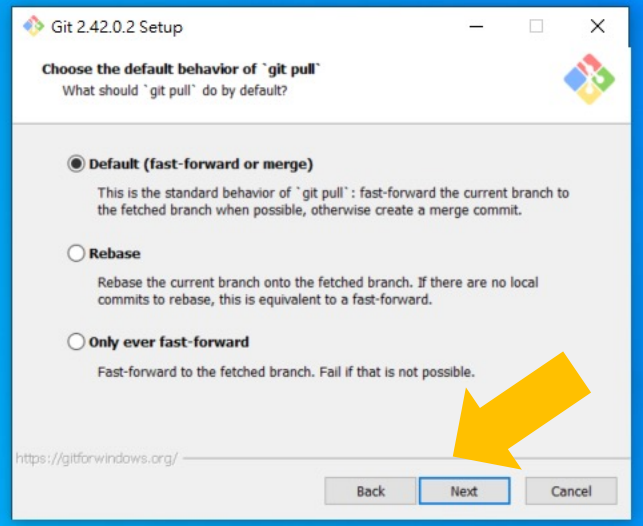
Click “Next”


Git 2.42.0.2 Setup
Choose the default behavior of `git pull`
What should `git pull` do by default?
Default (fast-forward or merge)
This is the standard behavior of `git pull`: fast-forward the current branch to the fetched branch when possible, otherwise create a merge commit.
Rebase
Rebase the current branch onto the fetched branch. If there are no local commits to rebase, this is equivalent to a fast-forward.
Only ever fast-forward
Fast-forward to the fetched branch. Fail if that is not possible.
https://gitforwindows.org/
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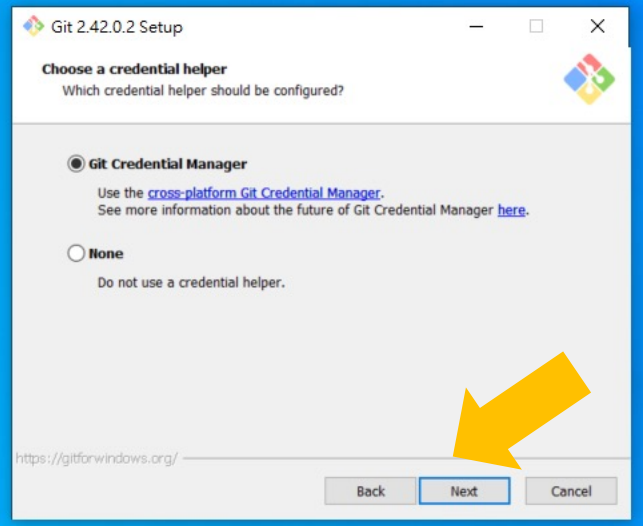
Git 2.42.0.2 Setup
Choose a credential helper
Which credential helper should be configured?
Git Credential Manager
Use the cross-platform Git Credential Manager.
See more information about the future of Git Credential Manager here.
None
Do not use a credential helper.
https://gitforwindows.org/
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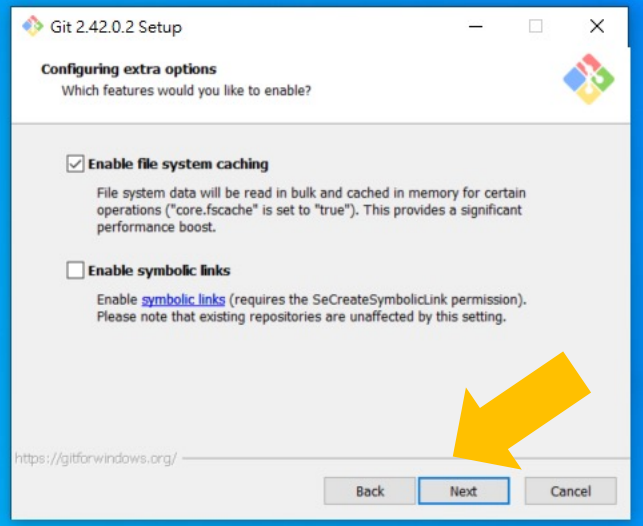
Click “Next”


Git 2.42.0.2 Setup
Configuring extra options
Which features would you like to enable?
Enable file system caching
File system data will be read in bulk and cached in memory for certain operations ("core.fscache" is set to "true"). This provides a significant performance boost.
Enable symbolic links
Enable symbolic links (requires the SeCreateSymbolicLink permission). Please note that existing repositories are unaffected by this setting.
https://gitforwindows.org/
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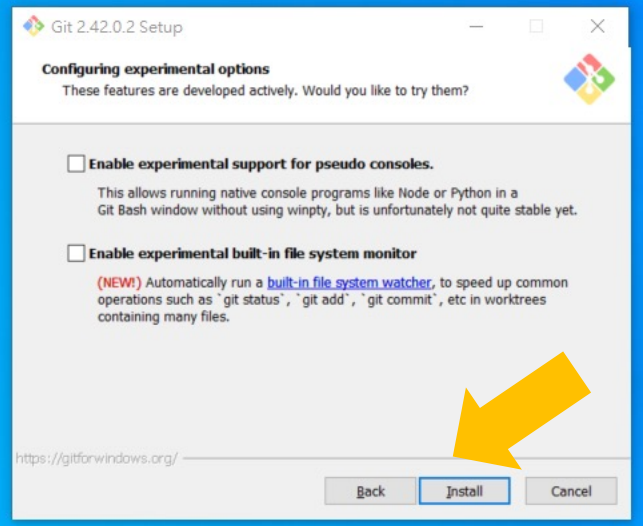
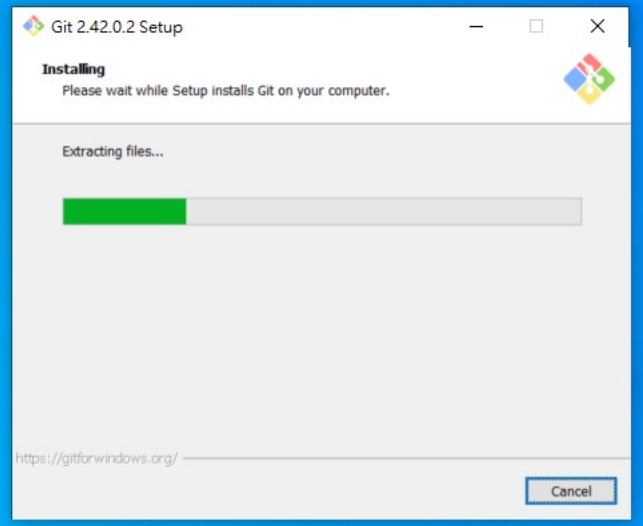
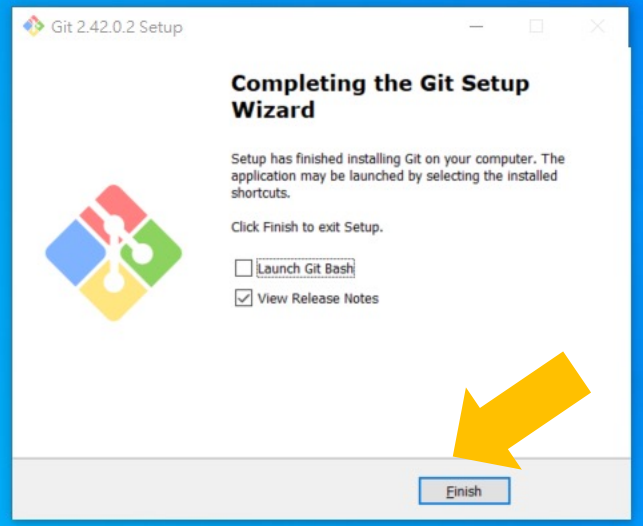
Click "Install"



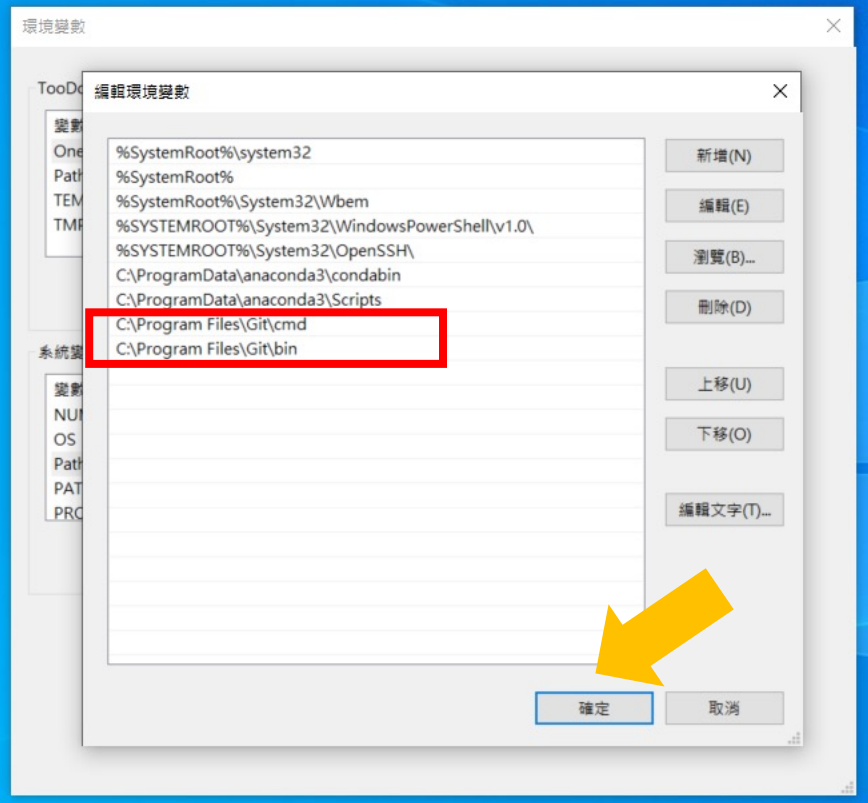
Installing Git



Click “Finish”

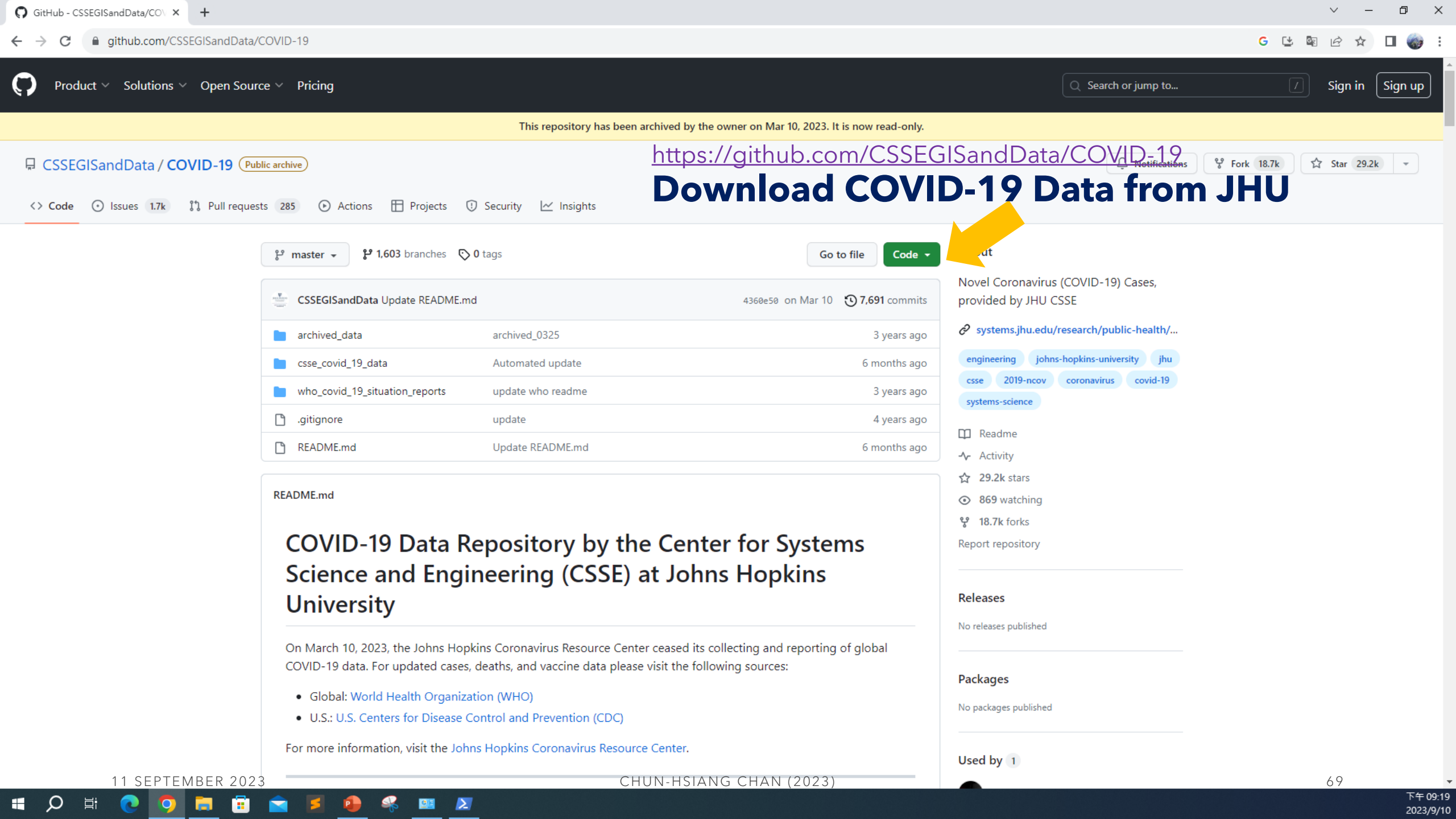


Set “環境變數” (environmental variables)



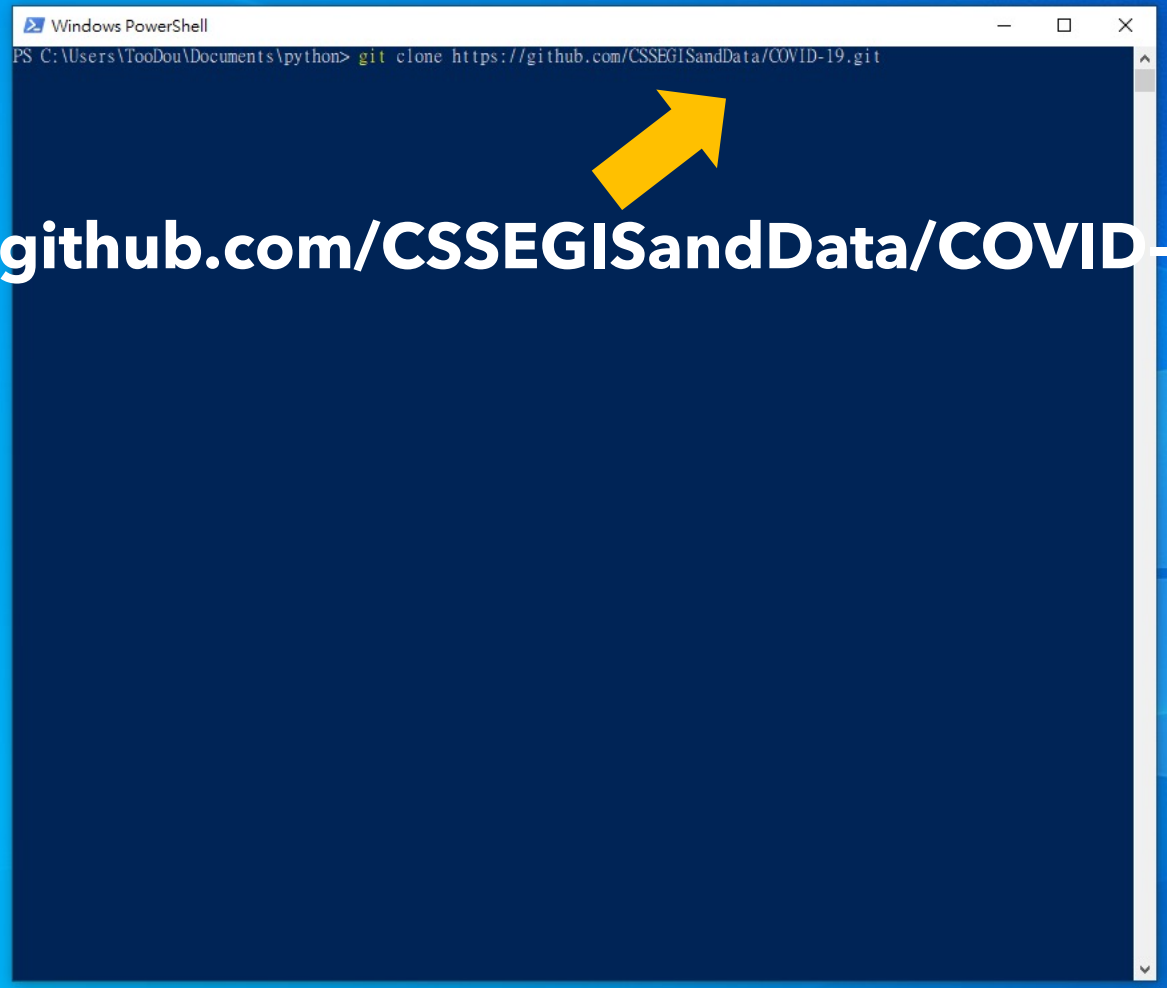
https://github.com/CSSEGISandData/COVID-19

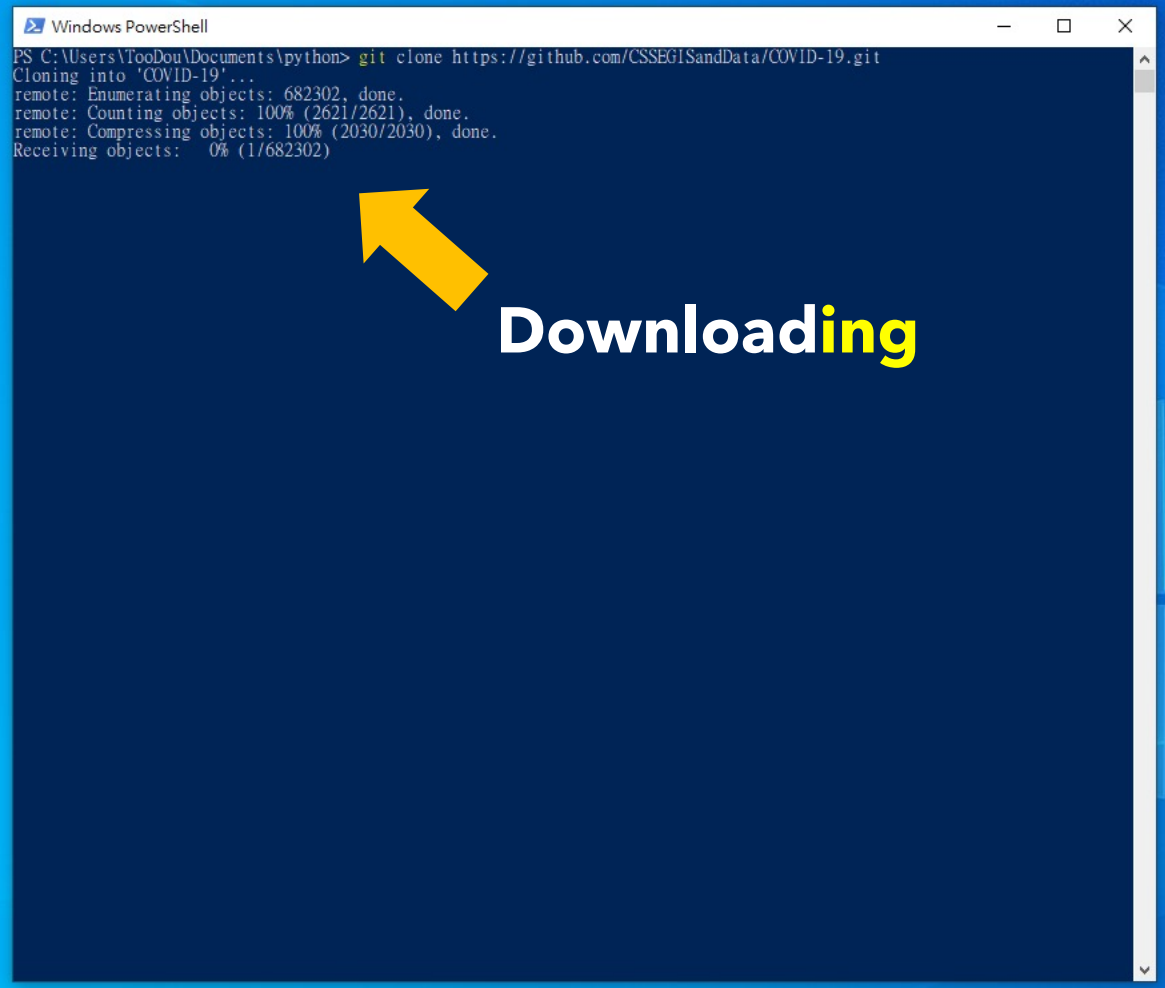
Download COVID-19 Data from JHU



Open terminal…

git clone https://github.com/CSSEGISandData/COVID-19.git




Windows PowerShell
PS C:\Users\TooDou\Documents\python> git clone https://github.com/CSSEGISandData/COVID-19.git
Cloning into 'COVID-19'...
remote: Enumerating objects: 682302, done.
remote: Counting objects: 100% (2621/2621), done.
remote: Compressing objects: 100% (2030/2030), done.
Receiving objects: 0% (1/682302)
Downloading

Question Time

- **Assignment:**
- **print** the following items
- a1 = [1,1,2,3,5,8,13,21,34]
- a1[0]
- a1[0:3]
- a1[:3]
- a1[1:3]
- a2 = ['1','1','2',3,5,8,13,21,34]
- a2[0:5]

The End

Thank you for your attention!

Email: chchan@ntnu.edu.tw
Web: toodou.github.io

SCAN ME