Python初學者入門

Python環境安裝說明

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Python環境安裝說明

1. 安裝Anaconda
2. 安裝變數檢視小工具
3. 開始第一支程式
4. JupyterLab使用說明
5. 輸出成HTML

1. 安装Anaconda

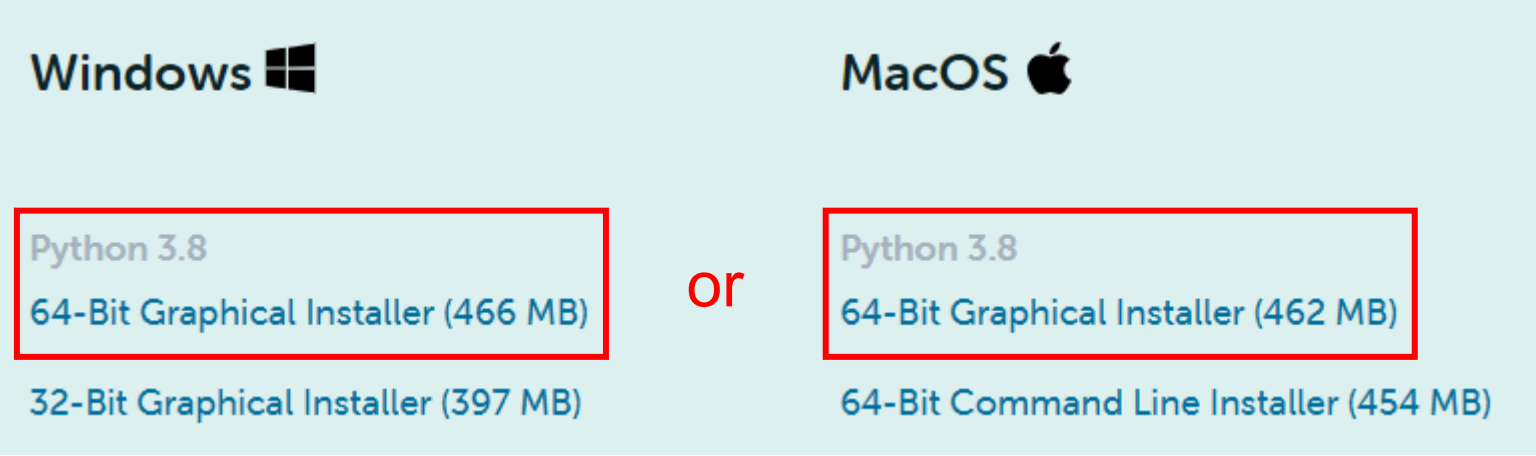
安裝Python環境(Anaconda套裝環境)

- 依據你的電腦系統下載安裝檔(Window/MacOS/Linux)

  https://www.anaconda.com/products/individual

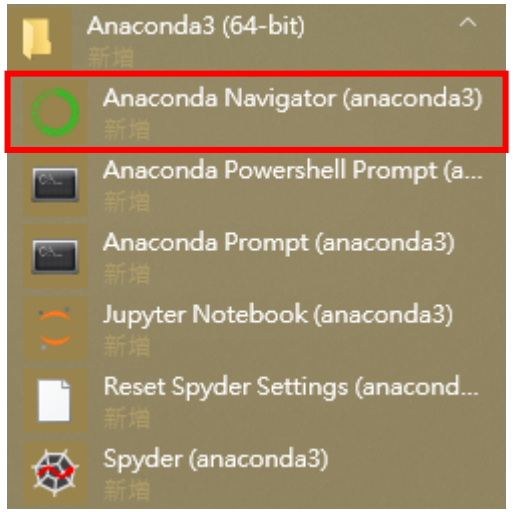
  選擇Python3.8, 64-Bit Graphical Installer

- 一直點選Next>安裝即可(花費5~7分鐘)

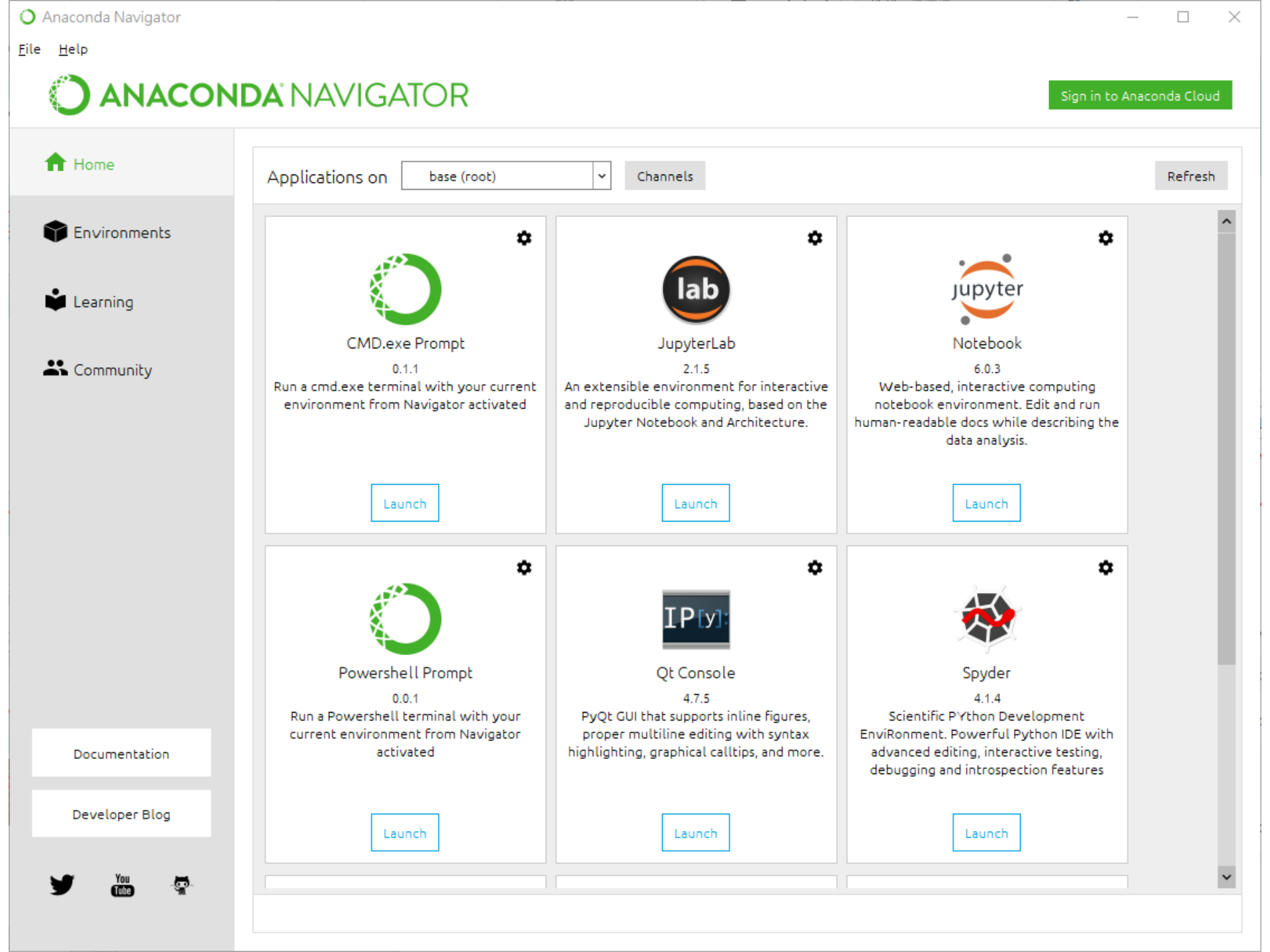


2. 安裝變數檢視小工具

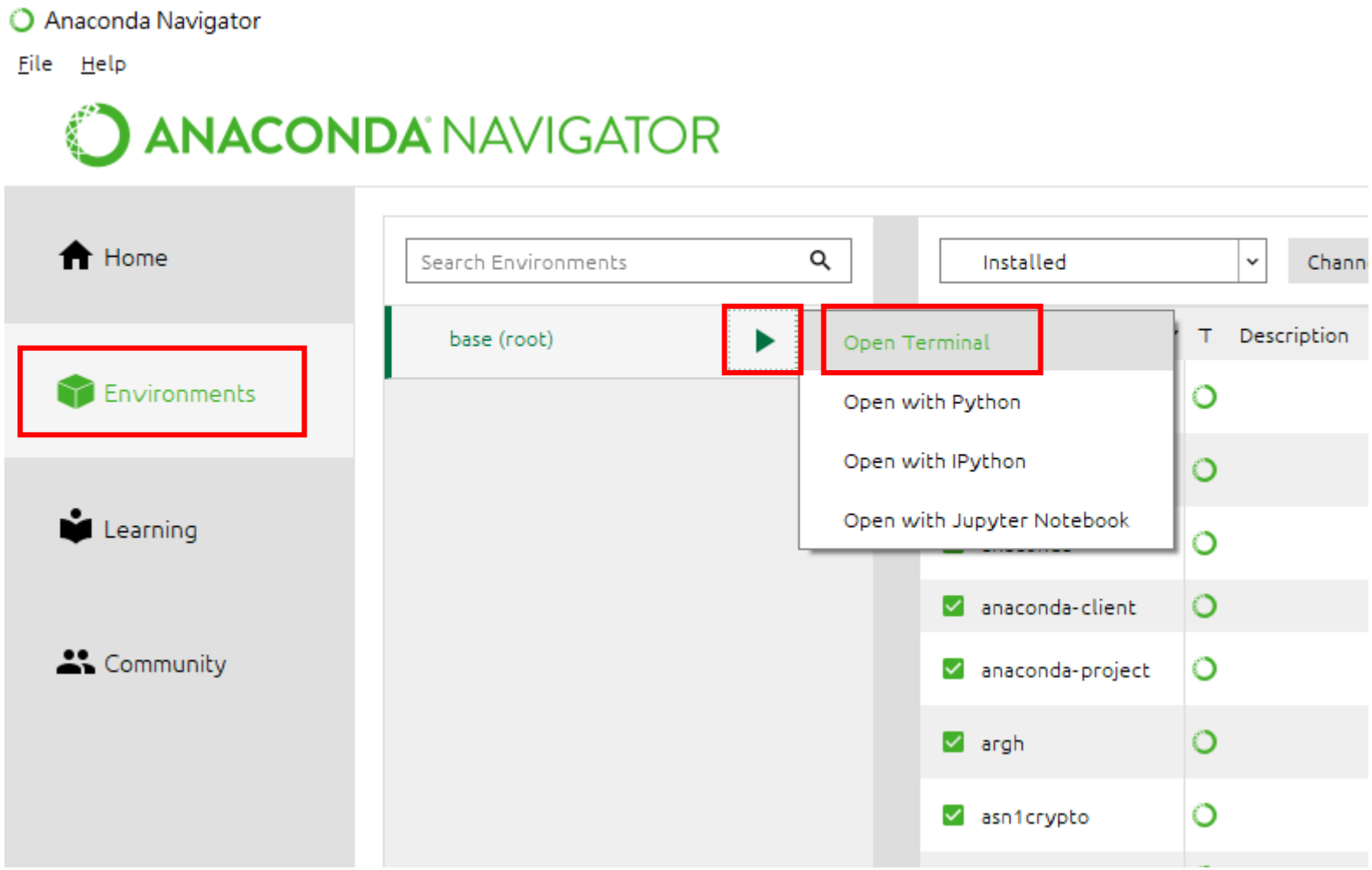
打開Anaconda Navigator



- 開啟後畫面如下頁


Anaconda Navigator
File
Help
ANACONDA NAVIGATOR
Sign in to Anaconda Cloud
Home
Environments
Learning
Community
Documentation
Developer Blog
Applications on
base (root)
Channels
Refresh
CMD.exe Prompt
0.1.1
Run a cmd.exe terminal with your current environment from Navigator activated
Launch
JupyterLab
2.1.5
An extensible environment for interactive and reproducible computing, based on the Jupyter Notebook and Architecture.
Launch
Notebook
6.0.3
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
4.7.5
PyQt GUI that supports inline figures, proper multiline editing with syntax highlighting, graphical calltips, and more.
Launch
Spyder
4.1.4
Scientific PYthon Development EnviRonment. Powerful Python IDE with advanced editing, interactive testing, debugging and introspection features
Launch

打開終端機


Anaconda Navigator
File Help
ANACONDA NAVIGATOR
Home
Environments
Learning
Community
Search Environments
Installed
Chann
base (root)
Open Terminal
Open with Python
Open with IPython
Open with Jupyter Notebook
T
Description
anaconda-client
anaconda-project
argh
asn1crypto

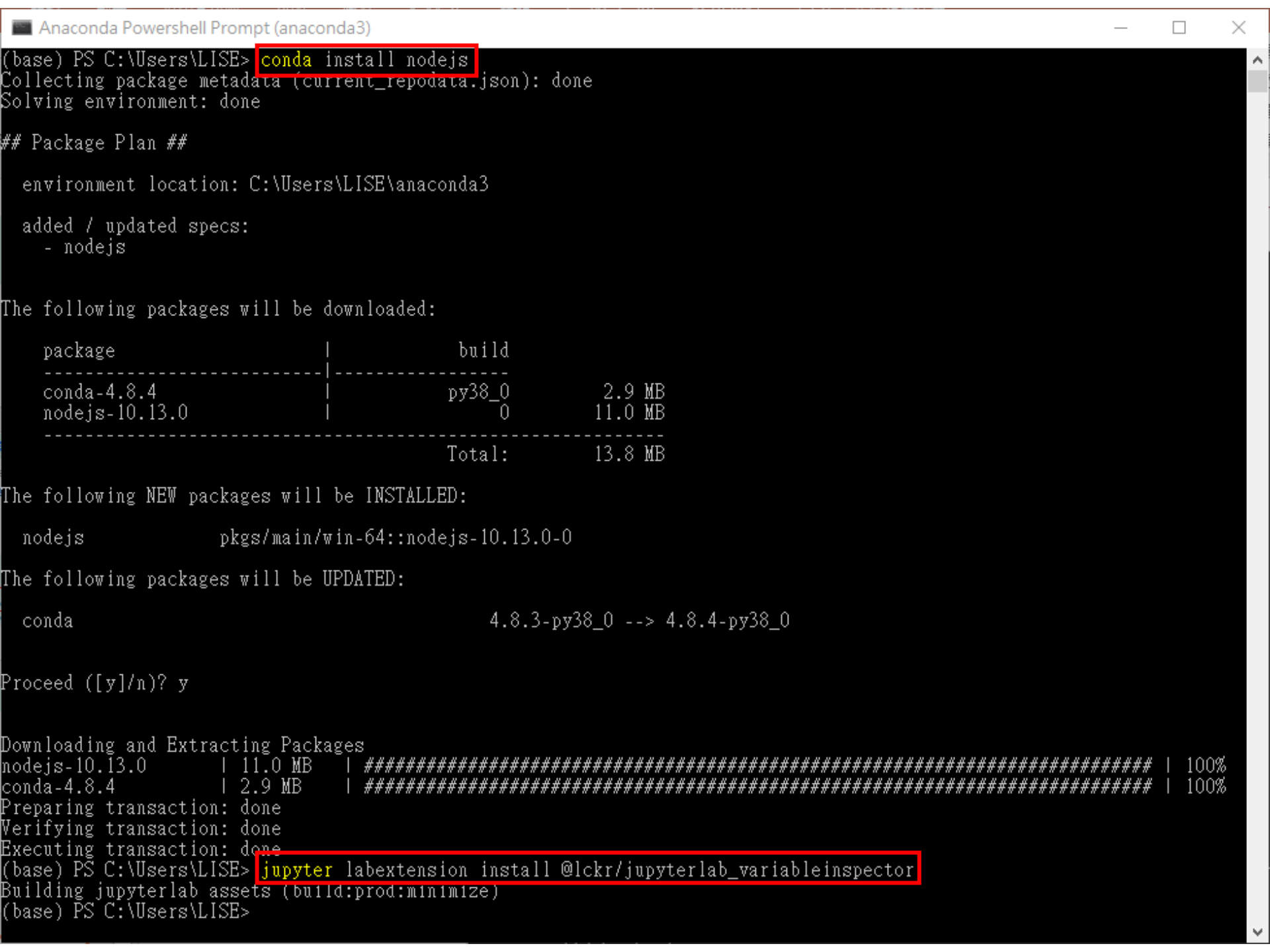
執行安裝指令 (見下一頁截圖說明)

- 輸入並執行第一行指令

```
conda install nodejs
```

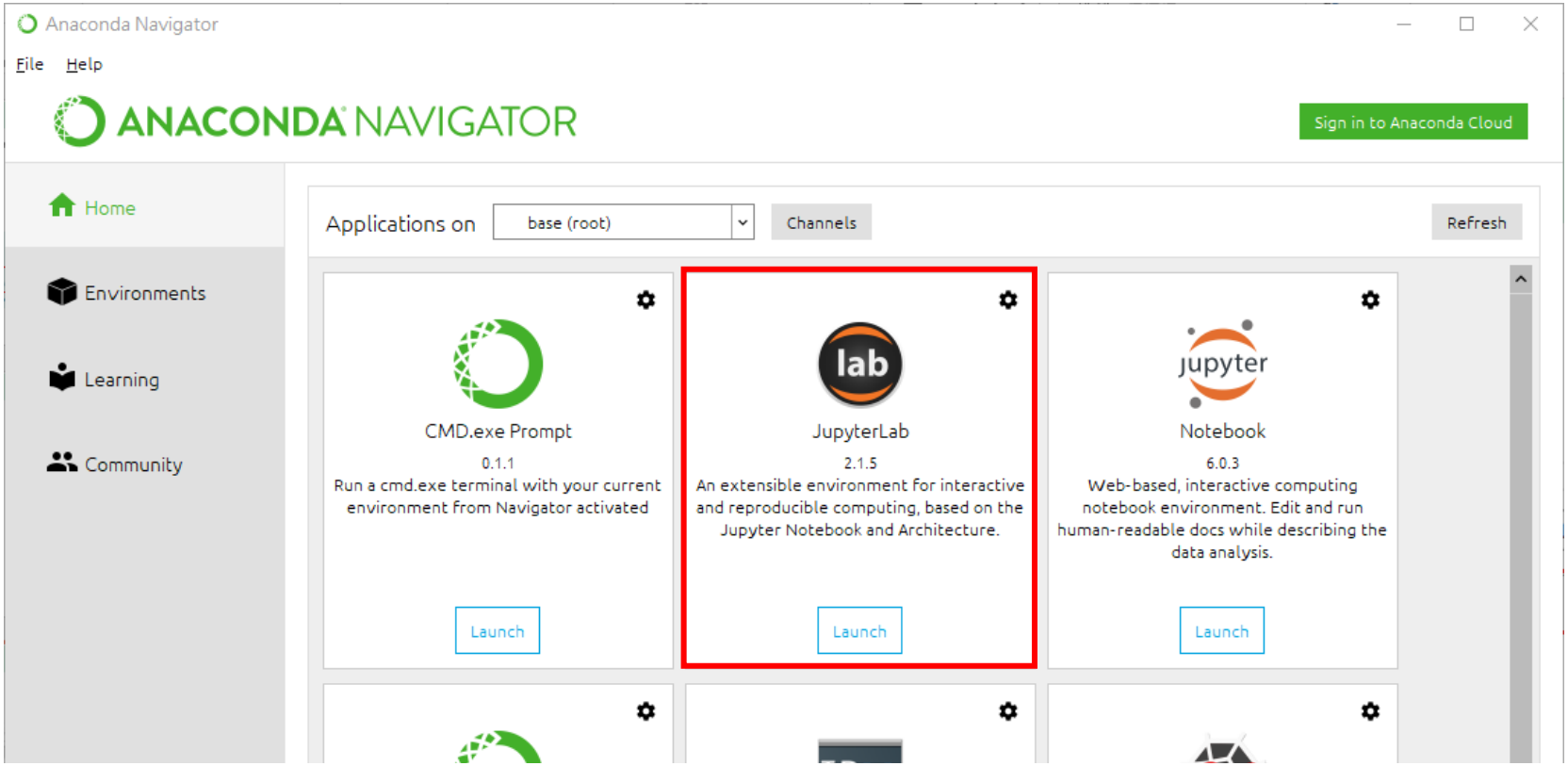
- 輸入並執行第二行指令(下面為一行指令，會花點時間)

```
jupyter labextension install
@lckr/jupyterlab_variableinspector
```

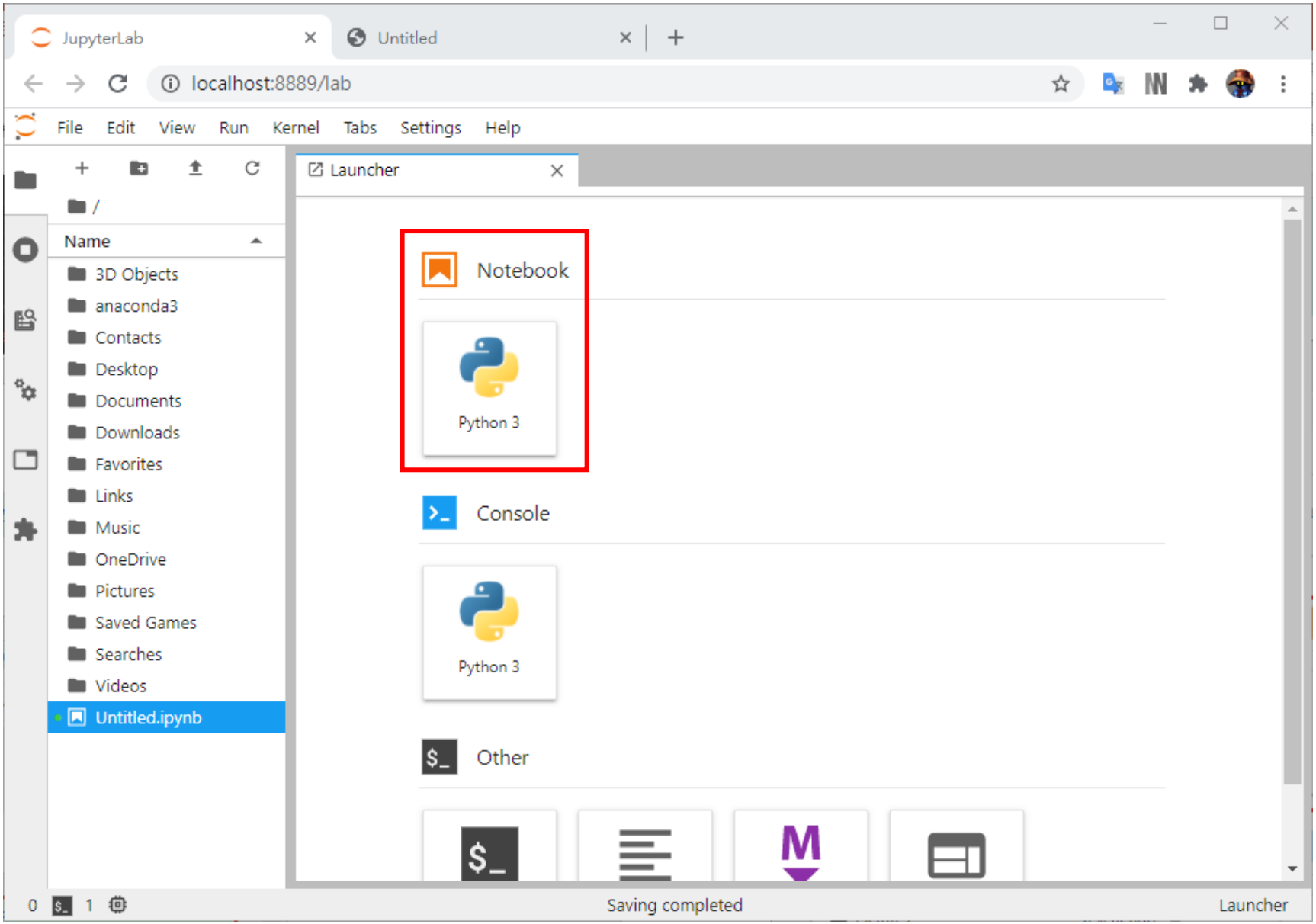

Anaconda Powershell Prompt (anaconda3)
(base) PS C:\Users\LISE> conda install nodejs
Collecting package metadata (current_repodata.json): done
Solving environment: done
Package Plan
environment location: C:\Users\LISE\anaconda3
added / updated specs:
- nodejs
The following packages will be downloaded:
package | build
conda-4.8.4 | py38_0 2.9 MB
nodejs-10.13.0 | 0 11.0 MB
Total: 13.8 MB
The following NEW packages will be INSTALLED:
nodejs pkgs/main/win-64::nodejs-10.13.0-0
The following packages will be UPDATED:
conda 4.8.3-py38_0 --> 4.8.4-py38_0
Proceed ([y]/n)? y
Downloading and Extracting Packages
nodejs-10.13.0 | 11.0 MB | ########## | 100%
conda-4.8.4 | 2.9 MB | ########## | 100%
Preparing transaction: done
Verifying transaction: done
Executing transaction: done
(base) PS C:\Users\LISE> jupyter labextension install @lckr/jupyterlab_variableinspector
Building jupyterlab assets (build:prod:minimize)
(base) PS C:\Users\LISE>

3. 開始第一支程式

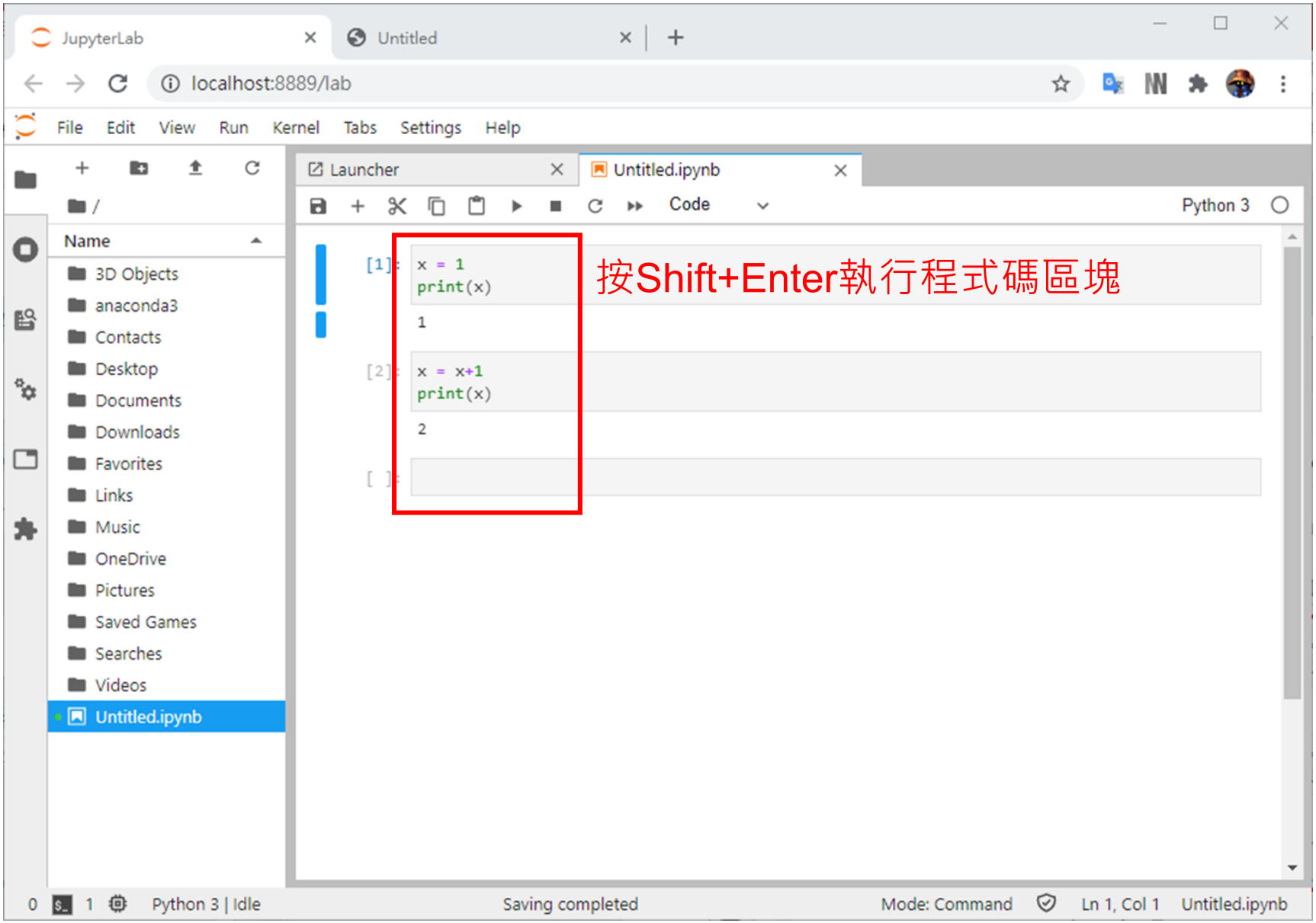
開啟JupyterLab



新增一個Notebook



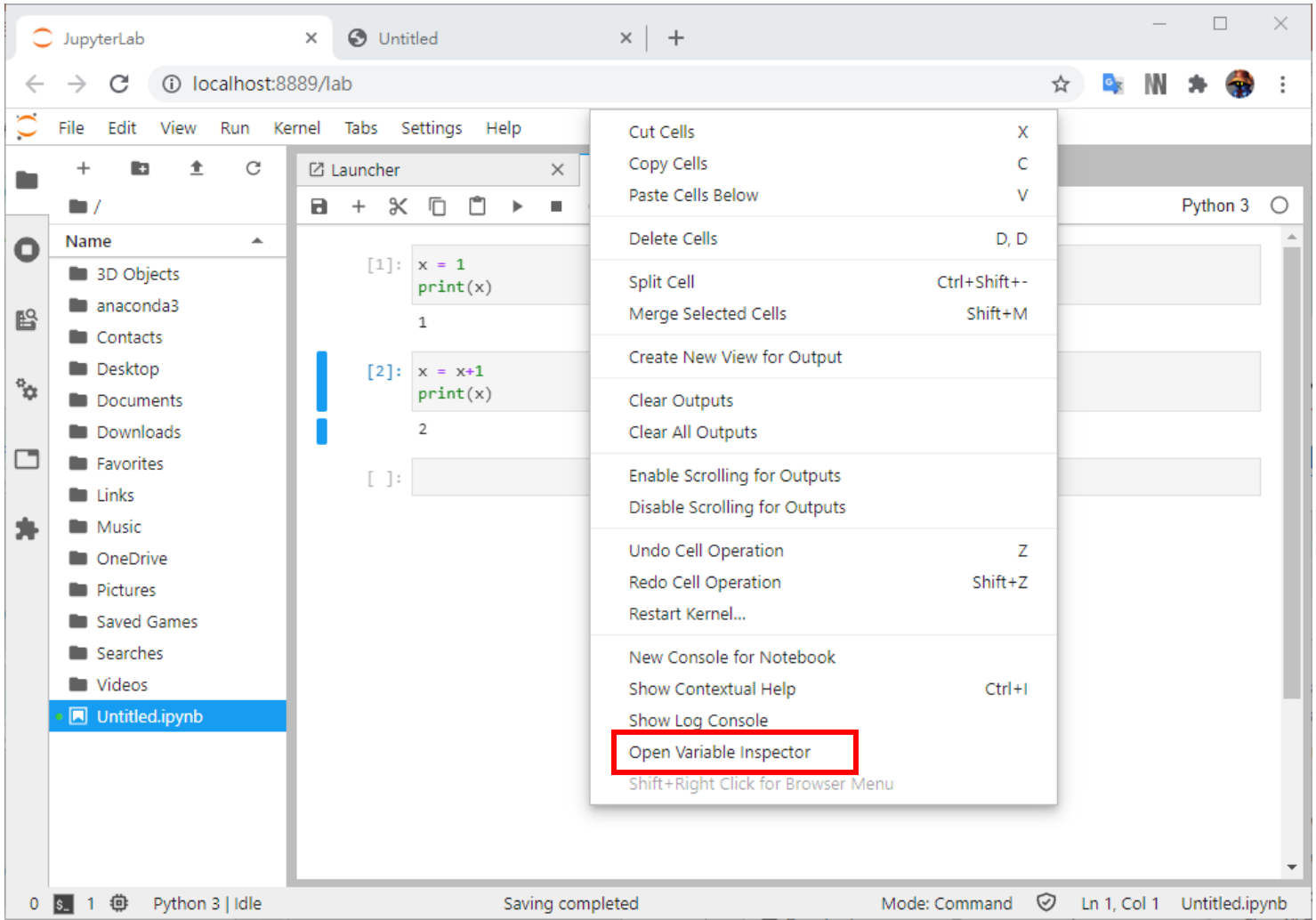
打些指令吧


JupyterLab
Untitled
localhost:8889/lab
File Edit View Run Kernel Tabs Settings Help
Launcher
Untitled.ipynb
Code
Python 3
Name
3D Objects
anaconda3
Contacts
Desktop
Documents
Downloads
Favorites
Links
Music
OneDrive
Pictures
Saved Games
Searches
Videos
Untitled.ipynb
[1]:
x = 1
print(x)
1
[2]:
x = x+1
print(x)
2
[ ]:
按Shift+Enter執行程式碼區塊
0 1 Python 3 | Idle
Saving completed
Mode: Command
Ln 1, Col 1
Untitled.ipynb

看一看變數

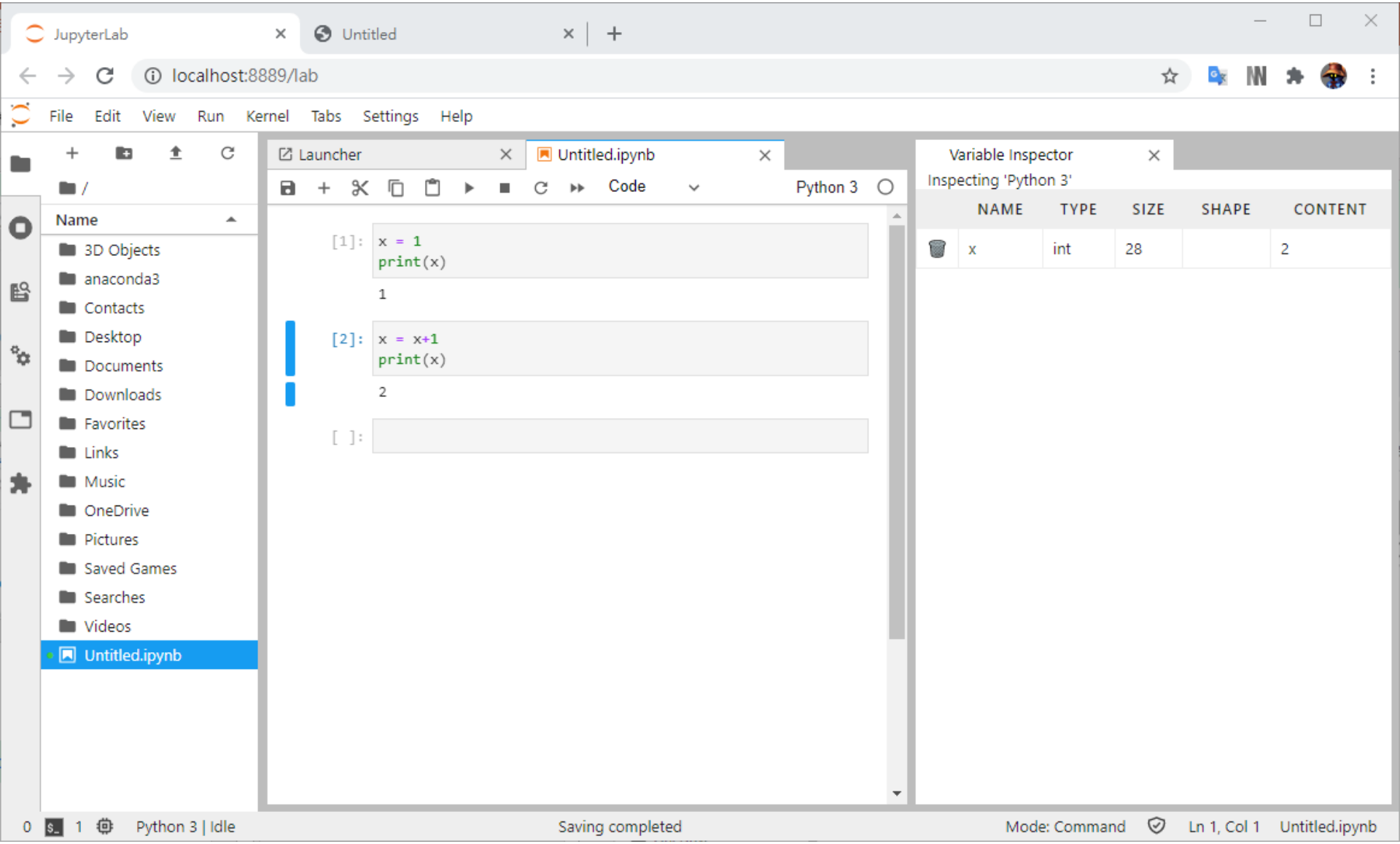
- 依照下面說明打開Variable Inspactor

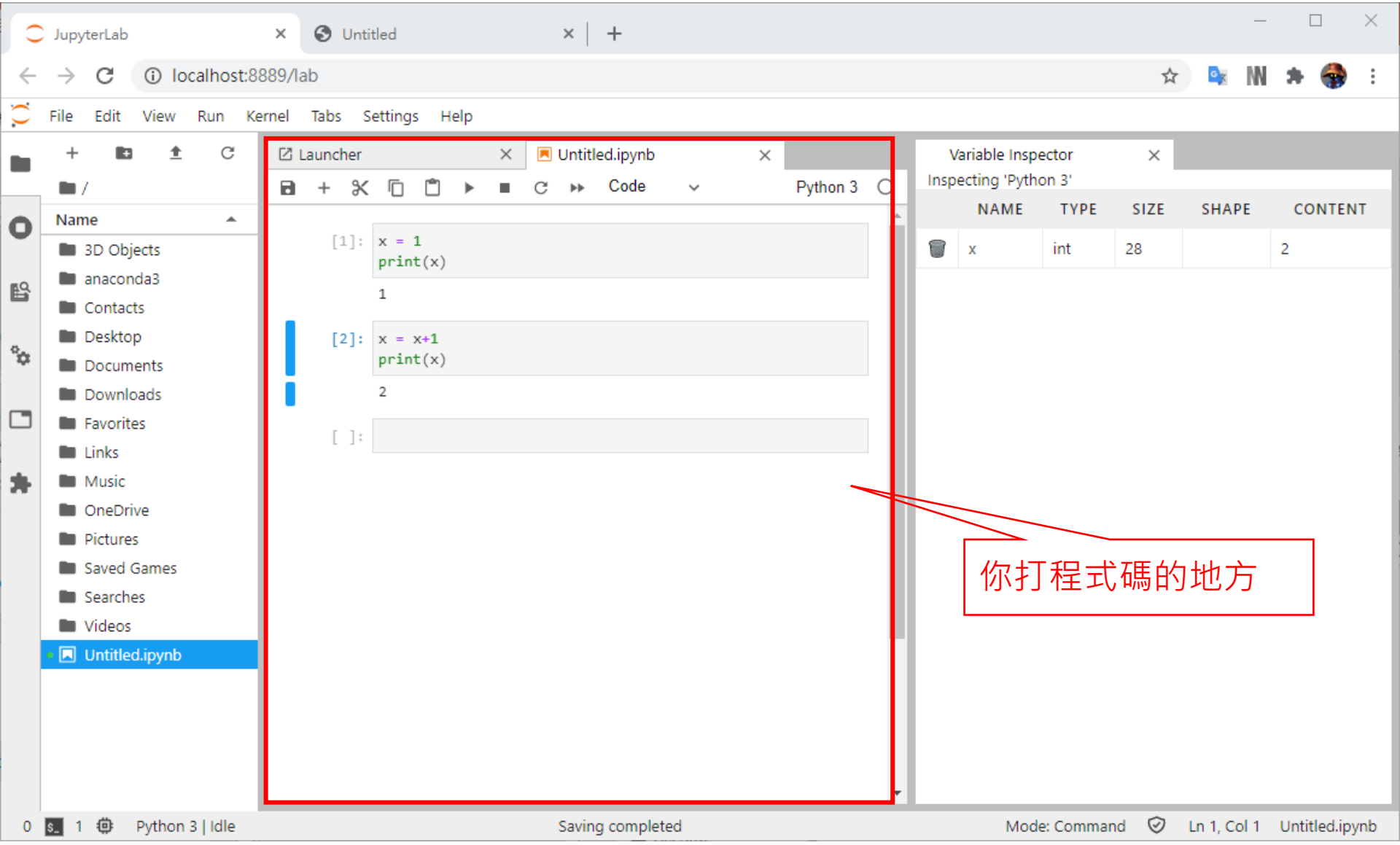
  https://github.com/lckr/jupyterlab-variableInspector/blob/master/early_demo.gif



4. JupyterLab使用說明

準備好你的執行環境(如下圖)




JupyterLab
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localhost:8889/lab
File Edit View Run Kernel Tabs Settings Help
Launcher
Untitled.ipynb
Code
Python 3
[1]:
x = 1
print(x)
1
[2]:
x = x+1
print(x)
2
[ ]:
Variable Inspector
Inspecting 'Python 3'
NAME TYPE SIZE SHAPE CONTENT
x int 28 2
Name
3D Objects
anaconda3
Contacts
Desktop
Documents
Downloads
Favorites
Links
Music
OneDrive
Pictures
Saved Games
Searches
Videos
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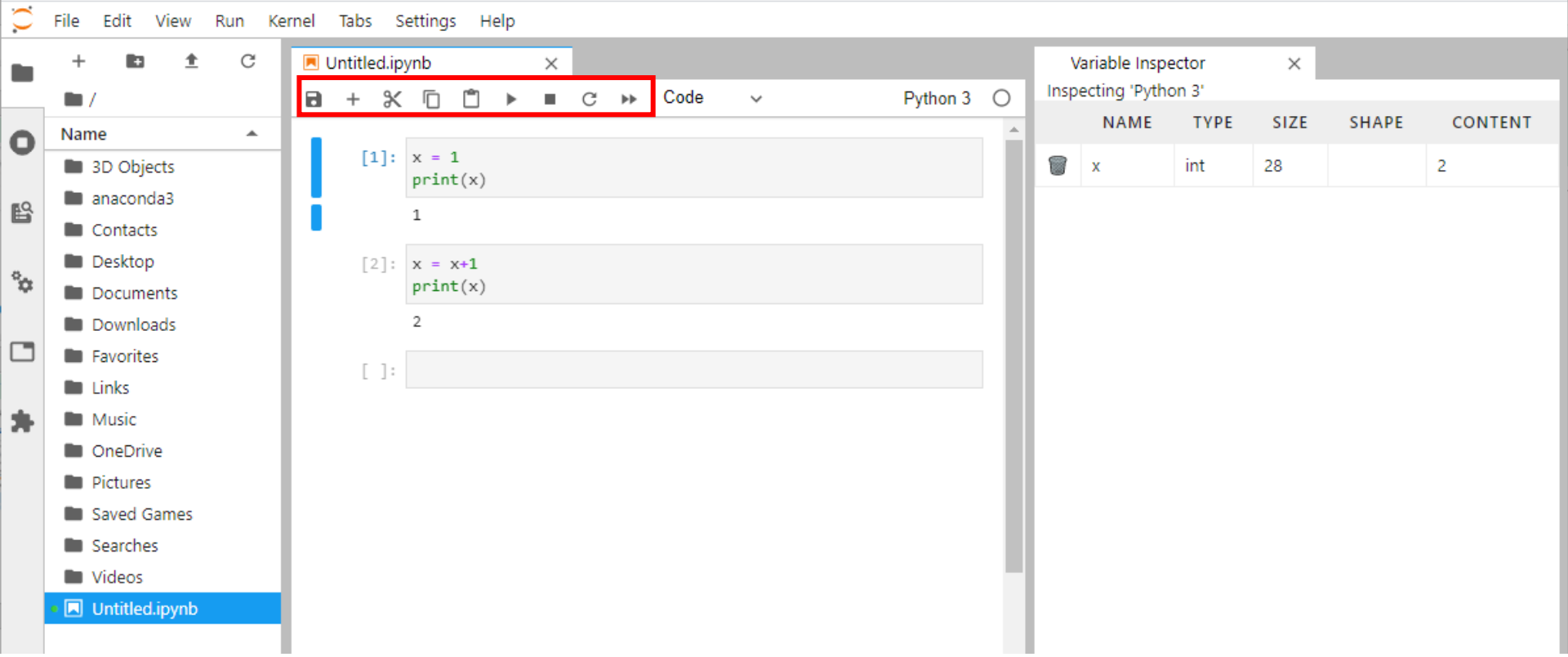
Saving completed
Mode: Command
Ln 1, Col 1
Untitled.ipynb


File Edit View Run Kernel Tabs Settings Help
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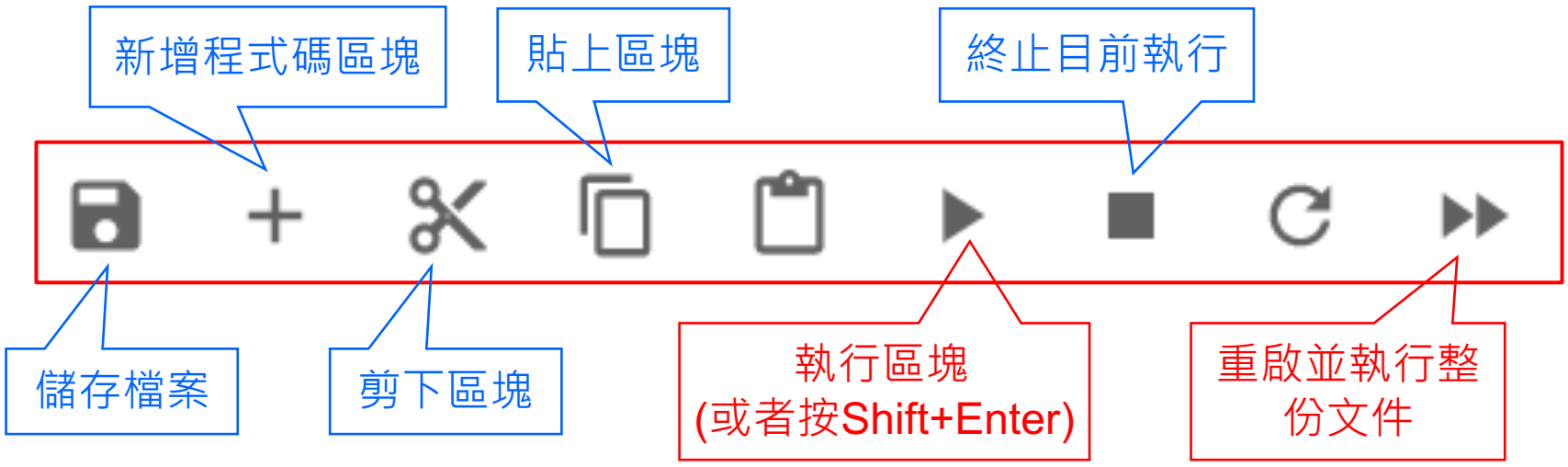
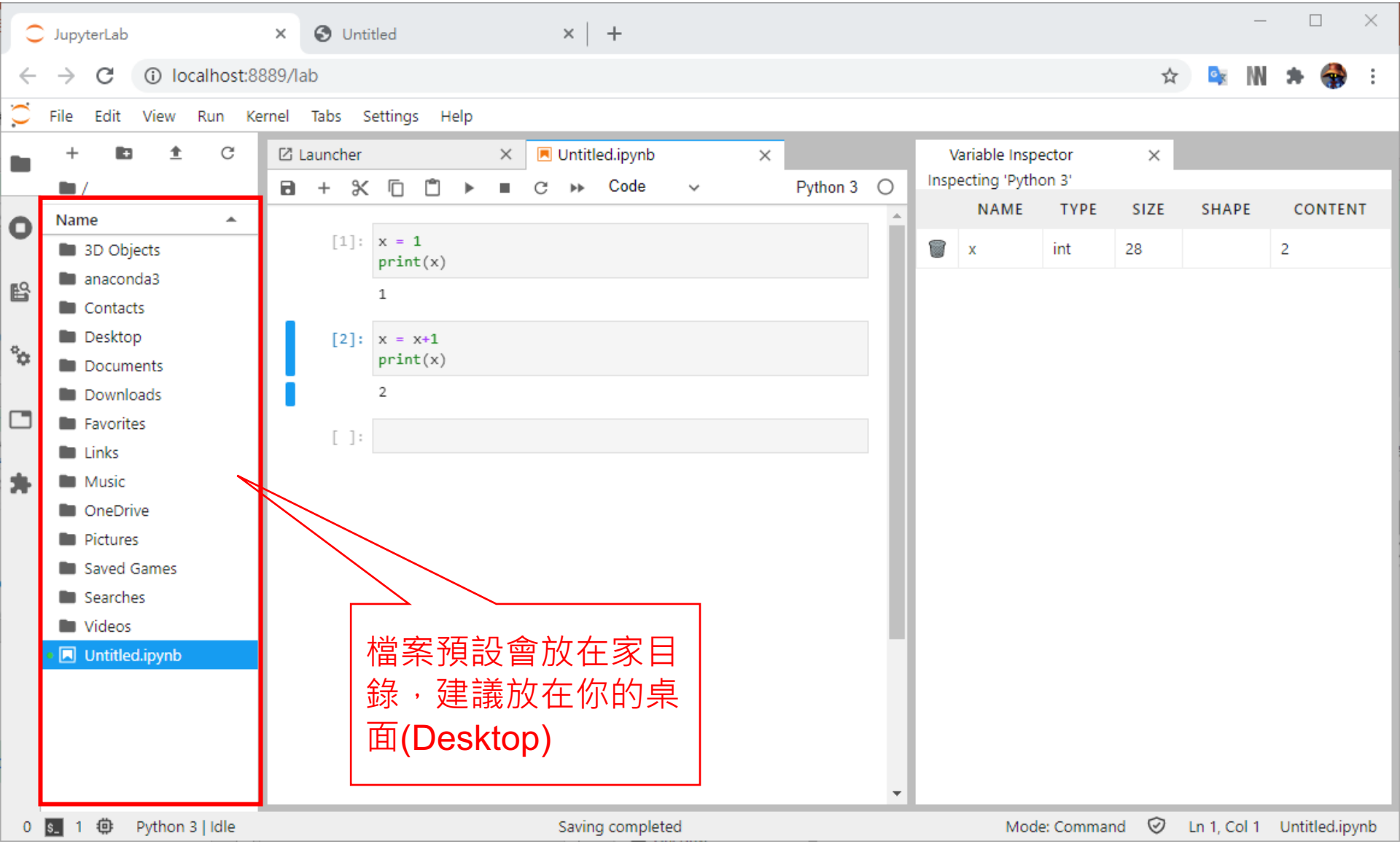

新增程式碼區塊
貼上區塊
終止目前執行
儲存檔案
剪下區塊
執行區塊
(或者按Shift+Enter)
重啟並執行整
份文件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localhost:8889/lab
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Launcher
Untitled.ipynb
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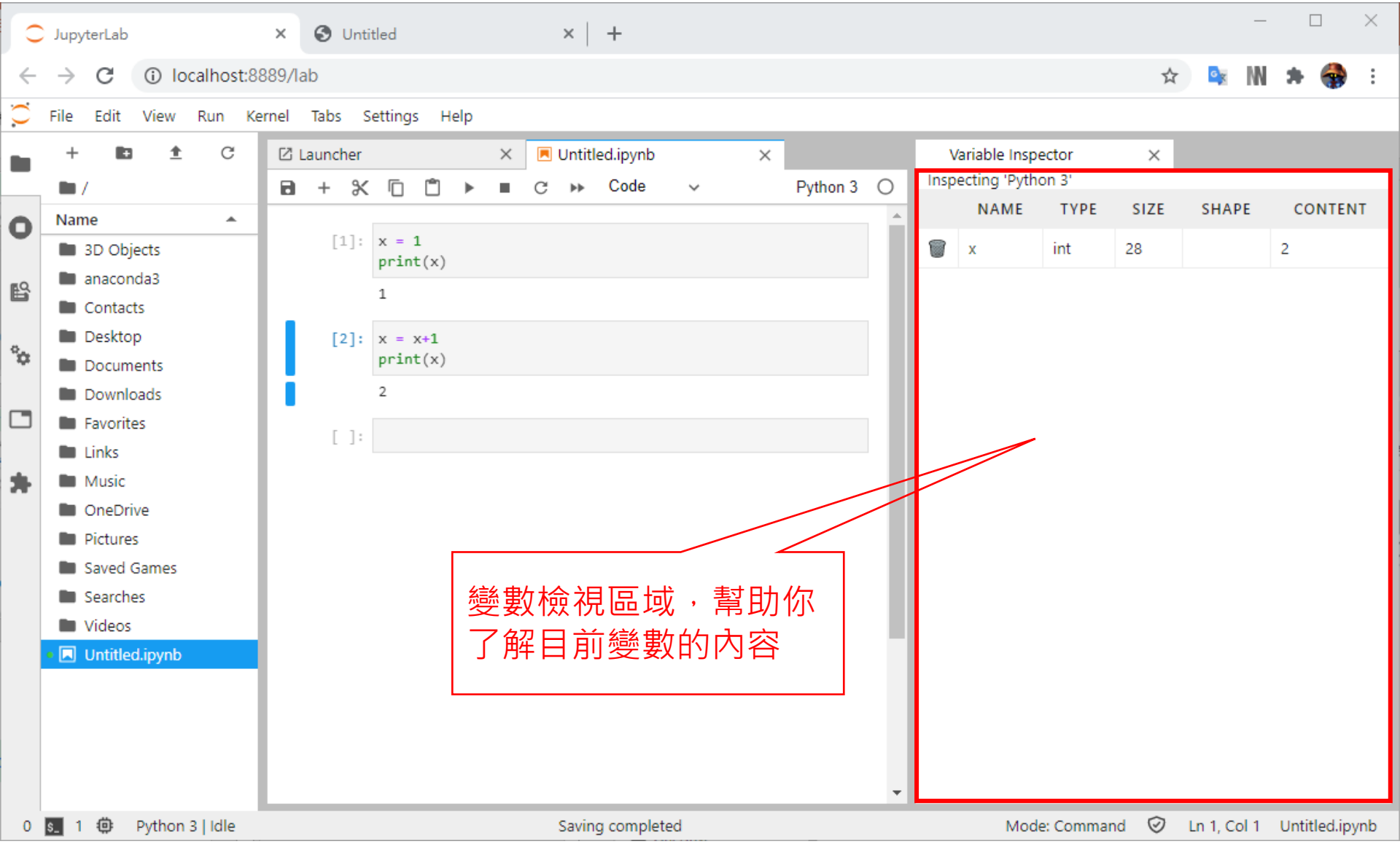
Favorites
Links
Music
OneDrive
Pictures
Saved Games
Searches
Videos
Untitled.ipynb
檔案預設會放在家目錄，建議放在你的桌面(Desktop)
Python 3 | Idle
Saving completed
Mode: Command
Ln 1, Col 1
Untitled.ipynb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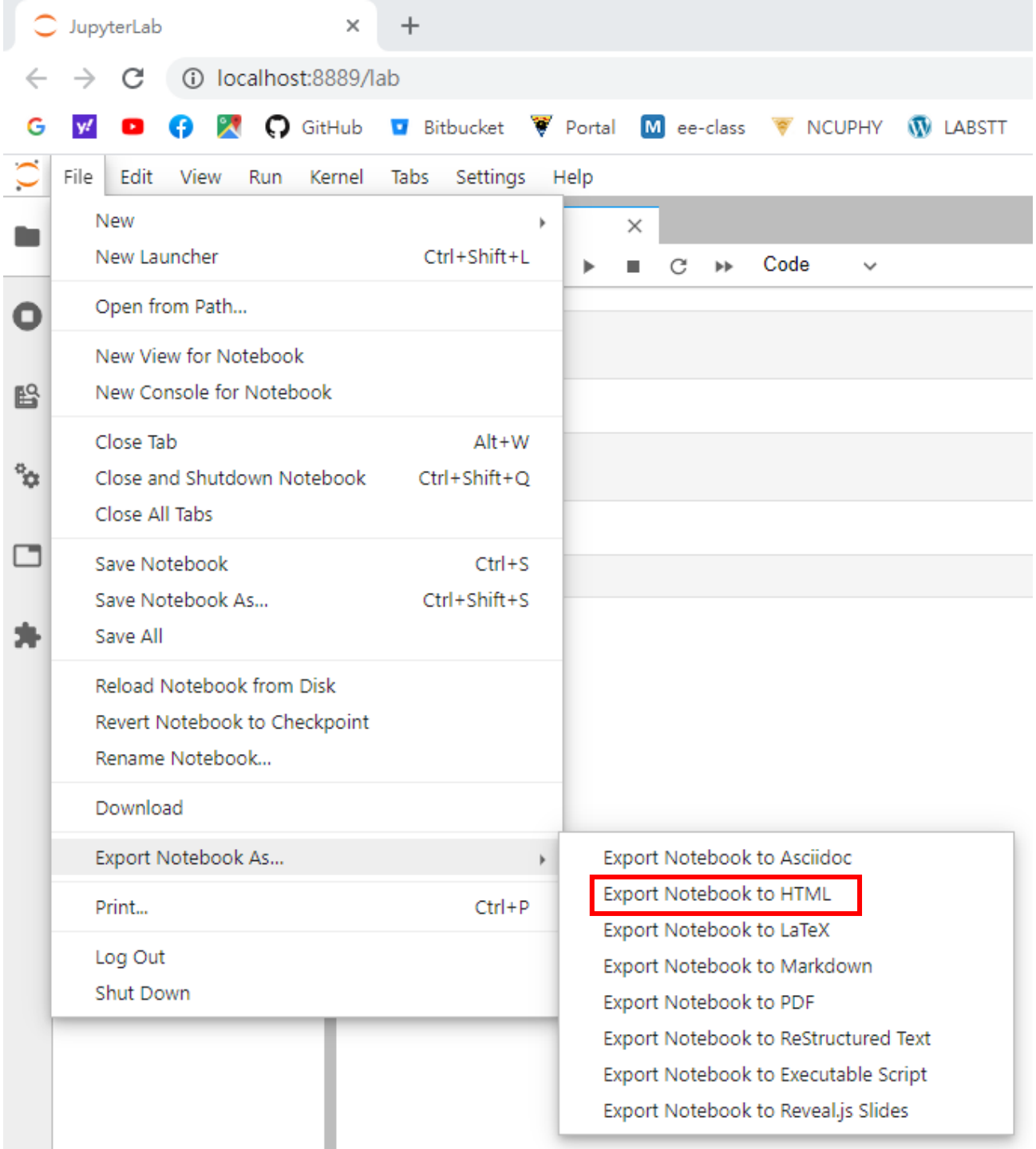
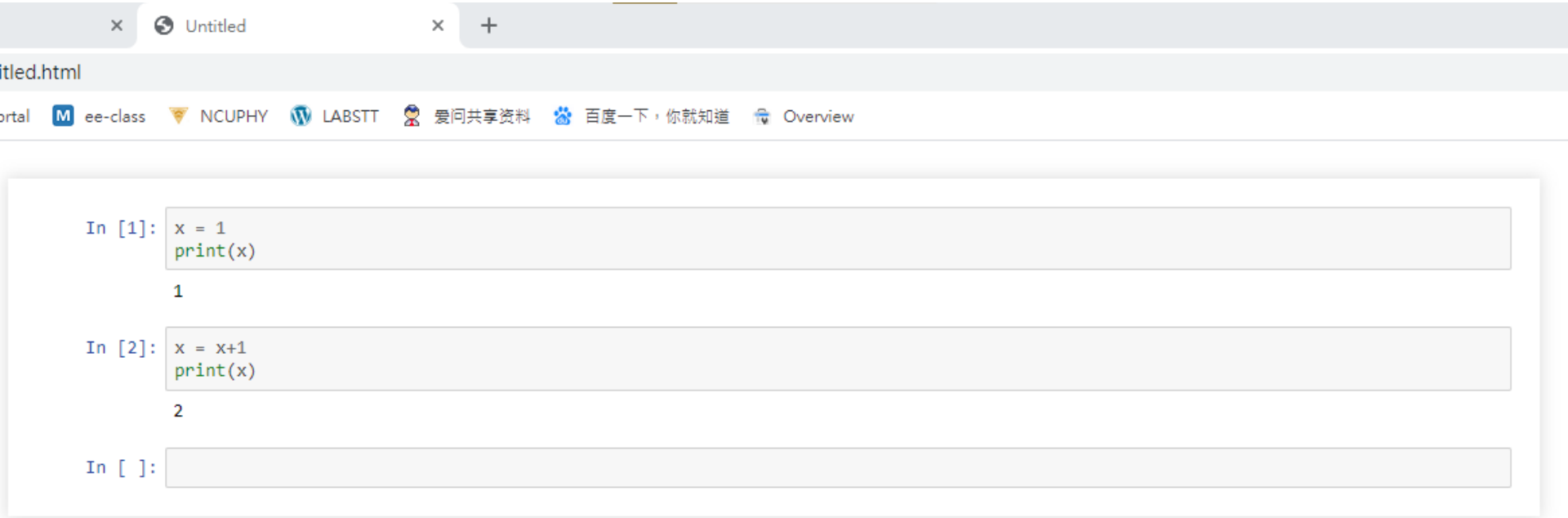
OneDrive
Pictures
Saved Games
Searches
Videos
Untitled.ipynb
Variable Inspector
Inspecting 'Python 3'
NAME TYPE SIZE SHAPE CONTENT
x int 28 2
變數檢視區域，幫助你
了解目前變數的內容
0 1 Python 3 | Idle
Saving completed
Mode: Command
Ln 1, Col 1
Untitled.ipynb

5. 輸出成HTML


JupyterLab
localhost:8889/lab
GitHub
Bitbucket
Portal
ee-class
NCUPHY
LABSTT
File
Edit
View
Run
Kernel
Tabs
Settings
Help
New
New Launcher Ctrl+Shift+L
Open from Path...
New View for Notebook
New Console for Notebook
Close Tab Alt+W
Close and Shutdown Notebook Ctrl+Shift+Q
Close All Tabs
Save Notebook Ctrl+S
Save Notebook As... Ctrl+Shift+S
Save All
Reload Notebook from Disk
Revert Notebook to Checkpoint
Rename Notebook...
Download
Export Notebook As...
Print... Ctrl+P
Log Out
Shut Down
Code
Export Notebook to Asciidoc
Export Notebook to HTML
Export Notebook to LaTeX
Export Notebook to Markdown
Export Notebook to PDF
Export Notebook to ReStructured Text
Export Notebook to Executable Script
Export Notebook to Reveal.js Slides

開啟後html檔後如下



注意事項

1. 請妥善保管好.ipynb原始碼檔與.html輸出檔
2. 程式碼作業繳交請上傳輸出後的html檔

   上傳前先開啟確認內容是否正確
3. 格式不對導致助教無法讀取，該次作業將沒有分數