# Colab Notebooks

Jeff Liu and Gary Chen

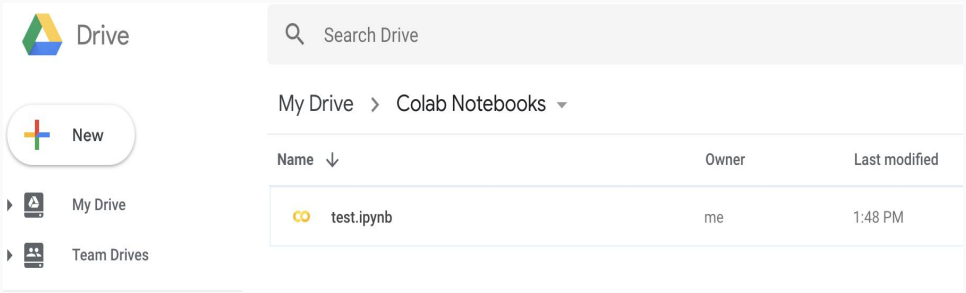
2019/01/12

CloudMile

# Introduction

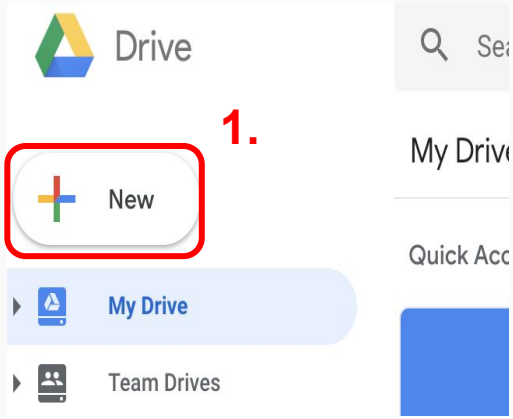
- 類似Jupyter Notebook，互動式介面，及時輸出結果
- 儲存在Google Drive 上，可以共同編輯
- 背後有VM 在運作
- 可連續使用免費的 Tesla K80 GPU 12小時(每次)
- 許多套件已事先安裝，例如：TensorFlow, Scikit-learn, Matplotlib等

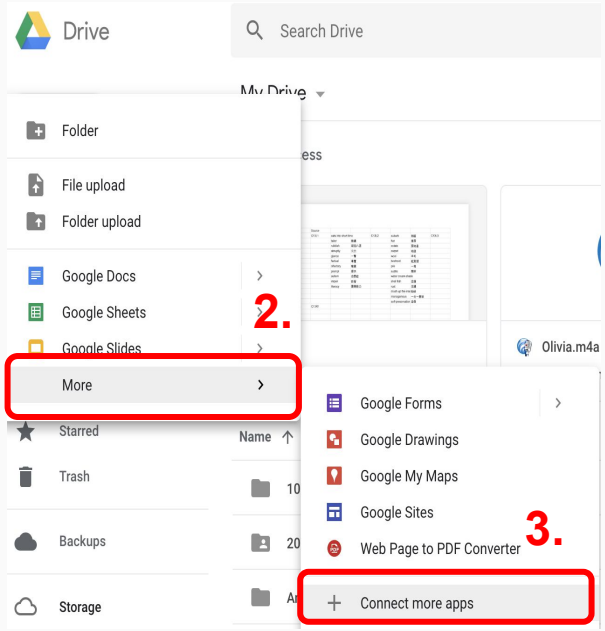
➔ Text Note: goo.gl/vmJGJ4

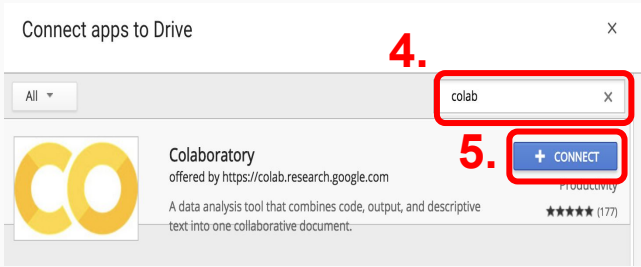


# Setup

- 進入Google Drive 連接到Colaboratory

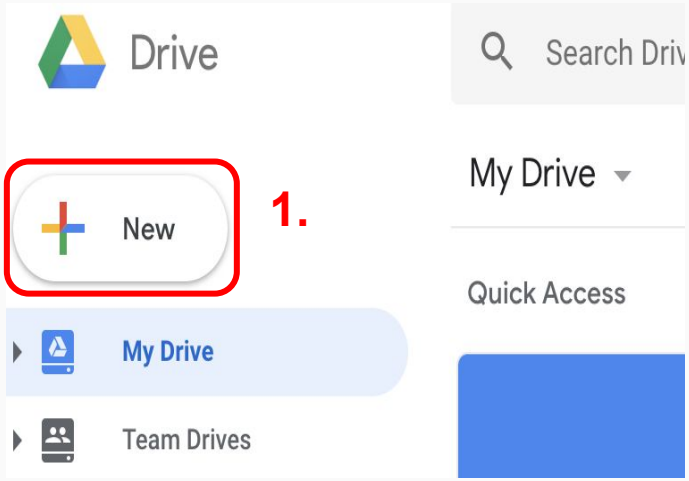


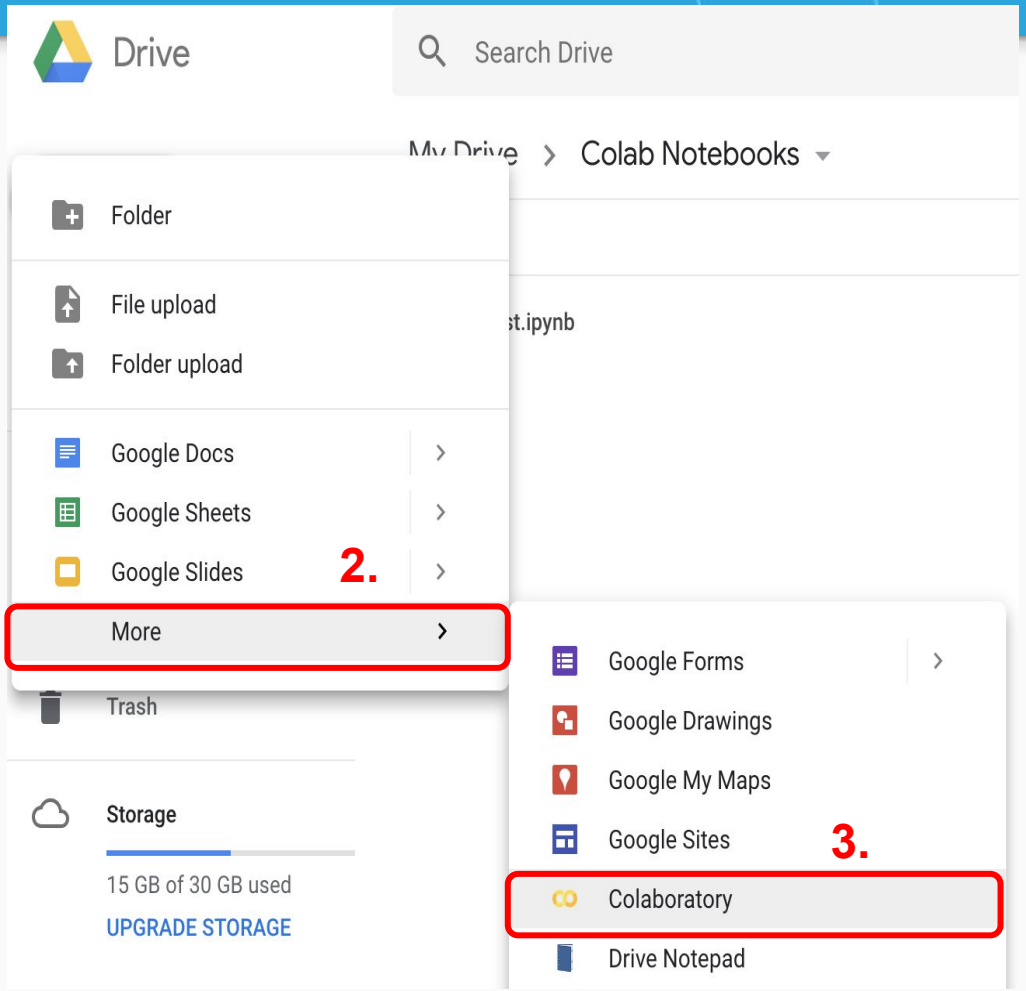



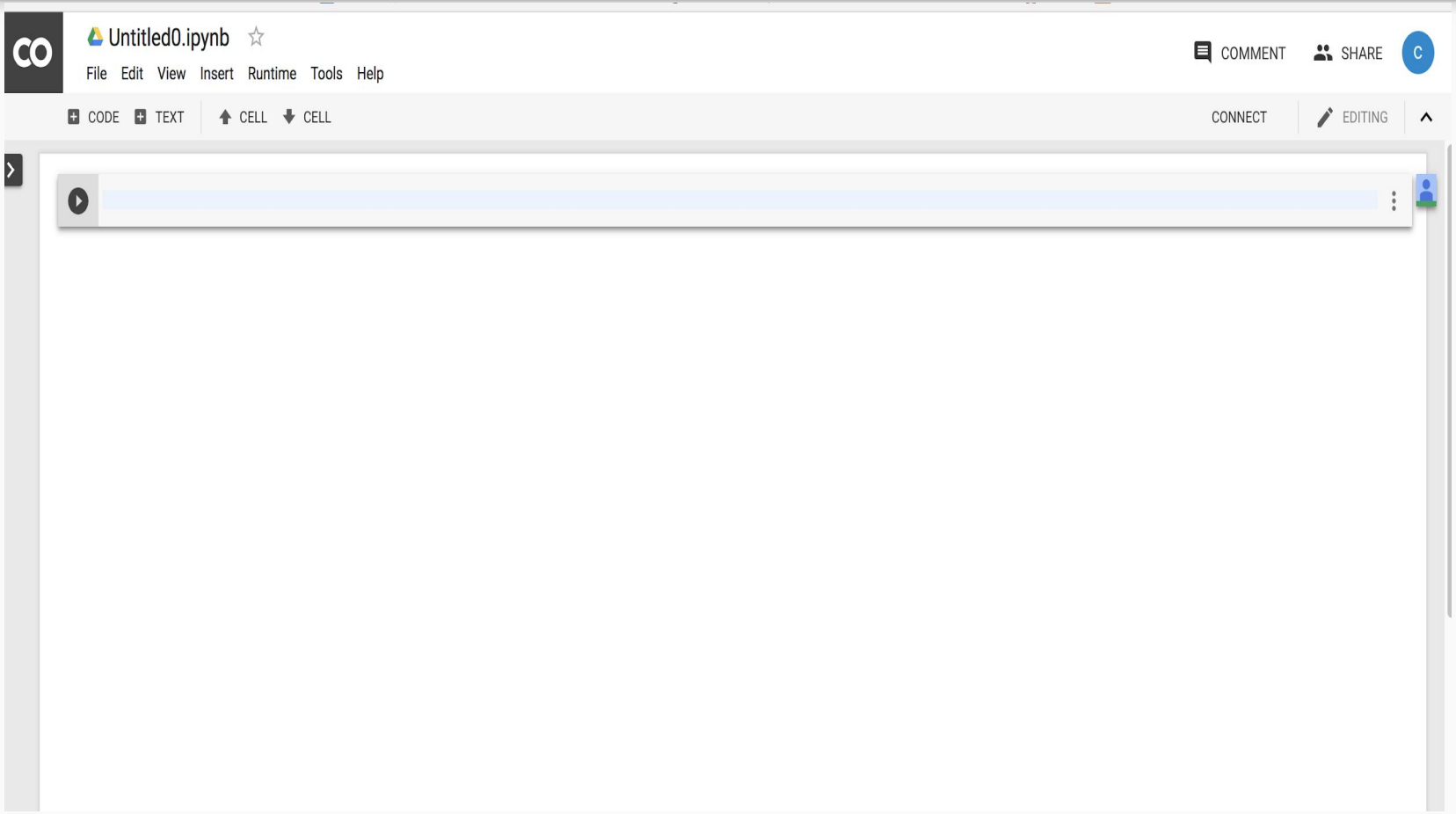
# Setup

- 建立一個新的Colaboratory

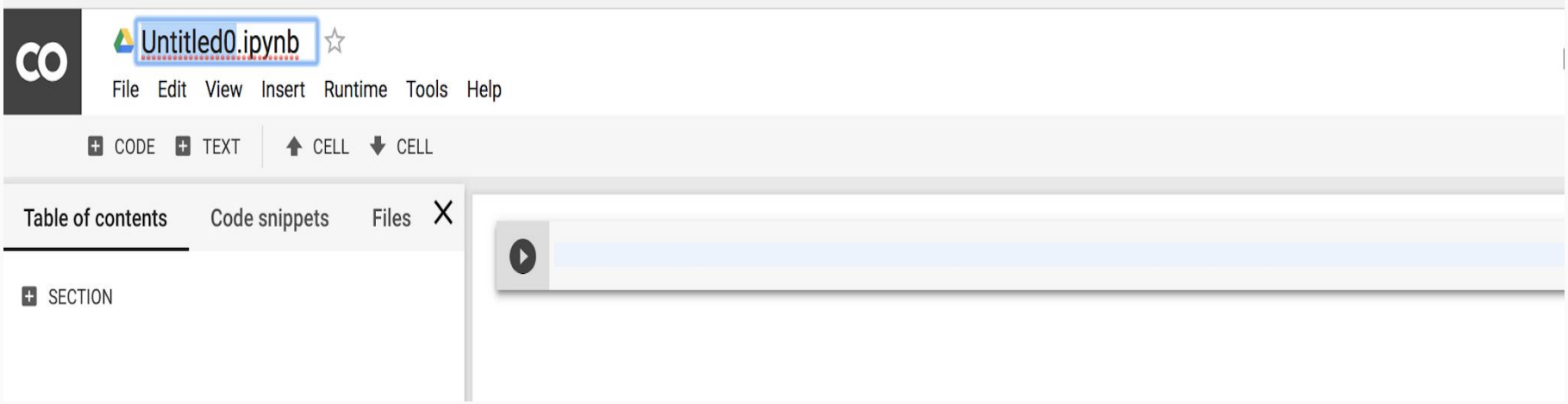


# 建立完成


Untitled0.ipynb
File Edit View Insert Runtime Tools Help
COMMENT
SHARE
CODE
TEXT
CELL
CELL
CONNECT
EDITING

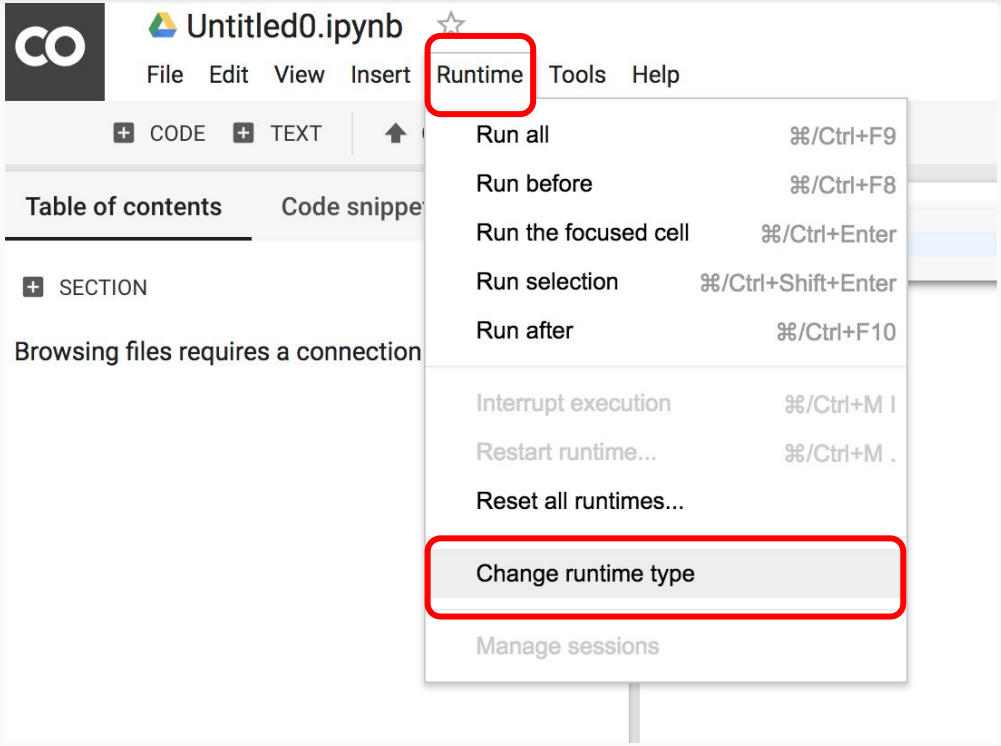
# 修改名稱


Untitled0.ipynb
File Edit View Insert Runtime Tools Help
CODE TEXT CELL CELL
Table of contents
Code snippets
Files
SECTION

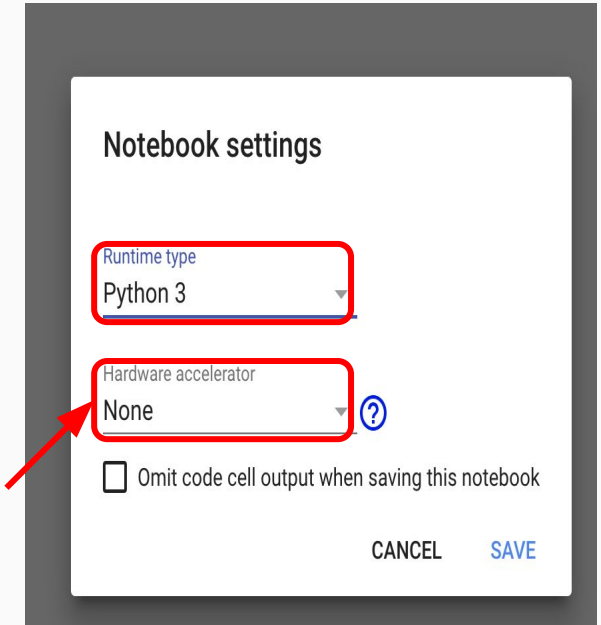
# 查看檔案

Untitled0.ipynb
File Edit View Insert Runtime Tools Help
COMMENT
SHARE
C
CODE
TEXT
CELL
CELL
CONNECT
EDITING
Table of contents
Code snippets
Files
SECTION
Browsing files requires a connection to a runtime.

# 修改Runtime




- 使用 Python 3

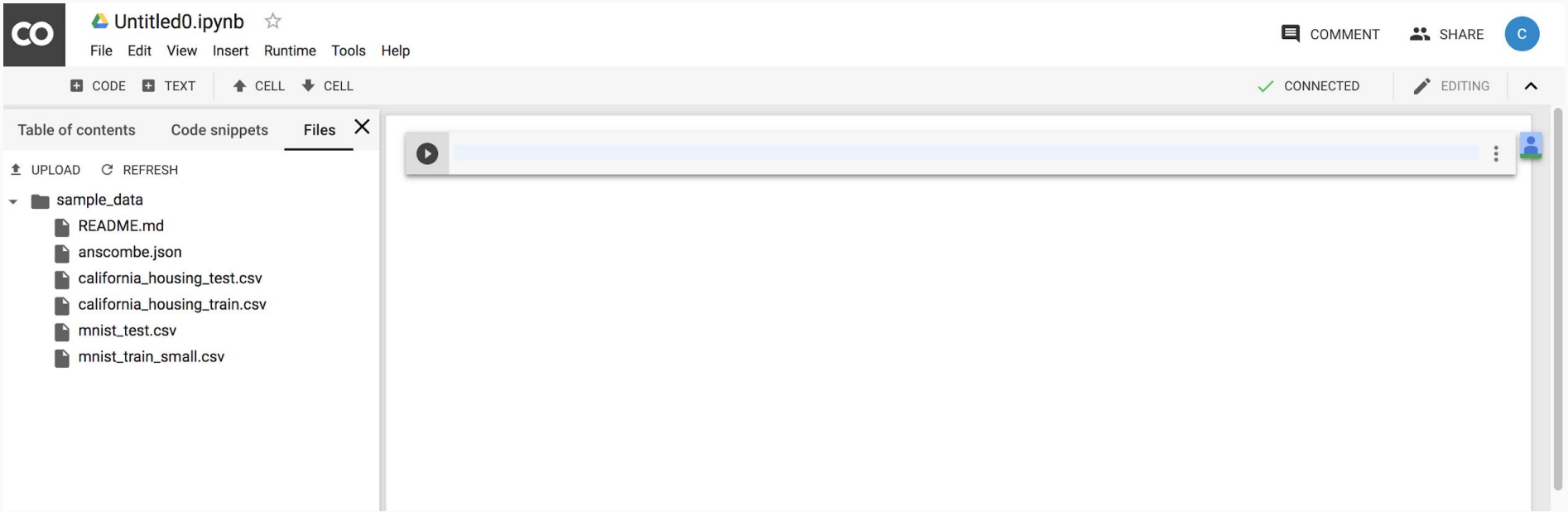



可選GPU

# 連接VM

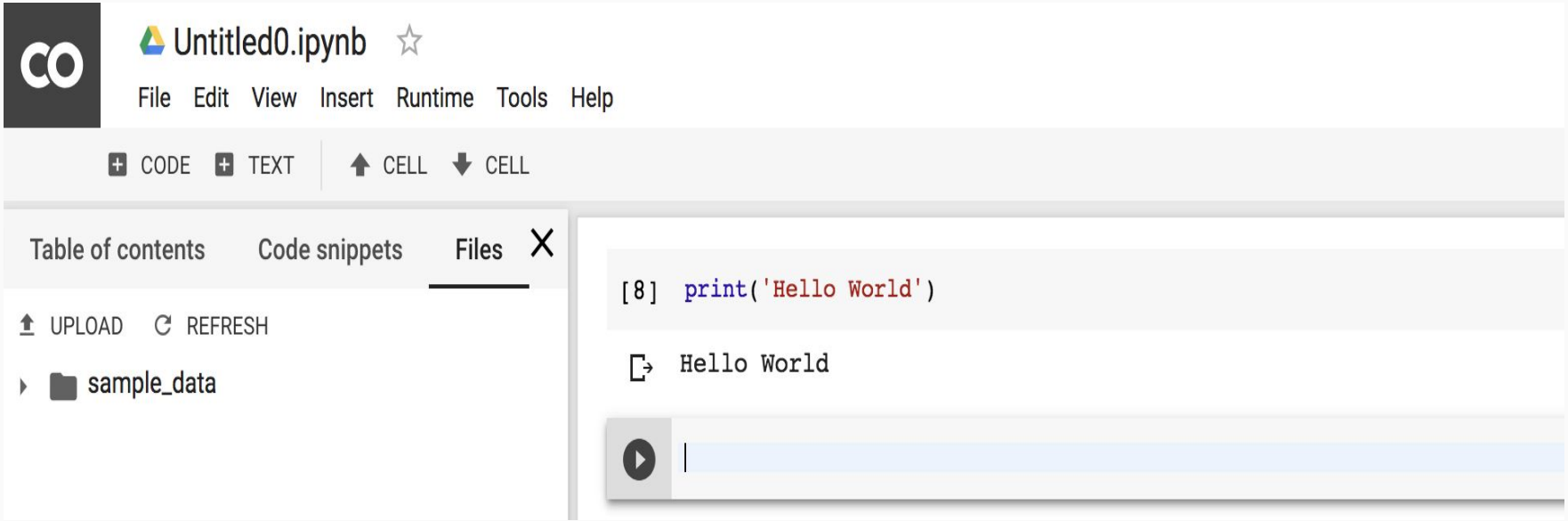
Untitled0.ipynb
File Edit View Insert Runtime Tools Help
COMMENT
SHARE
C
CODE
TEXT
CELL
CELL
CONNECT
EDITING
Table of contents
Code snippets
Files
SECTION
Connect to hosted runtime
Connect to local runtime...

# 連接完成


Untitled0.ipynb
File Edit View Insert Runtime Tools Help
COMMENT
SHARE
C
CODE
TEXT
CELL
CELL
CONNECTED
EDITING
Table of contents
Code snippets
Files
UPLOAD
REFRESH
sample_data
README.md
anscombe.json
california_housing_test.csv
california_housing_train.csv
mnist_test.csv
mnist_train_small.csv

# 基本語法 - Python

- 輸入 python 程式碼，點擊「Run」或是「Ctrl + Enter」執行程式碼區塊。

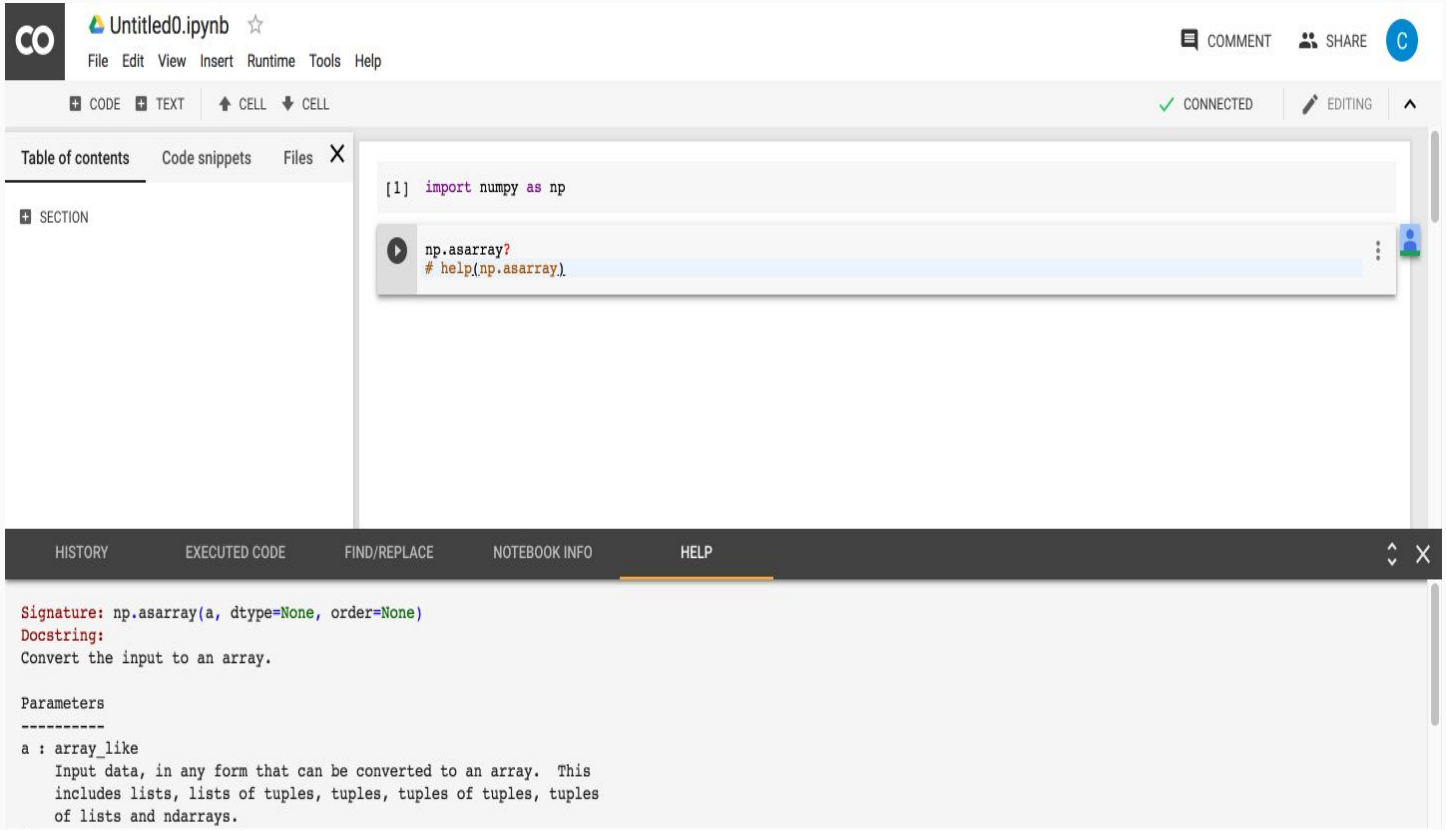


# 基本語法 - Shell

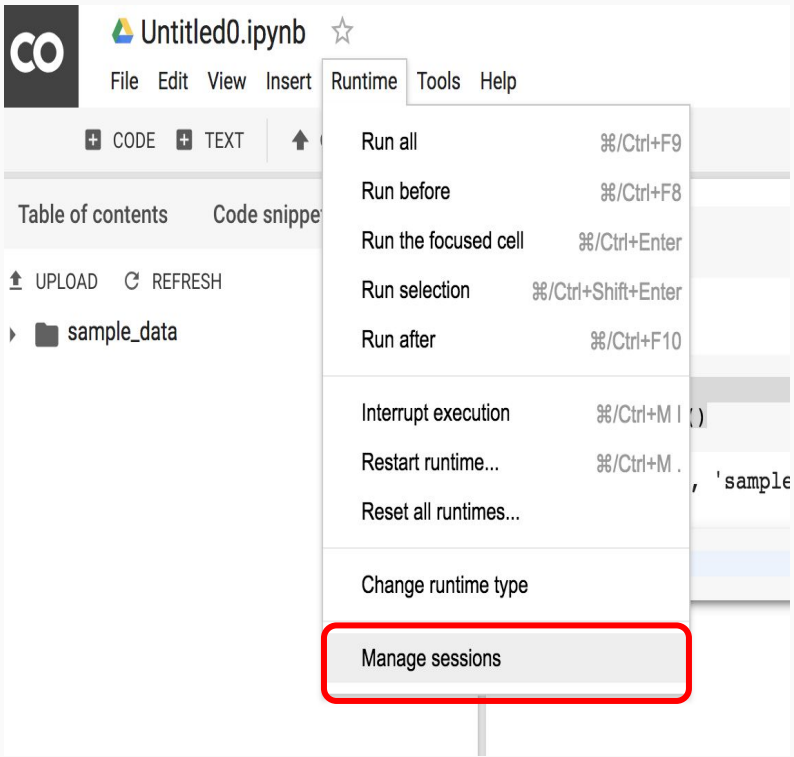
- 前面加上！

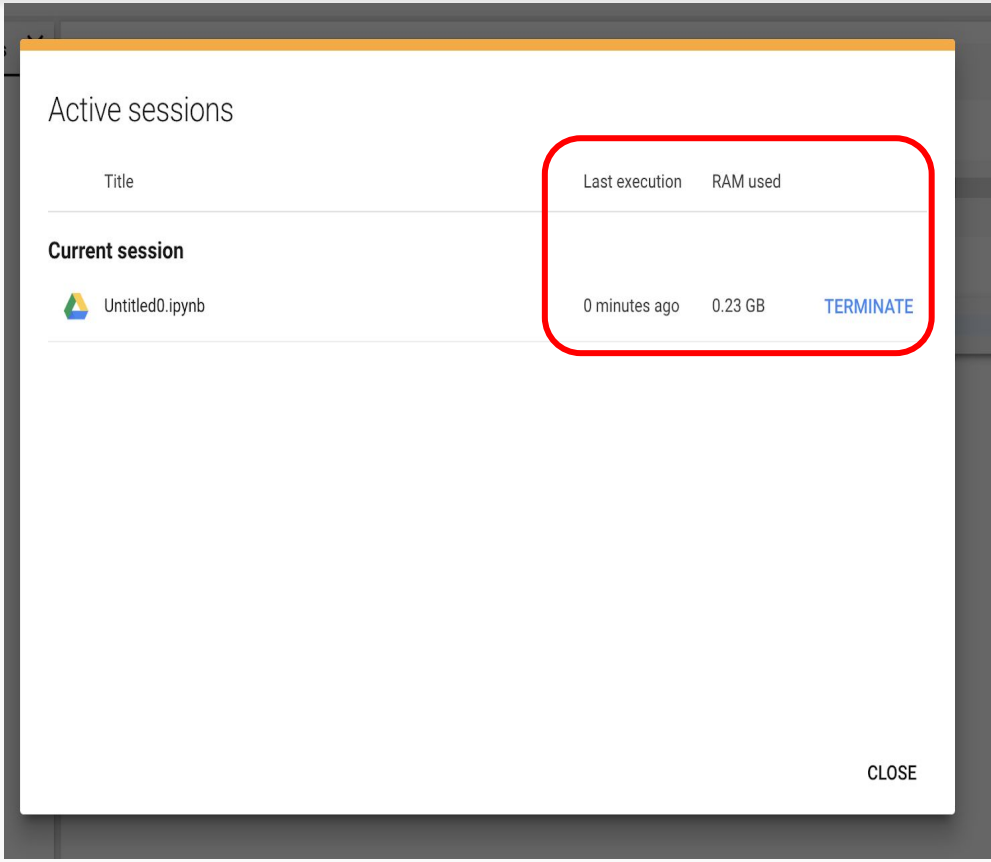
# 特殊語法 - 查看

- 在function 前面加上? 或是用help( )可以查看documentation

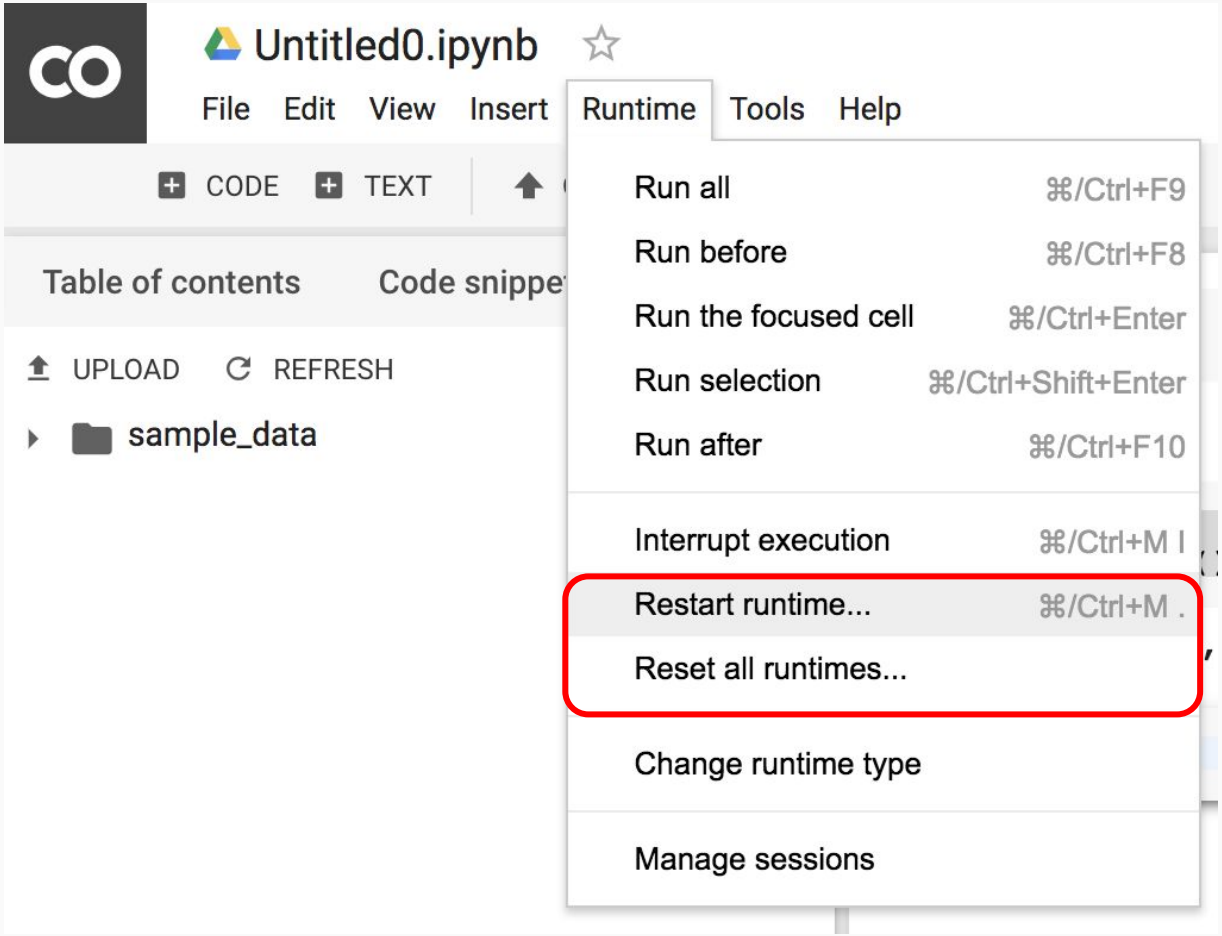


# 管理Session


Untitled0.ipynb
File Edit View Insert Runtime Tools Help
CODE TEXT
Table of contents
UPLOAD REFRESH
sample_data
Run all ⌘/Ctrl+F9
Run before ⌘/Ctrl+F8
Run the focused cell ⌘/Ctrl+Enter
Run selection ⌘/Ctrl+Shift+Enter
Run after ⌘/Ctrl+F10
Interrupt execution ⌘/Ctrl+M I
Restart runtime... ⌘/Ctrl+M .
Reset all runtimes...
Change runtime type
Manage sessions


Active sessions
Title
Last execution
RAM used
Current session
Untitled0.ipynb
0 minutes ago
0.23 GB
TERMINATE
CLOSE

# Restart runtime/ Reset runtime



# Lab 1: Memory-Based CF

➔ Note: goo.gl/vmJGJ4

Colab Links 1.

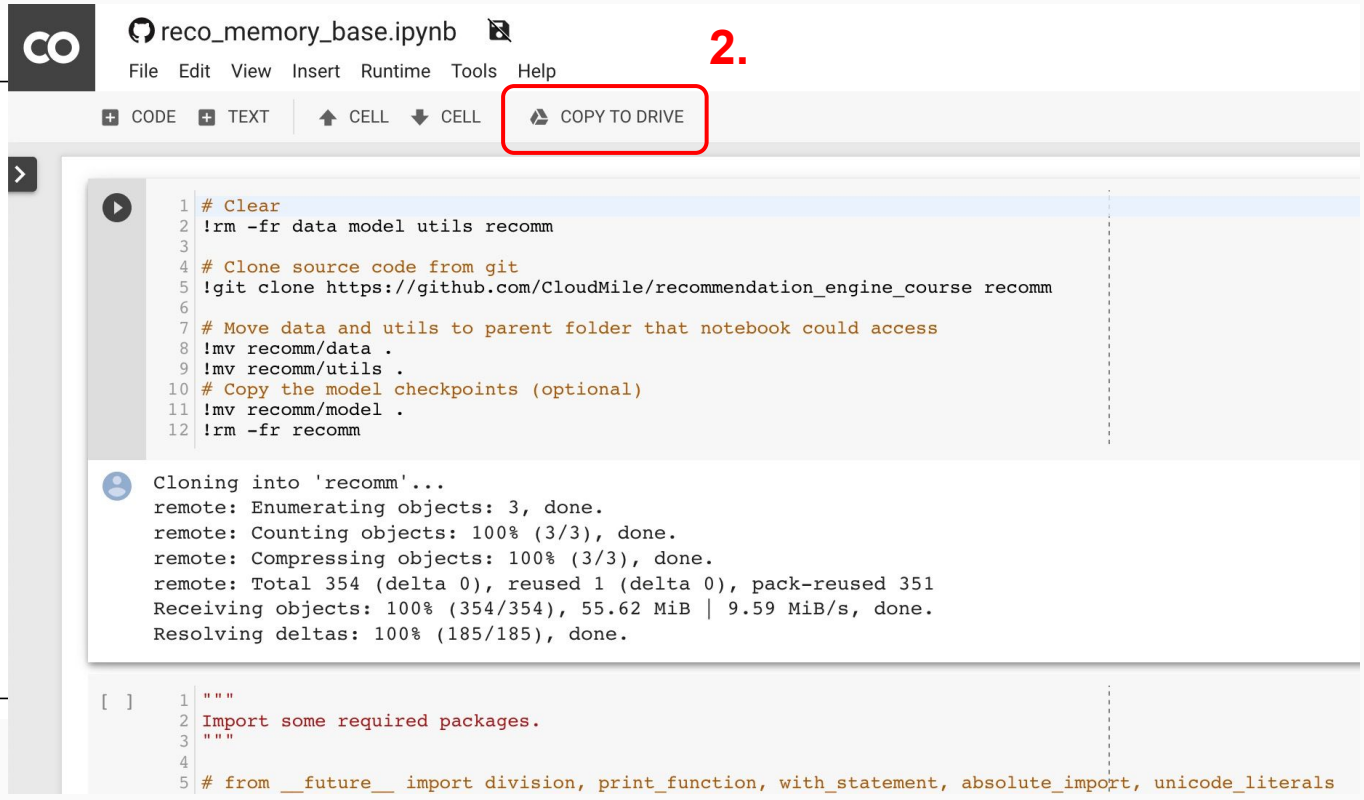
Lab 1: Memory base CF
reco_memory_base.ipynb

Lab 2: DNN practice:
tutorial_dnn_practice.ipynb
lab_tutorial_dnn_practice.ipynb

Lab 3: Basic MF
reco_model_mf.ipynb
lab_reco_model_mf.ipynb

Lab 4: MF with user histories
reco_model_mf_with_history.ipynb
lab_reco_model_mf_with_history.ipynb

Lab 5: MF with DNN
reco_model_mf_dnn.ipynb
lab_reco_model_mf_dnn.ipynb



# Reference

- https://colab.research.google.com/drive/1jt6Dk2MoUaBZu0nUuQpNAzVfMpm08Vps?authuser=1#scrollTo=zmVS_bIsW2Cq
- https://research.google.com/colaboratory/faq.html#gpu-availability
- https://research.google.com/colaboratory/local-runtimes.html