

The User Manual

1. 將 SD 卡格式化

- 下載 SD card formatter https://www.sdcard.org/downloads/formatter_4/

SD Memory Card Formatter Download for Windows/Mac

For Windows

For Mac

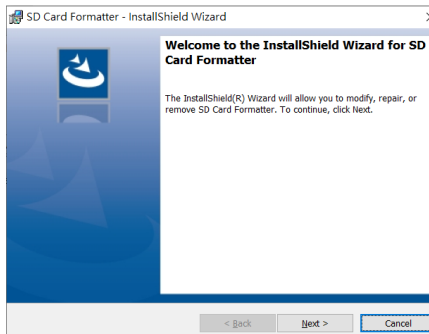
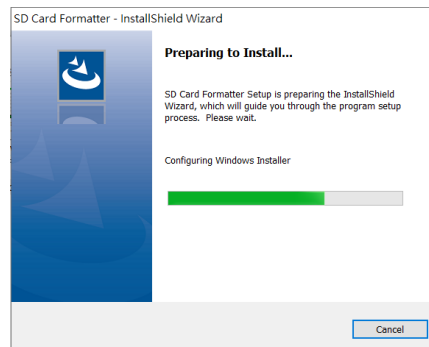
Developed by [Tuxera](#)

- 選擇“Accept”

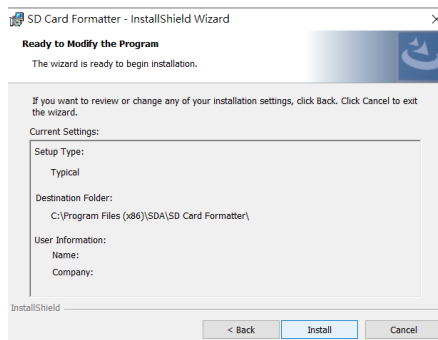
YOU ACKNOWLEDGE AND AGREE THAT YOU HAVE READ THIS AGREEMENT AND INTEND TO BE BOUND AS IF YOU HAD SIGNED THIS AGREEMENT IN WRITING. IF YOU ARE ACTING ON BEHALF OF AN ENTITY, YOU WARRANT THAT YOU HAVE THE AUTHORITY TO ENTER INTO THIS AGREEMENT ON BEHALF OF SUCH ENTITY AND BIND SUCH ENTITY TO THE TERMS OF THIS AGREEMENT.

Decline

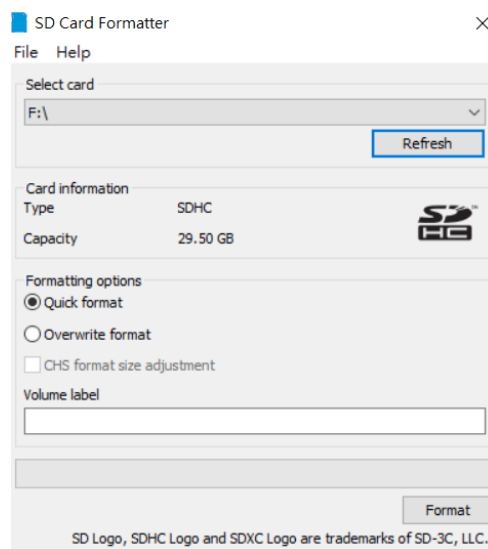
Accept



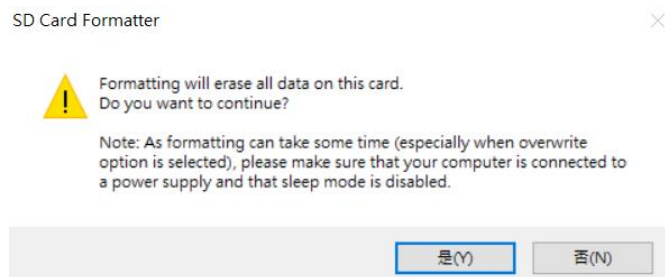
- 安裝 SD card formatter



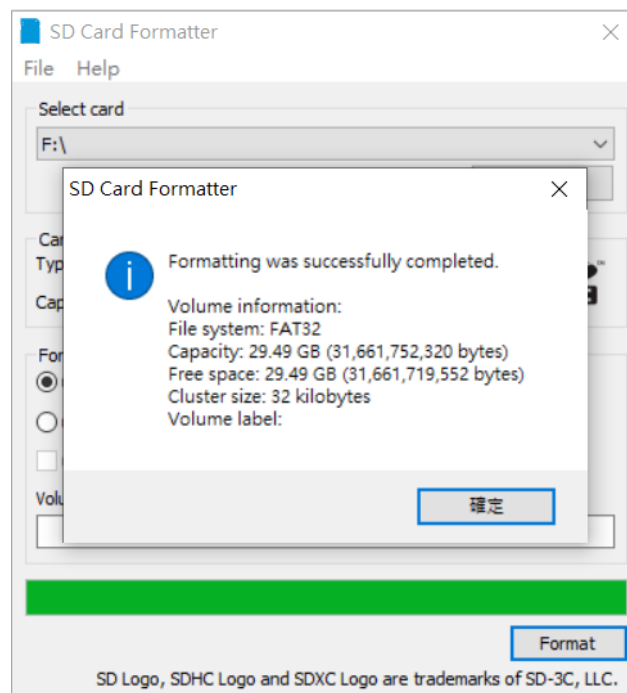
- 選擇 SD card，點選“Format”



- 選擇“是”



- 按“確定”，完成格式化



2. 安裝作業系統

- 使用 Raspberry Pi imager 下載 image 檔，自動安裝在 SD card

Installing operating system images

This resource explains how to install a Raspberry Pi operating system image on an SD card. You will need another computer with an SD card reader to install the image.

Before you start, don't forget to check [the SD card requirements](#).

Using Raspberry Pi Imager

Raspberry Pi have developed a graphical SD card writing tool that works on Mac OS, Ubuntu 18.04 and Windows, and is the easiest option for most users as it will download the image and install it automatically to the SD card.

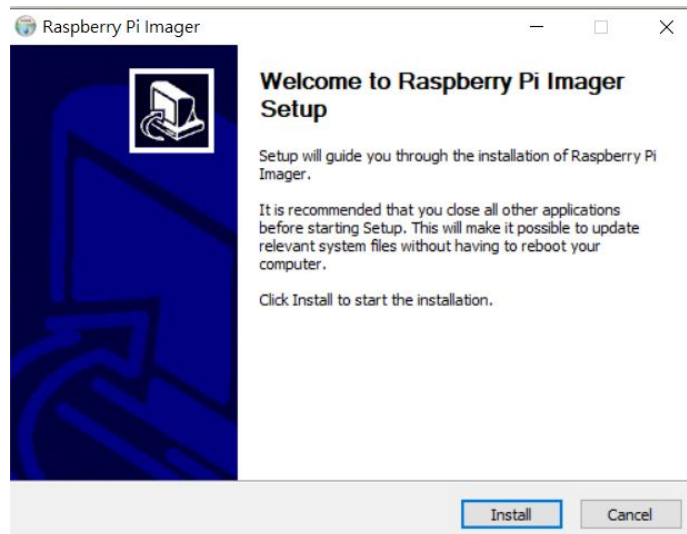
- Download the latest version of [Raspberry Pi Imager](#) and install it.
 - If you want to use Raspberry Pi Imager on the Raspberry Pi itself, you can install it from a terminal using `sudo apt install rpi-imager`.
- Connect an SD card reader with the SD card inside.
- Open Raspberry Pi Imager and choose the required OS from the list presented.
- Choose the SD card you wish to write your image to.
- Review your selections and click 'WRITE' to begin writing data to the SD card.

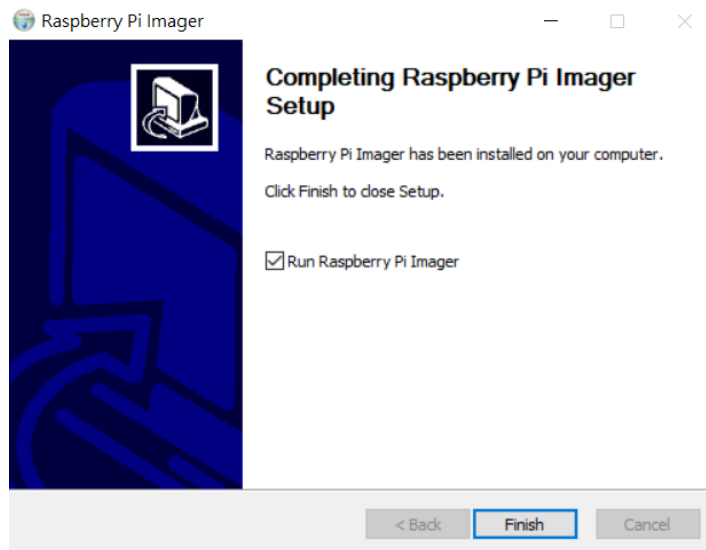
Downloads

Raspberry Pi OS (previously called Raspbian) is our official operating system for **all** models of the Raspberry Pi.

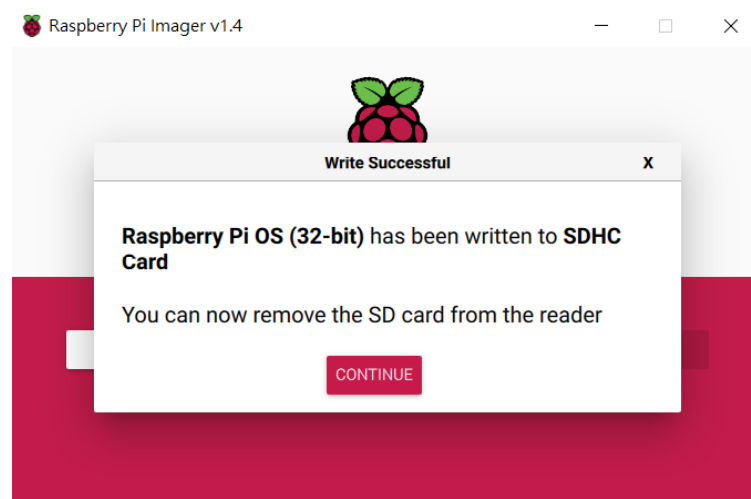
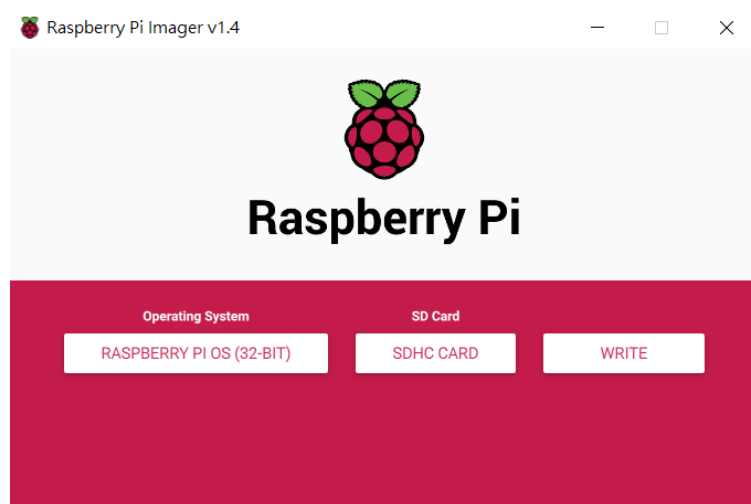
Use **Raspberry Pi Imager** for an easy way to install Raspberry Pi OS and other operating systems to an SD card ready to use with your Raspberry Pi:

- [Raspberry Pi Imager for Windows](#)
- [Raspberry Pi Imager for macOS](#)
- [Raspberry Pi Imager for Ubuntu](#)



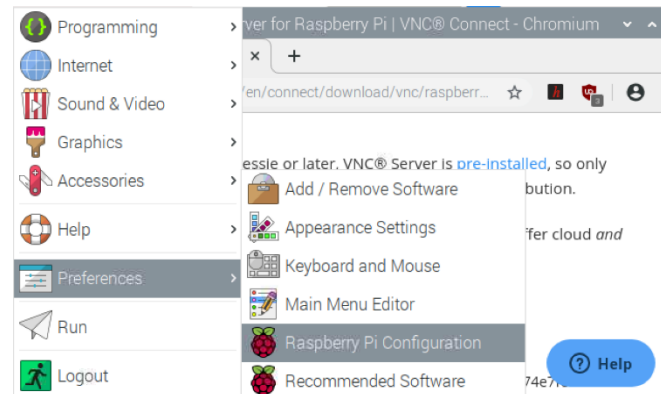


- 選擇作業系統"RASPBERRY PI OS(32-BIT)"，以及 SD card，即可選擇"WRITE"

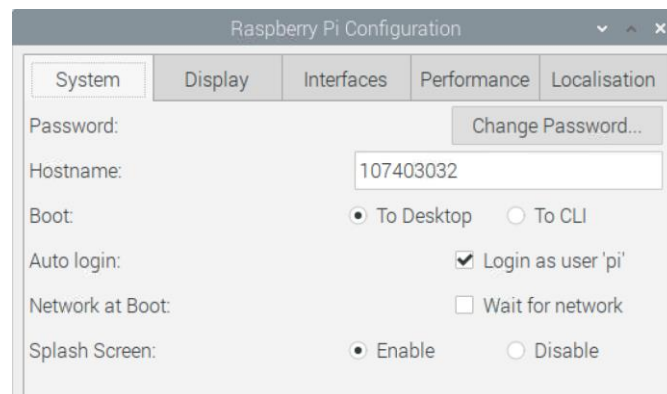


3. VNC 遠端連線

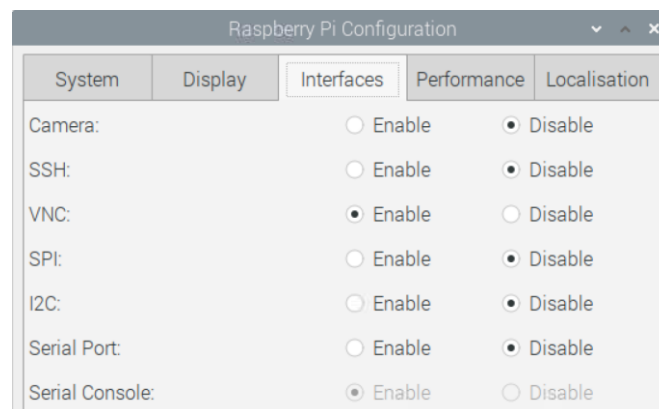
- 設定 Raspberry Pi
點選 Preference > Raspberry Pi Configuration



- 設定 Hostname 為學號



- 將 Interfaces 中的 VNC 設為"Enable"



- 於遠端電腦登入/註冊 real VNC <https://www.realvnc.com/en/>

Enter your password

Welcome back.

juliawu0717@gmail.com

[Change email](#)

.....

[Forgot password?](#)

[Sign in](#)

- 於遠端電腦下載 VNC viewer

<https://www.realvnc.com/en/connect/download/viewer/>

VNC® Connect consists of VNC® Viewer and VNC® Server

Download VNC® Viewer to the device you want to control from, below. Make sure you've installed VNC® Server on the computer you want to control.



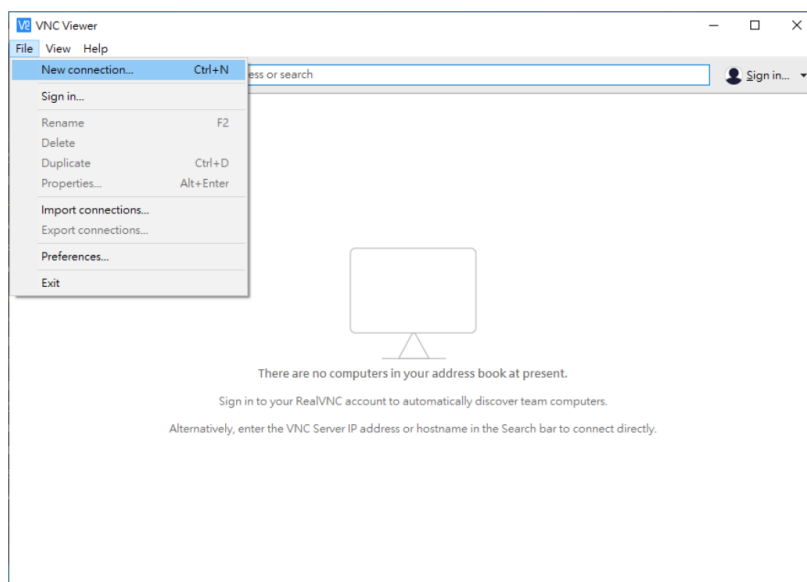
[Download VNC Viewer](#)

SHA-256: 6764e39303b4c49e8401e91878b1b26e3706ab5ffb4bac5f6e6334ecfe3363ae

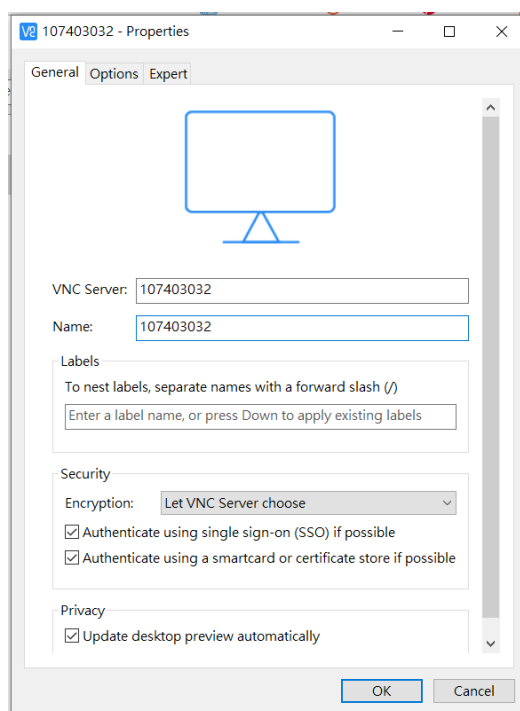
EXE x86/x64

[Looking for VNC® Server?](#)

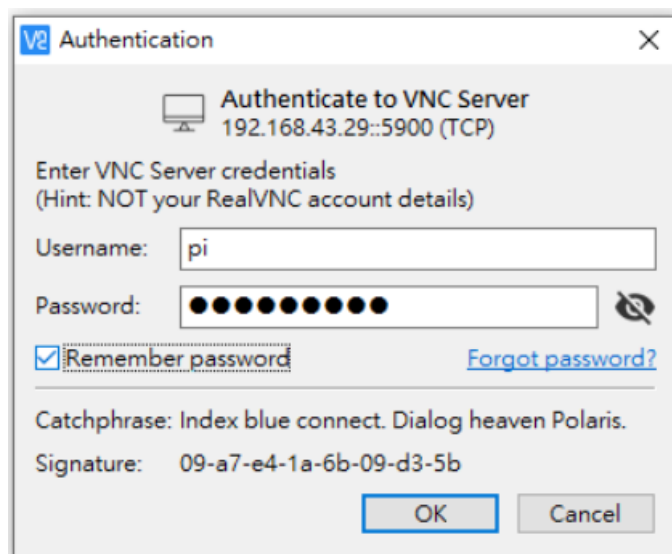
- 下載完後點擊 File > New connection 建立連線



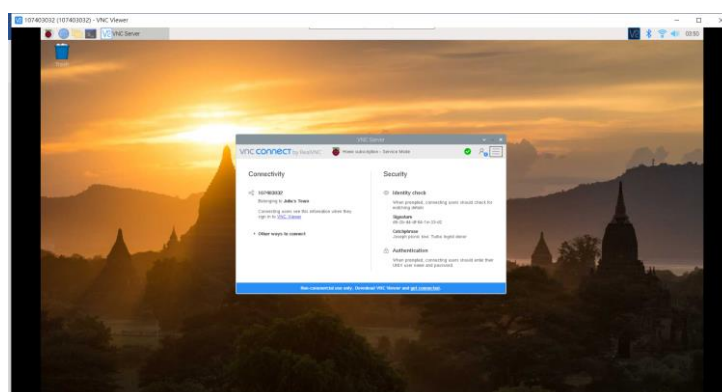
- 輸入 VNC server IP 位址(或 Hostname)，以及連線名稱



- 輸入 Raspberry Pi 帳號密碼，完成授權



- 連線成功，進入 Raspberry Pi 桌面

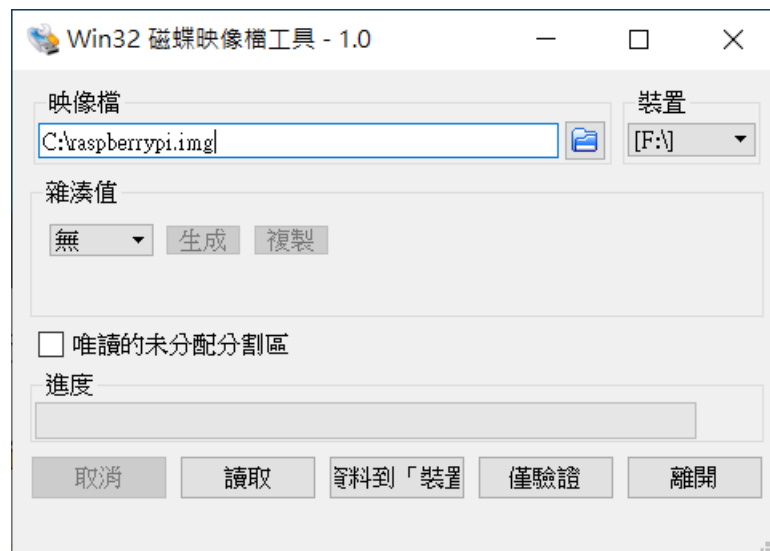


4. 備份 SD card

- 使用 Win32 Disk Imager <https://sourceforge.net/projects/win32diskimager/>



- 映像檔輸入“C:\raspberrypi.img”，點選“讀取”



- 等待讀取完成後，顯示讀取成功，點“確認”，完成備份

5. 安裝 Conda

- 在 Raspberry Pi 上安裝 berryconda <https://github.com/jjhelmus/berryconda>

armv7l installers (Raspberry Pi 2 or 3)

- [Berryconda3-2.0.0-Linux-armv7l.sh](#)
- [Berryconda2-2.0.0-Linux-armv7l.sh](#)

armv6l installers (Raspberry Pi 1 or Zero)

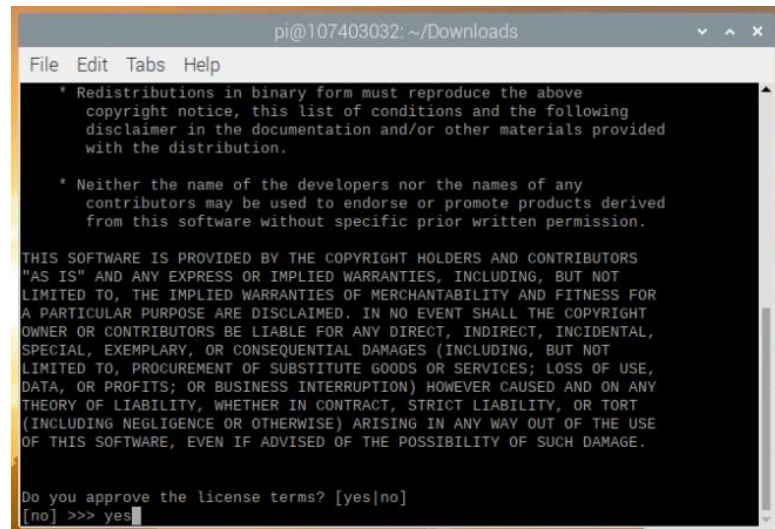
- [Berryconda3-2.0.0-Linux-armv6l.sh](#)
- [Berryconda2-2.0.0-Linux-armv6l.sh](#)

- 在 Terminal 輸入以下指令

```
pi@107403032:~/Downloads $ chmod +x Berryconda3-2.0.0-Linux-armv71.sh
```

```
pi@107403032:~/Downloads $ ./Berryconda3-2.0.0-Linux-armv71.sh
```

- 依照指示完成安裝



```
pi@107403032: ~/Downloads
File Edit Tabs Help

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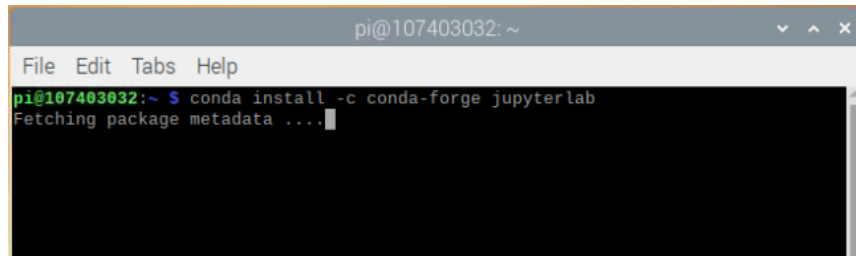
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DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
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(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Do you approve the license terms? [yes|no]
[no] >>> yes
```

6. 安裝 Jupyter Notebook

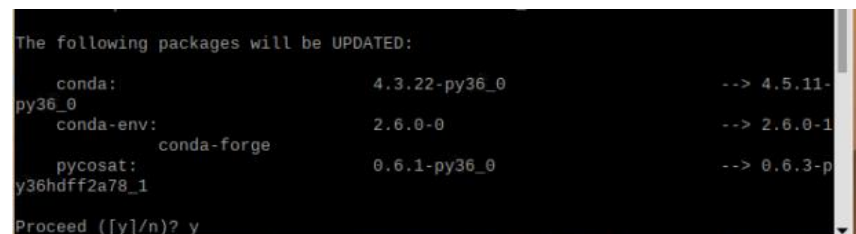
- 參考連結 <https://jupyter.org/install>
- 輸入指令安裝 JupyterLab

conda install -c conda-forge jupyterlab



```
pi@107403032: ~  
File Edit Tabs Help  
pi@107403032:~ $ conda install -c conda-forge jupyterlab  
Fetching package metadata ....
```

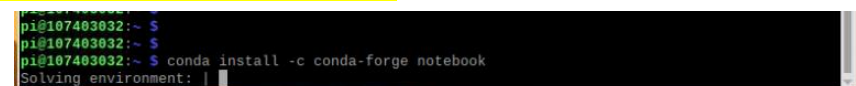
- 詢問是否更新 packages? 輸入“y”



```
The following packages will be UPDATED:  
  
conda: 4.3.22-py36_0 --> 4.5.11-py36_0  
py36_0  
conda-env: 2.6.0-0 --> 2.6.0-1  
conda-forge  
pycosat: 0.6.1-py36_0 --> 0.6.3-py36_0  
y36hdf2a78_1  
Proceed ([y]/n)? y
```

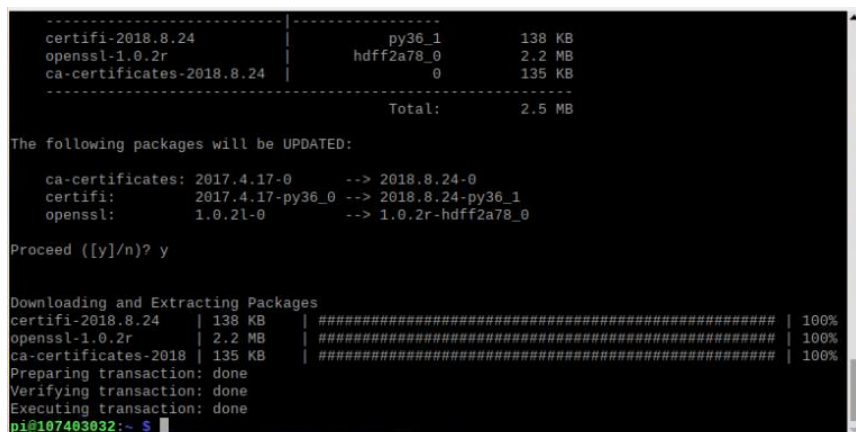
- 輸入指令安裝 Jupyter Notebook

conda install -c conda-forge notebook



```
pi@107403032:~ $  
pi@107403032:~ $  
pi@107403032:~ $ conda install -c conda-forge notebook  
Solving environment: |
```

- 詢問是否更新 packages? 輸入“y”後，完成安裝



```
-----  
certifi-2018.8.24 | py36_1 | 138 KB  
openssl-1.0.2r | hddf2a78_0 | 2.2 MB  
ca-certificates-2018.8.24 | 0 | 135 KB  
-----  
Total: 2.5 MB  
  
The following packages will be UPDATED:  
  
ca-certificates: 2017.4.17-0 --> 2018.8.24-0  
certifi: 2017.4.17-py36_0 --> 2018.8.24-py36_1  
openssl: 1.0.2l-0 --> 1.0.2r-hddf2a78_0  
  
Proceed ([y]/n)? y  
  
Downloading and Extracting Packages  
certifi-2018.8.24 | 138 KB | ##### | 100%  
openssl-1.0.2r | 2.2 MB | ##### | 100%  
ca-certificates-2018 | 135 KB | ##### | 100%  
Preparing transaction: done  
Verifying transaction: done  
Executing transaction: done  
pi@107403032:~ $
```

7. 執行 JupyterNotebook

- 輸入指令，打開 JupyterNotebook

jupyter notebook

```
pi@107403032:~$ jupyter notebook
[I 05:48:33.889 NotebookApp] Writing notebook server cookie secret to /home/pi/.local/share/jupyter/runtime/notebook_cookie_secret
[I 05:48:37.226 NotebookApp] JupyterLab extension loaded from /home/pi/berryconda3/lib/python3.6/site-packages/jupyterlab
[I 05:48:37.227 NotebookApp] JupyterLab application directory is /home/pi/berryconda3/share/jupyter/lab
[I 05:48:37.256 NotebookApp] Serving notebooks from local directory: /home/pi
[I 05:48:37.257 NotebookApp] The Jupyter Notebook is running at:
[I 05:48:37.258 NotebookApp] http://localhost:8888/?token=82e584019ff972d71c179824b84ad8c76ee2c4cfae621f4d
[I 05:48:37.258 NotebookApp] Use Control-C to stop this server and shut down all kernels (twice to skip confirmation).
[C 05:48:37.264 NotebookApp]

Copy/paste this URL into your browser when you connect for the first time,
to login with a token:
http://localhost:8888/?token=82e584019ff972d71c179824b84ad8c76ee2c4cfae621f4d
--disable-quit --enable-tcp-fast-open --ppapi-flash-path=/usr/lib/chromium-browser/libpepflashplayer.so --ppapi-flash-args=enable_stagevideo_auto=0 --ppapi-flash-version=
libEGL warning: DRI2: failed to authenticate
[2365:2365:1007/054848.080768:ERROR:sandbox_linux.cc(369)] InitializeSandbox() called with mult
```

- 點擊 new，選擇 Python3，建立新 Notebook

