

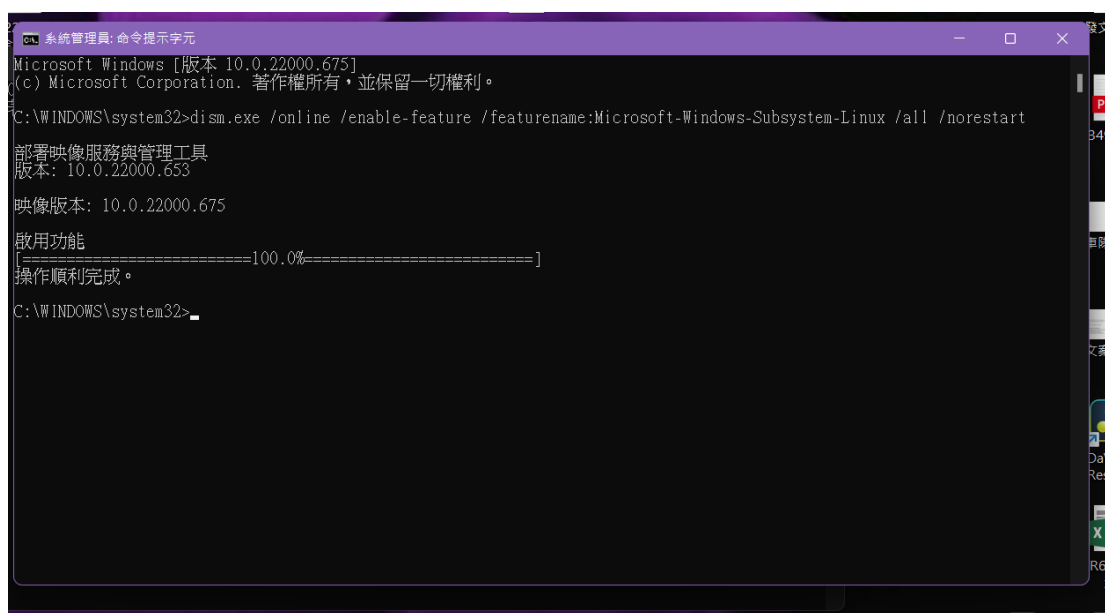
資訊安全導論-期末作業

資財二乙 109ab0749 羅珮琪

WSL

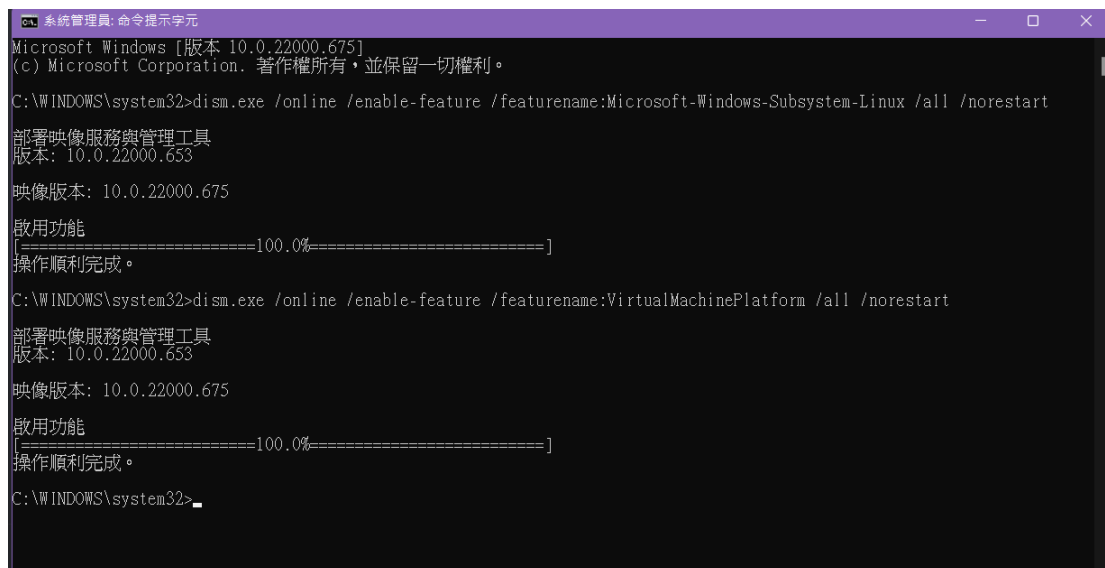
1. 安裝 WSL

(1) 啟用 Windows 子系統 Linux 版本



```
Microsoft Windows [版本 10.0.22000.675]
(c) Microsoft Corporation. 著作權所有，並保留一切權利。
C:\WINDOWS\system32>dism.exe /online /enable-feature /featurename:Microsoft-Windows-Subsystem-Linux /all /norestart
部署映像服務與管理工具
版本: 10.0.22000.653
映像版本: 10.0.22000.675
啟用功能
[=====100.0%=====]
操作順利完成。
C:\WINDOWS\system32>
```

(2) 啟用虛擬機器

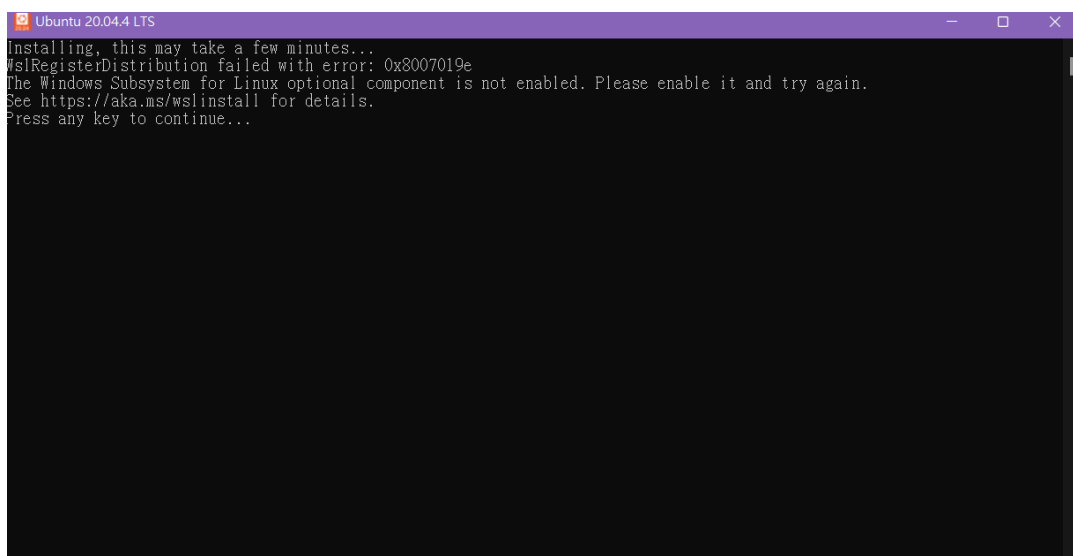


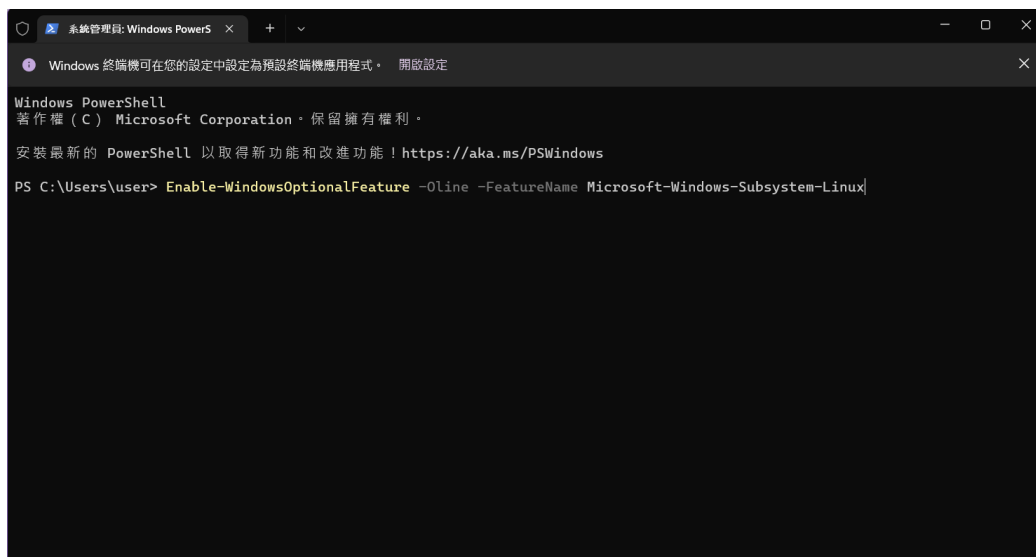
```
Microsoft Windows [版本 10.0.22000.675]
(c) Microsoft Corporation. 著作權所有，並保留一切權利。
C:\WINDOWS\system32>dism.exe /online /enable-feature /featurename:Microsoft-Windows-Subsystem-Linux /all /norestart
部署映像服務與管理工具
版本: 10.0.22000.653
映像版本: 10.0.22000.675
啟用功能
[=====100.0%=====]
操作順利完成。
C:\WINDOWS\system32>dism.exe /online /enable-feature /featurename:VirtualMachinePlatform /all /norestart
部署映像服務與管理工具
版本: 10.0.22000.653
映像版本: 10.0.22000.675
啟用功能
[=====100.0%=====]
操作順利完成。
C:\WINDOWS\system32>
```

(3)安裝 Linux Ubuntu 作業系統



這邊會發現檔案跳出錯誤而無法安裝，因此跑出 0x8007019e 的
error 錯誤碼



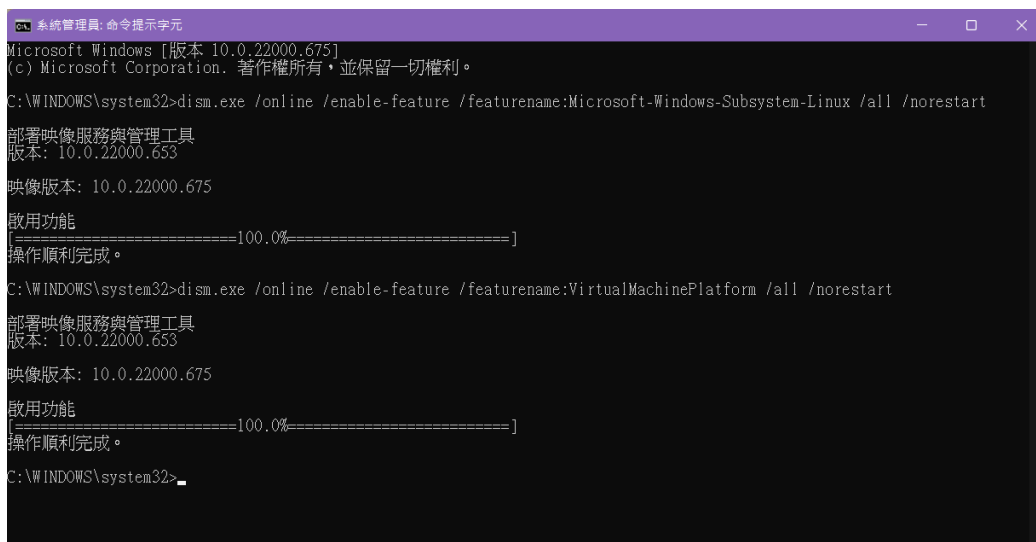


```
Windows PowerShell
著作權 (C) Microsoft Corporation。保留擁有權利。

安裝最新的 PowerShell 以取得新功能和改進功能！https://aka.ms/PSWindows

PS C:\Users\user> Enable-WindowsOptionalFeature -Online -FeatureName Microsoft-Windows-Subsystem-Linux
```

成功!!



```
Microsoft Windows [版本 10.0.22000.675]
(c) Microsoft Corporation. 著作權所有，並保留一切權利。

C:\WINDOWS\system32>dism.exe /online /enable-feature /featurename:Microsoft-Windows-Subsystem-Linux /all /norestart

部署映像服務與管理工具
版本: 10.0.22000.653

映像版本: 10.0.22000.675

啟用功能
[=====100.0%=====]
操作順利完成。

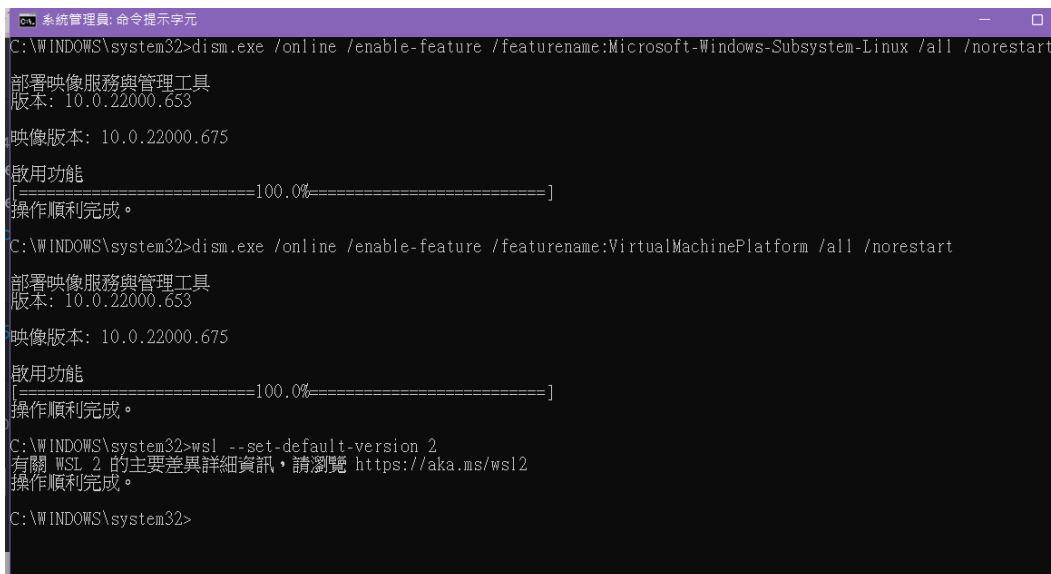
C:\WINDOWS\system32>dism.exe /online /enable-feature /featurename:VirtualMachinePlatform /all /norestart

部署映像服務與管理工具
版本: 10.0.22000.653

映像版本: 10.0.22000.675

啟用功能
[=====100.0%=====]
操作順利完成。

C:\WINDOWS\system32>
```



```
C:\WINDOWS\system32>dism.exe /online /enable-feature /featurename:Microsoft-Windows-Subsystem-Linux /all /norestart

部署映像服務與管理工具
版本: 10.0.22000.653

映像版本: 10.0.22000.675

啟用功能
[=====100.0%=====]
操作順利完成。

C:\WINDOWS\system32>dism.exe /online /enable-feature /featurename:VirtualMachinePlatform /all /norestart

部署映像服務與管理工具
版本: 10.0.22000.653

映像版本: 10.0.22000.675

啟用功能
[=====100.0%=====]
操作順利完成。

C:\WINDOWS\system32>wsl --set-default-version 2
有關 WSL 2 的主要差異詳細資訊，請瀏覽 https://aka.ms/wsl2
操作順利完成。

C:\WINDOWS\system32>
```

2.Ubuntu 學習

Ubuntu 是一套 Linux 核心的作業系統，因為功能齊全與使用者介面完善，是目前最多人使用的 Linux 作業系統。

(1)創建帳號、設置密碼

```
peggy66@DESKTOP-QVKSQA: ~  
Installing, this may take a few minutes...  
Please create a default UNIX user account. The username does not need to match your Windows username.  
For more information visit: https://aka.ms/wslusers  
Enter new UNIX username: peggy66  
New password:  
Retype new password:  
passwd: password updated successfully  
Installation successful!  
To run a command as administrator (user "root"), use "sudo <command>".  
See "man sudo_root" for details.  
  
Welcome to Ubuntu 20.04.4 LTS (GNU/Linux 5.10.16.3-microsoft-standard-WSL2 x86_64)  
  
* Documentation:  https://help.ubuntu.com  
* Management:    https://landscape.canonical.com  
* Support:       https://ubuntu.com/advantage  
  
System information as of Sun Jun  5 21:27:43 CST 2022  
  
System load:  0.04               Processes:            8  
Usage of /:   0.5% of 250.98GB   Users logged in:     0  
Memory usage: 3%                IPv4 address for eth0: 192.168.211.27  
Swap usage:   0%  
  
1 update can be applied immediately.  
To see these additional updates run: apt list --upgradable  
  
The list of available updates is more than a week old.  
To check for new updates run: sudo apt update  
  
peggy66@DESKTOP-QVKSQA: ~  
See "man sudo_root" for details.  
  
Welcome to Ubuntu 20.04.4 LTS (GNU/Linux 5.10.16.3-microsoft-standard-WSL2 x86_64)  
  
* Documentation:  https://help.ubuntu.com  
* Management:    https://landscape.canonical.com  
* Support:       https://ubuntu.com/advantage  
  
System information as of Sun Jun  5 21:27:43 CST 2022  
  
System load:  0.04               Processes:            8  
Usage of /:   0.5% of 250.98GB   Users logged in:     0  
Memory usage: 3%                IPv4 address for eth0: 192.168.211.27  
Swap usage:   0%  
  
1 update can be applied immediately.  
To see these additional updates run: apt list --upgradable  
  
The list of available updates is more than a week old.  
To check for new updates run: sudo apt update  
  
This message is shown once a day. To disable it please create the  
/home/peggy66/.hushlogin file.  
peggy66@DESKTOP-QVKSQA:~$ mkdir 資安期末  
mkdir 資安期末: command not found  
peggy66@DESKTOP-QVKSQA:~$ mkdir 資安作業  
peggy66@DESKTOP-QVKSQA:~$
```

(2)指令使用

cd=切換當前所在位置

mkdir=創建資料夾

· =目前位置

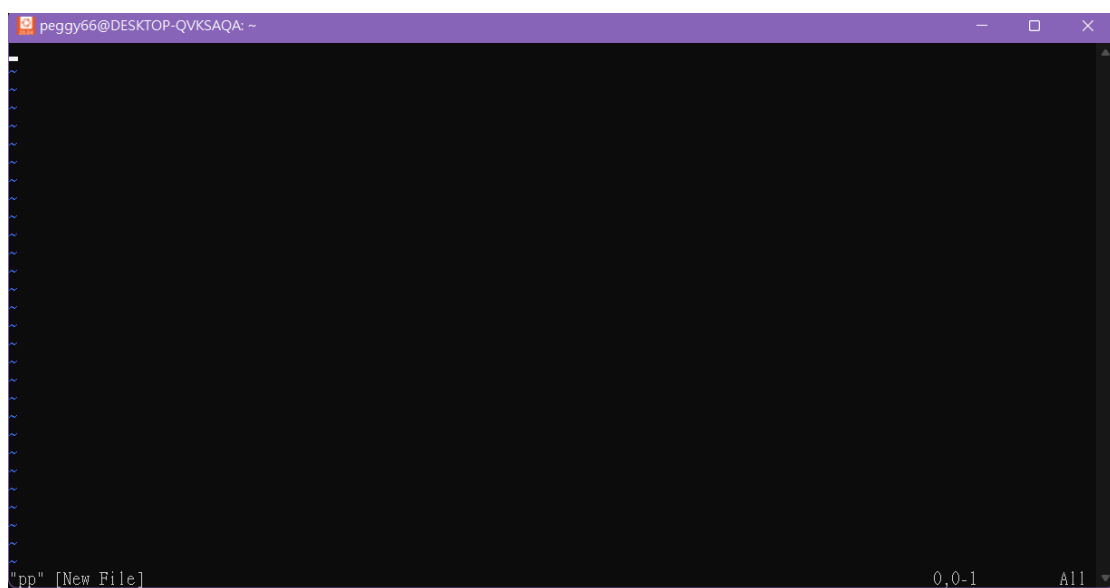
· · =目前位置的上一個資料夾目錄

touch=建立新檔案

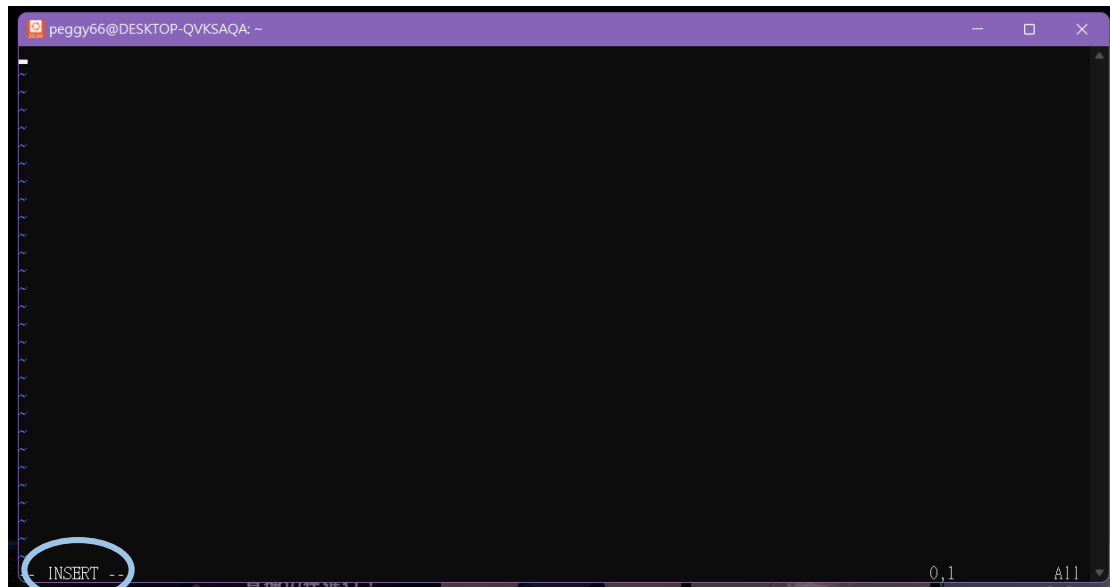
vim=開啟編輯器

3.VIM 編輯器

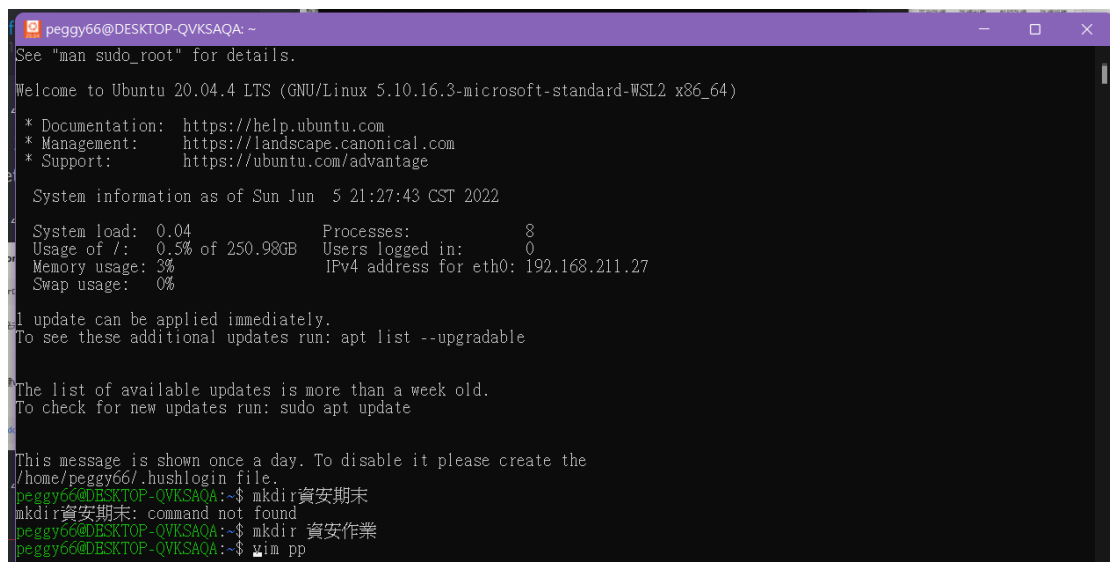
指令:**vim(檔名).副檔名**



按 **I** 可以進入輸入模式



```
peggy66@DESKTOP-QVKSQA: ~  
INSERT -- 0,1 All
```

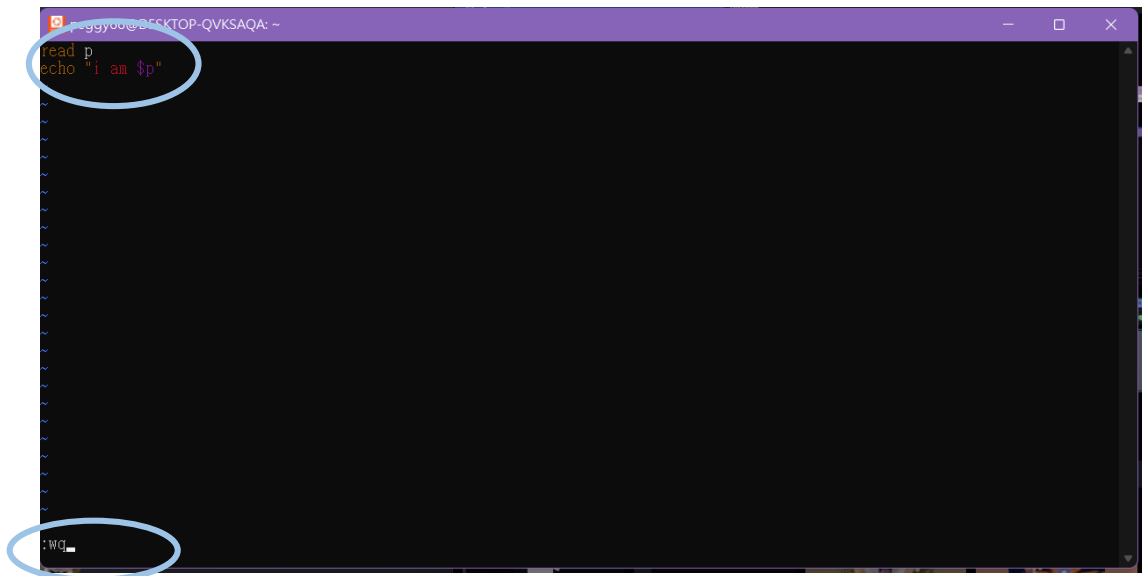


```
peggy66@DESKTOP-QVKSQA: ~  
See "man sudo_root" for details.  
Welcome to Ubuntu 20.04.4 LTS (GNU/Linux 5.10.16.3-microsoft-standard-WSL2 x86_64)  
* Documentation:  https://help.ubuntu.com  
* Management:    https://landscape.canonical.com  
* Support:        https://ubuntu.com/advantage  
  
System information as of Sun Jun  5 21:27:43 CST 2022  
  
System load: 0.04          Processes:            8  
Usage of /:  0.5% of 250.98GB Users logged in:       0  
Memory usage: 3%          IPv4 address for eth0: 192.168.211.27  
Swap usage:  0%  
  
1 update can be applied immediately.  
To see these additional updates run: apt list --upgradable  
  
The list of available updates is more than a week old.  
To check for new updates run: sudo apt update  
  
This message is shown once a day. To disable it please create the  
/home/peggy66/.hushlogin file.  
peggy66@DESKTOP-QVKSQA:~$ mkdir 資安期末  
mkdir 資安期末: command not found  
peggy66@DESKTOP-QVKSQA:~$ mkdir 資安作業  
peggy66@DESKTOP-QVKSQA:~$ vim pp
```

#!/=通往直譯器路徑，而直譯器 bash 預設放在/bin 目錄

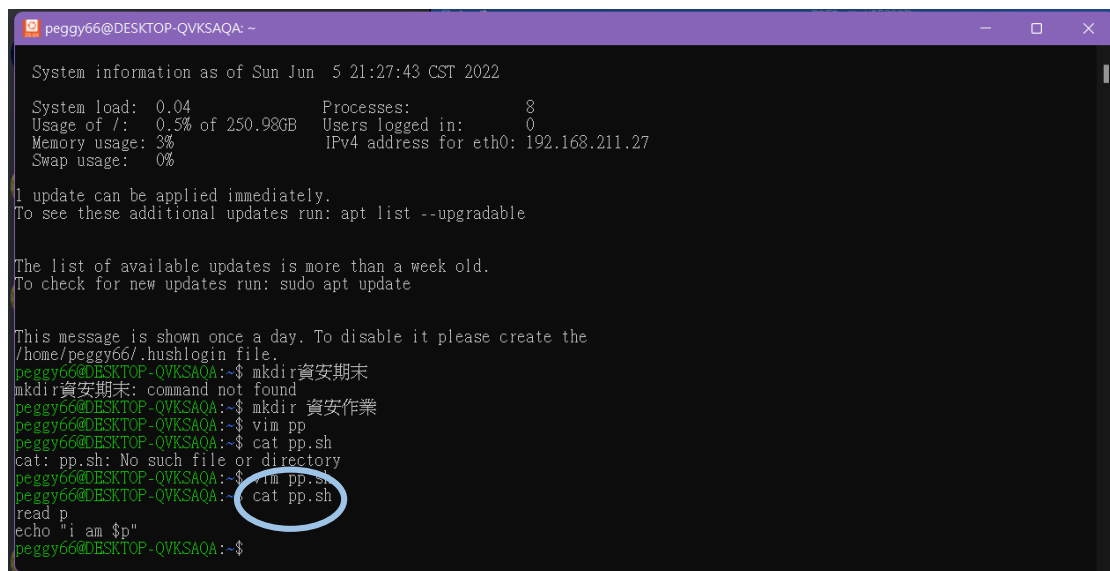
read=input，\$Hello=抓取變數 Hello，echo=印出結果

按下 esc 鍵，並在左下角輸入:eq，表示儲存並退出



```
peggy66@DESKTOP-QVKSQA: ~  
read p  
echo "i am $p"  
  
WQ_
```

利用 cat 檔案名稱.副檔名，查看檔案內容



```
peggy66@DESKTOP-QVKSQA: ~  
System information as of Sun Jun  5 21:27:43 CST 2022  
System load:  0.04          Processes:           8  
Usage of /:   0.5% of 250.98GB   Users logged in:  0  
Memory usage: 3%            IPv4 address for eth0: 192.168.211.27  
Swap usage:   0%  
  
1 update can be applied immediately.  
To see these additional updates run: apt list --upgradable  
  
The list of available updates is more than a week old.  
To check for new updates run: sudo apt update  
  
This message is shown once a day. To disable it please create the  
/home/peggy66/.hushlogin file.  
peggy66@DESKTOP-QVKSQA:~$ mkdir 資安期末  
mkdir 資安期末: command not found  
peggy66@DESKTOP-QVKSQA:~$ mkdir 資安作業  
peggy66@DESKTOP-QVKSQA:~$ vim pp  
peggy66@DESKTOP-QVKSQA:~$ cat pp.sh  
cat: pp.sh: No such file or directory  
peggy66@DESKTOP-QVKSQA:~$ vim pp.sh  
peggy66@DESKTOP-QVKSQA:~$ cat pp.sh  
read p  
echo "i am $p"  
peggy66@DESKTOP-QVKSQA:~$
```

利用 bash 檔案名稱.副檔名，來執行檔案

```
peggy66@DESKTOP-QVKSQA: ~
System load: 0.04      Processes:      8
Usage of /: 0.5% of 250.98GB   Users logged in: 0
Memory usage: 3%      IPv4 address for eth0: 192.168.211.27
Swap usage: 0%

1 update can be applied immediately.
To see these additional updates run: apt list --upgradable

The list of available updates is more than a week old.
To check for new updates run: sudo apt update

This message is shown once a day. To disable it please create the
/home/peggy66/.hushlogin file.
peggy66@DESKTOP-QVKSQA:~$ mkdir 資安期末
mkdir 資安期末: command not found
peggy66@DESKTOP-QVKSQA:~$ mkdir 資安作業
peggy66@DESKTOP-QVKSQA:~$ vim pp
peggy66@DESKTOP-QVKSQA:~$ cat pp.sh
cat: pp.sh: No such file or directory
peggy66@DESKTOP-QVKSQA:~$ vim pp.sh
peggy66@DESKTOP-QVKSQA:~$ cat pp.sh
read p
echo "i am $p"
peggy66@DESKTOP-QVKSQA:~$ bash pp.sh
e
i am e
peggy66@DESKTOP-QVKSQA:~$
```

WSL 的 GUI 介面

(1) 安裝 VcXsrv

(2) 透過 WSL 建設環境並新增一個 Bash Script

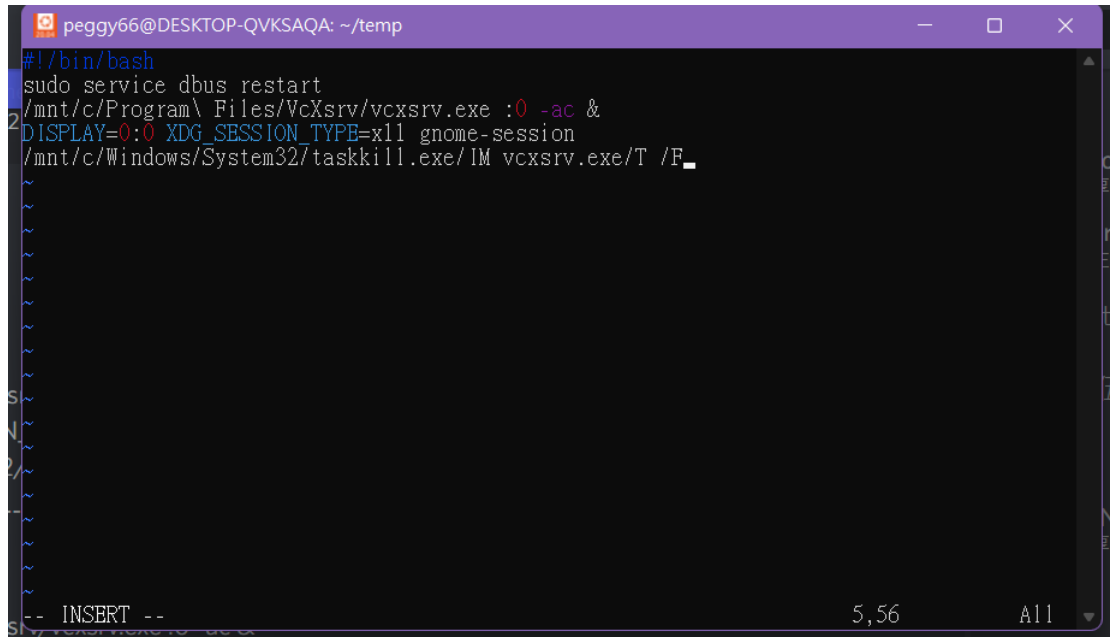
```
peggy66@DESKTOP-QVKSQA: ~/temp
Memory usage: 3%      IPv4 address for eth0: 192.168.211.27
Swap usage: 0%

1 update can be applied immediately.
To see these additional updates run: apt list --upgradable

The list of available updates is more than a week old.
To check for new updates run: sudo apt update

This message is shown once a day. To disable it please create the
/home/peggy66/.hushlogin file.
peggy66@DESKTOP-QVKSQA:~$ mkdir 資安期末
mkdir 資安期末: command not found
peggy66@DESKTOP-QVKSQA:~$ mkdir 資安作業
peggy66@DESKTOP-QVKSQA:~$ vim pp
peggy66@DESKTOP-QVKSQA:~$ cat pp.sh
cat: pp.sh: No such file or directory
peggy66@DESKTOP-QVKSQA:~$ vim pp.sh
peggy66@DESKTOP-QVKSQA:~$ cat pp.sh
read p
echo "i am $p"
peggy66@DESKTOP-QVKSQA:~$ bash pp.sh
e
i am e
peggy66@DESKTOP-QVKSQA:~$ mkdir temp
peggy66@DESKTOP-QVKSQA:~$ cd temp
peggy66@DESKTOP-QVKSQA:~/temp$
```

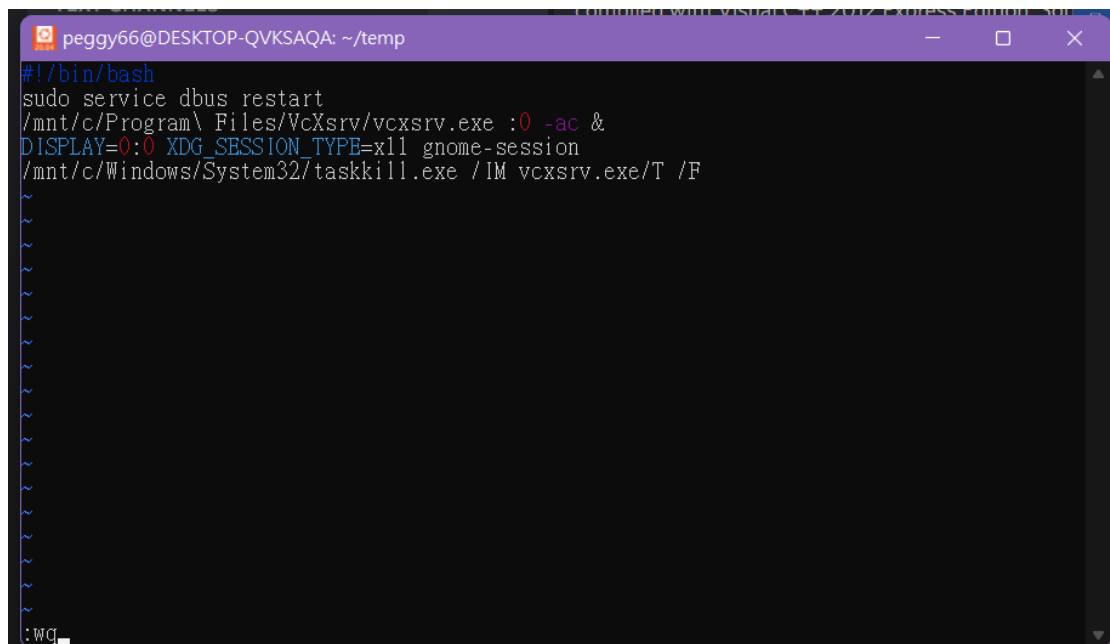

(3)以 vim 編輯內容並用 bash 執行



A terminal window titled 'peggy66@DESKTOP-QVKSAQA: ~/temp' with a purple header bar. The window shows a vim editor in INSERT mode editing a file. The script content is as follows:

```
#!/bin/bash
sudo service dbus restart
/mnt/c/Program\ Files/VcXsrv/vcxsrv.exe :0 -ac &
DISPLAY=:0 XDG_SESSION_TYPE=x11 gnome-session
/mnt/c/Windows/System32/taskkill.exe /IM vcxsrv.exe/T /F_
```

The status bar at the bottom indicates '5,56' and 'All'.



The same terminal window after pressing Esc to exit vim. The prompt is now '#!/bin/bash' and the script is being executed line by line. The output shows the dbus service restarting and the processes being launched.

```
#!/bin/bash
sudo service dbus restart
/mnt/c/Program\ Files/VcXsrv/vcxsrv.exe :0 -ac &
DISPLAY=:0 XDG_SESSION_TYPE=x11 gnome-session
/mnt/c/Windows/System32/taskkill.exe /IM vcxsrv.exe/T /F
```

The prompt is now ':WQ'.

```
peggy66@DESKTOP-QVKSAQA: ~/temp
This message is shown once a day. To disable it please create the
/home/peggy66/.hushlogin file.
peggy66@DESKTOP-QVKSAQA:~$ mkdir 資安期末
mkdir 資安期末: command not found
peggy66@DESKTOP-QVKSAQA:~$ mkdir 資安作業
peggy66@DESKTOP-QVKSAQA:~$ vim pp
peggy66@DESKTOP-QVKSAQA:~$ cat pp.sh
cat: pp.sh: No such file or directory
peggy66@DESKTOP-QVKSAQA:~$ vim pp.sh
peggy66@DESKTOP-QVKSAQA:~$ cat pp.sh
read p
echo "i am $p"
peggy66@DESKTOP-QVKSAQA:~$ bash pp.sh
e
i am e
peggy66@DESKTOP-QVKSAQA:~/temp$ temp
peggy66@DESKTOP-QVKSAQA:~/temp$ cd temp
peggy66@DESKTOP-QVKSAQA:~/temp$ touch gui.sh
peggy66@DESKTOP-QVKSAQA:~/temp$ chmod u+x gui.sh
peggy66@DESKTOP-QVKSAQA:~/temp$ vim gui.sh
```

```
peggy66@DESKTOP-QVKSAQA:~/temp$ touch gui.sh
peggy66@DESKTOP-QVKSAQA:~/temp$ chmod u+x gui.sh
peggy66@DESKTOP-QVKSAQA:~/temp$ vim gui.sh
peggy66@DESKTOP-QVKSAQA:~/temp$ sudo bash gui.sh
[sudo] password for peggy66:
* Stopping system message bus dbus [ OK ]
* Starting system message bus dbus [ OK ]
gui.sh: line 4: gnome-session: command not found
Welcome to the VcXsrv X Server
Vendor: The VcXsrv Project
Release: 1.20.14.0

OS: Windows NT 6.2 build 9200 (64-bit)
Contact: marha@users.sourceforge.net

LoadPreferences: C:\Users\user\AppData\Roaming\XWinrc not found
LoadPreferences: Loading C:\Program Files\VcXsrv\system.XWinrc
錯誤: 找不到處理程序 "vcxsr.exe/T"。
peggy66@DESKTOP-QVKSAQA:~/temp$ (BB) AIGLX: No native OpenGL in modes with a root window
(II) IGLX: Loaded and initialized swrast
(II) GLX: Initialized DRISWRAST GL provider for screen 0
```

更新 apt-get

```
(II) IGLX: Loaded and initialized swrast
(II) GLX: Initialized DRISWRAST GL provider for screen 0
peggy66@DESKTOP-QVKSAQA:~/temp$ sudo apt-get update
Get:1 http://security.ubuntu.com/ubuntu focal-security InRelease [114 kB]
Hit:2 http://archive.ubuntu.com/ubuntu focal InRelease
Get:3 http://archive.ubuntu.com/ubuntu focal-updates InRelease [114 kB]
Get:4 http://security.ubuntu.com/ubuntu focal-security/main amd64 Packages [1491 kB]
Get:5 http://archive.ubuntu.com/ubuntu focal-backports InRelease [108 kB]
Get:6 http://archive.ubuntu.com/ubuntu focal/universe amd64 Packages [8628 kB]
Get:7 http://security.ubuntu.com/ubuntu focal-security/main Translation-en [257 kB]
Get:8 http://security.ubuntu.com/ubuntu focal-security/main amd64 c-n-f Metadata [10.4 kB]
Get:9 http://security.ubuntu.com/ubuntu focal-security/restricted amd64 Packages [248 kB]
Get:10 http://security.ubuntu.com/ubuntu focal-security/restricted Translation-en [135 kB]
Get:11 http://security.ubuntu.com/ubuntu focal-security/restricted amd64 c-n-f Metadata [520 B]
Get:12 http://security.ubuntu.com/ubuntu focal-security/universe amd64 Packages [705 kB]
Get:13 http://security.ubuntu.com/ubuntu focal-security/universe Translation-en [126 kB]
Get:14 http://security.ubuntu.com/ubuntu focal-security/universe amd64 c-n-f Metadata [14.5 kB]
Get:15 http://security.ubuntu.com/ubuntu focal-security/multiverse amd64 Packages [22.2 kB]
Get:16 http://security.ubuntu.com/ubuntu focal-security/multiverse Translation-en [5376 B]
Get:17 http://security.ubuntu.com/ubuntu focal-security/multiverse amd64 c-n-f Metadata [512 B]
Get:18 http://archive.ubuntu.com/ubuntu focal/universe Translation-en [5124 kB]
Get:19 http://archive.ubuntu.com/ubuntu focal/universe amd64 c-n-f Metadata [265 kB]
Get:20 http://archive.ubuntu.com/ubuntu focal/multiverse amd64 Packages [144 kB]
Get:21 http://archive.ubuntu.com/ubuntu focal/multiverse Translation-en [104 kB]
Get:22 http://archive.ubuntu.com/ubuntu focal/multiverse amd64 c-n-f Metadata [9136 B]
Get:23 http://archive.ubuntu.com/ubuntu focal-updates/main amd64 Packages [1833 kB]
Get:24 http://archive.ubuntu.com/ubuntu focal-updates/main Translation-en [337 kB]
Get:25 http://archive.ubuntu.com/ubuntu focal-updates/main amd64 c-n-f Metadata [15.4 kB]
Get:26 http://archive.ubuntu.com/ubuntu focal-updates/restricted amd64 Packages [1010 kB]
Get:27 http://archive.ubuntu.com/ubuntu focal-updates/restricted Translation-en [144 kB]
Get:28 http://archive.ubuntu.com/ubuntu focal-updates/restricted amd64 c-n-f Metadata [520 B]
Get:29 http://archive.ubuntu.com/ubuntu focal-updates/universe amd64 Packages [926 kB]
Get:30 http://archive.ubuntu.com/ubuntu focal-updates/universe Translation-en [208 kB]
Get:31 http://archive.ubuntu.com/ubuntu focal-updates/universe amd64 c-n-f Metadata [20.7 kB]
Get:32 http://archive.ubuntu.com/ubuntu focal-updates/multiverse amd64 Packages [24.4 kB]
Get:33 http://archive.ubuntu.com/ubuntu focal-updates/multiverse Translation-en [7336 B]
Get:34 http://archive.ubuntu.com/ubuntu focal-updates/multiverse amd64 c-n-f Metadata [596 B]
Get:35 http://archive.ubuntu.com/ubuntu focal-backports/main amd64 Packages [44.5 kB]
Get:36 http://archive.ubuntu.com/ubuntu focal-backports/main Translation-en [10.9 kB]
Get:37 http://archive.ubuntu.com/ubuntu focal-backports/main amd64 c-n-f Metadata [980 B]
Get:38 http://archive.ubuntu.com/ubuntu focal-backports/restricted amd64 c-n-f Metadata [116 B]
Get:39 http://archive.ubuntu.com/ubuntu focal-backports/universe amd64 Packages [25.7 kB]
Get:40 http://archive.ubuntu.com/ubuntu focal-backports/universe Translation-en [15.9 kB]
Get:41 http://archive.ubuntu.com/ubuntu focal-backports/universe amd64 c-n-f Metadata [860 B]
Get:42 http://archive.ubuntu.com/ubuntu focal-backports/universe amd64 c-n-f Metadata [116 B]
Fetched 22.9 MB in 10s (2374 kB/s)
Reading package lists... Done
peggy66@DESKTOP-QVKSAQA:~/temp$
```

安裝 gedit

```
peggy66@DESKTOP-QVKSQA: ~/temp
peggy66@DESKTOP-QVKSQA:~/temp$ sudo apt-get install gedit -y
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  acl adwaita-icon-theme app aptdaemon aptdaemon-data aspell aspell-en at-spi2-core avahi-daemon
  avahi-utils bluez bubblewrap cheese-common colord colord-data cpp cpp-9 cracklib-runtime crda
  cups-pk-helper dconf-cli desktop-file-utils dictionaries-common dns-root-data dnsmasq-base docbook-xml
  emacs-en-common enchant-2 evolution-data-server evolution-data-server-common fontconfig fprintd
  gcc-9-base gcr gdm3 gedit-common geoclue-2.0 girl.2-accountsservice-1.0 girl.2-atk-1.0
  girl.2-atspi-2.0 girl.2-freedesktop girl.2-gck-1 girl.2-gcr-3 girl.2-gdesktopenums-3.0
  girl.2-gdkpixbuf-2.0 girl.2-gdm-1.0 girl.2-geoclue-2.0 girl.2-gnomebluetooth-1.0
  girl.2-gnomedesktop-3.0 girl.2-graphene-1.0 girl.2-gtk-3.0 girl.2-gtksource-4 girl.2-gweather-3.0
  girl.2-ibus-1.0 girl.2-json-1.0 girl.2-mutter-6 girl.2-nm-1.0 girl.2-nma-1.0 girl.2-notify-0.7
  girl.2-pango-1.0 girl.2-peas-1.0 girl.2-polkit-1.0 girl.2-rsvg-2.0 girl.2-secret-1 girl.2-soup-2.4
  girl.2-upowerglib-1.0 girl.2-vte-2.91 gjs gkbd-capplet gnome-control-center gnome-control-center-data
  gnome-control-center-faces gnome-desktop3-data gnome-keyring gnome-keyring-pkcs11 gnome-menus
  gnome-online-accounts gnome-session-bin gnome-session-common gnome-settings-daemon
  gnome-settings-daemon-common gnome-shell gnome-shell-common gnome-startup-applications gnome-user-docs
  gstcamerl.0-clutter-3.0 gstcamerl.0-gl gstcamerl.0-plugins-base gstcamerl.0-plugins-good
  gstcamerl.0-pulseaudio gstcamerl.0-x gtk-update-icon-cache hicolor-icon-theme humanity-icon-theme
  hunspell-en-us ibus ibus-data ibus-gtk ibus-gtk3 iio-sensor-proxy in-config ippusbxd iw
  language-selector-gnome libaal libatk-5.0 libatk-5-common libappindicator3-1 libasound2-plugins
  libaspell15 libatk-bridge2.0 libatk1.0 libatk1.0-data libatspi2.0 libavahi-client3
  libavahi-common-data libavahi-common3 libavahi-core7 libavahi-glib libavc1394-0 libbluetooth3
  libboost-thread-7.1 libcaca0 libcairo-gobject2 libcairo2 libcamel-1.2-62 libcanberra-gtk3-0
  libcanberra-gtk3-module libcanberra-pulse libcdparanoia0 libcheese-gtk25 libcheese8 libclutter-1.0-0
  libclutter-1.0-common libclutter-gst-3.0-0 libclutter-gtk-1.0-0 libcogl-common libcogl-pango20
  libcogl-path20 libcogl20 libcolord-gtk1 libcolord2 libcolorhug2 libcrack2 libcupss2 libdaemon0
  libdatrie libdbusmenu-glib libdbusmenu-gtk3-4 libdv4 libebook-1.2-10 libebook-1.2-20
  libebook-contacts-1.2-3 libecal-2.0-1 libedata-book-1.2-26 libedata-cal-2.0-1 libedataserver-1.2-24
  libedataserverui-1.2-2 libegl-mesa0 libegl libench-2.2 libepoxy0 libevdev2 libexif12 libfprint-2-2
  libgail-common libgail18 libgdm1 libgck-1.0 libgcr-base-3-1 libgcr-ui-3-1 libgdk3 libgdata-common
  libgd2 libgd2-2 libgdk-pixbuf2.0-0 libgdk-pixbuf2.0-bin libgdk-pixbuf2.0-common libgdm1 libgee-0.8-2
  libgeoclue-2.0 libgeocode-glib0 libgs0 libgles2 libgnome-autoar-0.0 libgnome-bluetooth13
  libgnome-desktop-3-19 libgnomekbd-common libgnomekbd8 libgsa-1.0-0b libgsa-1.0-common
  libgss-backend-1.0-1 libgsm1 libgphoto2-6 libgphoto2-110n libgphoto2-port12 libgraphene-1.0-0
  libgraphite2-3 libgssdp1 libgssdp1-common libgssdp1-2.0 libgstreamer-glib1.0-0
  libgstreamer-plugins-base1.0-0 libgstreamer-plugins-good1.0-0 libgtk-3.0 libgtk-3-bin libgtk-3-common
  libgtk2.0-0 libgtk2.0-bin libgtk2.0-common libgtksourceview-4-0 libgtksourceview-4-common
  libgtop-2.0-11 libgtop2-common libgupnp-1.2-0 libgupnp-av-1.0-2 libgupnp-dlna-2.0-3 libgweather-3-16
  libgweather-common libharfbuzz-icu0 libharfbuzz0b libhunspell-1.7-0 libhyphen0 libibus-1.0-5 libical3
  libidn11 libiec61883-0 libieee1284-3 libimobiledevice6 libinput-bin libinput10 libisl22
  libjack-jackd2-0 libjansson4 libjavascriptcoregtk-4.0-18 libjbig0 libjpeg-turbo8 libjpeg8 liblcms2-2
  libldb2 libmediaart-2.0-0 libmozjs-68-0 libmp3lame0 libmpeg123-0 libatdev1 libmutter-6-0
  libmysqldclient21 libndp0 libnl-3-200 libnl-genl-3-200 libnl-route-3-200 libnm0 libnma0 libnotify4
  libnss-mdns libopenp10 libopenjp2-7 libopus0 liborc-0.4-0 libpam-fprintd libpam-gnome-keyring
  libpango-1.0-0 libpangocairo-1.0-0 libpangoft2-1.0-0 libpangoxft-1.0-0 libpcsc-lite1 libpeas-1.0-0
  libpeas-common libphonenumbers7 libpixman-1-0 libplist3 libprotobuf17 libpulse-mainloop-glib0
```

```
peggy66@DESKTOP-QVKSQA: ~/temp
Setting up libedata-book-1.2-26:amd64 (3.36.5-0ubuntu1) ...
Setting up libcheese-gtk25:amd64 (3.34.0-1ubuntu1) ...
Setting up libebook-1.2-20:amd64 (3.36.5-0ubuntu1) ...
Setting up gnome-control-center (1:3.36.5-0ubuntu4) ...
Setting up evolution-data-server (3.36.5-0ubuntu1) ...
Setting up gnome-shell (3.36.9-0ubuntu0.20.04.2) ...
Setting up ubuntu-session (3.36.0-2ubuntu1) ...
Setting up gdm3 (3.36.3-0ubuntu0.20.04.4) ...

Creating config file /etc/gdm3/greeter.dconf-defaults with new version
invoke-rc.d: could not determine current runlevel
* Scheduling reload of GNOME Display Manager configuration gdm3
Setting up network-manager-gnome (1.8.24-1ubuntu3) ...
Processing triggers for sgml-base (1.29.1) ...
Setting up sgml-data (2.0.11) ...
Processing triggers for sgml-base (1.29.1) ...
Setting up docbook-xml (4.5-9) ...
Processing triggers for dictionaries-common (1.28.1) ...
aspell-autobuildhash: processing: en [en-common].
aspell-autobuildhash: processing: en [en-variant_0].
aspell-autobuildhash: processing: en [en-variant_1].
aspell-autobuildhash: processing: en [en-variant_2].
aspell-autobuildhash: processing: en [en-w_accents-only].
aspell-autobuildhash: processing: en [en-wo_accents-only].
aspell-autobuildhash: processing: en [en_AU-variant_0].
aspell-autobuildhash: processing: en [en_AU-variant_1].
aspell-autobuildhash: processing: en [en_AU-w_accents-only].
aspell-autobuildhash: processing: en [en_AU-wo_accents-only].
aspell-autobuildhash: processing: en [en_CA-variant_0].
aspell-autobuildhash: processing: en [en_CA-variant_1].
aspell-autobuildhash: processing: en [en_CA-w_accents-only].
aspell-autobuildhash: processing: en [en_CA-wo_accents-only].
aspell-autobuildhash: processing: en [en_GB-ise-w_accents-only].
aspell-autobuildhash: processing: en [en_GB-ise-wo_accents-only].
aspell-autobuildhash: processing: en [en_GB-ize-w_accents-only].
aspell-autobuildhash: processing: en [en_GB-ize-wo_accents-only].
aspell-autobuildhash: processing: en [en_GB-variant_0].
aspell-autobuildhash: processing: en [en_GB-variant_1].
aspell-autobuildhash: processing: en [en_US-w_accents-only].
aspell-autobuildhash: processing: en [en_US-wo_accents-only].
Processing triggers for libgdk-pixbuf2.0-0:amd64 (2.40.0+dfsg-3ubuntu0.2) ...
Processing triggers for rygel (0.38.3-1ubuntu1) ...
Processing triggers for libc-bin (2.31-0ubuntu9.7) ...
/sbin/ldconfig.real: /usr/lib/wsl/lib/libcuda.so.1 is not a symbolic link

Processing triggers for dbus (1.12.16-2ubuntu2.1) ...
Processing triggers for systemd (245.4-4ubuntu3.15) ...
Processing triggers for sgml-base (1.29.1) ...
peggy66@DESKTOP-QVKSQA:~/temp$
```

安裝 gimp

```
peggy66@DESKTOP-QVKSAQA: ~/temp
peggy66@DESKTOP-QVKSAQA:~/temp$ sudo apt-get install gimp -y
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  fonts-droid-fallback fonts-noto-mono fonts-urw-base35 ghostscript gimp-data
  i965-via-driver intel-media-via-driver libaacs0 libamd2 libaom0 libauthn-sasl-perl
  libavcodec58 libavformat58 libavutil56 libbabi-0.1-0 libbdplus0 libblas3 libbluray2
  libcam2 libccolamd2 libcholmod3 libchromaprint1 libcodec2-0.9 libcolamd2
  libdata-dump-perl libde265-0 libencode-locale-perl libexif2-27 libfile-basedir-perl
  libfile-desktopentry-perl libfile-listing-perl libfile-mimeinfo-perl libfont-afm-perl
  libgegl-0.4-0 libgegl-common libgexiv2-2 libgfortran5 libgimp2.0 libgme0 libgs9
  libgs9-common libgsm1 libheif1 libhtml-form-perl libhtml-format-perl
  libhtml-parser-perl libhtml-tagset-perl libhtml-tree-perl libhttp-cookies-perl
  libhttp-daemon-perl libhttp-date-perl libhttp-message-perl libhttp-negotiate-perl
  libigdmm11 libijs-0.35 liblmbase24 libio-html-perl libio-socket-ssl-perl
  libio-stringy-perl libipc-system-simple-perl libjbig2dec0 liblapack3
  liblwp-mediatypes-perl liblwp-protocol-https-perl libmailtools-perl libmetis5 libmng2
  libmypaint-1.5-1 libmypaint-common libnet-dbus-perl libnet-http-perl
  libnet-smtp-ssl-perl libnet-ssleay-perl libopenexr24 libopenmpt0 libpaper-utils
  libpaper1 libpoppler-glib3 libpoppler97 libquadmath0 libraw19 libsd2-2.0-0 libshine3
  libsnappy1v5 libssh-gcrypt-4 libsuitesparseconfig5 libswresample3 libswscale5
  libtie-ixhash-perl libtimedate-perl libtiny-perl libumfpack5 liburi-perl
  libva-drm2 libva-x11-2 libva2 libvdpaul libwebpmux3 libwmf0.2-7 libwww-perl
  libwww-robotrules-perl libxml-protocol-perl libx264-155 libx265-179
  libxml-parser-perl libxml-twig-perl libxml-xpathengine-perl libxvidcore4
  libzvb1-common libzvb10 mesa-via-drivers mesa-vdpau-drivers ocl-icd-libopencl1
  perl-openssl-defaults poppler-data va-driver-all vdpau-driver-all xdg-utils
Suggested packages:
  fonts-noto fonts-freefont-otf | fonts-freefont-ttf fonts-texgyre ghostscript-x
  gimp-help-en | gimp-help gimp-data-extras gvfs-backends i965-via-driver-shaders
  libdigest-hmac-perl libgssapi-perl libbluray-bdj exiv2 libcrypt-ssleay-perl
  libwmf0.2-7-gtk libauthn-ntlm-perl libunicode-map8-perl libunicode-string-perl
  xml-twig-tools opencl-icd poppler-utils fonts-japanese-mincho | fonts-ipafont-mincho
  fonts-japanese-gothic | fonts-ipafont-gothic fonts-archic-ukai fonts-archic-uming
  fonts-nanum libvdpau-via-gli nvidia-vdpau-driver nvidia-legacy-340xx-vdpau-driver
  nvidia-legacy-304xx-vdpau-driver
The following NEW packages will be installed:
  fonts-droid-fallback fonts-noto-mono fonts-urw-base35 ghostscript gimp gimp-data
  i965-via-driver intel-media-via-driver libaacs0 libamd2 libaom0 libauthn-sasl-perl
  libavcodec58 libavformat58 libavutil56 libbabi-0.1-0 libbdplus0 libblas3 libbluray2
  libcam2 libccolamd2 libcholmod3 libchromaprint1 libcodec2-0.9 libcolamd2
  libdata-dump-perl libde265-0 libencode-locale-perl libexif2-27 libfile-basedir-perl
  libfile-desktopentry-perl libfile-listing-perl libfile-mimeinfo-perl libfont-afm-perl
  libgegl-0.4-0 libgegl-common libgexiv2-2 libgfortran5 libgimp2.0 libgme0 libgs9
  libgs9-common libgsm1 libheif1 libhtml-form-perl libhtml-format-perl
  libhtml-parser-perl libhtml-tagset-perl libhtml-tree-perl libhttp-cookies-perl
  libhttp-daemon-perl libhttp-date-perl libhttp-message-perl libhttp-negotiate-perl
  libigdmm11 libijs-0.35 liblmbase24 libio-html-perl libio-socket-ssl-perl
  libio-stringy-perl libipc-system-simple-perl libjbig2dec0 liblapack3
  liblwp-mediatypes-perl liblwp-protocol-https-perl libmailtools-perl libmetis5 libmng2
  libmypaint-1.5-1 libmypaint-common libnet-dbus-perl libnet-http-perl
  libnet-smtp-ssl-perl libnet-ssleay-perl libopenexr24 libopenmpt0 libpaper-utils
  libpaper1 libpoppler-glib3 libpoppler97 libquadmath0 libraw19 libsd2-2.0-0 libshine3
  libsnappy1v5 libssh-gcrypt-4 libsuitesparseconfig5 libswresample3 libswscale5
  libtie-ixhash-perl libtimedate-perl libtiny-perl libumfpack5 liburi-perl
  libva-drm2 libva-x11-2 libva2 libvdpaul libwebpmux3 libwmf0.2-7 libwww-perl
  libwww-robotrules-perl libxml-protocol-perl libx264-155 libx265-179
  libxml-parser-perl libxml-twig-perl libxml-xpathengine-perl libxvidcore4
  libzvb1-common libzvb10 mesa-via-drivers mesa-vdpau-drivers ocl-icd-libopencl1
  perl-openssl-defaults poppler-data va-driver-all vdpau-driver-all xdg-utils

Selecting previously unselected package nautilus.
Preparing to unpack ./32-nautilus_1:3.36.3-0ubuntu1.20.04.1_amd64.deb ...
Unpacking nautilus (1:3.36.3-0ubuntu1.20.04.1) ...
Setting up libgsf-1-common (1.14.46-1) ...
Setting up libe2f:amd64 (2.2.1-2) ...
Setting up libdee-1.0-4:amd64 (1.2.7+17.10.20170616-4ubuntu6) ...
Setting up libtotem-plparser-common (3.26.5-lubuntu1) ...
Setting up libunity-scopes-json-def-desktop (7.1.4+19.04.20190319-0ubuntu3) ...
Setting up libxemp18:amd64 (2.5.1-1build1) ...
Setting up libcdio18:amd64 (2.0.0-2) ...
Setting up nautilus-data (1:3.36.3-0ubuntu1.20.04.1) ...
Setting up libnfs13:amd64 (4.0.0-1) ...
Setting up libnautilus-extension1a:amd64 (1:3.36.3-0ubuntu1.20.04.1) ...
Setting up libgsf-1-114:amd64 (1.14.46-1) ...
Setting up libtotem-plparser18:amd64 (3.26.5-lubuntu1) ...
Setting up libmtp-common (1.1.17-3) ...
Setting up libtracker-sparql-2.0-0:amd64 (2.3.6-0ubuntu1) ...
Setting up libtracker-control-2.0-0:amd64 (2.3.6-0ubuntu1) ...
Setting up libgif7:amd64 (5.1.9-1) ...
Setting up libtracker-miner-2.0-0:amd64 (2.3.6-0ubuntu1) ...
Setting up libmtp9:amd64 (1.1.17-3) ...
Setting up libgxs2:amd64 (0.3.1-1) ...
Setting up libmtp-runtime (1.1.17-3) ...
Setting up gvfs-common (1.44.1-lubuntu1.1) ...
Setting up libunity-protocol-private0:amd64 (7.1.4+19.04.20190319-0ubuntu3) ...
Setting up tracker (2.3.6-0ubuntu1) ...
Setting up libcdio-cdda2:amd64 (10.2+2.0.0-1) ...
Setting up libcdio-paranoia2:amd64 (10.2+2.0.0-1) ...
Setting up libunity9:amd64 (7.1.4+19.04.20190319-0ubuntu3) ...
Setting up gvfs-libs:amd64 (1.44.1-lubuntu1.1) ...
Setting up gvfs-daemons (1.44.1-lubuntu1.1) ...
Setting up gvfs:amd64 (1.44.1-lubuntu1.1) ...
Setting up gvfs-backends (1.44.1-lubuntu1.1) ...
Processing triggers for desktop-file-utils (0.24-lubuntu3) ...
Processing triggers for mime-support (3.64ubuntu1) ...
Processing triggers for hicolor-icon-theme (0.17-2) ...
Processing triggers for gnome-menus (3.36.0-lubuntu1) ...
Processing triggers for liblib2-0-0:amd64 (2.64.6-1-ubuntu20.04.4) ...
Processing triggers for libe-bin (2.31-0ubuntu9.7) ...
Processing triggers for libconfig:amd64 (1:3.36.3-0ubuntu1.20.04.1) ...
Processing triggers for man-db (2.9.1-1) ...
Processing triggers for udev (245.4-4ubuntu3.15) ...
Setting up tracker-extract (2.3.3-2) ...
Created symlink /etc/systemd/user/default.target.wants/tracker-extract.service → /usr/lib/systemd/user/tracker-extract.service.
Setting up tracker-miner-fs (2.3.3-2) ...
Created symlink /etc/systemd/user/default.target.wants/tracker-miner-fs.service → /usr/lib/systemd/user/tracker-miner-fs.service.
Setting up nautilus (1:3.36.3-0ubuntu1.20.04.1) ...
peggy66@DESKTOP-QVKSAQA:~/temp$
```

安裝 Nautilus

```
peggy66@DESKTOP-QVKSQAQ: ~/temp
Processing triggers for mime-support (3.64ubuntu1) ...
Processing triggers for hicolor-icon-theme (0.17-2) ...
Processing triggers for gnome-menus (3.36.0-1ubuntu1) ...
Processing triggers for libc-bin (2.31-0ubuntu9.7) ...
/sbin/ldconfig.real: /usr/lib/wsl/lib/libcudart.so.1 is not a symbolic link

peggy66@DESKTOP-QVKSQAQ:~/temp$ mkdir 資安期末
mkdir: 資安期末: command not found
peggy66@DESKTOP-QVKSQAQ:~/temp$ sudo apt-get install nautilus -y
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  gvfs gvfs-backends gvfs-common gvfs-daemons gvfs-libc libcdio-cdda2 libcdio-paranoia2 libcdiol8 libcue2 libdee-1.0-4
  libexempi8 libgif7 libgsf-1-114 libgsf-1-common libgxps2 libmtmp-common libmtmp-runtime libmtmp9 libnautilus-extension1a
  libnfs13 libtotem-plparser-common libtotem-plparser18 libtracker-control-2.0-0 libtracker-miner-2.0-0
  libtracker-spqr1-2.0-0 libunity-protocol-private0 libunity-scopes-json-def-desktop libunity9 nautilus-data tracker
  tracker-extract tracker-miner-fs
Suggested packages:
  bluez-obexd samba-common unity-common eog evince l pdf-viewer gnome-sushi nautilus-extension-brasero nautilus-sendto
  totem l mp3-decoder
The following NEW packages will be installed:
  gvfs gvfs-backends gvfs-common gvfs-daemons gvfs-libc libcdio-cdda2 libcdio-paranoia2 libcdiol8 libcue2 libdee-1.0-4
  libexempi8 libgif7 libgsf-1-114 libgsf-1-common libgxps2 libmtmp-common libmtmp-runtime libmtmp9 libnautilus-extension1a
  libnfs13 libtotem-plparser-common libtotem-plparser18 libtracker-control-2.0-0 libtracker-miner-2.0-0
  libtracker-spqr1-2.0-0 libunity-protocol-private0 libunity-scopes-json-def-desktop libunity9 nautilus nautilus-data
  tracker tracker-extract tracker-miner-fs
0 upgraded, 33 newly installed, 0 to remove and 78 not upgraded.
Need to get 3890 kB of archives.
After this operation, 16.2 MB of additional disk space will be used.
Get:1 http://archive.ubuntu.com/ubuntu focal-updates/main amd64 gvfs-common all 1.44.1-1ubuntu1.1 [20.0 kB]
Get:2 http://archive.ubuntu.com/ubuntu focal-updates/main amd64 gvfs-libc amd64 1.44.1-1ubuntu1.1 [97.4 kB]
Get:3 http://archive.ubuntu.com/ubuntu focal-updates/main amd64 gvfs-daemons amd64 1.44.1-1ubuntu1.1 [118 kB]
Get:4 http://archive.ubuntu.com/ubuntu focal-updates/main amd64 gvfs amd64 1.44.1-1ubuntu1.1 [115 kB]
Get:5 http://archive.ubuntu.com/ubuntu focal/main amd64 libcdiol8 amd64 2.0.0-2 [58.6 kB]
Get:6 http://archive.ubuntu.com/ubuntu focal/main amd64 libcdio-cdda2 amd64 10.242.0-0.1 [17.6 kB]
Get:7 http://archive.ubuntu.com/ubuntu focal/main amd64 libcdio-paranoia2 amd64 10.242.0-0.1 [16.2 kB]
Get:8 http://archive.ubuntu.com/ubuntu focal/main amd64 libmtmp-common all 1.1.17-3 [27.8 kB]
Get:9 http://archive.ubuntu.com/ubuntu focal/main amd64 libmtmp9 amd64 1.1.17-3 [163 kB]
Get:10 http://archive.ubuntu.com/ubuntu focal/main amd64 libnfs13 amd64 4.0.0-1 [95.1 kB]
Get:11 http://archive.ubuntu.com/ubuntu focal-updates/main amd64 gvfs-backends amd64 1.44.1-1ubuntu1.1 [344 kB]
Get:12 http://archive.ubuntu.com/ubuntu focal/main amd64 libcue2 amd64 2.2.1-2 [19.8 kB]
Get:13 http://archive.ubuntu.com/ubuntu focal/main amd64 libdee-1.0-4 amd64 1.2.7+17.10.20170616-4ubuntu6 [130 kB]
Get:14 http://archive.ubuntu.com/ubuntu focal/main amd64 libexempi8 amd64 2.5.1-1build1 [528 kB]
Get:15 http://archive.ubuntu.com/ubuntu focal/main amd64 libgif7 amd64 5.1.9-1 [32.2 kB]
Get:16 http://archive.ubuntu.com/ubuntu focal/main amd64 libgsf-1-common all 1.14.46-1 [12.7 kB]
Get:17 http://archive.ubuntu.com/ubuntu focal/main amd64 libgsf-1-114 amd64 1.14.46-1 [98.3 kB]
Get:18 http://archive.ubuntu.com/ubuntu focal/main amd64 libgxps2 amd64 0.3.1-1 [53.5 kB]
Get:19 http://archive.ubuntu.com/ubuntu focal/main amd64 libmtmp-runtime amd64 1.1.17-3 [5912 B]
Setting up libbasicusageenv1:amd64 (2020.01.19-1build1) ...
Setting up libvlccore9:amd64 (3.0.9-2.1) ...
Setting up libsidplay2 (2.1.1-1ubuntu2) ...
Setting up libva-wayland2:amd64 (2.7.0-2) ...
Setting up libsndio7.0:amd64 (1.5.0-3) ...
Setting up libmad0:amd64 (0.15.1b-10ubuntu1) ...
Setting up libstr1:amd64 (1.4.0-1build1) ...
Setting up liblua5.2.0:amd64 (5.2.4-1.1build3) ...
Setting up libqt5dbus5:amd64 (5.12.8+dfsg-0ubuntu2.1) ...
Setting up libdca0:amd64 (0.0.6-1) ...
Setting up libssh2-1:amd64 (1.8.0-2.1build1) ...
Setting up libopenmpt-modplug1:amd64 (0.4.11-1build1) ...
Setting up vlc-data (3.0.9-2.1) ...
Setting up libplacebo7:amd64 (1.7.0-2) ...
Setting up vlc-plugin-notify:amd64 (3.0.9-2.1) ...
Setting up libdvdnav4:amd64 (6.0.1-1build1) ...
Setting up libproxy-tools (0.4.15-10ubuntu2) ...
Setting up vlc-plugin-video-output:amd64 (3.0.9-2.1) ...
Setting up vlc-plugin-samba:amd64 (3.0.9-2.1) ...
Setting up libgroupsock8:amd64 (2020.01.19-1build1) ...
Setting up libSDL2-image1.2:amd64 (1.2.12-12) ...
Setting up vlc-plugin-video-splitter:amd64 (3.0.9-2.1) ...
Setting up libvlc5:amd64 (3.0.9-2.1) ...
Setting up libqt5network5:amd64 (5.12.8+dfsg-0ubuntu2.1) ...
Setting up libupnp13:amd64 (1:1.8.4-2ubuntu2) ...
Setting up vlc-plugin-visualization:amd64 (3.0.9-2.1) ...
Setting up libvlc-bin:amd64 (3.0.9-2.1) ...
Setting up liblivesmedia77:amd64 (2020.01.19-1build1) ...
Setting up libqt5gui5:amd64 (5.12.8+dfsg-0ubuntu2.1) ...
Setting up vlc-bin (3.0.9-2.1) ...
Setting up libqt5widgets5:amd64 (5.12.8+dfsg-0ubuntu2.1) ...
Setting up qt5-gtk-platformtheme:amd64 (5.12.8+dfsg-0ubuntu2.1) ...
Setting up vlc-plugin-base:amd64 (3.0.9-2.1) ...
Setting up libqt5xml5:amd64 (5.12.8-0ubuntu1) ...
Setting up libqt5svg5:amd64 (5.12.8-0ubuntu1) ...
Setting up vlc-plugin-qt:amd64 (3.0.9-2.1) ...
Setting up vlc (3.0.9-2.1) ...
Setting up vlc-plugin-skins2:amd64 (3.0.9-2.1) ...
Processing triggers for libc-bin (2.31-0ubuntu9.7) ...
/sbin/ldconfig.real: /usr/lib/wsl/lib/libcudart.so.1 is not a symbolic link

Processing triggers for man-db (2.9.1-1) ...
Processing triggers for fontconfig (2.13.1-2ubuntu3) ...
Processing triggers for desktop-file-utils (0.24-1ubuntu3) ...
Processing triggers for mime-support (3.64ubuntu1) ...
Processing triggers for hicolor-icon-theme (0.17-2) ...
Processing triggers for gnome-menus (3.36.0-1ubuntu1) ...
Processing triggers for libvlc-bin:amd64 (3.0.9-2.1) ...
peggy66@DESKTOP-QVKSQAQ:~/temp$
```

安裝 vic

```
peggy66@DESKTOP-QVKSQAQ: ~/temp
Processing triggers for udev (245.4-4ubuntu3.15) ...
Setting up tracker-extract (2.3.3-2) ...
Created symlink /etc/systemd/user/default.target.wants/tracker-extract.service → /usr/lib/systemd/user/tracker-extract.service.
Setting up tracker-miner-fs (2.3.3-2) ...
Created symlink /etc/systemd/user/default.target.wants/tracker-miner-fs.service → /usr/lib/systemd/user/tracker-miner-fs.service.
Setting up mantis (1:3.36.3-0ubuntu1.20.04.1) ...
peggy66@DESKTOP-QVKSQAQ:~/temp$ sudo apt-get install vlc -y
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  fonts-freefont-ttf liba52-0.7.4 libaribb24-0 libass9 libbasicusageenvironment1 libbcb2 libbdc1394-22 libbca0
  libdouble-conversion3 libdvbpsi10 libdvbnav4 libdvdrad7 libebml4v5 libfaad2 libgroupsock8 libixl10 libkate1
  liblirc-client0 liblivemedia77 liblua5.2-0 libmad0 libmatroska6v5 libmpdec6 libmpeg2-4 libmysofal
  libopenapt-adplug1 libpcre2-16-0 libplacebo7 libpostproc55 libprotobuf-litel7 libproxy-tools libqt5core5a
  libqt5dbus5 libqt5gui5 libqt5network5 libqt5svg5 libqt5widgets5 libqt5xmltree5 libresid-builder0c2a
  libSDL_image1.2 libSDL1.2debian libSDLplay2 libsndio7.0 libspatialaudio0 libstl libssh2-1 libunpl3
  libusageenvironment3 libva-wayland2 libvlc-bin libvlc5 libvlccore9 libxcb-xinerama0 libxcb-xinput0
  qt5-gtk-platformtheme qttranslations5-l10n vlc-bin vlc-data vlc-l10n vlc-plugin-base vlc-plugin-notify
  vlc-plugin-qt vlc-plugin-samba vlc-plugin-skins2 vlc-plugin-video-output vlc-plugin-video-splitter
  vlc-plugin-visualization
Suggested packages:
  libdvdc2 lirc qt5-image-formats-plugins qtwalland5 sndiod
The following NEW packages will be installed:
  fonts-freefont-ttf liba52-0.7.4 libaribb24-0 libass9 libbasicusageenvironment1 libbcb2 libbdc1394-22 libbca0
  libdouble-conversion3 libdvbpsi10 libdvbnav4 libdvdrad7 libebml4v5 libfaad2 libgroupsock8 libixl10 libkate1
  liblirc-client0 liblivemedia77 liblua5.2-0 libmad0 libmatroska6v5 libmpdec6 libmpeg2-4 libmysofal
  libopenapt-adplug1 libpcre2-16-0 libplacebo7 libpostproc55 libprotobuf-litel7 libproxy-tools libqt5core5a
  libqt5dbus5 libqt5gui5 libqt5network5 libqt5svg5 libqt5widgets5 libqt5xmltree5 libresid-builder0c2a
  libSDL_image1.2 libSDL1.2debian libSDLplay2 libsndio7.0 libspatialaudio0 libstl libssh2-1 libunpl3
  libusageenvironment3 libva-wayland2 libvlc-bin libvlc5 libvlccore9 libxcb-xinerama0 libxcb-xinput0
  qt5-gtk-platformtheme qttranslations5-l10n vlc-bin vlc-data vlc-l10n vlc-plugin-base vlc-plugin-notify
  vlc-plugin-qt vlc-plugin-samba vlc-plugin-skins2 vlc-plugin-video-output vlc-plugin-video-splitter
  vlc-plugin-visualization
0 upgraded, 68 newly installed, 0 to remove and 78 not upgraded.
Need to get 27.0 MB of archives.
After this operation, 125 MB of additional disk space will be used.
Get:1 http://archive.ubuntu.com/ubuntu focal/universe amd64 libdouble-conversion3 amd64 3.1.5-4ubuntu1 [37.9 kB]
Get:2 http://archive.ubuntu.com/ubuntu focal/main amd64 libpcre2-16-0 amd64 10.34-7 [181 kB]
Get:3 http://archive.ubuntu.com/ubuntu focal-updates/universe amd64 libqt5core5a amd64 5.12.8dfsg-0ubuntu2.1 [2006 kB]
Get:4 http://archive.ubuntu.com/ubuntu focal-updates/universe amd64 libqt5dbus5 amd64 5.12.8dfsg-0ubuntu2.1 [209 kB]
Get:5 http://archive.ubuntu.com/ubuntu focal-updates/universe amd64 libqt5network5 amd64 5.12.8dfsg-0ubuntu2.1 [673 kB]
Get:6 http://archive.ubuntu.com/ubuntu focal/main amd64 libxcb-xinerama0 amd64 1.14-2 [5260 B]
Get:7 http://archive.ubuntu.com/ubuntu focal/main amd64 libxcb-xinput0 amd64 1.14-2 [29.3 kB]
Get:8 http://archive.ubuntu.com/ubuntu focal-updates/universe amd64 libqt5gui5 amd64 5.12.8dfsg-0ubuntu2.1 [2971 kB]
Get:9 http://archive.ubuntu.com/ubuntu focal-updates/universe amd64 libqt5widgets5 amd64 5.12.8dfsg-0ubuntu2.1 [2295 kB]
Get:10 http://archive.ubuntu.com/ubuntu focal/universe amd64 libqt5svg5 amd64 5.12.8-0ubuntu1 [131 kB]
Get:11 http://archive.ubuntu.com/ubuntu focal/main amd64 fonts-freefont-ttf all 20120503-10 [2440 kB]
Get:12 http://archive.ubuntu.com/ubuntu focal/universe amd64 liba52-0.7.4 amd64 0.7.4-20 [30.5 kB]
```

安裝 x11apps

```
peggy66@DESKTOP-QVKSQAQ: ~/temp
Processing triggers for hicolor-icon-theme (0.17-2) ...
Processing triggers for gnome-menus (3.36.0-1ubuntu1) ...
Processing triggers for libvlc-bin:amd64 (3.0.9.2-1) ...
peggy66@DESKTOP-QVKSQAQ:~/temp$ sudo apt install x11-apps -y
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  xbitmaps
Suggested packages:
  mesa-utils
The following NEW packages will be installed:
  x11-apps xbitmaps
0 upgraded, 2 newly installed, 0 to remove and 78 not upgraded.
Need to get 685 kB of archives.
After this operation, 2763 kB of additional disk space will be used.
Get:1 http://archive.ubuntu.com/ubuntu focal/main amd64 x11-apps amd64 7.7+8 [657 kB]
Get:2 http://archive.ubuntu.com/ubuntu focal/main amd64 xbitmaps all 1.1.1-2 [28.1 kB]
Fetched 685 kB in 3s (227 kB/s)
Selecting previously unselected package x11-apps.
(Reading database ... 68557 files and directories currently installed.)
Preparing to unpack .../x11-apps_7.7+8_amd64.deb ...
Unpacking x11-apps (7.7+8) ...
Selecting previously unselected package xbitmaps.
Preparing to unpack .../xbitmaps_1.1.1-2_all.deb ...
Unpacking xbitmaps (1.1.1-2) ...
Setting up x11-apps (7.7+8) ...
Setting up xbitmaps (1.1.1-2) ...
Processing triggers for man-db (2.9.1-1) ...
peggy66@DESKTOP-QVKSQAQ:~/temp$
```

安裝 Google Chrom

```
peggy66@DESKTOP-QVKSQA: ~/temp/temp2
peggy66@DESKTOP-QVKSQA:~/temp$
peggy66@DESKTOP-QVKSQA:~/temp$
peggy66@DESKTOP-QVKSQA:~/temp$ mkdir temp2
peggy66@DESKTOP-QVKSQA:~/temp/temp2$ sudo wget https://dl.google.com/linux/direct/google-chrome-stable_current_amd64.deb
2022-06-05 23:06:18 - https://dl.google.com/linux/direct/google-chrome-stable_current_amd64.deb
Resolving dl.google.com (dl.google.com)... 172.217.163.46, 2404:6800:4012:3::200e
Connecting to dl.google.com (dl.google.com)|172.217.163.46|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 84701968 (81M) [application/x-debian-package]
Saving to: 'google-chrome-stable_current_amd64.deb'

google-chrome-stable_current_amd6 100%[=====] 80.78M  5.83MB/s  in 15s
2022-06-05 23:06:33 (5.57 MB/s) - 'google-chrome-stable_current_amd64.deb' saved [84701968/84701968]
peggy66@DESKTOP-QVKSQA:~/temp/temp2$
```

```
peggy66@DESKTOP-QVKSQA: ~/temp/temp2
Connecting to dl.google.com (dl.google.com)|172.217.163.46|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 84701968 (81M) [application/x-debian-package]
Saving to: 'google-chrome-stable_current_amd64.deb'

google-chrome-stable_current_amd6 100%[=====] 80.78M  5.83MB/s  in 15s
2022-06-05 23:06:33 (5.57 MB/s) - 'google-chrome-stable_current_amd64.deb' saved [84701968/84701968]
peggy66@DESKTOP-QVKSQA:~/temp/temp2$ sudo dpkg -i google-chrome-stable_current_amd64.deb
Selecting previously unselected package google-chrome-stable.
(Reading database ... 68758 files and directories currently installed.)
Preparing to unpack google-chrome-stable_current_amd64.deb ...
Unpacking google-chrome-stable (102.0.5005.61-1) ...
dpkg: dependency problems prevent configuration of google-chrome-stable:
 google-chrome-stable depends on fonts-liberation; however:
  Package fonts-liberation is not installed.

dpkg: error processing package google-chrome-stable (--install):
 dependency problems - leaving unconfigured
Processing triggers for gnome-menus (3.36.0-1ubuntu1) ...
Processing triggers for desktop-file-utils (0.24-1ubuntu3) ...
Processing triggers for mime-support (3.64ubuntu1) ...
Processing triggers for man-db (2.9.1-1) ...
Errors were encountered while processing:
 google-chrome-stable
peggy66@DESKTOP-QVKSQA:~/temp/temp2$
```

```
peggy66@DESKTOP-QVKSQA:~/temp/temp2
Preparing to unpack google-chrome-stable_current_amd64.deb ...
Unpacking google-chrome-stable (102.0.5005.61-1) ...
dpkg: dependency problems prevent configuration of google-chrome-stable:
 google-chrome-stable depends on fonts-liberation; however:
  Package fonts-liberation is not installed.

dpkg: error processing package google-chrome-stable (--install):
 dependency problems - leaving unconfigured
Processing triggers for gnome-menus (3.36.0-1ubuntu1) ...
Processing triggers for desktop-file-utils (0.24-1ubuntu3) ...
Processing triggers for mime-support (3.64ubuntu1) ...
Processing triggers for man-db (2.9.1-1) ...
Errors were encountered while processing:
 google-chrome-stable
peggy66@DESKTOP-QVKSQA:~/temp/temp2$ sudo apt install --fix-broken -y
Reading package lists... Done
Building dependency tree
Reading state information... Done
Correcting dependencies... Done
The following additional packages will be installed:
 fonts-liberation
The following NEW packages will be installed:
 fonts-liberation
0 upgraded, 1 newly installed, 0 to remove and 78 not upgraded.
Need to get 822 kB of archives.
After this operation, 2139 kB of additional disk space will be used.
Get:1 http://archive.ubuntu.com/ubuntu focal/main amd64 fonts-liberation all 1:1.07.4-11 [822 kB]
Fetched 822 kB in 3s (262 kB/s)
Selecting previously unselected package fonts-liberation.
(Reading database ... 68872 files and directories currently installed.)
Preparing to unpack .../fonts-liberation_1:1.07.4-11_all.deb ...
Unpacking fonts-liberation (1:1.07.4-11) ...
Setting up fonts-liberation (1:1.07.4-11) ...
Setting up google-chrome-stable (102.0.5005.61-1) ...
update-alternatives: using /usr/bin/google-chrome-stable to provide /usr/bin/x-www-browser (x-www-browser) in auto mode
update-alternatives: using /usr/bin/google-chrome-stable to provide /usr/bin/gnome-www-browser (gnome-www-browser) in auto mode
update-alternatives: using /usr/bin/google-chrome-stable to provide /usr/bin/google-chrome (google-chrome) in auto mode
Processing triggers for fontconfig (2.13.1-2ubuntu3) ...
peggy66@DESKTOP-QVKSQA:~/temp/temp2$
```

```
peggy66@DESKTOP-QVKSQA:~/temp/temp2$ sudo dpkg -i google-chrome-stable
peggy66@DESKTOP-QVKSQA:~/temp/temp2$ sudo dpkg -i google-chrome-stable_current_amd64.deb
(Reading database ... 68895 files and directories currently installed.)
peggy66@DESKTOP-QVKSQA:~/temp/temp2$ 1) ...untu1) ...tu3) ...005.61-1) ...
```

參考來源

Ubuntu 是什麼？如何透過 USB 安裝 Ubuntu 作業系統？完整教學指南

<https://adersaytech.com/practical-software/ubuntu-install-tutorial.html>

學習心得

這次在學習使用 Ubuntu 是一套以 Linux 作業系統為基礎所開發的作業系統，他與之前比較常接觸的 Windows 作業系統有些許的不同，在這部份自己也不是很熟悉，所以很感謝網路資訊的分享及同學的幫助，納在使用的時候覺得最大的不同是在介面部分，上網查詢資料也了解到，Linux 作業系統的核心與視窗系統是分開的，所以當視窗系統當機時，只要 Linux 作業系統的核心沒當掉，可以直接進入核心界面的文字模式重新再啟動視窗系統。也表示 Linux 作業系統可以有好幾種視窗系統的可能。

另一個覺得較不相同的部分是，Linux 沒有 exe 任何的文件都可以是執行檔，只要讓系統能了解「怎麼執行」。

雖然在學習的過程非常不順利，尋求同儕許多的協助，但也對這項系統有更多的了解。