資訊安全導論-期末作業 資財二乙 109ab0749 羅珮琪

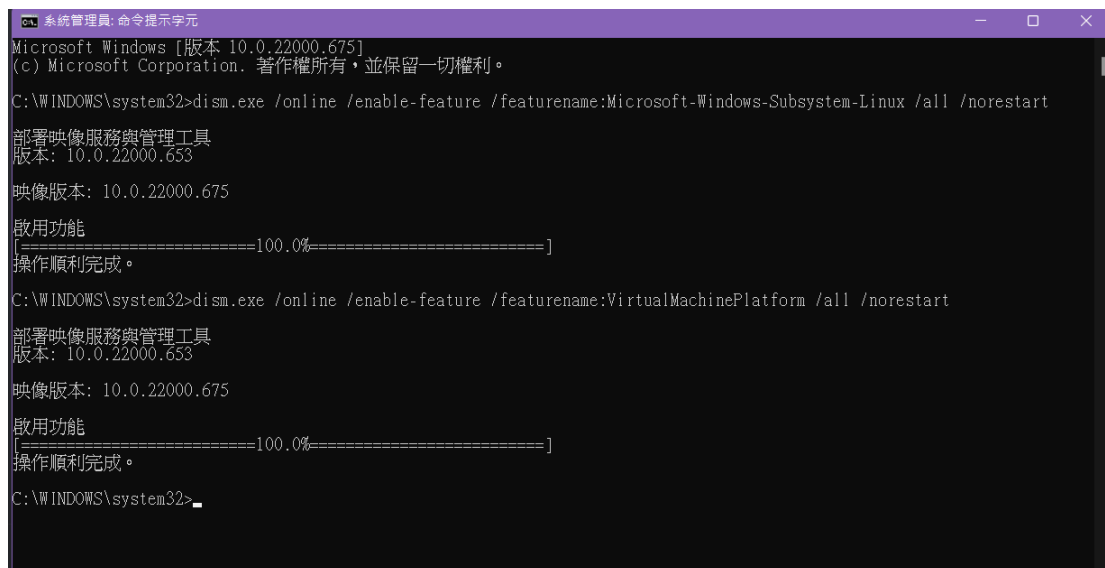# WSL

1.安裝 WSL

(1)啟用 Windows 子系統 Linux 版本

(2)啟用虛擬機器

(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 -Oline -FeatureName Microsoft-Windows-Subsystem-Linux
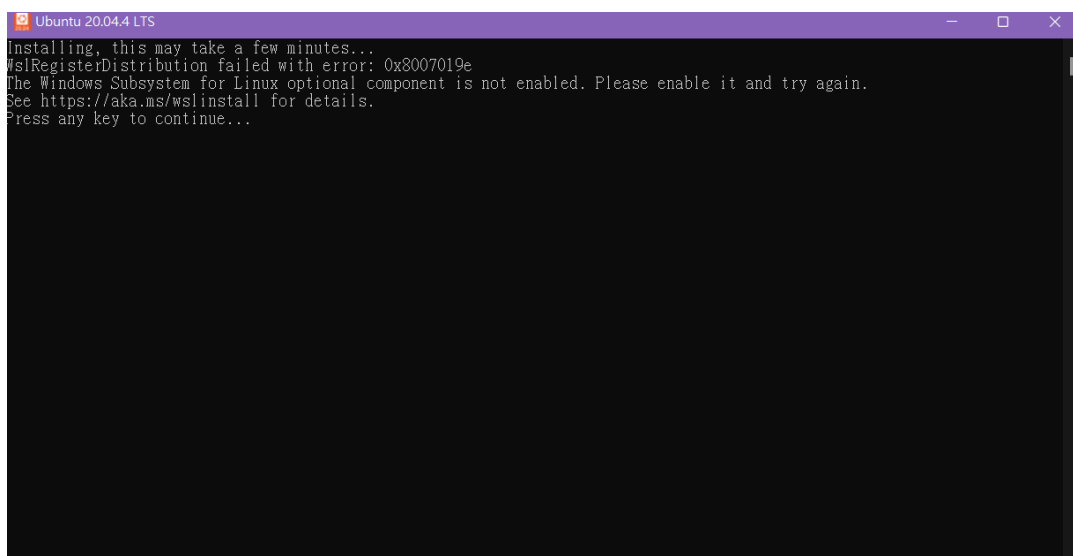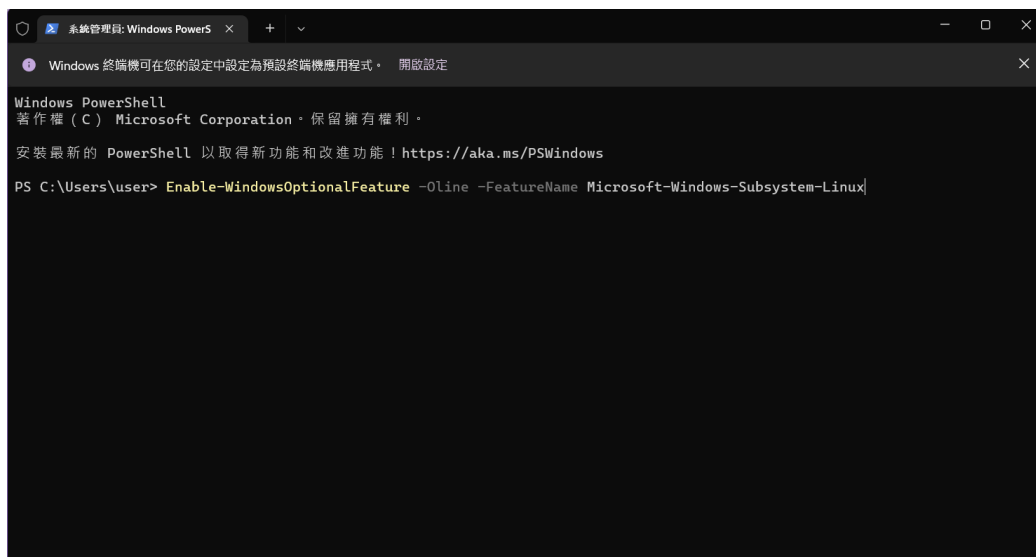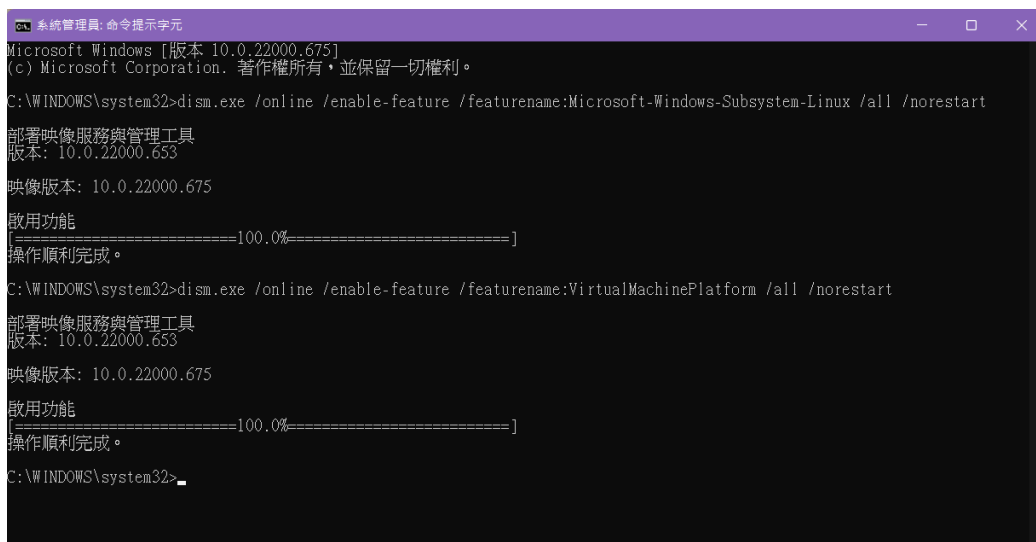
成功!!

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
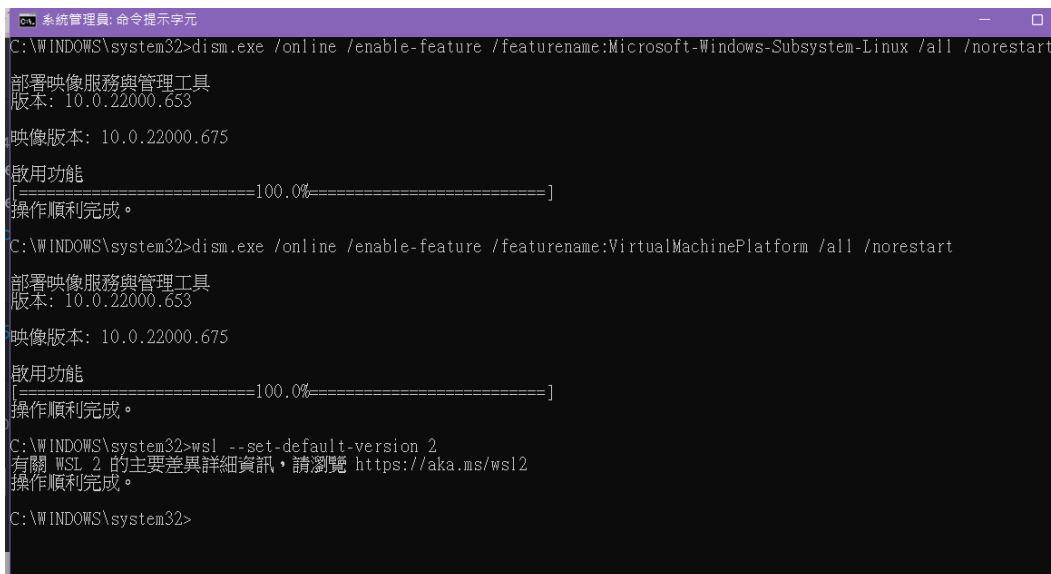[==========================100.0%==========================]
操作順利完成。

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

(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
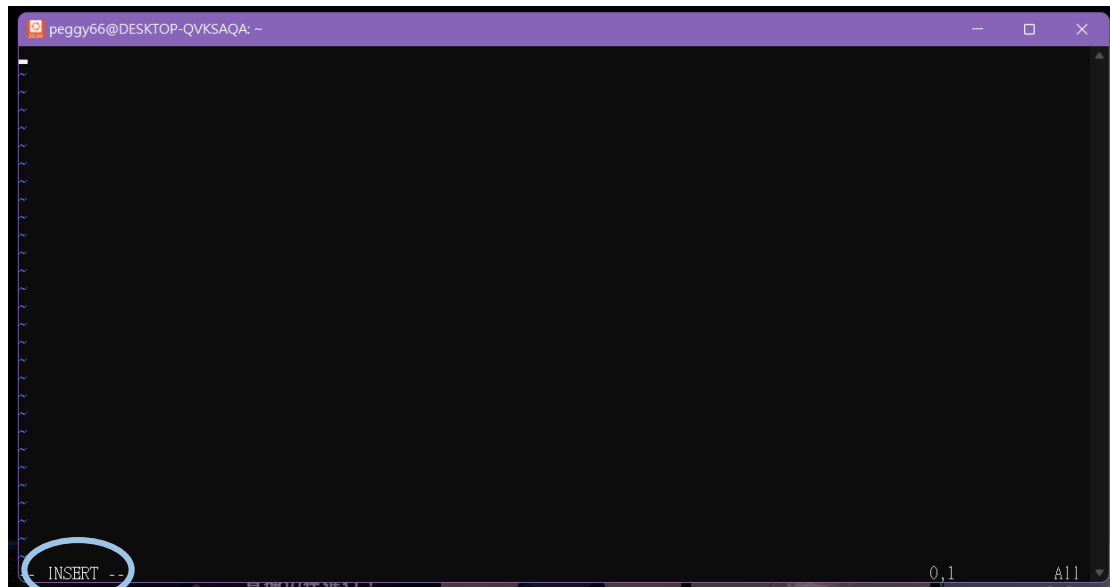
vim＝開啟編輯器

3.VIM 編輯器
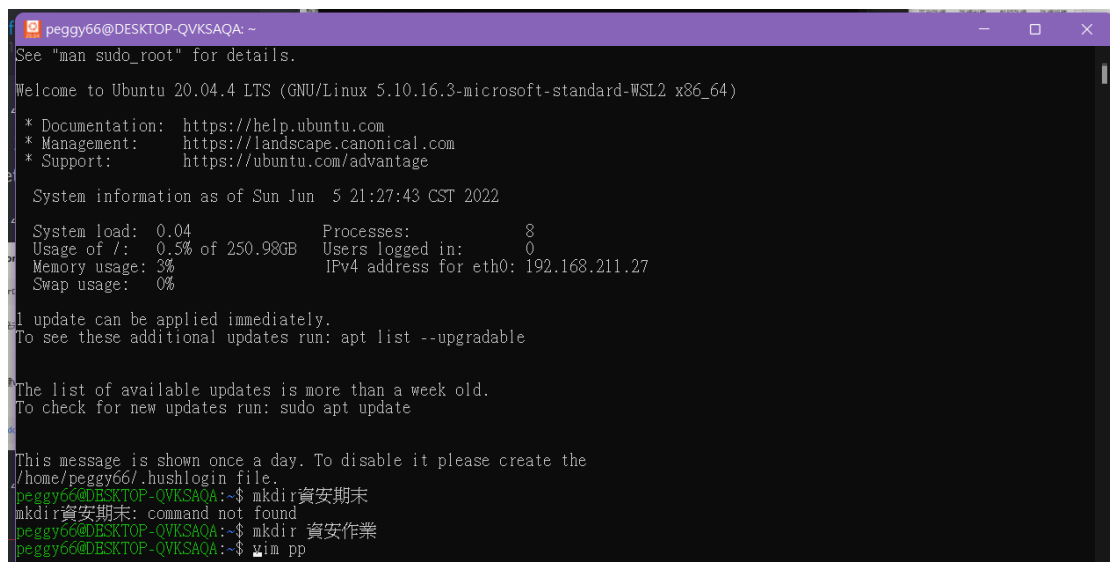
指令:vim(檔名).副檔名
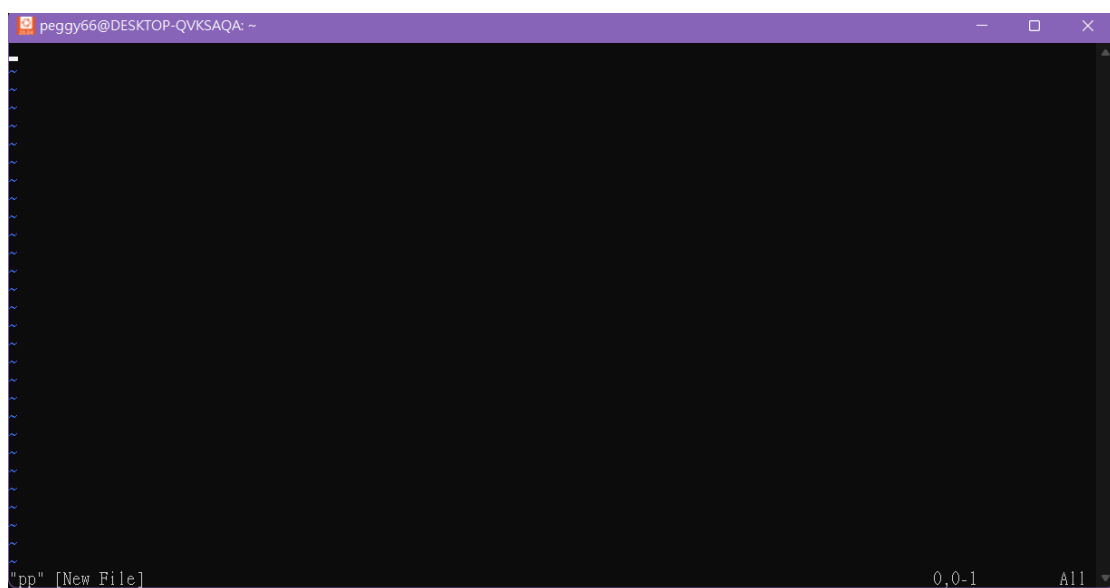
按 I 可以進入輸入模式
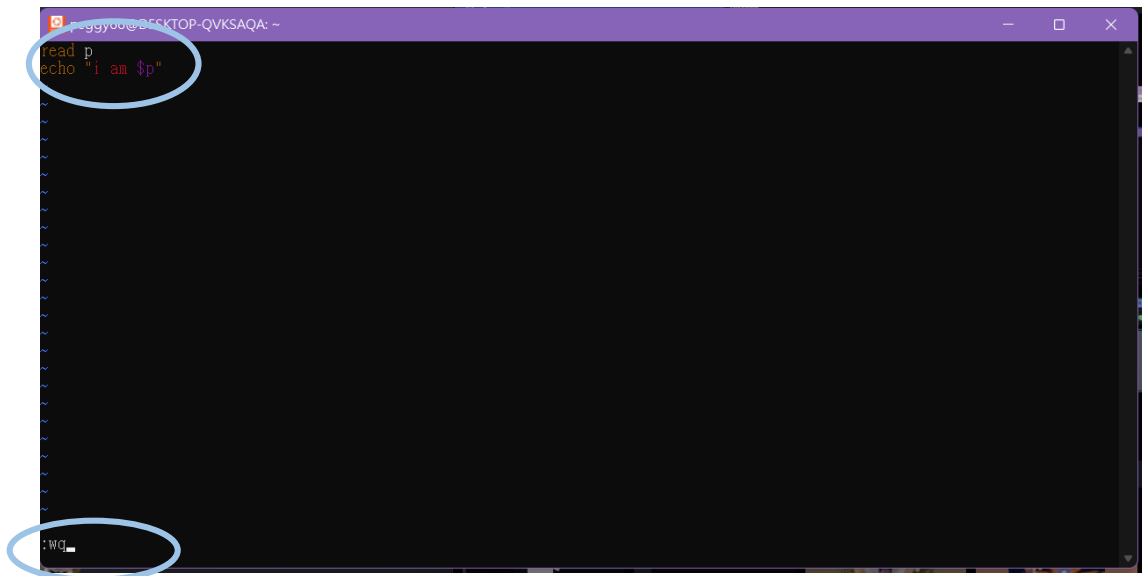
#!=通往直譯器路徑，而直譯器 bash 預設放在/bin 目錄
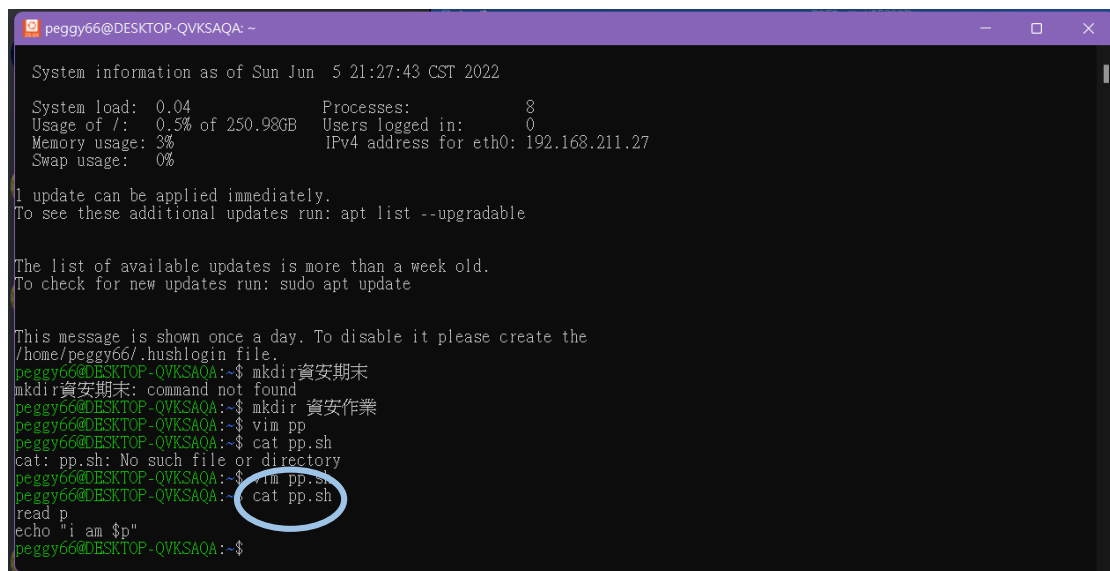
read=input，$Hello=抓取變數 Hello，echo=印出結果

按下 esc 鍵，並在左下角輸入:eq，表示儲存並退出

```
read p
echo "i am $p"
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
:wq
```

利用 cat 檔案名稱.副檔名，查看檔案內容


```
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-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 $p"
peggy66@DESKTOP-QVKSAQA:~$
```

利用 bash 檔案名稱.副檔名，來執行檔案

WSL 的 GUI 介面

(1)安裝 VcXsrv

(2)透過 WSL 建設環境並新增一個 Bash Script

(3)以 vim 編輯內容並用 bash 執行

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
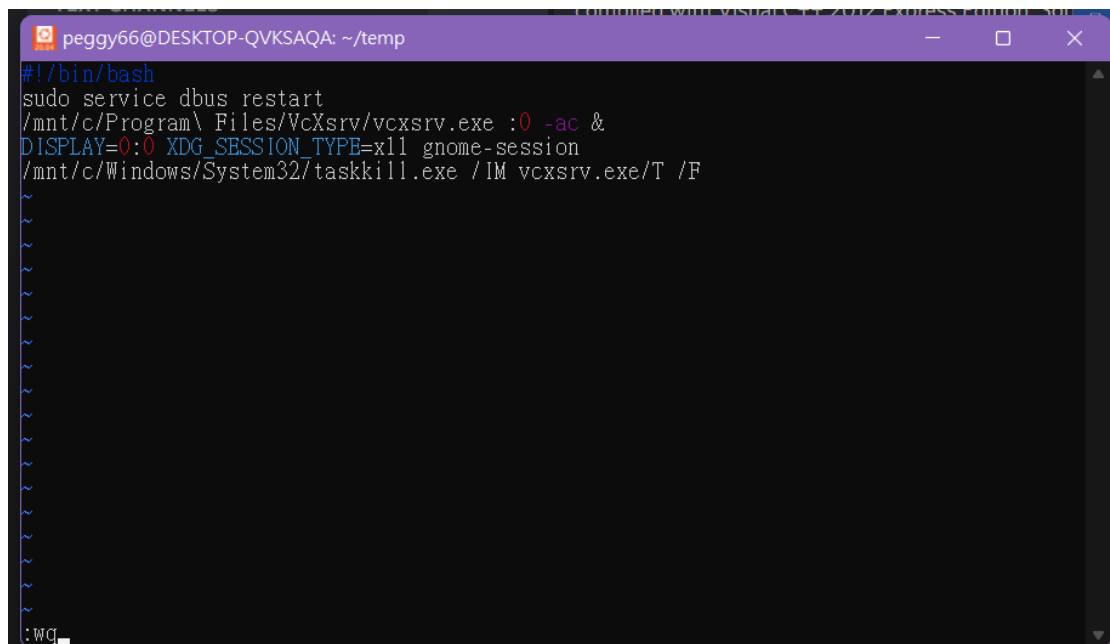peggy66@DESKTOP-QVKSAQA:~$ cd temp
peggy66@DESKTOP-QVKSAQA:~/temp$ touch gui.sh
peggy66@DESKTOP-QVKSAQA:~/temp$ chmod u+x gui.sh
peggy66@DESKTOP-QVKSAQA:~/temp$ vim gui.sh

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$
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 "vcxsrv.exe/T"。
peggy66@DESKTOP-QVKSAQA:~/temp$ (EE) AIGLX: No native OpenGL in modes with a root windo
w
(II) IGLX: Loaded and initialized swrast
(II) GLX: Initialized DRISWRAST GL provider for screen 0

更新 apt-get

安裝 gedit

```
peggy66@DESKTOP-QVKSAQA:~/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 apg 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
  emacsen-common enchant-2 evolution-data-server evolution-data-server-common fontconfig fprintd
  gcc-9-base gcr gdm3 gedit-common geoclue-2.0 gir1.2-accountsservice-1.0 gir1.2-atk-1.0
  gir1.2-atspi-2.0 gir1.2-freedesktop gir1.2-gck-1 gir1.2-gcr-3 gir1.2-gdesktopenums-3.0
  gir1.2-gdkpixbuf-2.0 gir1.2-gdm-1.0 gir1.2-geoclue-2.0 gir1.2-gnomebluetooth-1.0
  gir1.2-gnomedesktop-3.0 gir1.2-graphene-1.0 gir1.2-gtk-3.0 gir1.2-gtksource-4 gir1.2-gweather-3.0
  gir1.2-ibus-1.0 gir1.2-json-1.0 gir1.2-mutter-6 gir1.2-nm-1.0 gir1.2-nma-1.0 gir1.2-notify-0.7
  gir1.2-pango-1.0 gir1.2-peas-1.0 gir1.2-polkit-1.0 gir1.2-rsvg-2.0 gir1.2-secret-1 gir1.2-soup-2.4
  gir1.2-upowerglib-1.0 gir1.2-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
  gstreamer1.0-clutter-3.0 gstreamer1.0-gl gstreamer1.0-plugins-base gstreamer1.0-plugins-good
  gstreamer1.0-pulseaudio gstreamer1.0-x gtk-update-icon-cache hicolor-icon-theme humanity-icon-theme
  hunspell-en-us ibus ibus-data ibus-gtk ibus-gtk3 iio-sensor-proxy im-config ippusbxd iw
  language-selector-gnome libaa1 libamtk-5-0 libamtk-5-common libappindicator3-1 libasound2-plugins
  libaspell15 libatk-bridge2.0-0 libatk1.0-0 libatk1.0-data libatspi2.0-0 libavahi-client3
  libavahi-common-data libavahi-common3 libavahi-core7 libavahi-glib1 libavc1394-0 libbluetooth3
  libboost-thread1.71.0 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 libcups2 libdaemon0
  libdatrie1 libdbusmenu-glib4 libdbusmenu-gtk3-4 libdv4 libebackend-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 libegl1 libenchant-2-2 libepoxy0 libevdev2 libexif12 libfprint-2-2
  libgail-common libgail18 libgbm1 libgck-1-0 libgcr-base-3-1 libgcr-ui-3-1 libgd3 libgdata-common
  libgdata22 libgdk-pixbuf2.0-0 libgdk-pixbuf2.0-bin libgdk-pixbuf2.0-common libgdm1 libgee-0.8-2
  libgeoclue-2-0 libgeocode-glib0 libgjs0g libgles2 libgnome-autoar-0-0 libgnome-bluetooth13
  libgnome-desktop-3-19 libgnomekbd-common libgnomekbd8 libgoa-1.0-0b libgoa-1.0-common
  libgoa-backend-1.0-1 libgomp1 libgphoto2-6 libgphoto2-l10n libgphoto2-port12 libgraphene-1.0-0
  libgraphite2-3 libgsound0 libgspell-1-2 libgspell-1-common libgstreamer-gl1.0-0 libgstreamer-plugins-
  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 libmpc3 libmpg123-0 libmtdev1 libmutter-6-0
  libmysqlclient21 libndp0 libnl-3-200 libnl-genl-3-200 libnl-route-3-200 libnm0 libnma0 libnotify4
  libnss-mdns libopengl0 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 libpcsclite1 libpeas-1.0-0
  libpeas-common libphonenumber7 libpixman-1-0 libplist3 libprotobuf17 libpulse-mainloop-glib0
```

```
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                          [ OK ]
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-QVKSAQA:~/temp$
```

安裝 gimp


```
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-va-driver intel-media-va-driver libaacs0 libamd2 libaom0 libauthen-sasl-perl
  libavcodec58 libavformat58 libavutil56 libbabl-0.1-0 libbdplus0 libblas3 libbluray2
  libcamd2 libccolamd2 libcholmod3 libchromaprint1 libcodec2-0.9 libcolamd2
  libdata-dump-perl libde265-0 libencode-locale-perl libexiv2-27 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
  libigdgmm11 libijs-0.35 libilmbase24 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-glib8 libpoppler97 libquadmath0 libraw19 libsdl2-2.0-0 libshine3
  libsnappy1v5 libssh-gcrypt-4 libsuitesparseconfig5 libswresample3 libswscale5
  libtie-ixhash-perl libtimedate-perl libtry-tiny-perl libumfpack5 liburi-perl
  libva-drm2 libva-x11-2 libva2 libvdpau1 libwebpmux3 libwmf0.2-7 libwww-perl
  libwww-robotrules-perl libx11-protocol-perl libx264-155 libx265-179
  libxml-parser-perl libxml-twig-perl libxml-xpathengine-perl libxvidcore4
  libzvbi-common libzvbi0 mesa-va-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-va-driver-shaders
  libdigest-hmac-perl libgssapi-perl libbluray-bdj exiv2 libcrypt-ssleay-perl
  libwmf0.2-7-gtk libauthen-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-arphic-ukai fonts-arphic-uming
  fonts-nanum libvdpau-va-gl1 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-va-driver intel-media-va-driver libaacs0 libamd2 libaom0 libauthen-sasl-perl
  libavcodec58 libavformat58 libavutil56 libbabl-0.1-0 libbdplus0 libblas3 libbluray2
  libcamd2 libccolamd2 libcholmod3 libchromaprint1 libcodec2-0.9 libcolamd2
  libdata-dump-perl libde265-0 libencode-locale-perl libexiv2-27 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
  libigdgmm11 libijs-0.35 libilmbase24 libio-html-perl libio-socket-ssl-perl
```



```
Selecting previously unselected package nautilus.
Preparing to unpack .../32-nautilus_1%3a3.36.3-0ubuntu1.20.04.1_amd64.deb ...
Unpacking nautilus (1:3.36.3-0ubuntu1.20.04.1) ...
Setting up libgsf-1-common (1.14.46-1) ...
Setting up libcue2:amd64 (2.2.1-2) ...
Setting up libdee-1.0-4:amd64 (1.2.7+17.10.20170616-4ubuntu6) ...
Setting up libtotem-plparser-common (3.26.5-1ubuntu1) ...
Setting up libunity-scopes-json-def-desktop (7.1.4+19.04.20190319-0ubuntu3) ...
Setting up libexempi8: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 libnfsl3: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 (3.26.5-1ubuntu1) ...
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 libgxps2:amd64 (0.3.1-1) ...
Setting up libmtp-runtime (1.1.17-3) ...
Setting up gvfs-common (1.44.1-1ubuntu1.1) ...
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 (1.44.1-1ubuntu1.1) ...
Setting up gvfs-daemons (1.44.1-1ubuntu1.1) ...
Setting up gvfs:amd64 (1.44.1-1ubuntu1.1) ...
Setting up gvfs-backends (1.44.1-1ubuntu1.1) ...
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 libglib2.0-0:amd64 (2.64.6-1~ubuntu20.04.4) ...
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 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

安装 vic

安装 x11apps

安裝 Google Chrom

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。