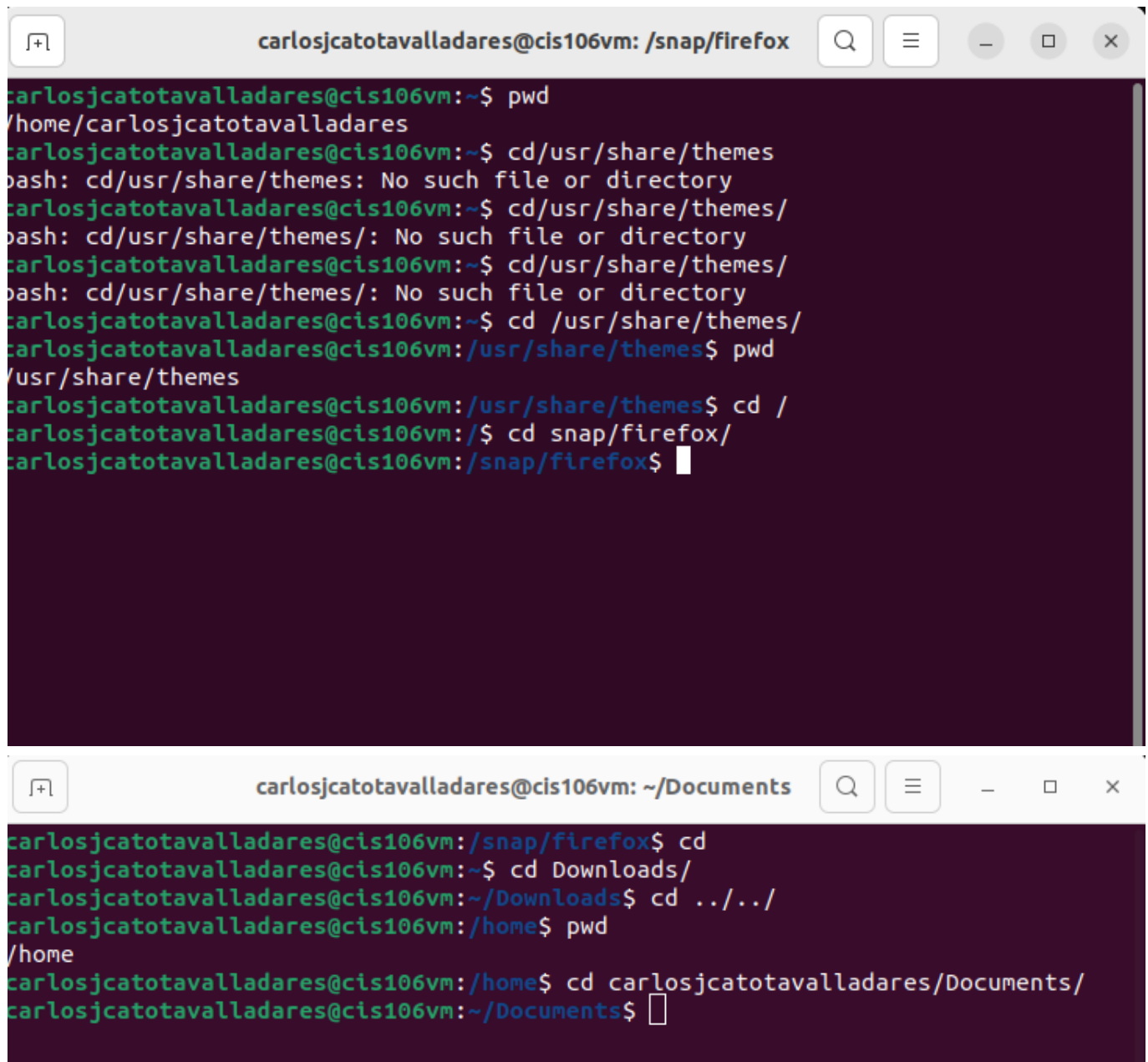


Lab 4 The Linux FS

Question 1



The image shows two terminal window screenshots. The top window has a title bar 'carlosjcatotavalladares@cis106vm: /snap/firefox' and shows a series of 'cd' commands attempting to navigate to '/usr/share/themes', which fails with 'No such file or directory' errors. The user then successfully navigates to '/usr/share/themes' and then to '/snap/firefox'. The bottom window has a title bar 'carlosjcatotavalladares@cis106vm: ~/Documents' and shows the user navigating from '/snap/firefox' to '~', then to '~Downloads', and finally to '~Documents' using relative paths and 'cd' commands.

```
carlosjcatotavalladares@cis106vm:~$ pwd
/home/carlosjcatotavalladares
carlosjcatotavalladares@cis106vm:~$ cd /usr/share/themes
bash: cd /usr/share/themes: No such file or directory
carlosjcatotavalladares@cis106vm:~$ cd /usr/share/themes/
bash: cd /usr/share/themes/: No such file or directory
carlosjcatotavalladares@cis106vm:~$ cd /usr/share/themes/
bash: cd /usr/share/themes/: No such file or directory
carlosjcatotavalladares@cis106vm:~$ cd /usr/share/themes/
carlosjcatotavalladares@cis106vm:/usr/share/themes$ pwd
/usr/share/themes
carlosjcatotavalladares@cis106vm:/usr/share/themes$ cd /
carlosjcatotavalladares@cis106vm:/$ cd snap/firefox/
carlosjcatotavalladares@cis106vm:/snap/firefox$
```

```
carlosjcatotavalladares@cis106vm:/snap/firefox$ cd
carlosjcatotavalladares@cis106vm:~$ cd Downloads/
carlosjcatotavalladares@cis106vm:~/Downloads$ cd ../../
carlosjcatotavalladares@cis106vm:/home$ pwd
/home
carlosjcatotavalladares@cis106vm:/home$ cd carlosjcatotavalladares/Documents/
carlosjcatotavalladares@cis106vm:~/Documents$
```

Question 2

```

carlosjcatotavalladares@cisi106vm:~/Documents$ cd /usr/share/
carlosjcatotavalladares@cisi106vm:/usr/share$ ls /home/carlosjcatotavalladares/lab4files/
countries.json  document.docx  helloWorld.c  sample.xls  Ubuntu.pdf
csvfile.csv    globe.avi      Linux.pdf     Tux.png     website.html
carlosjcatotavalladares@cisi106vm:/usr/share$ cd ~/lab4files/
carlosjcatotavalladares@cisi106vm:~/lab4files$ ls -l
total 6580
-rw-rw-r-- 1 carlosjcatotavalladares carlosjcatotavalladares 20471 Feb 22 2022 countries.json
-rw-rw-r-- 1 carlosjcatotavalladares carlosjcatotavalladares 284042 Feb 22 2022 csvfile.csv
-rw-rw-r-- 1 carlosjcatotavalladares carlosjcatotavalladares 764176 Feb 22 2022 document.docx
-rw-rw-r-- 1 carlosjcatotavalladares carlosjcatotavalladares 742478 Feb 22 2022 globe.avi
-rw-rw-r-- 1 carlosjcatotavalladares carlosjcatotavalladares 76 Feb 22 2022 helloWorld.c
-rw-rw-r-- 1 carlosjcatotavalladares carlosjcatotavalladares 2600138 Feb 22 2022 Linux.pdf
-rw-rw-r-- 1 carlosjcatotavalladares carlosjcatotavalladares 8704 Feb 22 2022 sample.xls
-rw-rw-r-- 1 carlosjcatotavalladares carlosjcatotavalladares 42777 Feb 22 2022 Tux.png
-rw-rw-r-- 1 carlosjcatotavalladares carlosjcatotavalladares 2114053 Feb 22 2022 Ubuntu.pdf
-rw-rw-r-- 1 carlosjcatotavalladares carlosjcatotavalladares 137453 Feb 22 2022 website.html
carlosjcatotavalladares@cisi106vm:~/lab4files$ ls -h
countries.json  document.docx  helloWorld.c  sample.xls  Ubuntu.pdf
csvfile.csv    globe.avi      Linux.pdf     Tux.png     website.html
carlosjcatotavalladares@cisi106vm:~/lab4files$ ls -lh
total 6.5M
-rw-rw-r-- 1 carlosjcatotavalladares carlosjcatotavalladares 20K Feb 22 2022 countries.json
-rw-rw-r-- 1 carlosjcatotavalladares carlosjcatotavalladares 278K Feb 22 2022 csvfile.csv
-rw-rw-r-- 1 carlosjcatotavalladares carlosjcatotavalladares 747K Feb 22 2022 document.docx
-rw-rw-r-- 1 carlosjcatotavalladares carlosjcatotavalladares 726K Feb 22 2022 globe.avi
-rw-rw-r-- 1 carlosjcatotavalladares carlosjcatotavalladares 76 Feb 22 2022 helloWorld.c
-rw-rw-r-- 1 carlosjcatotavalladares carlosjcatotavalladares 2.5M Feb 22 2022 Linux.pdf
-rw-rw-r-- 1 carlosjcatotavalladares carlosjcatotavalladares 8.5K Feb 22 2022 sample.xls
-rw-rw-r-- 1 carlosjcatotavalladares carlosjcatotavalladares 42K Feb 22 2022 Tux.png
-rw-rw-r-- 1 carlosjcatotavalladares carlosjcatotavalladares 2.1M Feb 22 2022 Ubuntu.pdf
-rw-rw-r-- 1 carlosjcatotavalladares carlosjcatotavalladares 135K Feb 22 2022 website.html

```

```

carlosjcatotavalladares@cisi106vm:~/lab4files$ ls -lhs
total 6.5M
-rw-rw-r-- 1 carlosjcatotavalladares carlosjcatotavalladares 2.5M Feb 22 2022 Linux.pdf
-rw-rw-r-- 1 carlosjcatotavalladares carlosjcatotavalladares 2.1M Feb 22 2022 Ubuntu.pdf
-rw-rw-r-- 1 carlosjcatotavalladares carlosjcatotavalladares 747K Feb 22 2022 document.docx
-rw-rw-r-- 1 carlosjcatotavalladares carlosjcatotavalladares 726K Feb 22 2022 globe.avi
-rw-rw-r-- 1 carlosjcatotavalladares carlosjcatotavalladares 278K Feb 22 2022 csvfile.csv
-rw-rw-r-- 1 carlosjcatotavalladares carlosjcatotavalladares 135K Feb 22 2022 website.html
-rw-rw-r-- 1 carlosjcatotavalladares carlosjcatotavalladares 42K Feb 22 2022 Tux.png
-rw-rw-r-- 1 carlosjcatotavalladares carlosjcatotavalladares 20K Feb 22 2022 countries.json
-rw-rw-r-- 1 carlosjcatotavalladares carlosjcatotavalladares 8.5K Feb 22 2022 sample.xls
-rw-rw-r-- 1 carlosjcatotavalladares carlosjcatotavalladares 76 Feb 22 2022 helloWorld.c
carlosjcatotavalladares@cisi106vm:~/lab4files$ ls -lhSg
total 6.5M
-rw-rw-r-- 1 2.5M Feb 22 2022 Linux.pdf
-rw-rw-r-- 1 2.1M Feb 22 2022 Ubuntu.pdf
-rw-rw-r-- 1 747K Feb 22 2022 document.docx
-rw-rw-r-- 1 726K Feb 22 2022 globe.avi
-rw-rw-r-- 1 278K Feb 22 2022 csvfile.csv
-rw-rw-r-- 1 135K Feb 22 2022 website.html
-rw-rw-r-- 1 42K Feb 22 2022 Tux.png
-rw-rw-r-- 1 20K Feb 22 2022 countries.json
-rw-rw-r-- 1 8.5K Feb 22 2022 sample.xls
-rw-rw-r-- 1 76 Feb 22 2022 helloWorld.c
carlosjcatotavalladares@cisi106vm:~/lab4files$ ls -lhSgGi
total 6.5M
933048 -rw-rw-r-- 1 2.5M Feb 22 2022 Linux.pdf
933073 -rw-rw-r-- 1 2.1M Feb 22 2022 Ubuntu.pdf
933079 -rw-rw-r-- 1 747K Feb 22 2022 document.docx
933083 -rw-rw-r-- 1 726K Feb 22 2022 globe.avi
933077 -rw-rw-r-- 1 278K Feb 22 2022 csvfile.csv
933165 -rw-rw-r-- 1 135K Feb 22 2022 website.html
933049 -rw-rw-r-- 1 42K Feb 22 2022 Tux.png
933075 -rw-rw-r-- 1 20K Feb 22 2022 countries.json
933161 -rw-rw-r-- 1 8.5K Feb 22 2022 sample.xls
933085 -rw-rw-r-- 1 76 Feb 22 2022 helloWorld.c

```

```

carlosjcatotavalladares@cis106vm:~/lab4files$ ls -Xr
sample.xls  Ubuntu.pdf  countries.json  document.docx  helloWorld.c
Tux.png     Linux.pdf   website.html    csvfile.csv    globe.avi
carlosjcatotavalladares@cis106vm:~/lab4files$ ls -Xr1
sample.xls
Tux.png
Ubuntu.pdf
Linux.pdf
countries.json
website.html
document.docx
csvfile.csv
helloWorld.c
globe.avi
carlosjcatotavalladares@cis106vm:~/lab4files$ 

```

Question 4

```

carlosjcatotavalladares@cis106vm:~$ pwd
/home/carlosjcatotavalladares
carlosjcatotavalladares@cis106vm:~$ cd /usr/share/icons/default/
carlosjcatotavalladares@cis106vm:/usr/share/icons/default$ cd /proc/sys/net/ipv4/
carlosjcatotavalladares@cis106vm:/proc/sys/net/ipv4$ cd -
/usr/share/icons/default
carlosjcatotavalladares@cis106vm:/usr/share/icons/default$ ls /usr/share/backgrounds/
Blue_flower_by_Elena_Stravoravdi.jpg
canvas_by_roytanck.jpg
Cherry_Tree_in_Lakones_by_elenastravoravdi.jpg
contest
DSC2943_by_kcpru.jpg
Jammy-Jellyfish_WP_4096x2304_Grey.png
jj_dark_by_Hiking93.jpg
jj_light_by_Hiking93.jpg
Mirror_by_Uday_Nakade.jpg
Optical_Fibers_in_Dark_by_Elena_Stravoravdi.jpg
ubuntu2_by_arman1992.jpg
ubuntu_by_arman1992.jpg
ubuntu-default-greyscale-wallpaper.png
warty-final-ubuntu.png
carlosjcatotavalladares@cis106vm:/usr/share/icons/default$ ls ~/cis106/
Cheatsheets Labs weekReports
carlosjcatotavalladares@cis106vm:/usr/share/icons/default$ cd

carlosjcatotavalladares@cis106vm:~$ ls Downloads/
code_1.82.2-1694671812_amd64.deb
lab4files.zip
'Linux Workshop Ubuntu Software installation cheat sheet.png'
practicels.tar.xz
carlosjcatotavalladares@cis106vm:~$ ls Downloads/ -a
.
..
code_1.82.2-1694671812_amd64.deb
lab4files.zip
'Linux Workshop Ubuntu Software installation cheat sheet.png'
practicels.tar.xz
carlosjcatotavalladares@cis106vm:~$ cd /dev/disk/by-id/
carlosjcatotavalladares@cis106vm:/dev/disk/by-id$ ls -al /home/
total 12
drwxr-xr-x  3 root          root          4096 Sep 24 16:13 .
drwxr-xr-x 20 root          root          4096 Oct  8 10:32 ..
drwxr-x--- 23 carlosjcatotavalladares carlosjcatotavalladares 4096 Oct 22 20:33 carlosjcatotavalladares
carlosjcatotavalladares@cis106vm:/dev/disk/by-id$ ls -t /usr/share/themes/
Yaru                Yaru-hdpi                Yaru-purple-dark      Default
Yaru-bark           Yaru-magenta             Yaru-red              Emacs
Yaru-bark-dark      Yaru-magenta-dark        Yaru-red-dark         Raleigh
Yaru-blue           Yaru-olive               Yaru-sage              Adwaita
Yaru-blue-dark      Yaru-olive-dark          Yaru-sage-dark        Adwaita-dark
Yaru-dark           Yaru-prussiangreen       Yaru-viridian         HighContrast
Yaru-dark-hdpi      Yaru-prussiangreen-dark  Yaru-viridian-dark
Yaru-dark-xhdoi     Yaru-purple              Yaru-xhdoi

```

```
carlosjcatotavalladares@cis106vm:/dev/disk/by-id$ ls -X /usr/share/
accountsservice          libc-bin
aclocal                  libdebuginfod-common
acpi-support             libdrm
adduser                  libexttextcat
aisleriot                libgnomekbd
alacarte                 libgweather
alsa                    libgweather-4
alsa-base               libinput
alsa-card-profile       liblangtag
appdata                 liblouis
app-info                liblouisutdm1
applications            libmysofa
appport                 libreoffice
apps                    libvenge
apturl                  libthai
aspell                  libwacom
avahi                   lightdm
backgrounds             lintian
base-files              linux-sound-base
base-passwd             locale
bash-completion         locale-langpack
binfmts                 locales
branding                lto-disabled-list
brltty                  m2300w
bug                      man
build-essential         man-db
ca-certificates         mate-panel
caffeine-indicator      maven-repo
catdoc                  media-player-info
cmake                   menu
code                    mesa-demos
cogl                    metainfo
color                   mfx
colord                  mime
common-licenses         misc
consolefonts            mobile-broadband-provider-info
console-setup           ModemManager
consoletrans            mousetweaks
cowsay                  mythes
cups                    nano
dbus-1                  nautilus
dconf                   nautilus-python
debconf                 nautilus-share
devd
```

```
ebianutils
efaults
esktop-directories
ict
ictionaries-common
istro-info
jvu
ns
nsmasq-base
oc
oc-base
pkg
nacs
nacsen-common
nchant-2
og
piphany-browser
vince
volution-data-server
iglet
ile
ile-roller
ish
lameshot
latpak
ontconfig
onts
onts-droid-fallback
onts-sil-abyssinica
onts-sil-padauk
oo2qpd1
oo2zjs
wupd
amemode
ames
cc
Conf
db
dm
eany
eary
edit
eoIP
ettext
netpbm
netplan
numpy3
openvpn
orca
os-prober
p11-kit
package-data-downloads
PackageKit
pam
pam-configs
perl
perl5
perl-openssl-defaults
pipewire
pixmap
pkgconfig
plymouth
pnm2ppa
pocketsphinx
polkit-1
poppler
ppd
ppp
publicsuffix
pulseaudio
pyshared
python3
python-apt
python-wheels
qlogging-categories5
qt5
readline
remmina
rhythmbox
rig
rsync
rsyslog
rubygems-integration
rygel
samba
seahorse
secureboot
sensible-utils
```

```
ghostscript
git-core
gitweb
glade
glvnd
gnome
gnome-applets
gnome-background-properties
gnome-bluetooth
gnome-control-center
gnome-initial-setup
gnome-logs
gnome-mahjongg
gnome-panel
gnome-remote-desktop
gnome-session
gnome-settings-daemon
gnome-shell
gnome-software
gnome-system-monitor
gnome-todo
gnome-tweaks
gnome-video-effects
gnupg
grilo-plugins
groff
grub
grub-gfxpayload-lists
gst-plugins-base
gtk-doc
gtk-engines
gtksourceview-4
guile
gupnp-av
gvfs
help
help-langpack
hplip
hunspell
hwdata
hyphen
i18n
ibus
ibus-table
icons
session-migration
sgml
sgml-base
sgml-data
snmp
software-properties
solid
sounds
source-highlight
speech-dispatcher
ssl-cert
system-config-printer
systemd
systemtap
tabset
tcltk
terminfo
tex-common
texlive
texmf
themes
thumbnailers
tilix
totem
tracker3
tracker3-miners
transmission
ubuntu
ubuntu-drivers-common
ubuntu-release-upgrader
ubuntu-wayland
ucf
ufw
unattended-upgrades
unity
update-manager
update-notifier
upstart
usb-creator
usb_modeswitch
vala
vim
vlc
vulkan
w3m
```



```
icons
ImageMagick-6
im-config
indicator-application
indicator-power
indicators
info
initramfs-tools
installed-tests
ipp-usb
iptables
iso-codes
java
javascript
kconf_update
kde4
keyrings
kf5
knotifications5
kservices5
kservicetypes5
language-selector
language-support
language-tools
libcaca
w3m
wayland-sessions
X11
xapps-common
xdg-desktop-portal
xml
xml-core
xsessions
yelp
yelp-xsl
zenity
zoneinfo
zoneinfo-icu
zsh
gir-1.0
glib-2.0
gnome-bluetooth-3.0
goa-1.0
gststreamer-1.0
gtk-4.0
gtksourceview-2.0
gtksourceview-3.0
gupnp-dlna-2.0
org.gnome.Characters
drirc.d
```

Question 5

```
carlosjcatotavalladares@cis106vm:~$ cd ../../
carlosjcatotavalladares@cis106vm:/$ cd home/carlosjcatotavalladares/Downloads/
carlosjcatotavalladares@cis106vm:~/Downloads$ pwd
/home/carlosjcatotavalladares/Downloads
carlosjcatotavalladares@cis106vm:~/Downloads$
```

```
carlosjcatotavalladares@cis106vm:~$ cd /usr/share/themes/Adwaita/
carlosjcatotavalladares@cis106vm:/usr/share/themes/Adwaita$ cd ~/Documents/
carlosjcatotavalladares@cis106vm:~/Documents$ pwd
/home/carlosjcatotavalladares/Documents
carlosjcatotavalladares@cis106vm:~/Documents$
```