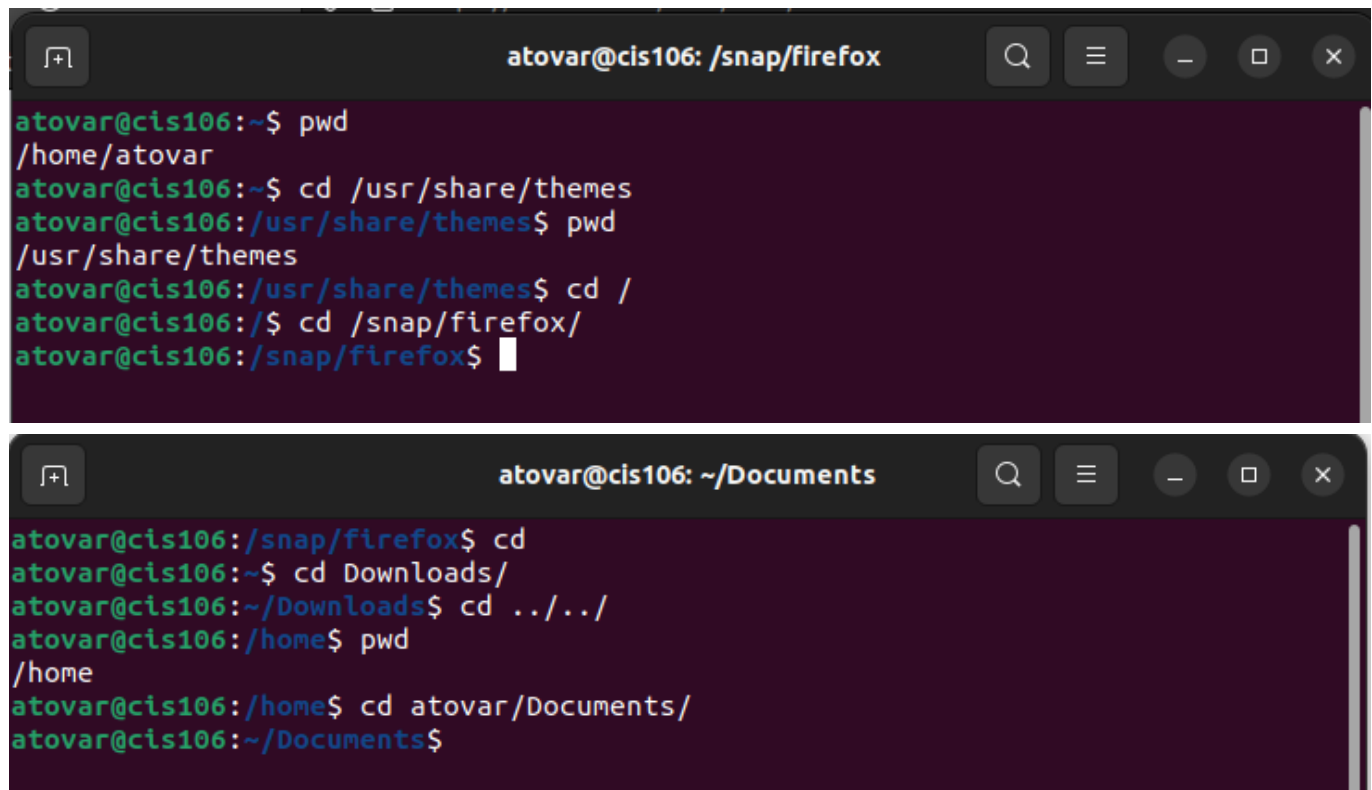


Lab 4 The linux FS

Question 1



The image shows two terminal windows. The first window, titled 'atovar@cis106: /snap/firefox', shows a sequence of commands: 'pwd' (returns /home/atovar), 'cd /usr/share/themes' (returns /usr/share/themes), 'pwd' (returns /usr/share/themes), 'cd /' (returns /), 'cd /snap/firefox/' (returns /snap/firefox/), and the prompt is ready for the next command. The second window, titled 'atovar@cis106: ~/Documents', shows: 'cd' (returns /snap/firefox/), 'cd Downloads/' (returns ~/Downloads/), 'cd ../../' (returns /home/), 'pwd' (returns /home), 'cd atovar/Documents/' (returns ~/Documents/), and the prompt is ready for the next command.

```
atovar@cis106:~$ pwd
/home/atovar
atovar@cis106:~$ cd /usr/share/themes
atovar@cis106:/usr/share/themes$ pwd
/usr/share/themes
atovar@cis106:/usr/share/themes$ cd /
atovar@cis106:/$ cd /snap/firefox/
atovar@cis106:/snap/firefox$
```

```
atovar@cis106:/snap/firefox$ cd
atovar@cis106:~$ cd Downloads/
atovar@cis106:~/Downloads$ cd ../../
atovar@cis106:/home$ pwd
/home
atovar@cis106:/home$ cd atovar/Documents/
atovar@cis106:~/Documents$
```

Question 2

```

atovar@cis106: ~/lab4files
atovar@cis106:~/Documents$ cd /usr/share/
atovar@cis106:/usr/share$ ls /home/atovar/lab4files/
countries.json  document.docx  helloWorld.c  sample.xls  Ubuntu.pdf
csvfile.csv     globe.avi      Linux.pdf     Tux.png     website.html
atovar@cis106:/usr/share$ cd ~/lab4files/
atovar@cis106:~/lab4files$ ls -l
total 6580
-rw-rw-r-- 1 atovar atovar 20471 Feb 22 2022 countries.json
-rw-rw-r-- 1 atovar atovar 284042 Feb 22 2022 csvfile.csv
-rw-rw-r-- 1 atovar atovar 764176 Feb 22 2022 document.docx
-rw-rw-r-- 1 atovar atovar 742478 Feb 22 2022 globe.avi
-rw-rw-r-- 1 atovar atovar 76 Feb 22 2022 helloWorld.c
-rw-rw-r-- 1 atovar atovar 2600138 Feb 22 2022 Linux.pdf
-rw-rw-r-- 1 atovar atovar 8704 Feb 22 2022 sample.xls
-rw-rw-r-- 1 atovar atovar 42777 Feb 22 2022 Tux.png
-rw-rw-r-- 1 atovar atovar 2114053 Feb 22 2022 Ubuntu.pdf
-rw-rw-r-- 1 atovar atovar 137453 Feb 22 2022 website.html
atovar@cis106:~/lab4files$ ls -lh
total 6.5M
-rw-rw-r-- 1 atovar atovar 20K Feb 22 2022 countries.json
-rw-rw-r-- 1 atovar atovar 278K Feb 22 2022 csvfile.csv
-rw-rw-r-- 1 atovar atovar 747K Feb 22 2022 document.docx
-rw-rw-r-- 1 atovar atovar 726K Feb 22 2022 globe.avi
-rw-rw-r-- 1 atovar atovar 76 Feb 22 2022 helloWorld.c
-rw-rw-r-- 1 atovar atovar 2.5M Feb 22 2022 Linux.pdf
-rw-rw-r-- 1 atovar atovar 8.5K Feb 22 2022 sample.xls
-rw-rw-r-- 1 atovar atovar 42K Feb 22 2022 Tux.png
-rw-rw-r-- 1 atovar atovar 2.1M Feb 22 2022 Ubuntu.pdf
-rw-rw-r-- 1 atovar atovar 135K Feb 22 2022 website.html
atovar@cis106:~/lab4files$ ls -lhs
total 6.5M
-rw-rw-r-- 1 atovar atovar 2.5M Feb 22 2022 Linux.pdf
-rw-rw-r-- 1 atovar atovar 2.1M Feb 22 2022 Ubuntu.pdf
-rw-rw-r-- 1 atovar atovar 747K Feb 22 2022 document.docx
-rw-rw-r-- 1 atovar atovar 726K Feb 22 2022 globe.avi
-rw-rw-r-- 1 atovar atovar 278K Feb 22 2022 csvfile.csv
-rw-rw-r-- 1 atovar atovar 135K Feb 22 2022 website.html
-rw-rw-r-- 1 atovar atovar 42K Feb 22 2022 Tux.png
-rw-rw-r-- 1 atovar atovar 20K Feb 22 2022 countries.json
-rw-rw-r-- 1 atovar atovar 8.5K Feb 22 2022 sample.xls
-rw-rw-r-- 1 atovar atovar 76 Feb 22 2022 helloWorld.c
atovar@cis106:~/lab4files$ ls -lhsGg
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
atovar@cis106:~/lab4files$ ls -lhsGi
total 6.5M
1204283 -rw-rw-r-- 1 2.5M Feb 22 2022 Linux.pdf
1204285 -rw-rw-r-- 1 2.1M Feb 22 2022 Ubuntu.pdf
1204288 -rw-rw-r-- 1 747K Feb 22 2022 document.docx
1204289 -rw-rw-r-- 1 726K Feb 22 2022 globe.avi
1204287 -rw-rw-r-- 1 278K Feb 22 2022 csvfile.csv
1204292 -rw-rw-r-- 1 135K Feb 22 2022 website.html
1204284 -rw-rw-r-- 1 42K Feb 22 2022 Tux.png
1204286 -rw-rw-r-- 1 20K Feb 22 2022 countries.json
1204291 -rw-rw-r-- 1 8.5K Feb 22 2022 sample.xls
1204290 -rw-rw-r-- 1 76 Feb 22 2022 helloWorld.c
atovar@cis106:~/lab4files$ ls -Xr
sample.xls  Tux.png  Ubuntu.pdf  Linux.pdf  countries.json  website.html  document.docx  csvfile.csv  helloWorld.c  globe.avi
atovar@cis106:~/lab4files$ ls -Xr1
sample.xls
Tux.png
Ubuntu.pdf
Linux.pdf
countries.json
website.html
document.docx
csvfile.csv
helloWorld.c
globe.avi
atovar@cis106:~/lab4files$

```

Question 3

Question 4

```

atovar@cis106: /dev/disk/by-id
atovar@cis106:~$ pwd
/home/atovar
atovar@cis106:~$ cd /usr/share/icons/default/
atovar@cis106:/usr/share/icons/default$ cd /proc/sys/net/ipv4/
atovar@cis106:/proc/sys/net/ipv4$ cd -
/usr/share/icons/default
atovar@cis106:/usr/share/icons/default$ ls /share/backgrounds/
ls: cannot access '/share/backgrounds/': No such file or directory
atovar@cis106:/usr/share/icons/default$ ls /usr/share/backgrounds/
Blue_flower_by_Elena_Stravoravdi.jpg          jj_light_by_Hiking93.jpg
canvas_by_roytanck.jpg                        Mirror_by_Uday_Nakade.jpg
Cherry_Tree_in_Lakones_by_elenastravoravdi.jpg Optical_Fibers_in_Dark_by_Elena_Stravoravdi.jpg
contest                                         ubuntu2_by_arman1992.jpg
DSC2943_by_kcpru.jpg                          ubuntu_by_arman1992.jpg
Jammy-Jellyfish_WP_4096x2304_Grey.png         ubuntu-default-greyscale-wallpaper.png
jj_dark_by_Hiking93.jpg                      warty-final-ubuntu.png
atovar@cis106:/usr/share/icons/default$ ls /home/atovar/cis106/
cheatSheet labs weekReports
atovar@cis106:/usr/share/icons/default$ cd /home/
atovar@cis106:/home$ ls /home/atovar/cis106/
cheatSheet labs weekReports
atovar@cis106:/home$ ls /home/atovar/Downloads/
cis106homework.docx lab4files.zip my myfiles mygames
atovar@cis106:/home$ cd /dev/disk/by-id/
atovar@cis106:/dev/disk/by-id$ ls -la
total 0
drwxr-xr-x 2 root root 140 Oct 26 23:47 .
drwxr-xr-x 7 root root 140 Oct 26 23:46 ..
lrwxrwxrwx 1 root root 9 Oct 26 23:46 ata-VBOX_CD-ROM_VB2-01700376 -> ../../sr0
lrwxrwxrwx 1 root root 9 Oct 26 23:46 ata-VBOX_HARDDISK_VB568bd1dc-984dcb67 -> ../../sda
lrwxrwxrwx 1 root root 10 Oct 26 23:46 ata-VBOX_HARDDISK_VB568bd1dc-984dcb67-part1 -> ../../sda1
lrwxrwxrwx 1 root root 10 Oct 26 23:47 ata-VBOX_HARDDISK_VB568bd1dc-984dcb67-part2 -> ../../sda2
lrwxrwxrwx 1 root root 10 Oct 26 23:46 ata-VBOX_HARDDISK_VB568bd1dc-984dcb67-part3 -> ../../sda3
atovar@cis106:/dev/disk/by-id$ ls -t /usr/share/themes/
Yaru          Yaru-dark      Yaru-magenta-dark  Yaru-purple      Yaru-sage-dark  Emacs
Yaru-bark     Yaru-dark-hdpi Yaru-olive          Yaru-purple-dark Yaru-viridian    Raleigh
Yaru-bark-dark Yaru-dark-xdpi Yaru-olive-dark     Yaru-red          Yaru-viridian-dark Adwaita
Yaru-blue     Yaru-hdpi      Yaru-prussiangreen Yaru-red-dark     Yaru-xhdpi       Adwaita-dark
Yaru-blue-dark Yaru-magenta   Yaru-prussiangreen-dark Yaru-sage         Default          HighContrast

atovar@cis106:/dev/disk/by-id$ ls -X /usr/share/
accountsservice gcc libdrm rig
aclocal GConf libexttextcat rsync
acpi-support gdb libgnomekbd rsyslog
adduser gdm libgweather rubygems-integration
aisleriot geany libgweather-4 rygel
alacarte geary libinput samba
alsa gedit liblangtag sass
alsa-base GeoIP liblouis seahorse
alsa-card-profile gettext liblouisutdm1 secureboot
appdata ghostscript libmysofa sensible-utils
app-info git-core libreoffice session-migration
applications gitweb librevenge sgml
apport glade libthai sgml-base
apps glvnd libwacom sgml-data
apturl gnome lightdm snmp
aspell gnome-applets lintian software-properties
avahi gnome-background-properties linux-sound-base solid
backgrounds gnome-bluetooth locale sounds
base-files gnome-control-center locale-langpack source-highlight
base-passwd gnome-initial-setup locales speech-dispatcher
bash-completion gnome-logs lto-disabled-list sphinx_rtd_theme
binfmts gnome-mahjongg m2300w ssl-cert
branding gnome-panel man system-config-printer
brlty gnome-remote-desktop man-db systemd
bug gnome-session mate-panel systemtap
build-essential gnome-settings-daemon maven-repo tabset
ca-certificates gnome-shell media-player-info tcltk
caffeine-indicator gnome-software menu terminfo
catdoc gnome-system-monitor mesa-demos tex-common
cmake gnome-todo metainfo texlive
code gnome-tweaks mfx texmf
cogl gnome-video-effects mime themes
color gnupg misc thumbnails
colord grilo-plugins mobile-broadband-provider-info tilix
common-licenses groff ModemManager totem
consolefonts grub mopidy tracker3
console-setup grub-gfxpayload-lists mousetweaks tracker3-miners
consoletrans gst-plugins-base mythes transmission
cowsay gtk-doc nano ubuntu
cups gtk-engines nautilus ubuntu-drivers-common

```

dbus-1	gtksourceview-4	nautilus-python	ubuntu-release-upgrader
dconf	guile	nautilus-share	ubuntu-wayland
debconf	gupnp-av	nemo	ucf
debhelper	gvfs	netpbm	ufw
debianutils	help	netplan	unattended-upgrades
defaults	help-langpack	nodejs	unity
desktop-directories	hplip	numpy3	update-manager
dict	hunspell	open-vm-tools	update-notifier
dictionaries-common	hwdata	openvpn	upstart
distro-info	hyphen	orca	usb-creator
djvu	i18n	os-prober	usb_modeswitch
dns	ibus	p11-kit	vala
dnsmasq-base	ibus-table	package-data-downloads	vim
doc	icons	PackageKit	vlc
doc-base	ImageMagick-6	pam	vulkan
dpkg	im-config	pam-configs	w3m
emacs	indicator-application	perl	wayland-sessions
emacs-common	indicator-power	perl5	X11
enchant-2	indicators	perl-openssl-defaults	xapps-common
eog	info	pipewire	xdg-desktop-portal
epiphany-browser	initramfs-tools	pixmaps	xml
evince	installed-tests	pkgconfig	xml-core
evolution-data-server	ipp-usb	plasma	xsessions
figlet	iptables	plymouth	yelp
file	iso-codes	pnm2ppa	yelp-xsl
file-roller	java	pocketsphinx	zenity
fish	javascript	polkit-1	zoneinfo
flameshot	kconf_update	poppler	zoneinfo-icu
flatpak	kde4	ppd	zsh
fontconfig	keyrings	ppp	gir-1.0
fonts	kf5	publicsuffix	glib-2.0
fonts-droid-fallback	knotifications5	pulseaudio	gnome-bluetooth-3.0
fonts-font-awesome	kservices5	pyshared	goa-1.0
fonts-sil-abyssinica	kservicetypes5	python3	gststreamer-1.0
fonts-sil-padauk	language-selector	python-apt	gtk-4.0
foo2qpdf	language-support	qlogging-categories5	gtksourceview-2.0
foo2zjs	language-tools	qt5	gtksourceview-3.0
fwupd	libcaca	readline	gupnp-dlna-2.0
gamemode	libc-bin	remmina	org.gnome.Characters
games	libdebuginfod-common	rhythmbox	drirc.d

Question 5

```

atovar@cis106: ~/Downloads

atovar@cis106:~$ cd /
atovar@cis106:/$ cd /home/
atovar@cis106:/home$ cd /home/atovar/
atovar@cis106:~$ cd /home/atovar/Downloads/
atovar@cis106:~/Downloads$ pwd
/home/atovar/Downloads
atovar@cis106:~/Downloads$

```

```

atovar@cis106: /usr/share

atovar@cis106:~/Downloads$ cd /usr/share/
atovar@cis106:/usr/share$ cd /usr/share/themes/Adwaita

```