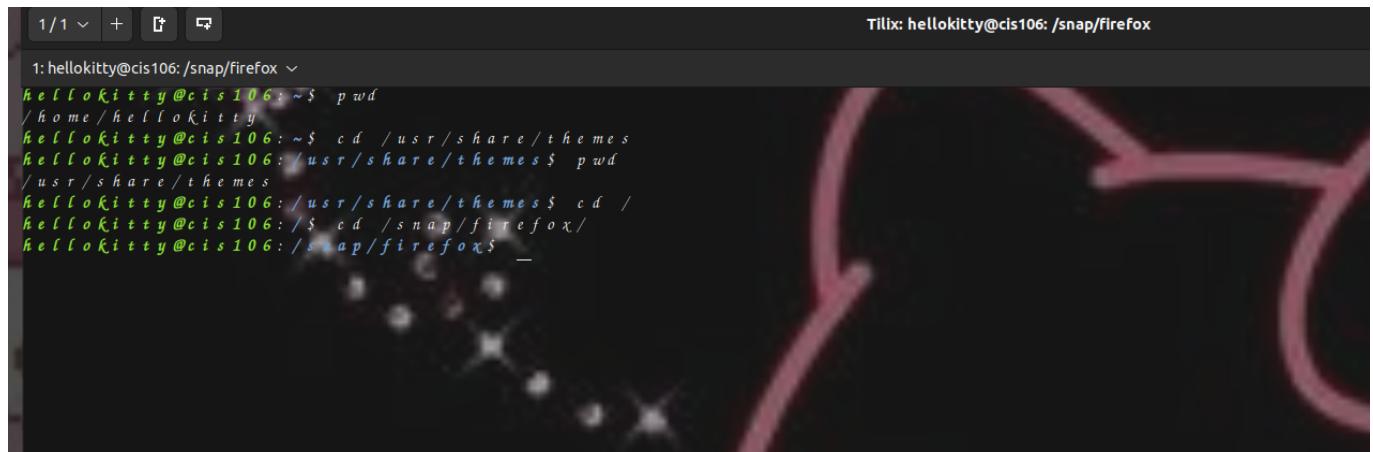


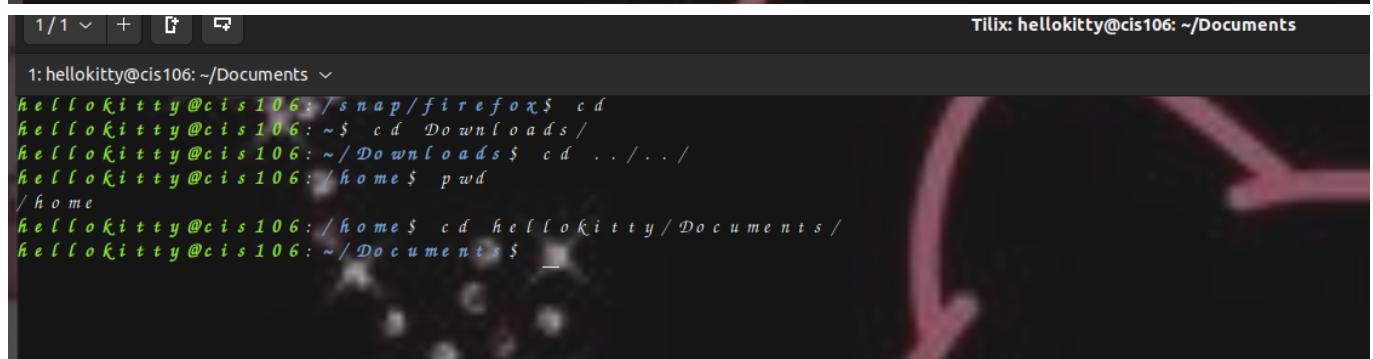
Lab 4 The Linux FS

Question 1



```
1/1 ~ + 🖼 🔍 Tilix: hellokitty@cis106: /snap/firefox

1: hellokitty@cis106:~/snap/firefox ~
hellokitty@cis106:~$ pwd
/home/hellokitty
hellokitty@cis106:~$ cd /usr/share/themes
hellokitty@cis106:/usr/share/themes$ pwd
/usr/share/themes
hellokitty@cis106:/usr/share/themes$ cd /
hellokitty@cis106:/$ cd /snap/firefox/
hellokitty@cis106:/snap/firefox$ _
```



```
1/1 ~ + 🖼 🔍 Tilix: hellokitty@cis106: ~/Documents

1: hellokitty@cis106:~/Documents ~
hellokitty@cis106:/snap/firefox$ cd
hellokitty@cis106:~$ cd Downloads/
hellokitty@cis106:~/Downloads$ cd ./. .
hellokitty@cis106:/home$ pwd
/home
hellokitty@cis106:/home$ cd hellokitty/Documents/
hellokitty@cis106:~/Documents$ _
```

Question 2

```
1/1 + 🔍 Tilix: hellokitty@cis106: ~/lab4files

1: hellokitty@cis106: ~/lab4files ~
hellokitty@cis106: ~/lab4files$ cd /usr/share/
hellokitty@cis106: /usr/share$ ls /home/hellokitty/lab4files
countries.json document.docx helloWorld.c sample.xls Ubuntu.pdf
csvfile.csv globe.avi Linux.pdf TuX.png website.html
hellokitty@cis106: /usr/share$ cd ~/lab4files/
hellokitty@cis106: ~/lab4files$ ls -l
total 6580
-rw-rw-r-- 1 hellokitty hellokitty 20471 Feb 22 2022 countries.json
-rw-rw-r-- 1 hellokitty hellokitty 284042 Feb 22 2022 csvfile.csv
-rw-rw-r-- 1 hellokitty hellokitty 764176 Feb 22 2022 document.docx
-rw-rw-r-- 1 hellokitty hellokitty 742478 Feb 22 2022 globe.avi
-rw-rw-r-- 1 hellokitty hellokitty 76 Feb 22 2022 helloWorld.c
-rw-rw-r-- 1 hellokitty hellokitty 2600138 Feb 22 2022 Linux.pdf
-rw-rw-r-- 1 hellokitty hellokitty 8704 Feb 22 2022 sample.xls
-rw-rw-r-- 1 hellokitty hellokitty 42777 Feb 22 2022 TuX.png
-rw-rw-r-- 1 hellokitty hellokitty 2114053 Feb 22 2022 Ubuntu.pdf
-rw-rw-r-- 1 hellokitty hellokitty 137453 Feb 22 2022 website.html
hellokitty@cis106: ~/lab4files$ ls -lh
total 6.5M
-rw-rw-r-- 1 hellokitty hellokitty 20K Feb 22 2022 countries.json
-rw-rw-r-- 1 hellokitty hellokitty 278K Feb 22 2022 csvfile.csv
-rw-rw-r-- 1 hellokitty hellokitty 747K Feb 22 2022 document.docx
-rw-rw-r-- 1 hellokitty hellokitty 726K Feb 22 2022 globe.avi
-rw-rw-r-- 1 hellokitty hellokitty 76 Feb 22 2022 helloWorld.c
-rw-rw-r-- 1 hellokitty hellokitty 2.5M Feb 22 2022 Linux.pdf
-rw-rw-r-- 1 hellokitty hellokitty 8.5K Feb 22 2022 sample.xls
-rw-rw-r-- 1 hellokitty hellokitty 42K Feb 22 2022 TuX.png
-rw-rw-r-- 1 hellokitty hellokitty 2.1M Feb 22 2022 Ubuntu.pdf
-rw-rw-r-- 1 hellokitty hellokitty 135K Feb 22 2022 website.html
hellokitty@cis106: ~/lab4files$ ls -lhs
total 6.5M
-rw-rw-r-- 1 hellokitty hellokitty 2.5M Feb 22 2022 Linux.pdf
-rw-rw-r-- 1 hellokitty hellokitty 2.1M Feb 22 2022 Ubuntu.pdf
-rw-rw-r-- 1 hellokitty hellokitty 747K Feb 22 2022 document.docx
-rw-rw-r-- 1 hellokitty hellokitty 726K Feb 22 2022 globe.avi
-rw-rw-r-- 1 hellokitty hellokitty 278K Feb 22 2022 csvfile.csv
-rw-rw-r-- 1 hellokitty hellokitty 135K Feb 22 2022 website.html
-rw-rw-r-- 1 hellokitty hellokitty 42K Feb 22 2022 TuX.png
-rw-rw-r-- 1 hellokitty hellokitty 20K Feb 22 2022 countries.json
-rw-rw-r-- 1 hellokitty hellokitty 8.5K Feb 22 2022 sample.xls
-rw-rw-r-- 1 hellokitty hellokitty 76 Feb 22 2022 helloWorld.c
hellokitty@cis106: ~/lab4files$ ls -lhsqG
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
hellokitty@cis106: ~/lab4files$ ls -lhsqGi
total 6.5M
036935 -rw-rw-r-- 1 2.5M Feb 22 2022 Linux.pdf
036948 -rw-rw-r-- 1 2.1M Feb 22 2022 Ubuntu.pdf
036960 -rw-rw-r-- 1 747K Feb 22 2022 document.docx
036963 -rw-rw-r-- 1 726K Feb 22 2022 globe.avi
036958 -rw-rw-r-- 1 278K Feb 22 2022 csvfile.csv
037087 -rw-rw-r-- 1 135K Feb 22 2022 website.html
036937 -rw-rw-r-- 1 42K Feb 22 2022 TuX.png
036950 -rw-rw-r-- 1 20K Feb 22 2022 countries.json
037086 -rw-rw-r-- 1 8.5K Feb 22 2022 sample.xls
037085 -rw-rw-r-- 1 76 Feb 22 2022 helloWorld.c
hellokitty@cis106: ~/lab4files$ ls -Xr
sample.xls Ubuntu.pdf countries.json document.docx helloWorld.c
TuX.png Linux.pdf website.html csvfile.csv globe.avi
hellokitty@cis106: ~/lab4files$
```

Question 4

```

1/1 ~ + ↻ Tilix: hellokitty@cis106: /dev/disk/by-id

1:hellokitty@cis106:/dev/disk/by-id ~
helllokitty@cis106: ~$ pwd
/home/helllokitty
helllokitty@cis106: ~$ cd /usr
helllokitty@cis106: /usr$ cd /proc/ipv4
bash: cd: /proc/ipv4: No such file or directory
helllokitty@cis106: /usr$ cd /usr
helllokitty@cis106: /usr$ ls /usr/share/backgrounds
Blue_flower_by_Elena_Stravoravdi.jpg
canvas_by_roytanck.jpg
Cherry_Tree_in_Lakones_by_elenastravoravdi.jpg
contest
DS_C2943_by_kepru.jpg
Jammie_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
ubuntu_by_arman1992.jpg
ubuntu_by_arman1992.jpg
ubuntu-default-greyscale-wallpaper.png
warty-final-ubuntu.png
helllokitty@cis106: /usr$ ls -c/s106
cheatsheet gitCommands.txt LABS weekReports
helllokitty@cis106: /usr$ ls Downloads/
ls: cannot access 'Downloads/': No such file or directory
helllokitty@cis106: /usr$ cd /dev/disk/by-id
helllokitty@cis106: /dev/disk/by-ids ls -l
ls: ls: command not found
helllokitty@cis106: /dev/disk/by-ids ls -l
total 0
lrwxrwxrwx 1 root root 9 Dec 6 17:42 ata-VBOX_CD-ROM_VB2-01700376 -> ../../sr0
lrwxrwxrwx 1 root root 9 Dec 6 17:42 ata-VBOX_HARDDISK_VBa032c3b8-08c9633f -> ../../sda1
lrwxrwxrwx 1 root root 10 Dec 6 17:42 ata-VBOX_HARDDISK_VBa032c3b8-08c9633f-part1 -> ../../sda1
lrwxrwxrwx 1 root root 10 Dec 6 17:42 ata-VBOX_HARDDISK_VBa032c3b8-08c9633f-part2 -> ../../sda2
lrwxrwxrwx 1 root root 10 Dec 6 17:42 ata-VBOX_HARDDISK_VBa032c3b8-08c9633f-part3 -> ../../sda3

1/1 ~ + ↻ Tilix: hellokitty@cis106: /dev/disk/by-id

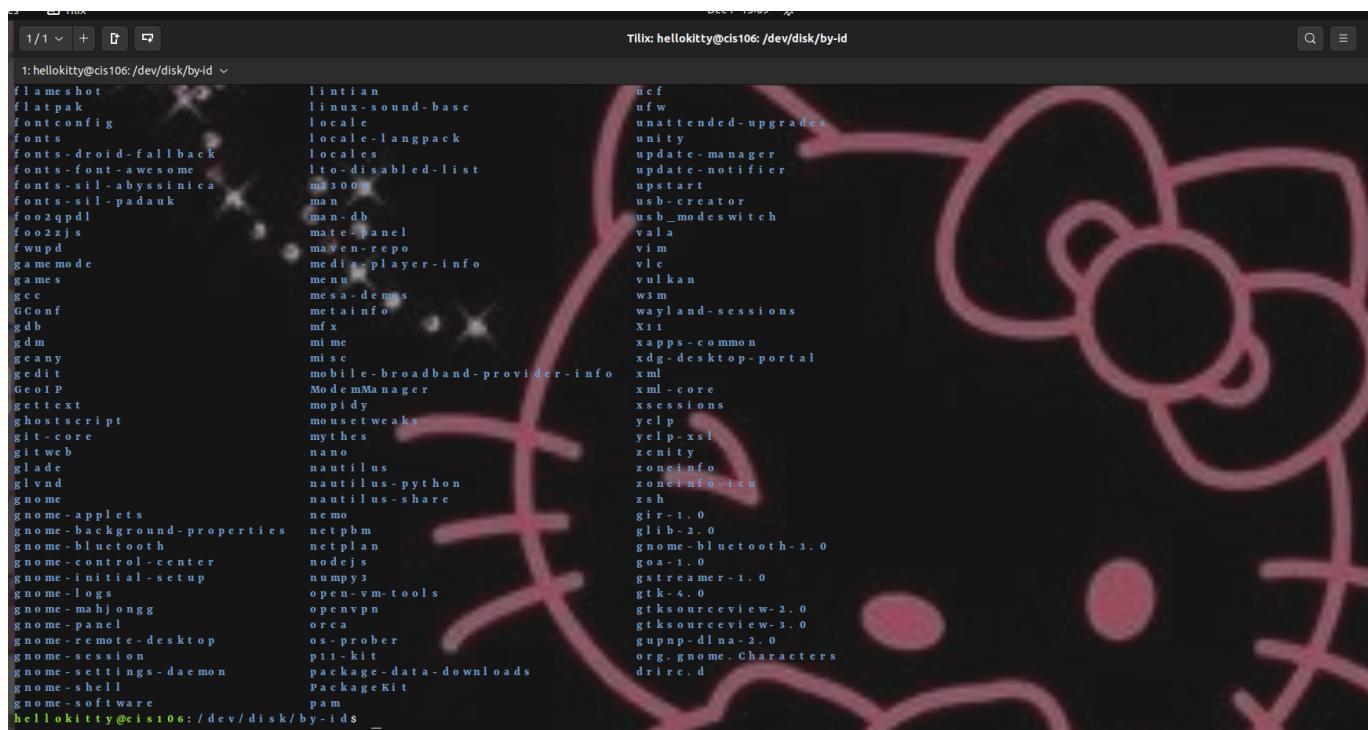
1:hellokitty@cis106:/dev/disk/by-id ~
helllokitty@cis106: /dev/disk/by-ids ls -la
total 0
drwxr-xr-x 2 root root 140 Dec 6 17:42 .
drwxr-xr-x 7 root root 140 Dec 6 17:42 ..
lrwxrwxrwx 1 root root 9 Dec 6 17:42 ata-VBOX_CD-ROM_VB2-01700376 -> ../../sr0
lrwxrwxrwx 1 root root 9 Dec 6 17:42 ata-VBOX_HARDDISK_VBa032c3b8-08c9633f -> ../../sda1
lrwxrwxrwx 1 root root 10 Dec 6 17:42 ata-VBOX_HARDDISK_VBa032c3b8-08c9633f-part1 -> ../../sda1
lrwxrwxrwx 1 root root 10 Dec 6 17:42 ata-VBOX_HARDDISK_VBa032c3b8-08c9633f-part2 -> ../../sda2
lrwxrwxrwx 1 root root 10 Dec 6 17:42 ata-VBOX_HARDDISK_VBa032c3b8-08c9633f-part3 -> ../../sda3
helllokitty@cis106: /dev/disk/by-ids ls -lt /usr/share/themes
total 120
drwxr-xr-x 7 root root 4096 Aug 7 18:54 Yaru
drwxr-xr-x 5 root root 4096 Aug 7 18:54 Yaru-bark
drwxr-xr-x 5 root root 4096 Aug 7 18:54 Yaru-bark-dark
drwxr-xr-x 5 root root 4096 Aug 7 18:54 Yaru-blue
drwxr-xr-x 5 root root 4096 Aug 7 18:54 Yaru-blue-dark
drwxr-xr-x 7 root root 4096 Aug 7 18:54 Yaru-dark
drwxr-xr-x 3 root root 4096 Aug 7 18:54 Yaru-dark-hdpi
drwxr-xr-x 3 root root 4096 Aug 7 18:54 Yaru-dark-xhdpi
drwxr-xr-x 3 root root 4096 Aug 7 18:54 Yaru-hdpi
drwxr-xr-x 5 root root 4096 Aug 7 18:54 Yaru-magenta
drwxr-xr-x 5 root root 4096 Aug 7 18:54 Yaru-magenta-dark
drwxr-xr-x 5 root root 4096 Aug 7 18:54 Yaru-olive
drwxr-xr-x 5 root root 4096 Aug 7 18:54 Yaru-olive-dark
drwxr-xr-x 5 root root 4096 Aug 7 18:54 Yaru-prussiangreen
drwxr-xr-x 5 root root 4096 Aug 7 18:54 Yaru-prussiangreen-dark
drwxr-xr-x 5 root root 4096 Aug 7 18:54 Yaru-purple
drwxr-xr-x 5 root root 4096 Aug 7 18:54 Yaru-purple-dark
drwxr-xr-x 5 root root 4096 Aug 7 18:54 Yaru-red
drwxr-xr-x 5 root root 4096 Aug 7 18:54 Yaru-red-dark
drwxr-xr-x 5 root root 4096 Aug 7 18:54 Yaru-sage
drwxr-xr-x 5 root root 4096 Aug 7 18:54 Yaru-sage-dark
drwxr-xr-x 5 root root 4096 Aug 7 18:54 Yaru-viridian
drwxr-xr-x 5 root root 4096 Aug 7 18:54 Yaru-viridian-dark
drwxr-xr-x 3 root root 4096 Aug 7 18:54 Yaru-xhdpi
drwxr-xr-x 4 root root 4096 Aug 7 18:54 Default
drwxr-xr-x 4 root root 4096 Aug 7 18:54 Emacs
drwxr-xr-x 3 root root 4096 Aug 7 18:54 Raleigh
drwxr-xr-x 4 root root 4096 Aug 7 18:54 Adwaita
drwxr-xr-x 4 root root 4096 Aug 7 18:54 Adwaita-dark
drwxr-xr-x 4 root root 4096 Aug 7 18:54 HighContrast

```

```

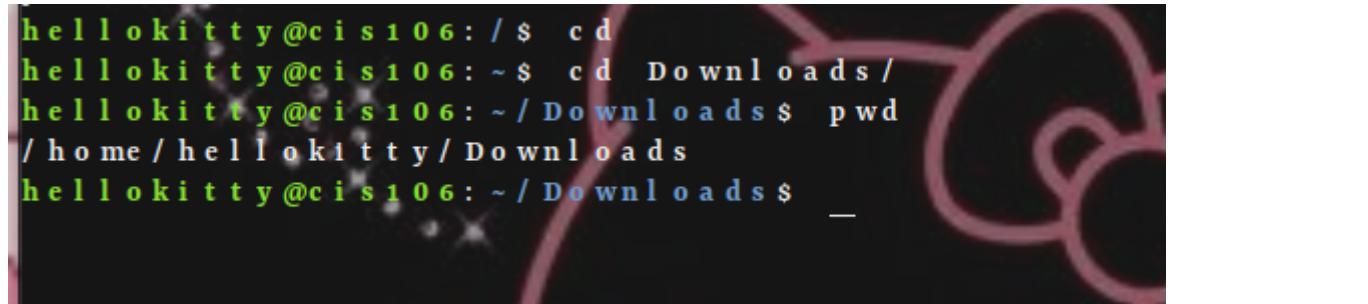
ls -l /usr/share
drwxr-xr-x 4 root root 4096 Aug 7 18:54 HighContrast
hellkitty@cis106: /dev/disk/by-id ~
accounts-service
aclocal
acpi-support
addresser
aisleriot
alacarte
alsa
alsa-base
alsa-card-profile
appdata
app-info
applications
apport
apps
apturl
aspell
avahi
backgrounds
base-files
base-passwd
bash-completion
binfmts
branding
brltty
bug
build-essential
ca-certificates
caffeine-indicator
catdoc
cmake
code
cogl
color
colord
common-licenses
consolefonts
console-setup
consoletrans
cowsay
cups
kconf_update
kde4
keyrings
kfs
knottifications
kservicetypes5
language-selector
language-support
language-tools
libcaca
libc-bin
libdebuginfod-common
libdrm
libexttextcat
libgnomekbd
libgweather
libgweather-4
libinput
liblangtag
libouis
libouisutdml
libmysofa
libreoffice
librevenge
libthai
libwacom
lightdm
lintian
linux-sound-base
locale
locales-langpack
locales
lto-disabled-list
m2300w
man
man-db
mate-panel
maven-repo
media-player-info
menu
pam-configs
perl
perl5
perl-openssl-defaults
piperwire
pixmaps
pkgconfig
plasma
plymouth
pnmpa
pocketphinx
polkit-1
poppler
ppd
ppp
publicsuffix
pulseaudio
pyshared
pythons
python-apt
qllogging-categories5
qt5
readline
remmina
rhythmbox
rig
rsync
rsyslog
rubygems-integration
rygel
samba
sass
seahorse
secureboot
sensible-utils
session-migration
sgml
sgml-base
sgml-data
snmp
software-properties
solid
sounds
source-highlight
speech-dispatcher
sphinx_rtd_theme
ssl-cert
system-config-printer
systemd
systemtap
tabset
tcltk
terminfo
tex-common
texlive
texmf
themes
thumbnails
tilix
totem
trackers
trackers-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
vte
vulkan

```

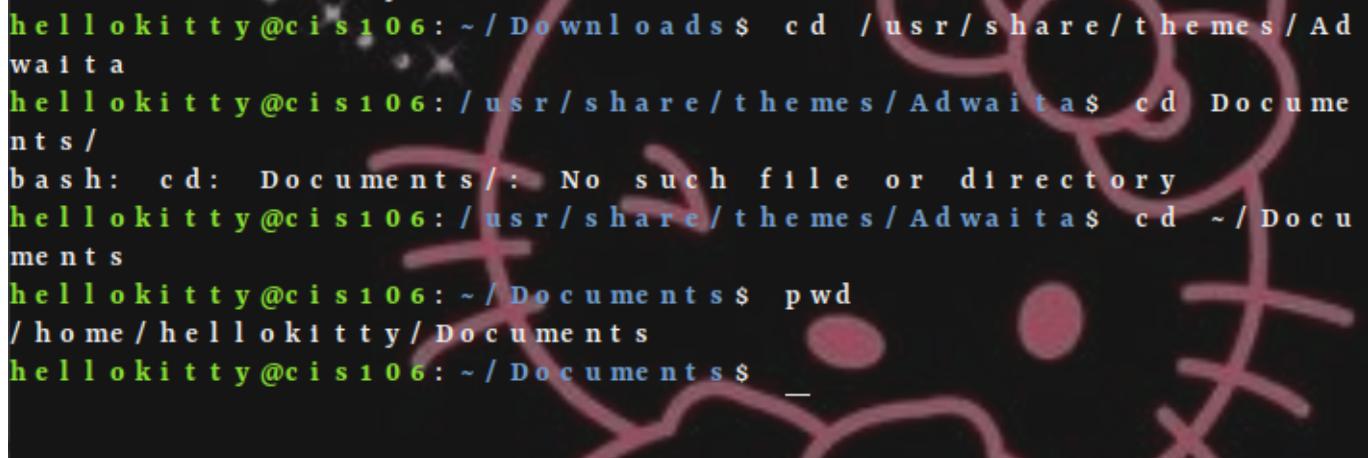


```
1: hellokitty@cis106: /dev/disk/by-id ~
flameshot
flatpak
fontconfig
fonts
fonts-droid-fallback
fonts-font-awesome
fonts-sil-abysinica
fonts-sil-padauk
foo2qpdl
foozjs
fwupd
gamede
gams
gcc
GConf
gdb
gdm
geany
gedit
GeoIP
gettext
ghostscript
git-core
gitweb
glade
gvnd
gnome
gnome-applets
gnome-background-properties
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
hellokitty@cis106: /dev/disk/by-ids _
```

Question 5



```
hell0kitt0@cis106: / $ cd
hell0kitt0@cis106: ~ $ cd Downloads/
hell0kitt0@cis106: ~/Downloads $ pwd
/home/hell0kitt0/Downloads
hell0kitt0@cis106: ~/Downloads $ _
```



```
hell0kitt0@cis106: ~/Downloads $ cd /usr/share/themes/Adwaita
hell0kitt0@cis106: /usr/share/themes/Adwaita$ cd Documents/
bash: cd: Documents/: No such file or directory
hell0kitt0@cis106: /usr/share/themes/Adwaita$ cd ~/Documents
hell0kitt0@cis106: ~/Documents $ pwd
/home/hell0kitt0/Documents
hell0kitt0@cis106: ~/Documents $ _
```