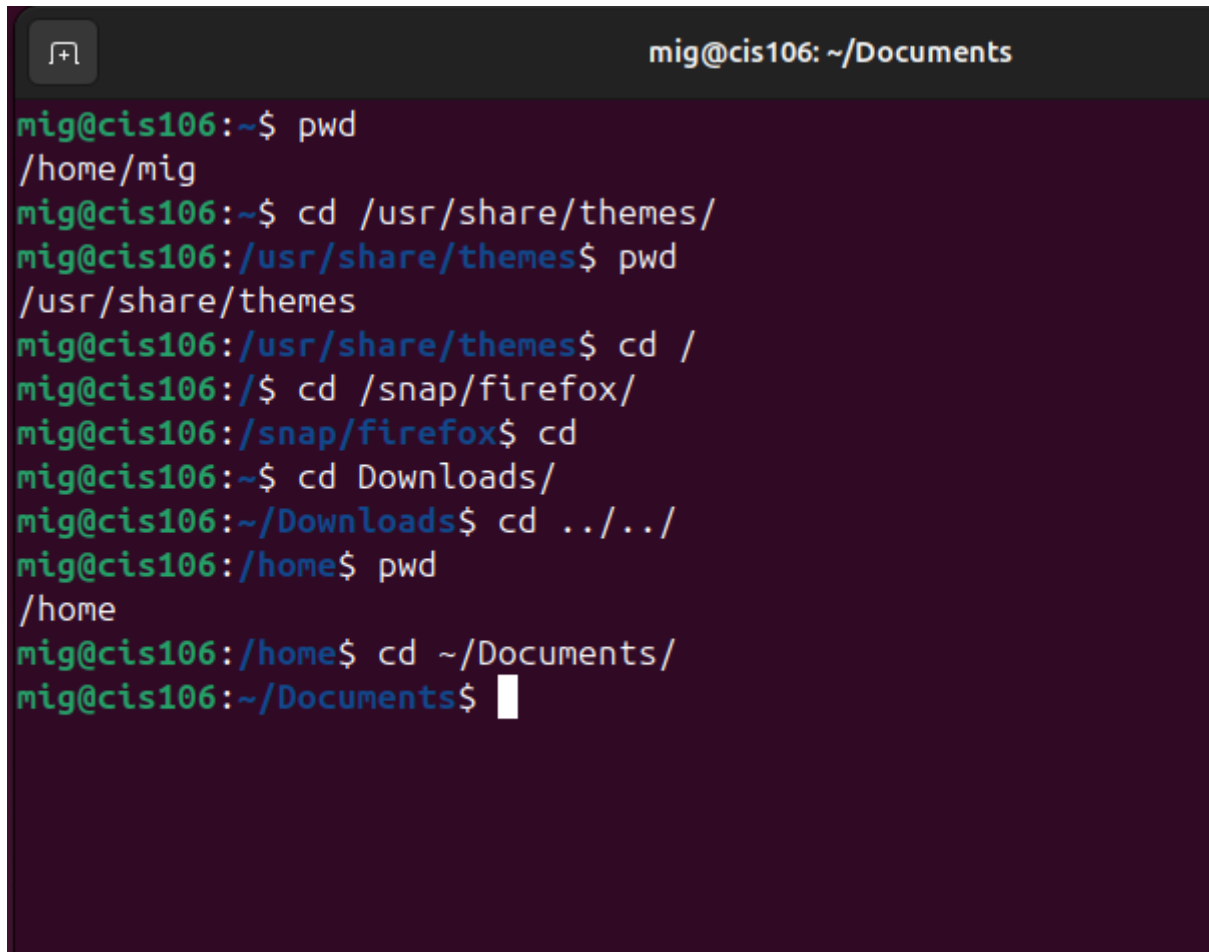


# Lab 4

---

## Question 1



```
mig@cis106: ~/Documents

mig@cis106:~$ pwd
/home/mig
mig@cis106:~$ cd /usr/share/themes/
mig@cis106:/usr/share/themes$ pwd
/usr/share/themes
mig@cis106:/usr/share/themes$ cd /
mig@cis106:/$ cd /snap/firefox/
mig@cis106:/snap/firefox$ cd
mig@cis106:~$ cd Downloads/
mig@cis106:~/Downloads$ cd ../../
mig@cis106:/home$ pwd
/home
mig@cis106:/home$ cd ~/Documents/
mig@cis106:~/Documents$
```

## Question 2

```

1/1 + [ ] [ ]
Tilix: mig@cis106: ~/lab4files

1: mig@cis106: ~/lab4files
mig@cis106:~$ cd /usr/share/
mig@cis106:/usr/share$ ls ~/lab4files/
countries.json  document.docx  helloWorld.c  sample.xls  Ubuntu.pdf
csvfile.csv     globe.avi      Linux.pdf     Tux.png     website.html
mig@cis106:/usr/share$ cd ~/lab4files/
mig@cis106:~/lab4files$ ls -lh
total 6.5M
-rw-rw-r-- 1 mig mig 20K Feb 22 2022 countries.json
-rw-rw-r-- 1 mig mig 278K Feb 22 2022 csvfile.csv
-rw-rw-r-- 1 mig mig 747K Feb 22 2022 document.docx
-rw-rw-r-- 1 mig mig 726K Feb 22 2022 globe.avi
-rw-rw-r-- 1 mig mig 76 Feb 22 2022 helloWorld.c
-rw-rw-r-- 1 mig mig 2.5M Feb 22 2022 Linux.pdf
-rw-rw-r-- 1 mig mig 8.5K Feb 22 2022 sample.xls
-rw-rw-r-- 1 mig mig 42K Feb 22 2022 Tux.png
-rw-rw-r-- 1 mig mig 2.1M Feb 22 2022 Ubuntu.pdf
-rw-rw-r-- 1 mig mig 135K Feb 22 2022 website.html
mig@cis106:~/lab4files$ ls -lhS
total 6.5M
-rw-rw-r-- 1 mig mig 2.5M Feb 22 2022 Linux.pdf
-rw-rw-r-- 1 mig mig 2.1M Feb 22 2022 Ubuntu.pdf
-rw-rw-r-- 1 mig mig 747K Feb 22 2022 document.docx
-rw-rw-r-- 1 mig mig 726K Feb 22 2022 globe.avi
-rw-rw-r-- 1 mig mig 278K Feb 22 2022 csvfile.csv
-rw-rw-r-- 1 mig mig 135K Feb 22 2022 website.html
-rw-rw-r-- 1 mig mig 42K Feb 22 2022 Tux.png
-rw-rw-r-- 1 mig mig 20K Feb 22 2022 countries.json
-rw-rw-r-- 1 mig mig 8.5K Feb 22 2022 sample.xls
-rw-rw-r-- 1 mig mig 76 Feb 22 2022 helloWorld.c
mig@cis106:~/lab4files$ ls -lhSgGi
total 6.5M
2899006 -rw-rw-r-- 1 2.5M Feb 22 2022 Linux.pdf
2900741 -rw-rw-r-- 1 2.1M Feb 22 2022 Ubuntu.pdf
2900751 -rw-rw-r-- 1 747K Feb 22 2022 document.docx
2900757 -rw-rw-r-- 1 726K Feb 22 2022 globe.avi
2900745 -rw-rw-r-- 1 278K Feb 22 2022 csvfile.csv
2901446 -rw-rw-r-- 1 135K Feb 22 2022 website.html

```

## Question 3

```

Terminal
# /bin/bash
# A script to practice:
# 1. Environment variables
# 2. User defined variables
# 3. ls, pwd, and cd

# Creating some variables
cis="$HOME/cis106"
downloads="$HOME/Downloads"
msg1="The current directory is: \t"
msg2="\nAll files (including hidden files) in"

# Using cd in a script
echo "The current user is $USER. It's 'home directory is $HOME"
cd $downloads
echo -e "$msg1"
pwd
cd $cis
echo -e "$msg1"
pwd

# Using ls in a script
echo -e "$msg2 /"
ls -lA --color=auto /

echo -e "$msg2 $HOME"
ls -lA --color=auto $HOME

echo -e "$msg2 $downloads"
ls -lA --color=auto $downloads

echo -e "$msg2 $cis"
ls -lA --color=auto $cis

Tilix: mig@cis106: ~/scripts

1/1 + [ ] [ ]
Tilix: mig@cis106: ~/scripts

t: mig@cis106: ~/scripts
mig@cis106:~$ cd scripts
mig@cis106:~/scripts$ bash lab4_script.sh
The current user is mig. It's 'home directory is /home/mig
The current directory is:
/home/mig/Downloads
The current directory is:
/home/mig/cis106

All files (including hidden files) in /
bin, bin.usr-is-merged, boot, cdrom, dev, etc, home, lib, lib64, lib.usr-is-merged, lost+found, media, mnt, opt,
proc, root, run, sbin, sbin.usr-is-merged, snap, srv, swap.img, sys, usr, var

All files (including hidden files) in /home/mig
.bash_history, .bash_logout, .bashrc, .bastetr, .cache, cis106, .config, Desktop, Documents, .dotnet, Downloads,
.gitconfig, .gnupg, .irb_history, lab4files, .lessht, .local, Music, Pictures, .pkg, .profile, Public,
.python_history, scripts, snap, .ssh, .sudo_as_admin_successful, Templates, .vboxclient-clipboard-tty2-control.pid,
.vboxclient-clipboard-tty2-service.pid, .vboxclient-draganddrop-tty2-control.pid,
.vboxclient-hostversion-tty2-control.pid, .vboxclient-seamless-tty2-control.pid,
.vboxclient-vmsvga-session-tty2-control.pid, .vboxclient-vmsvga-session-tty2-service.pid, Videos, .viminfo, .vscode,
.wget-hsts

All files (including hidden files) in /home/mig/Downloads
games, lab4files.zip, lab4_script.sh, .lab4_script.sh.swp

All files (including hidden files) in /home/mig/cis106
cheatSheets, finalProject, .git, labs, notes, weekReports
mig@cis106:~/scripts$

```

## Question 4 (Challenge Question)

- [Script Source Code](#)

```
1 #!/bin/bash
2 pic="\t$HOME/Pictures"
3 vid="\t$HOME/Videos"
4
5 cd ~/Pictures
6 echo -e "Changing to:$pic"
7 cd ~/Videos
8 echo -e "Changing to:$vid"
9 echo -e "Current PWD:$vid"
10 echo -e "Previous PWD:$pic\n"
11 echo "Long list of $HOME/cis106"
12 cd ~/cis106
13 ls -lhG --time-style=+%x --color=auto
```

```
1: mig@cis106: ~/cis106/labs/lab4
mig@cis106:~$ cd ~/cis106/labs/lab4
mig@cis106:~/cis106/labs/lab4$ bash lab4_challenge_script.sh
Changing to: /home/mig/Pictures
Changing to: /home/mig/Videos
Current PWD: /home/mig/Videos
Previous PWD: /home/mig/Pictures

Long list of /home/mig/cis106
total 20K
drwxrwxr-x 2 4.0K 03/02/2025 cheatSheets
drwxrwxr-x 5 4.0K 02/19/2025 finalProject
drwxrwxr-x 6 4.0K 03/12/2025 labs
drwxrwxr-x 5 4.0K 03/02/2025 notes
drwxrwxr-x 5 4.0K 03/02/2025 weekReports
mig@cis106:~/cis106/labs/lab4$
```