

Question 1

```
1: ajmartinez48305@cis106: ~/Documents
ajmartinez48305@cis106:/snap/firefox$ cd
ajmartinez48305@cis106:~$ cd Downloads/
ajmartinez48305@cis106:~/Downloads$ cd ../../
ajmartinez48305@cis106:/home$ pwd
/home
ajmartinez48305@cis106:/home$ cd ajmartinez48305/Documents/
ajmartinez48305@cis106:~/Documents$ _
```

Question 2

```
Applications Places  
1/1 +  Tilix: ajmartinez48305@cis106: ~/lab4files  
1: ajmartinez48305@cis106: ~/Documents $ cd /usr/share/  
ajmartinez48305@cis106:/usr/share$ ls /home/ajmartinez48305/lab4files/  
countries.json document.docx helloWorld.c sample.xls Ubuntu.pdf  
csvfile.csv globe.avi Linux.pdf Tux.png website.html  
ajmartinez48305@cis106:/usr/share$ cd ~/lab4files/  
bash: cd: -: invalid option  
cd: usage: cd [-L|[-P [-e]] [-@]] [dir]  
ajmartinez48305@cis106:/usr/share$ cd ~/lab4files/  
ajmartinez48305@cis106:~/lab4files$ ls -l  
total 6580  
-rw-rw-r-- 1 ajmartinez48305 ajmartinez48305 20471 Feb 22 2022 countries.json  
-rw-rw-r-- 1 ajmartinez48305 ajmartinez48305 284042 Feb 22 2022 csvfile.csv  
-rw-rw-r-- 1 ajmartinez48305 ajmartinez48305 764176 Feb 22 2022 document.docx  
-rw-rw-r-- 1 ajmartinez48305 ajmartinez48305 742478 Feb 22 2022 globe.avi  
-rw-rw-r-- 1 ajmartinez48305 ajmartinez48305 76 Feb 22 2022 helloWorld.c  
-rw-rw-r-- 1 ajmartinez48305 ajmartinez48305 2600138 Feb 22 2022 Linux.pdf  
-rw-rw-r-- 1 ajmartinez48305 ajmartinez48305 8704 Feb 22 2022 sample.xls  
-rw-rw-r-- 1 ajmartinez48305 ajmartinez48305 42777 Feb 22 2022 Tux.png  
-rw-rw-r-- 1 ajmartinez48305 ajmartinez48305 2114053 Feb 22 2022 Ubuntu.pdf  
-rw-rw-r-- 1 ajmartinez48305 ajmartinez48305 137453 Feb 22 2022 website.html  
ajmartinez48305@cis106:~/lab4files$ ls -lh  
total 6.5M  
-rw-rw-r-- 1 ajmartinez48305 ajmartinez48305 20K Feb 22 2022 countries.json  
-rw-rw-r-- 1 ajmartinez48305 ajmartinez48305 278K Feb 22 2022 csvfile.csv  
-rw-rw-r-- 1 ajmartinez48305 ajmartinez48305 747K Feb 22 2022 document.docx  
-rw-rw-r-- 1 ajmartinez48305 ajmartinez48305 726K Feb 22 2022 globe.avi  
-rw-rw-r-- 1 ajmartinez48305 ajmartinez48305 76 Feb 22 2022 helloWorld.c  
-rw-rw-r-- 1 ajmartinez48305 ajmartinez48305 2.5M Feb 22 2022 Linux.pdf  
-rw-rw-r-- 1 ajmartinez48305 ajmartinez48305 8.5K Feb 22 2022 sample.xls  
-rw-rw-r-- 1 ajmartinez48305 ajmartinez48305 42K Feb 22 2022 Tux.png  
-rw-rw-r-- 1 ajmartinez48305 ajmartinez48305 2.1M Feb 22 2022 Ubuntu.pdf  
-rw-rw-r-- 1 ajmartinez48305 ajmartinez48305 135K Feb 22 2022 website.html
```

```
Applications Places  
1/1 +  Tilix: ajmartinez48305@cis106: ~/lab4files  
1: ajmartinez48305@cis106: ~/lab4files $ ls -lhS  
total 6.5M  
-rw-rw-r-- 1 ajmartinez48305 ajmartinez48305 2.5M Feb 22 2022 Linux.pdf  
-rw-rw-r-- 1 ajmartinez48305 ajmartinez48305 2.1M Feb 22 2022 Ubuntu.pdf  
-rw-rw-r-- 1 ajmartinez48305 ajmartinez48305 747K Feb 22 2022 document.docx  
-rw-rw-r-- 1 ajmartinez48305 ajmartinez48305 726K Feb 22 2022 globe.avi  
-rw-rw-r-- 1 ajmartinez48305 ajmartinez48305 278K Feb 22 2022 csvfile.csv  
-rw-rw-r-- 1 ajmartinez48305 ajmartinez48305 135K Feb 22 2022 website.html  
-rw-rw-r-- 1 ajmartinez48305 ajmartinez48305 42K Feb 22 2022 Tux.png  
-rw-rw-r-- 1 ajmartinez48305 ajmartinez48305 20K Feb 22 2022 countries.json  
-rw-rw-r-- 1 ajmartinez48305 ajmartinez48305 8.5K Feb 22 2022 sample.xls  
-rw-rw-r-- 1 ajmartinez48305 ajmartinez48305 76 Feb 22 2022 helloWorld.c  
ajmartinez48305@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  
ajmartinez48305@cis106:~/lab4files$ ls -lhSgGi  
total 6.5M  
1462987 -rw-rw-r-- 1 2.5M Feb 22 2022 Linux.pdf  
1448518 -rw-rw-r-- 1 2.1M Feb 22 2022 Ubuntu.pdf  
1462992 -rw-rw-r-- 1 747K Feb 22 2022 document.docx  
1462993 -rw-rw-r-- 1 726K Feb 22 2022 globe.avi
```

```
1402993 -rw-rw-r-- 1 zok ren zz 2022 globe.avi  
1462991 -rw-rw-r-- 1 278K Feb 22 2022 csvfile.csv  
1462997 -rw-rw-r-- 1 135K Feb 22 2022 website.html  
1462989 -rw-rw-r-- 1 42K Feb 22 2022 Tux.png  
1462988 -rw-rw-r-- 1 20K Feb 22 2022 countries.json  
1462996 -rw-rw-r-- 1 8.5K Feb 22 2022 sample.xls  
1462994 -rw-rw-r-- 1 76 Feb 22 2022 helloWorld.c  
ajmartinez48305@cis106:~/lab4files$ ls -Xr  
sample.xls Ubuntu.pdf countries.json document.docx helloWorld.c  
Tux.png Linux.pdf website.html csvfile.csv globe.avi  
ajmartinez48305@cis106:~/lab4files$ ls -Xr1  
sample.xls  
Tux.png  
Ubuntu.pdf  
Linux.pdf  
countries.json  
website.html  
document.docx  
csvfile.csv  
helloWorld.c  
globe.avi  
ajmartinez48305@cis106:~/lab4files$ _
```

Question 3

No submission required.

Question 4

Challenge Question 1

```
Applications Places  
1 / 1 + ↻ Tilix: ajmartinez48305@cis106: /dev/disk/by-id  
1: ajmartinez48305@cis106: /dev/disk/by-id ▼  
ajmartinez48305@cis106:~$ pwd  
home/ajmartinez48305  
ajmartinez48305@cis106:~$ cd /usr  
ajmartinez48305@cis106:~$ cd /proc/ip4  
ash: cd: /proc/ip4: No such file or directory  
ajmartinez48305@cis106:~$ cd /proc/ip4/  
ash: cd: /proc/ip4/: No such file or directory  
ajmartinez48305@cis106:~$ cd -  
home/ajmartinez48305  
ajmartinez48305@cis106:~$ ls /usr/share/backgrounds  
lue_flower_by_Elena_Stravoravdi.jpg  
anvas_by_roytanck.jpg  
herry_Tree_in_Lakones_by_elenastravoravdi.jpg  
ontest  
SC2943_by_kcpnu.jpg  
ammy-Jellyfish_WP_4096x2304_Grey.png  
j_dark_by_Hiking93.jpg  
j_light_by_Hiking93.jpg  
rror_by_Uday_Nakade.jpg  
ptical_Fibers_in_Dark_by_Elena_Stravoravdi.jpg  
buntu2_by_arman1992.jpg  
buntu_by_arman1992.jpg  
buntu-default-greyscale-wallpaper.png  
arty-final-ubuntu.png  
ajmartinez48305@cis106:~$ ls -l ~/cis106  
total 24  
rwxrwxr-x 2 ajmartinez48305 ajmartinez48305 4096 May 9 11:02 'Cheat Sheets'  
rwxrwxr-x 2 ajmartinez48305 ajmartinez48305 4096 May 9 10:44 'Deliverable Project'  
rwxrwxr-x 2 ajmartinez48305 ajmartinez48305 4096 May 9 19:41 finalExam  
rwxrwxr-x 2 ajmartinez48305 ajmartinez48305 4096 May 9 17:56 final_exam_study  
rwxrwxr-x 8 ajmartinez48305 ajmartinez48305 4096 May 2 19:51 labs  
rwxrwxr-x 3 ajmartinez48305 ajmartinez48305 4096 Apr 25 14:29 'Week Reports'  
ajmartinez48305@cis106:~$ cd ~/Downloads  
ajmartinez48305@cis106:~/Downloads$ ls -l  
total 20  
rw-rw-r-- 1 ajmartinez48305 ajmartinez48305 2466 May 2 23:17 apache-web-server-logo_1_200x200.webp  
rw-rw-r-- 1 ajmartinez48305 ajmartinez48305 14806 May 2 23:14 apache-web-server-logo.webp  
ajmartinez48305@cis106:~/Downloads$ cd disk/by-id  
ash: cd: disk/by-id: No such file or directory  
ajmartinez48305@cis106:~/Downloads$ cd /dev/disk/by-id  
ajmartinez48305@cis106:~/Downloads$ ls -la ~/  
Content — Mozilla Fir... ↻ lab4.md-cis106-V... [Tab4Files] Tilix: ajmartinez48305@cis106: /dev/disk/by-id
```

```
Applications Places  
1 / 1 + ↻ Tilix: ajmartinez48305@cis106: /dev/disk/by-id  
1: ajmartinez48305@cis106: /dev/disk/by-id ▼  
ajmartinez48305@cis106:~/Downloads$ cd /dev/disk/by-id  
ajmartinez48305@cis106:/dev/disk/by-id$ ls -la ~/  
total 2404  
drwxr-x--- 37 ajmartinez48305 ajmartinez48305 4096 May 9 19:27 .  
drwxr-xr-x 3 root root 4096 Feb 14 12:54 ..  
drwxrwxr-x 2 ajmartinez48305 ajmartinez48305 4096 Feb 14 15:40 ajmartinez48305  
-rw----- 1 ajmartinez48305 ajmartinez48305 12527 May 9 20:32 .bash_history  
-rw-r--r-- 1 ajmartinez48305 ajmartinez48305 220 Feb 14 12:54 .bash_logout  
-rw-r--r-- 1 ajmartinez48305 ajmartinez48305 3771 Feb 14 12:54 .bashrc  
drwxr---- 20 ajmartinez48305 ajmartinez48305 4096 Mar 8 12:25 .cache  
drwxrwxr-x 9 ajmartinez48305 ajmartinez48305 4096 May 9 17:56 cis106  
-rw-rw-r-- 1 ajmartinez48305 ajmartinez48305 3520 Feb 16 08:06 .cis106.png  
drwxr----- 27 ajmartinez48305 ajmartinez48305 4096 May 9 20:16 .config  
drwxr-xr-x 2 ajmartinez48305 ajmartinez48305 4096 Mar 4 12:44 Desktop  
drwxr-xr-x 3 ajmartinez48305 ajmartinez48305 4096 May 9 19:28 Documents  
drwxrwxr-x 3 ajmartinez48305 ajmartinez48305 4096 Feb 14 14:05 .dotnet  
drwxr-xr-x 2 ajmartinez48305 ajmartinez48305 4096 May 9 11:02 Downloads  
drwxrwxr-x 2 ajmartinez48305 ajmartinez48305 4096 May 9 18:47 final_q2  
drwxrwxr-x 2 ajmartinez48305 ajmartinez48305 20480 Mar 8 11:27 .fonts  
-rw-rw-r-- 1 ajmartinez48305 ajmartinez48305 91 Feb 15 12:09 gitcommands.txt  
-rw-rw-r-- 1 ajmartinez48305 ajmartinez48305 74 Feb 14 14:35 .gitconfig  
drwxr----- 2 ajmartinez48305 ajmartinez48305 4096 Feb 15 11:07 .gnupg  
drwxrwxr-x 2 ajmartinez48305 ajmartinez48305 4096 Feb 22 2022 lab4files  
drwxrwxr-x 2 ajmartinez48305 ajmartinez48305 4096 Mar 30 14:17 Lab-5  
drwxrwxr-x 2 ajmartinez48305 ajmartinez48305 4096 Mar 30 14:06 lab5-audio  
drwxrwxr-x 3 ajmartinez48305 ajmartinez48305 4096 Mar 30 15:01 lab5ChallengeQuestion  
drwxrwxr-x 2 ajmartinez48305 ajmartinez48305 4096 Mar 30 14:14 lab5-docs  
drwxrwxr-x 2 ajmartinez48305 ajmartinez48305 4096 Mar 30 14:15 lab5-imgs  
drwxrwxr-x 2 ajmartinez48305 ajmartinez48305 4096 Mar 30 14:11 lab5-video  
drwxrwxr-x 6 ajmartinez48305 ajmartinez48305 4096 May 2 21:05 lab6  
drwxrwxr-x 3 ajmartinez48305 ajmartinez48305 4096 May 2 21:14 lab6-q5  
-rw----- 1 ajmartinez48305 ajmartinez48305 20 Mar 8 15:54 .lessht  
drwxr----- 4 ajmartinez48305 ajmartinez48305 4096 Feb 15 12:15 .local  
drwxr-xr-x 2 ajmartinez48305 ajmartinez48305 4096 Feb 14 13:04 Music  
drwxr-xr-x 4 ajmartinez48305 ajmartinez48305 4096 Mar 30 14:40 Pictures  
drwxr----- 3 ajmartinez48305 ajmartinez48305 4096 Feb 14 14:01 .pki  
drwxrwxr-x 2 ajmartinez48305 ajmartinez48305 4096 Feb 27 2022 practicels  
-rw-rw-r-- 1 ajmartinez48305 ajmartinez48305 2229212 Feb 21 21:10 practicels.tar.xz  
drwxrwxr-x 2 ajmartinez48305 ajmartinez48305 4096 May 2 12:47 practiceWildcards  
-rw-r--r-- 1 ajmartinez48305 ajmartinez48305 807 Feb 14 12:54 .profile  
drwxr-xr-x 2 ajmartinez48305 ajmartinez48305 4096 Feb 14 13:04 Public
```

```
Content — Mozilla Fir... lab4.md - cis106 - V... Tilix: ajmartinez48305@cis106: /dev/disk/by-id
1 / 1 + ↻ ↺ Tilix: ajmartinez48305@cis106: /dev/disk/by-id

1: ajmartinez48305@cis106:/dev/disk/by-id ▼
drwxrwxr-x 3 ajmartinez48305 ajmartinez48305 4096 May  9 19:36 rebeccasfiles
drwx----- 5 ajmartinez48305 ajmartinez48305 4096 Feb 14 13:56 snap
drwx----- 2 ajmartinez48305 ajmartinez48305 4096 Mar 28 13:22 .ssh
-rw-r--r-- 1 ajmartinez48305 ajmartinez48305 0 Feb 14 13:18 .sudo_as_admin_successful
drwxr-xr-x 2 ajmartinez48305 ajmartinez48305 4096 Feb 14 13:04 Templates
-rw-r---- 1 ajmartinez48305 ajmartinez48305 5 May  9 17:46 .vboxclient-clipboard.pid
-rw-r---- 1 ajmartinez48305 ajmartinez48305 5 May  9 17:46 .vboxclient-draganddrop.pid
-rw-r---- 1 ajmartinez48305 ajmartinez48305 5 May  9 17:46 .vboxclient-seamless.pid
-rw-r---- 1 ajmartinez48305 ajmartinez48305 6 May  9 17:46 .vboxclient-vmsvga-session-tty2.pid
drwxr-xr-x 2 ajmartinez48305 ajmartinez48305 4096 Feb 14 13:04 Videos
drwxrwxr-x 3 ajmartinez48305 ajmartinez48305 4096 Feb 14 14:01 vscode
drwxrwxr-x 4 ajmartinez48305 ajmartinez48305 4096 Mar 29 12:53 website
drwxrwxr-x 2 ajmartinez48305 ajmartinez48305 4096 May  2 13:01 wildcardpractice
ajmartinez48305@cis106:/dev/disk/by-id$ ls -lt /usr/share/themes
total 120
drwxr-xr-x 7 root root 4096 Aug  9 2022 Yaru
drwxr-xr-x 5 root root 4096 Aug  9 2022 Yaru-bark
drwxr-xr-x 5 root root 4096 Aug  9 2022 Yaru-bark-dark
drwxr-xr-x 5 root root 4096 Aug  9 2022 Yaru-blue
drwxr-xr-x 5 root root 4096 Aug  9 2022 Yaru-blue-dark
drwxr-xr-x 7 root root 4096 Aug  9 2022 Yaru-dark
drwxr-xr-x 3 root root 4096 Aug  9 2022 Yaru-dark-hdpi
drwxr-xr-x 3 root root 4096 Aug  9 2022 Yaru-dark-xhdpi
drwxr-xr-x 3 root root 4096 Aug  9 2022 Yaru-hdpi
drwxr-xr-x 5 root root 4096 Aug  9 2022 Yaru-magenta
drwxr-xr-x 5 root root 4096 Aug  9 2022 Yaru-magenta-dark
drwxr-xr-x 5 root root 4096 Aug  9 2022 Yaru-olive
drwxr-xr-x 5 root root 4096 Aug  9 2022 Yaru-olive-dark
drwxr-xr-x 5 root root 4096 Aug  9 2022 Yaru-prussiangreen
drwxr-xr-x 5 root root 4096 Aug  9 2022 Yaru-prussiangreen-dark
drwxr-xr-x 5 root root 4096 Aug  9 2022 Yaru-purple
drwxr-xr-x 5 root root 4096 Aug  9 2022 Yaru-purple-dark
drwxr-xr-x 5 root root 4096 Aug  9 2022 Yaru-red
drwxr-xr-x 5 root root 4096 Aug  9 2022 Yaru-red-dark
drwxr-xr-x 5 root root 4096 Aug  9 2022 Yaru-sage
drwxr-xr-x 5 root root 4096 Aug  9 2022 Yaru-sage-dark
drwxr-xr-x 5 root root 4096 Aug  9 2022 Yaru-viridian
drwxr-xr-x 5 root root 4096 Aug  9 2022 Yaru-viridian-dark
drwxr-xr-x 3 root root 4096 Aug  9 2022 Yaru-xhdpi
drwxr-xr-x 4 root root 4096 Aug  9 2022 Default
drwxr-xr-x 4 root root 4096 Aug  9 2022 Emacs

drwxr-xr-x 3 root root 4096 Aug  9 2022 Raleigh
drwxr-xr-x 4 root root 4096 Aug  9 2022 Adwaita
drwxr-xr-x 4 root root 4096 Aug  9 2022 Adwaita-dark
drwxr-xr-x 4 root root 4096 Aug  9 2022 HighContrast
ajmartinez48305@cis106:/dev/disk/by-id$ ls -X /usr/share_
```

Challenge Question 2

```
1: ajmartinez48305@cis106: ~/Downloads ▾
ajmartinez48305@cis106:~$ cd /
ajmartinez48305@cis106:/$ cd home
ajmartinez48305@cis106:/home$ cd ajmartinez48305
ajmartinez48305@cis106:~$ cd Downloads
ajmartinez48305@cis106:~/Downloads$ pwd
/home/ajmartinez48305/Downloads
ajmartinez48305@cis106:~/Downloads$ _
```

```
Applications Places  
1 / 1 +  Tilix: ajmartinez48305@cis106: ~/Documents  
  
1: ajmartinez48305@cis106: ~/Documents ▼  
ajmartinez48305@cis106:~$ cd /usr/share/themes/Adwaita  
ajmartinez48305@cis106:/usr/share/themes/Adwaita$ cd ../../..~/home/ajmartinez48305/Downloads  
bash: cd: ../../..~/home/ajmartinez48305/Downloads: No such file or directory  
ajmartinez48305@cis106:/usr/share/themes/Adwaita$ cd ../../..~/home/ajmartinez48305/Documents  
bash: cd: ../../..~/home/ajmartinez48305/Documents: No such file or directory  
ajmartinez48305@cis106:/usr/share/themes/Adwaita$ cd ..~/home/ajmartinez48305/Documents  
bash: cd: ..~/home/ajmartinez48305/Documents: No such file or directory  
ajmartinez48305@cis106:/usr/share/themes/Adwaita$ cd /home/ajmartinez48305/Documents  
ajmartinez48305@cis106:~/Documents$ pwd  
/home/ajmartinez48305/Documents  
ajmartinez48305@cis106:~/Documents$ _
```