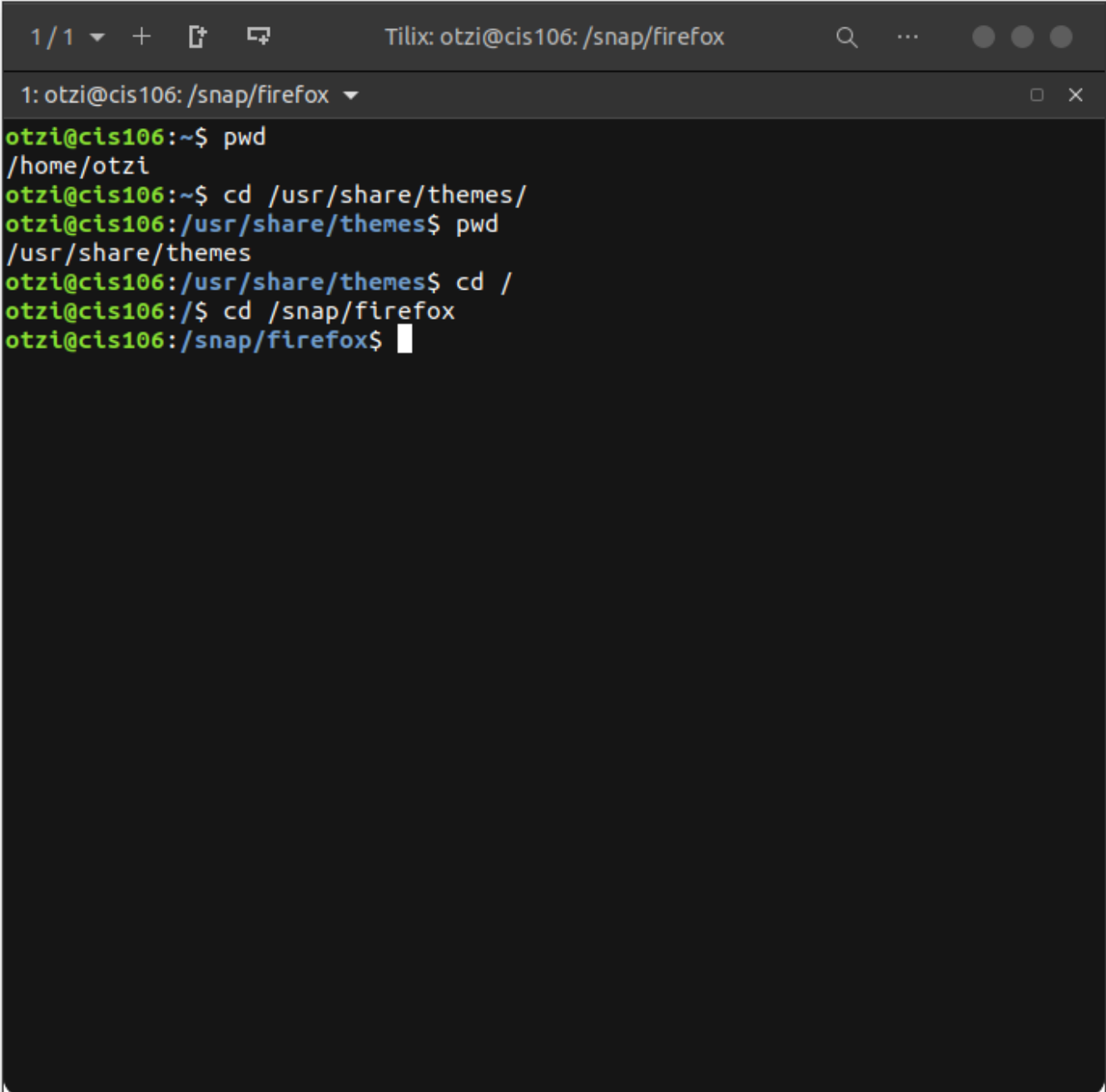


Lab 4 Report

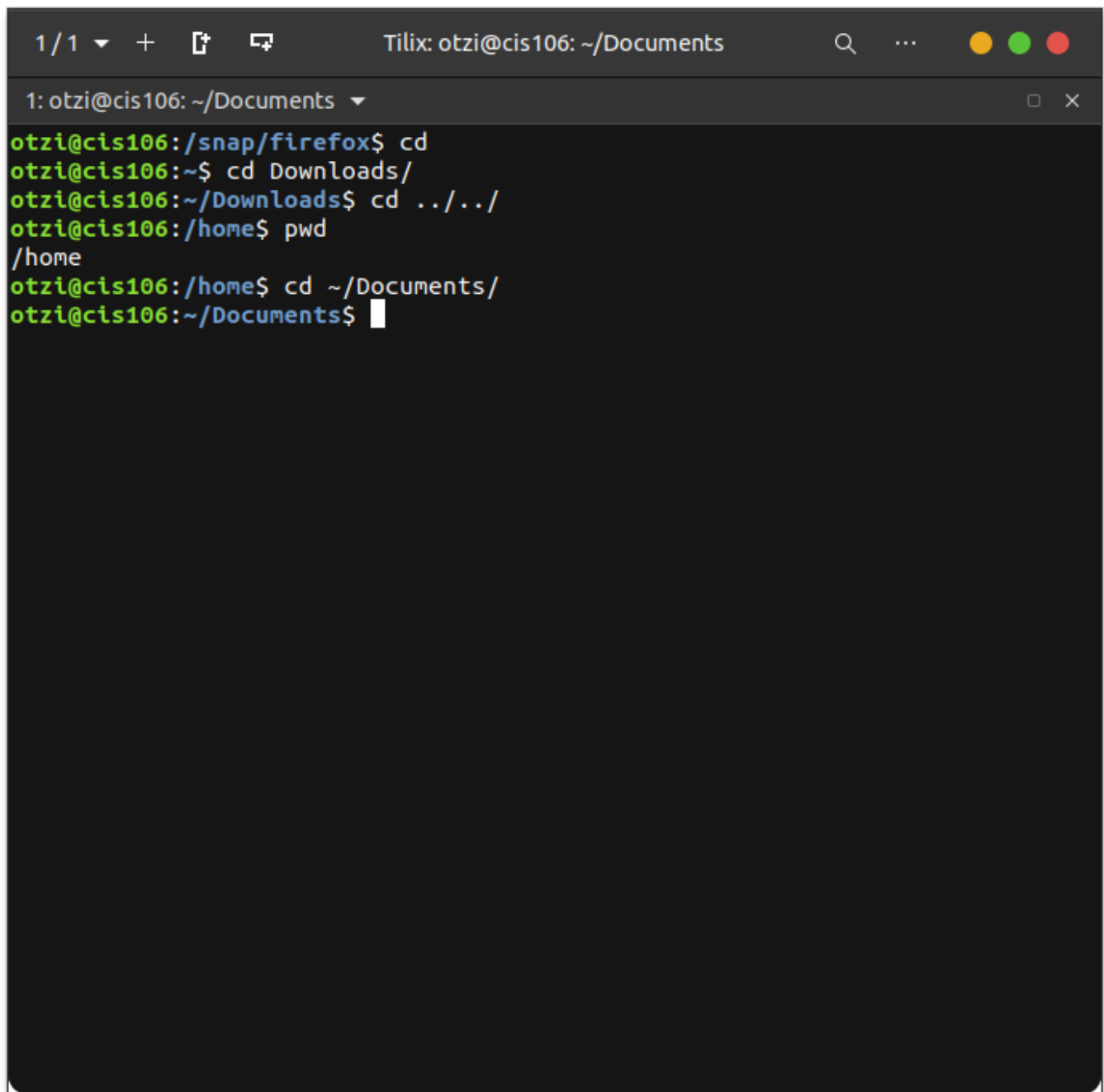
Question 1

Screenshot 1

A screenshot of a terminal window titled "Tilix: otzi@cis106: /snap/firefox". The terminal shows a series of commands and their outputs. The user starts in the home directory, then navigates to /usr/share/themes, then back to the root directory, and finally to /snap/firefox.

```
1 / 1 ▾ + [?] [?] Tilix: otzi@cis106: /snap/firefox
1: otzi@cis106: /snap/firefox ▾
otzi@cis106:~$ pwd
/home/otzi
otzi@cis106:~$ cd /usr/share/themes/
otzi@cis106:/usr/share/themes$ pwd
/usr/share/themes
otzi@cis106:/usr/share/themes$ cd /
otzi@cis106:/$ cd /snap/firefox
otzi@cis106:/snap/firefox$
```

Screenshot 2



A terminal window titled "Tilix: otzi@cis106: ~/Documents" with standard window controls. The terminal shows a sequence of commands and their outputs:

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

Question 2

Screenshot 1

```
1/1 + [ ] [ ] Tilix: otzi@cis106: ~/lab4files

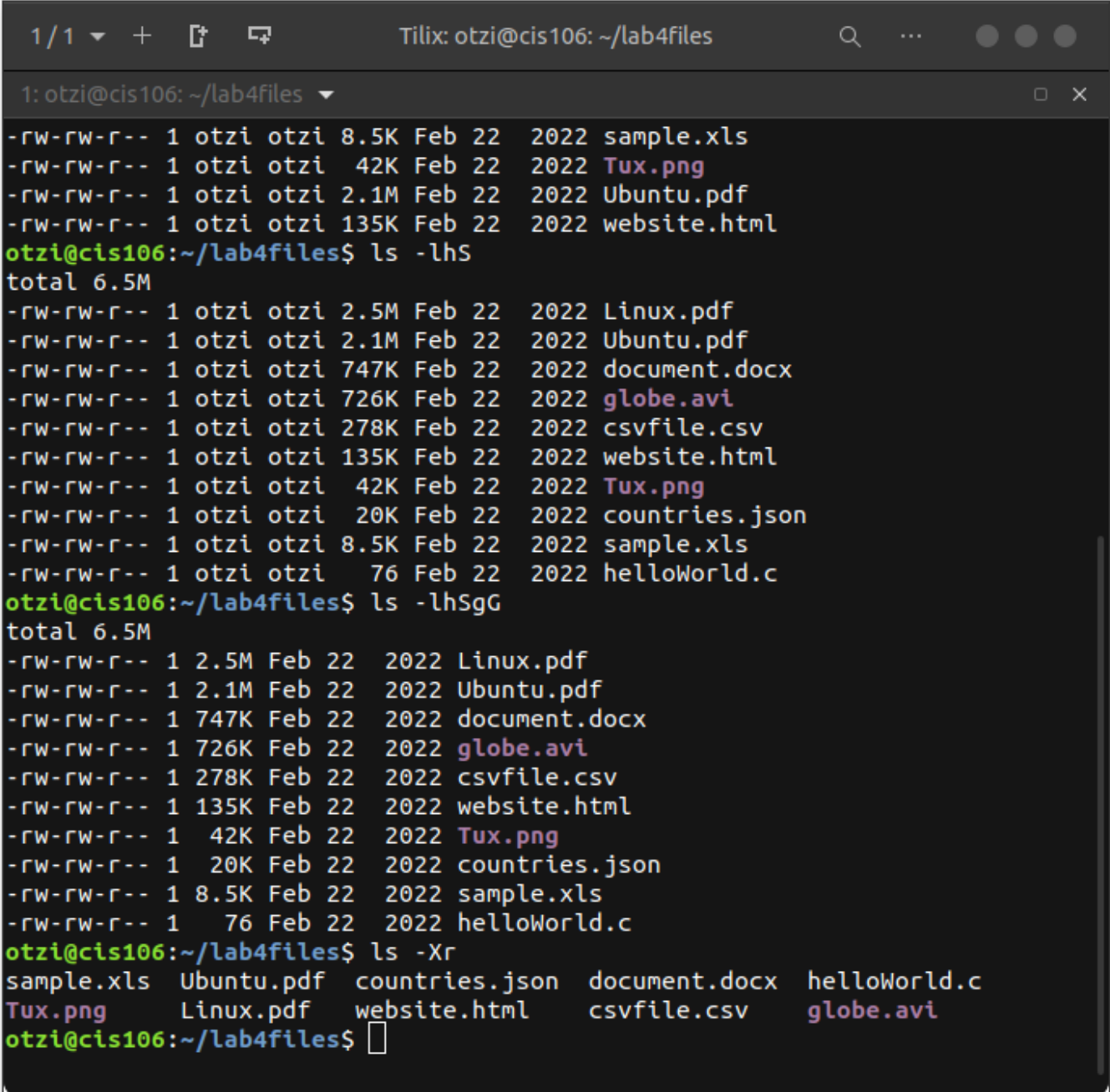
1: otzi@cis106: ~/lab4files
otzi@cis106:~/Documents$ wget https://cis106.com/assets/lab4files.zip
--2025-03-16 02:40:15-- https://cis106.com/assets/lab4files.zip
Resolving cis106.com (cis106.com)... 185.199.108.153
Connecting to cis106.com (cis106.com)|185.199.108.153|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 3460751 (3.3M) [application/zip]
Saving to: 'lab4files.zip'

lab4files.zip      100%[=====>]  3.30M  10.5MB/s   in 0.3s

2025-03-16 02:40:16 (10.5 MB/s) - 'lab4files.zip' saved [3460751/3460751]

otzi@cis106:~/Documents$ cd /usr/share/
otzi@cis106:/usr/share$ ls /home/otzi/lab4files/
countries.json  document.docx  helloWorld.c  sample.xls  Ubuntu.pdf
csvfile.csv    globe.avi      Linux.pdf     Tux.png     website.html
otzi@cis106:/usr/share$ cd ~/lab4files/; ls -lh
total 6.5M
-rw-rw-r-- 1 otzi otzi  20K Feb 22  2022 countries.json
-rw-rw-r-- 1 otzi otzi 278K Feb 22  2022 csvfile.csv
-rw-rw-r-- 1 otzi otzi 747K Feb 22  2022 document.docx
-rw-rw-r-- 1 otzi otzi 726K Feb 22  2022 globe.avi
-rw-rw-r-- 1 otzi otzi   76 Feb 22  2022 helloWorld.c
-rw-rw-r-- 1 otzi otzi 2.5M Feb 22  2022 Linux.pdf
-rw-rw-r-- 1 otzi otzi 8.5K Feb 22  2022 sample.xls
-rw-rw-r-- 1 otzi otzi 42K Feb 22  2022 Tux.png
-rw-rw-r-- 1 otzi otzi 2.1M Feb 22  2022 Ubuntu.pdf
-rw-rw-r-- 1 otzi otzi 135K Feb 22  2022 website.html
otzi@cis106:~/lab4files$ ls -lhs
total 6.5M
-rw-rw-r-- 1 otzi otzi 2.5M Feb 22  2022 Linux.pdf
-rw-rw-r-- 1 otzi otzi 2.1M Feb 22  2022 Ubuntu.pdf
-rw-rw-r-- 1 otzi otzi 747K Feb 22  2022 document.docx
```

Screenshot 2

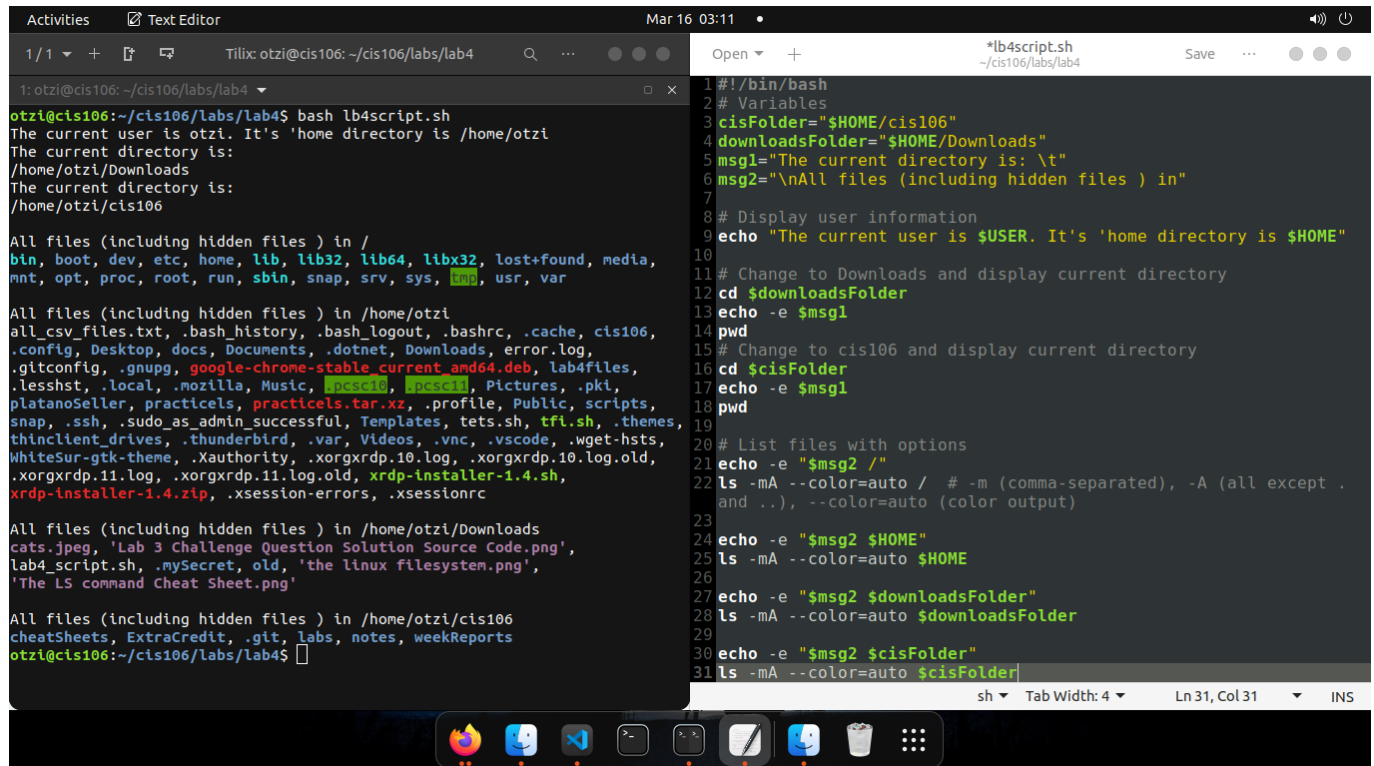


The screenshot shows a terminal window titled "Tilix: otzi@cis106: ~/lab4files". The terminal displays the output of several `ls` commands. The first `ls -lhs` command lists five files: `sample.xls` (8.5K), `Tux.png` (42K), `Ubuntu.pdf` (2.1M), `website.html` (135K), and `helloWorld.c` (76 bytes). The second `ls -lhSgG` command lists the same files in descending order of size: `Linux.pdf` (2.5M), `Ubuntu.pdf` (2.1M), `document.docx` (747K), `globe.avi` (726K), `csvfile.csv` (278K), `website.html` (135K), `Tux.png` (42K), `countries.json` (20K), `sample.xls` (8.5K), and `helloWorld.c` (76 bytes). The third `ls -Xr` command lists the files in two rows, sorted by extension: `sample.xls`, `Ubuntu.pdf`, `countries.json`, `document.docx`, `helloWorld.c`, `Tux.png`, `Linux.pdf`, `website.html`, `csvfile.csv`, and `globe.avi`.

```
1/1 + [ ] [ ] Tilix: otzi@cis106: ~/lab4files
1: otzi@cis106: ~/lab4files
-rw-rw-r-- 1 otzi otzi 8.5K Feb 22 2022 sample.xls
-rw-rw-r-- 1 otzi otzi 42K Feb 22 2022 Tux.png
-rw-rw-r-- 1 otzi otzi 2.1M Feb 22 2022 Ubuntu.pdf
-rw-rw-r-- 1 otzi otzi 135K Feb 22 2022 website.html
otzi@cis106:~/lab4files$ ls -lhs
total 6.5M
-rw-rw-r-- 1 otzi otzi 2.5M Feb 22 2022 Linux.pdf
-rw-rw-r-- 1 otzi otzi 2.1M Feb 22 2022 Ubuntu.pdf
-rw-rw-r-- 1 otzi otzi 747K Feb 22 2022 document.docx
-rw-rw-r-- 1 otzi otzi 726K Feb 22 2022 globe.avi
-rw-rw-r-- 1 otzi otzi 278K Feb 22 2022 csvfile.csv
-rw-rw-r-- 1 otzi otzi 135K Feb 22 2022 website.html
-rw-rw-r-- 1 otzi otzi 42K Feb 22 2022 Tux.png
-rw-rw-r-- 1 otzi otzi 20K Feb 22 2022 countries.json
-rw-rw-r-- 1 otzi otzi 8.5K Feb 22 2022 sample.xls
-rw-rw-r-- 1 otzi otzi 76 Feb 22 2022 helloWorld.c
otzi@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
otzi@cis106:~/lab4files$ ls -Xr
sample.xls  Ubuntu.pdf  countries.json  document.docx  helloWorld.c
Tux.png     Linux.pdf   website.html    csvfile.csv    globe.avi
otzi@cis106:~/lab4files$
```

Question 3

Screenshot



```
Activities Text Editor Mar 16 03:11
1/1 + TiliX: otzi@cis106: ~/cis106/labs/lab4
otzi@cis106:~/cis106/labs/lab4$ bash lb4script.sh
The current user is otzi. It's 'home directory is /home/otzi
The current directory is:
/home/otzi/Downloads
The current directory is:
/home/otzi/cis106

All files (including hidden files ) in /
bin, boot, dev, etc, home, lib, lib32, lib64, libx32, lost+found, media,
mnt, opt, proc, root, run, sbin, snap, srv, sys, tmp, usr, var

All files (including hidden files ) in /home/otzi
all_csv_files.txt, .bash_history, .bash_logout, .bashrc, .cache, cis106,
.config, Desktop, docs, Documents, .dotnet, Downloads, error.log,
.gitconfig, .gnupg, google-chrome-stable-current-amd64.deb, lab4files,
.lesshst, .local, .mozilla, Music, .mySecret, .mySecret1, Pictures, .pki,
platanoSeller, practicels, practicels.tar.xz, .profile, Public, scripts,
snap, .ssh, .sudo_as_admin_successful, Templates, tets.sh, tfl.sh, .themes,
thinclient_drives, .thunderbird, .var, Videos, .vnc, .vscode, .wget-hsts,
WhiteSur-gtk-theme, .Xauthority, .xorgxrdp.10.log, .xorgxrdp.10.log.old,
.xorgxrdp.11.log, .xorgxrdp.11.log.old, xrdp-installer-1.4.sh,
xrdp-installer-1.4.zip, .xsession-errors, .xsessionrc

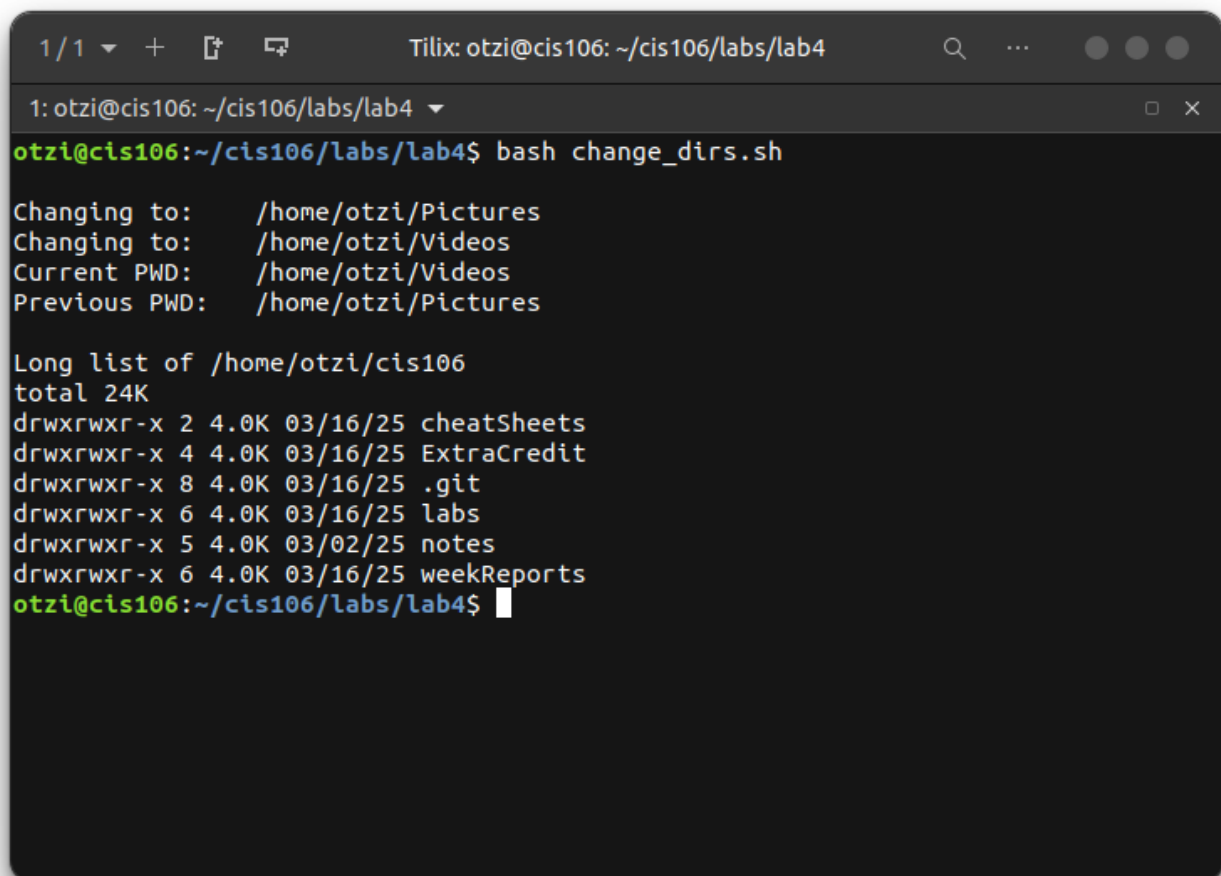
All files (including hidden files ) in /home/otzi/Downloads
cats.jpeg, 'Lab 3 Challenge Question Solution Source Code.png',
lab4_script.sh, .mySecret, old, 'the linux filesystem.png',
'The LS command Cheat Sheet.png'

All files (including hidden files ) in /home/otzi/cis106
cheatSheets, ExtraCredit, .git, labs, notes, weekReports
otzi@cis106:~/cis106/labs/lab4$

1#!/bin/bash
2# Variables
3cisFolder="$HOME/cis106"
4downloadsFolder="$HOME/Downloads"
5msg1="The current directory is: \t"
6msg2="\nAll files (including hidden files ) in"
7
8# Display user information
9echo "The current user is $USER. It's 'home directory is $HOME"
10
11# Change to Downloads and display current directory
12cd $downloadsFolder
13echo -e $msg1
14pwd
15# Change to cis106 and display current directory
16cd $cisFolder
17echo -e $msg1
18pwd
19
20# List files with options
21echo -e "$msg2 /"
22ls -mA --color=auto / # -m (comma-separated), -A (all except .
and ..), --color=auto (color output)
23
24echo -e "$msg2 $HOME"
25ls -mA --color=auto $HOME
26
27echo -e "$msg2 $downloadsFolder"
28ls -mA --color=auto $downloadsFolder
29
30echo -e "$msg2 $cisFolder"
31ls -mA --color=auto $cisFolder
```

Question 4

Screenshot



```
1 / 1 + [?] [?] TiliX: otzi@cis106: ~/cis106/labs/lab4
1: otzi@cis106: ~/cis106/labs/lab4
otzi@cis106:~/cis106/labs/lab4$ bash change_dirs.sh

Changing to:    /home/otzi/Pictures
Changing to:    /home/otzi/Videos
Current PWD:    /home/otzi/Videos
Previous PWD:   /home/otzi/Pictures

Long list of /home/otzi/cis106
total 24K
drwxrwxr-x 2 4.0K 03/16/25 cheatSheets
drwxrwxr-x 4 4.0K 03/16/25 ExtraCredit
drwxrwxr-x 8 4.0K 03/16/25 .git
drwxrwxr-x 6 4.0K 03/16/25 labs
drwxrwxr-x 5 4.0K 03/02/25 notes
drwxrwxr-x 6 4.0K 03/16/25 weekReports
otzi@cis106:~/cis106/labs/lab4$
```