

# Lab 4

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Question 1:

```
1/1 ~ + [icons] Tilix: LukeM@cis106vm: /snap/firefox
1: LukeM@cis106vm: /snap/firefox ~
LukeM@cis106vm:~$ pwd
/home/LukeM
LukeM@cis106vm:~$ cd /usr/share/themes/
LukeM@cis106vm:/usr/share/themes$ pwd
/usr/share/themes
LukeM@cis106vm:/usr/share/themes$ cd /
LukeM@cis106vm:/$ cd /snap/firefox/
LukeM@cis106vm:/snap/firefox$
```

[illegible]

### Question 2:

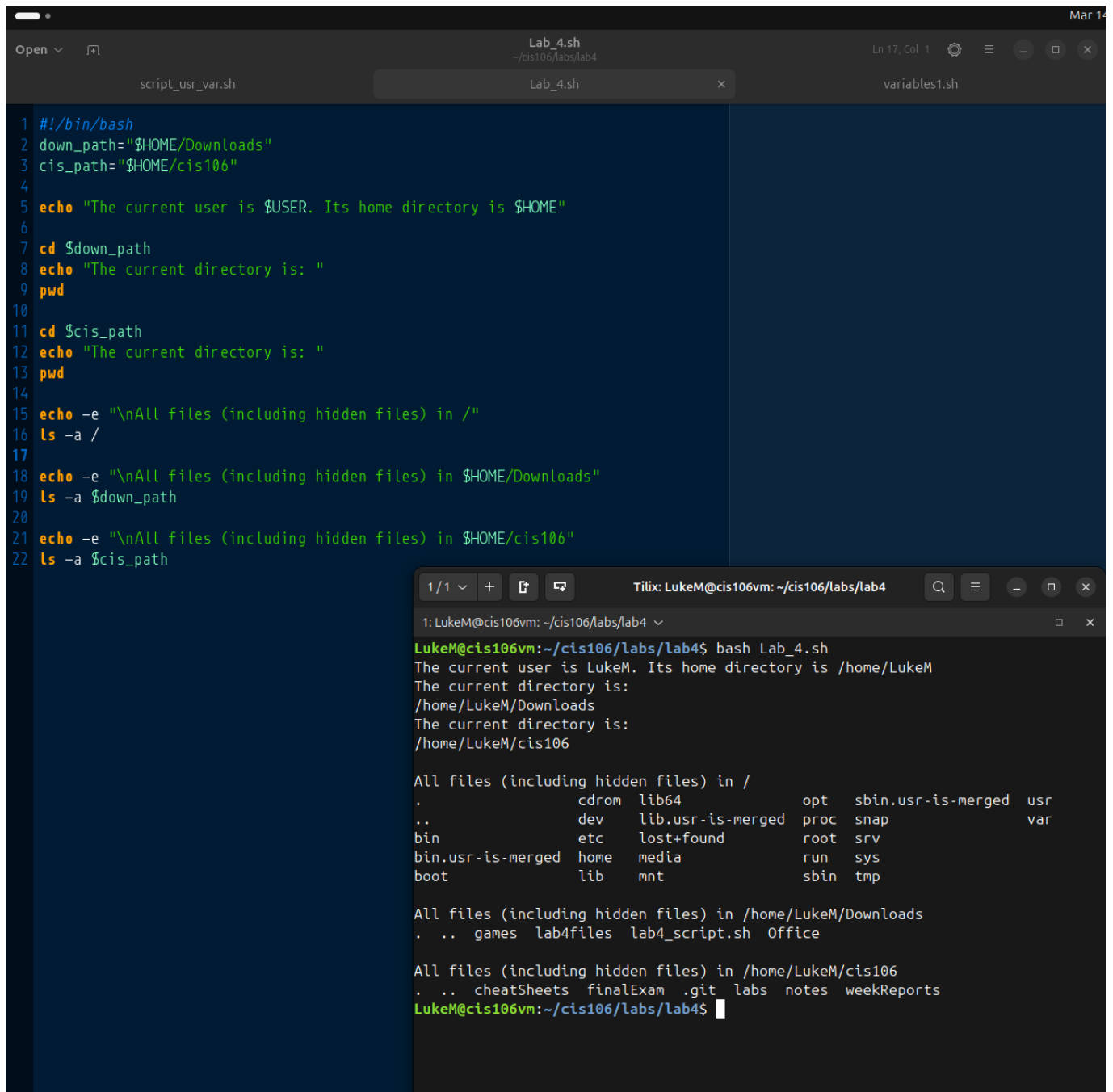
```

1/1  +  [ ] [x]
Tilix: LukeM@cis106vm: ~/Downloads/lab4files

1: LukeM@cis106vm: ~/Downloads/lab4files
LukeM@cis106vm:~$ cd /usr/share/
LukeM@cis106vm:/usr/share$ ls /home/LukeM/Downloads/lab4files/
countries.json  csvfile.csv  document.docx  globe.avi  helloWorld.c  Linux.pdf  sample.xls  Tux.png  Ubuntu.pdf  website.html
LukeM@cis106vm:/usr/share$ cd ~/Do
Documents/ Downloads/
LukeM@cis106vm:/usr/share$ cd ~/Downloads/lab4files/
LukeM@cis106vm:~/Downloads/lab4files$ ls -lh
total 6.5M
-rw-rw-r-- 1 LukeM LukeM 20K Feb 22 2022 countries.json
-rw-rw-r-- 1 LukeM LukeM 278K Feb 22 2022 csvfile.csv
-rw-rw-r-- 1 LukeM LukeM 747K Feb 22 2022 document.docx
-rw-rw-r-- 1 LukeM LukeM 726K Feb 22 2022 globe.avi
-rw-rw-r-- 1 LukeM LukeM 76 Feb 22 2022 helloWorld.c
-rw-rw-r-- 1 LukeM LukeM 2.5M Feb 22 2022 Linux.pdf
-rw-rw-r-- 1 LukeM LukeM 8.5K Feb 22 2022 sample.xls
-rw-rw-r-- 1 LukeM LukeM 42K Feb 22 2022 Tux.png
-rw-rw-r-- 1 LukeM LukeM 2.1M Feb 22 2022 Ubuntu.pdf
-rw-rw-r-- 1 LukeM LukeM 135K Feb 22 2022 website.html
LukeM@cis106vm:~/Downloads/lab4files$ ls -lSh
total 6.5M
-rw-rw-r-- 1 LukeM LukeM 2.5M Feb 22 2022 Linux.pdf
-rw-rw-r-- 1 LukeM LukeM 2.1M Feb 22 2022 Ubuntu.pdf
-rw-rw-r-- 1 LukeM LukeM 747K Feb 22 2022 document.docx
-rw-rw-r-- 1 LukeM LukeM 726K Feb 22 2022 globe.avi
-rw-rw-r-- 1 LukeM LukeM 278K Feb 22 2022 csvfile.csv
-rw-rw-r-- 1 LukeM LukeM 135K Feb 22 2022 website.html
-rw-rw-r-- 1 LukeM LukeM 42K Feb 22 2022 Tux.png
-rw-rw-r-- 1 LukeM LukeM 20K Feb 22 2022 countries.json
-rw-rw-r-- 1 LukeM LukeM 8.5K Feb 22 2022 sample.xls
-rw-rw-r-- 1 LukeM LukeM 76 Feb 22 2022 helloWorld.c
LukeM@cis106vm:~/Downloads/lab4files$ ls -lShSg
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
LukeM@cis106vm:~/Downloads/lab4files$ ls -lShSgi
total 6.5M
1329033 -rw-rw-r-- 1 2.5M Feb 22 2022 Linux.pdf
1329035 -rw-rw-r-- 1 2.1M Feb 22 2022 Ubuntu.pdf
1329038 -rw-rw-r-- 1 747K Feb 22 2022 document.docx
1329039 -rw-rw-r-- 1 726K Feb 22 2022 globe.avi
1329037 -rw-rw-r-- 1 278K Feb 22 2022 csvfile.csv
1329042 -rw-rw-r-- 1 135K Feb 22 2022 website.html
1329034 -rw-rw-r-- 1 42K Feb 22 2022 Tux.png
1329036 -rw-rw-r-- 1 20K Feb 22 2022 countries.json
1329041 -rw-rw-r-- 1 8.5K Feb 22 2022 sample.xls
1329040 -rw-rw-r-- 1 76 Feb 22 2022 helloWorld.c
LukeM@cis106vm:~/Downloads/lab4files$ ls -Xr
sample.xls  Ubuntu.pdf  countries.json  document.docx  helloWorld.c
Tux.png    Linux.pdf   website.html   csvfile.csv    globe.avi

```

### Question 3:



The image shows a code editor window with a dark theme. The editor has three tabs: 'script\_usr\_var.sh', 'Lab\_4.sh', and 'variables1.sh'. The 'Lab\_4.sh' tab is active, displaying a shell script with 22 lines. The script sets environment variables, echoes user and directory information, and lists files in the root directory and two subdirectories. Below the editor, a terminal window titled 'Tilix: LukeM@cis106vm: ~/cis106/labs/lab4' shows the output of running 'bash Lab\_4.sh'. The terminal output matches the script's logic, displaying the current user, home directory, and file listings for the specified paths.

```
1 #!/bin/bash
2 down_path="$HOME/Downloads"
3 cis_path="$HOME/cis106"
4
5 echo "The current user is $USER. Its home directory is $HOME"
6
7 cd $down_path
8 echo "The current directory is: "
9 pwd
10
11 cd $cis_path
12 echo "The current directory is: "
13 pwd
14
15 echo -e "\nAll files (including hidden files) in /"
16 ls -a /
17
18 echo -e "\nAll files (including hidden files) in $HOME/Downloads"
19 ls -a $down_path
20
21 echo -e "\nAll files (including hidden files) in $HOME/cis106"
22 ls -a $cis_path
```

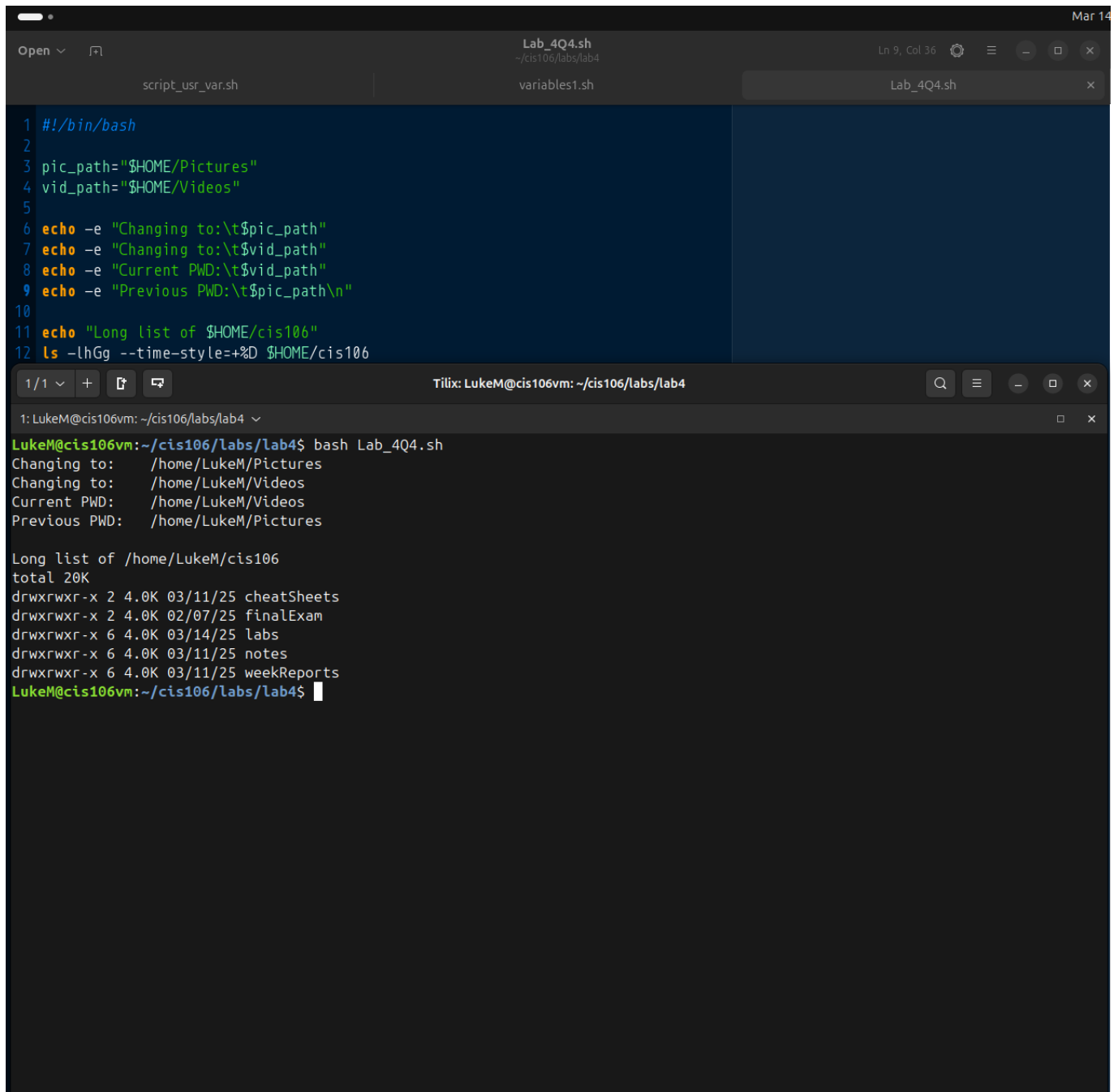
```
1: LukeM@cis106vm: ~/cis106/labs/lab4
LukeM@cis106vm:~/cis106/labs/lab4$ bash Lab_4.sh
The current user is LukeM. Its home directory is /home/LukeM
The current directory is:
/home/LukeM/Downloads
The current directory is:
/home/LukeM/cis106

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

All files (including hidden files) in /home/LukeM/Downloads
. ..  games  lab4files  lab4_script.sh  Office

All files (including hidden files) in /home/LukeM/cis106
. ..  cheatSheets  finalExam  .git  labs  notes  weekReports
LukeM@cis106vm:~/cis106/labs/lab4$
```

## Question 4



The image shows a code editor window with three tabs: `script_usr_var.sh`, `variables1.sh`, and `Lab_4Q4.sh`. The `Lab_4Q4.sh` tab is active, displaying a shell script with 12 lines. Below the code editor is a terminal window titled `Tilix: LukeM@cis106vm: ~/cis106/labs/lab4`. The terminal shows the execution of the script `Lab_4Q4.sh`, which sets environment variables for `pic_path` and `vid_path`, prints their values along with the current and previous PWD, and lists the contents of `/home/LukeM/cis106`.

```
1 #!/bin/bash
2
3 pic_path="$HOME/Pictures"
4 vid_path="$HOME/Videos"
5
6 echo -e "Changing to:\t$pic_path"
7 echo -e "Changing to:\t$vid_path"
8 echo -e "Current PWD:\t$vid_path"
9 echo -e "Previous PWD:\t$pic_path\n"
10
11 echo "Long list of $HOME/cis106"
12 ls -lhGg --time-style=+%D $HOME/cis106
```

```
1: LukeM@cis106vm: ~/cis106/labs/lab4
LukeM@cis106vm:~/cis106/labs/lab4$ bash Lab_4Q4.sh
Changing to:    /home/LukeM/Pictures
Changing to:    /home/LukeM/Videos
Current PWD:    /home/LukeM/Videos
Previous PWD:   /home/LukeM/Pictures

Long list of /home/LukeM/cis106
total 20K
drwxrwxr-x 2 4.0K 03/11/25 cheatSheets
drwxrwxr-x 2 4.0K 02/07/25 finalExam
drwxrwxr-x 6 4.0K 03/14/25 labs
drwxrwxr-x 6 4.0K 03/11/25 notes
drwxrwxr-x 6 4.0K 03/11/25 weekReports
LukeM@cis106vm:~/cis106/labs/lab4$
```