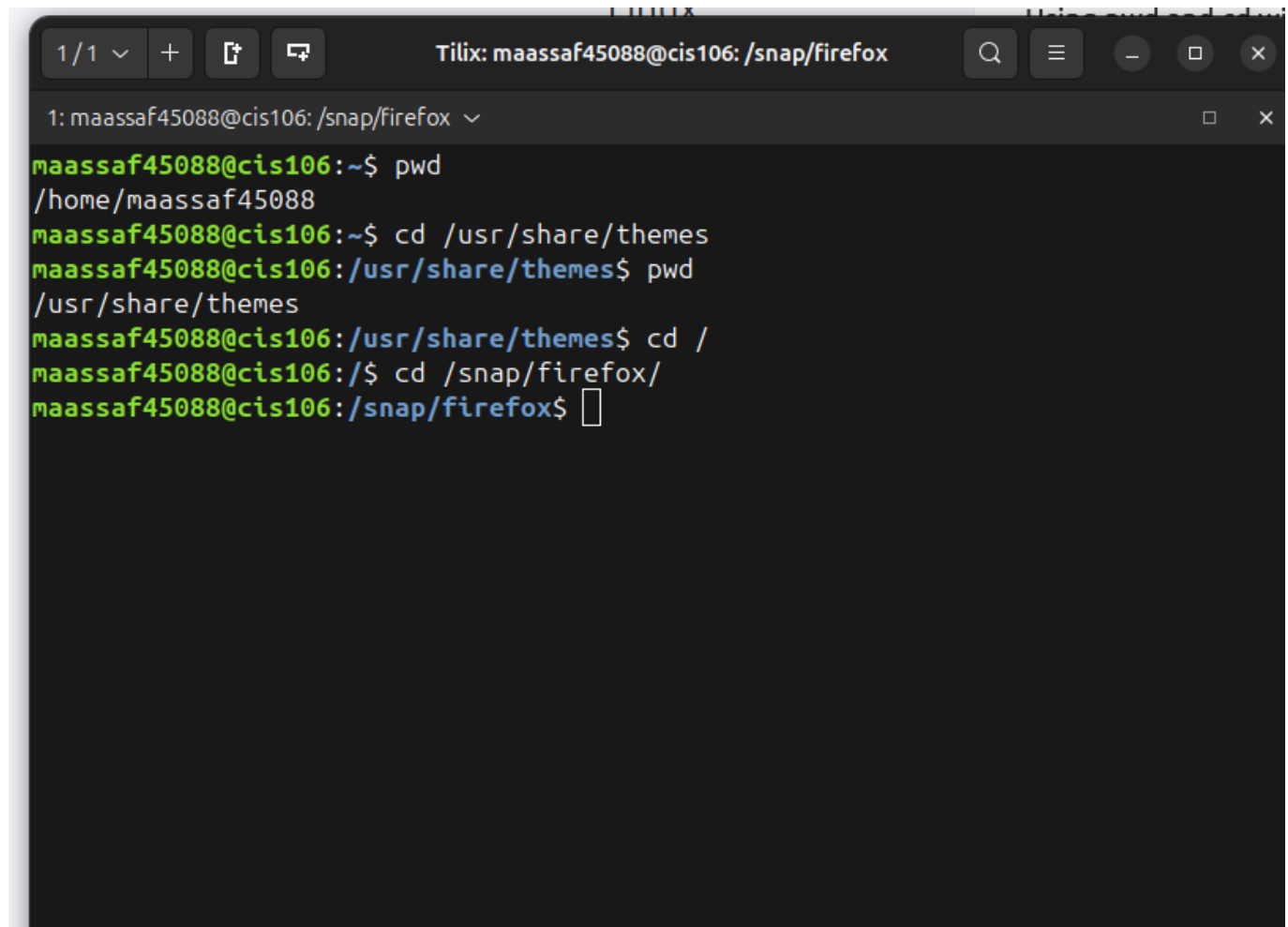


Lab 4 Submission

Student: Mohammed Assaf semester: Fall 24 Assignment: Lab 3

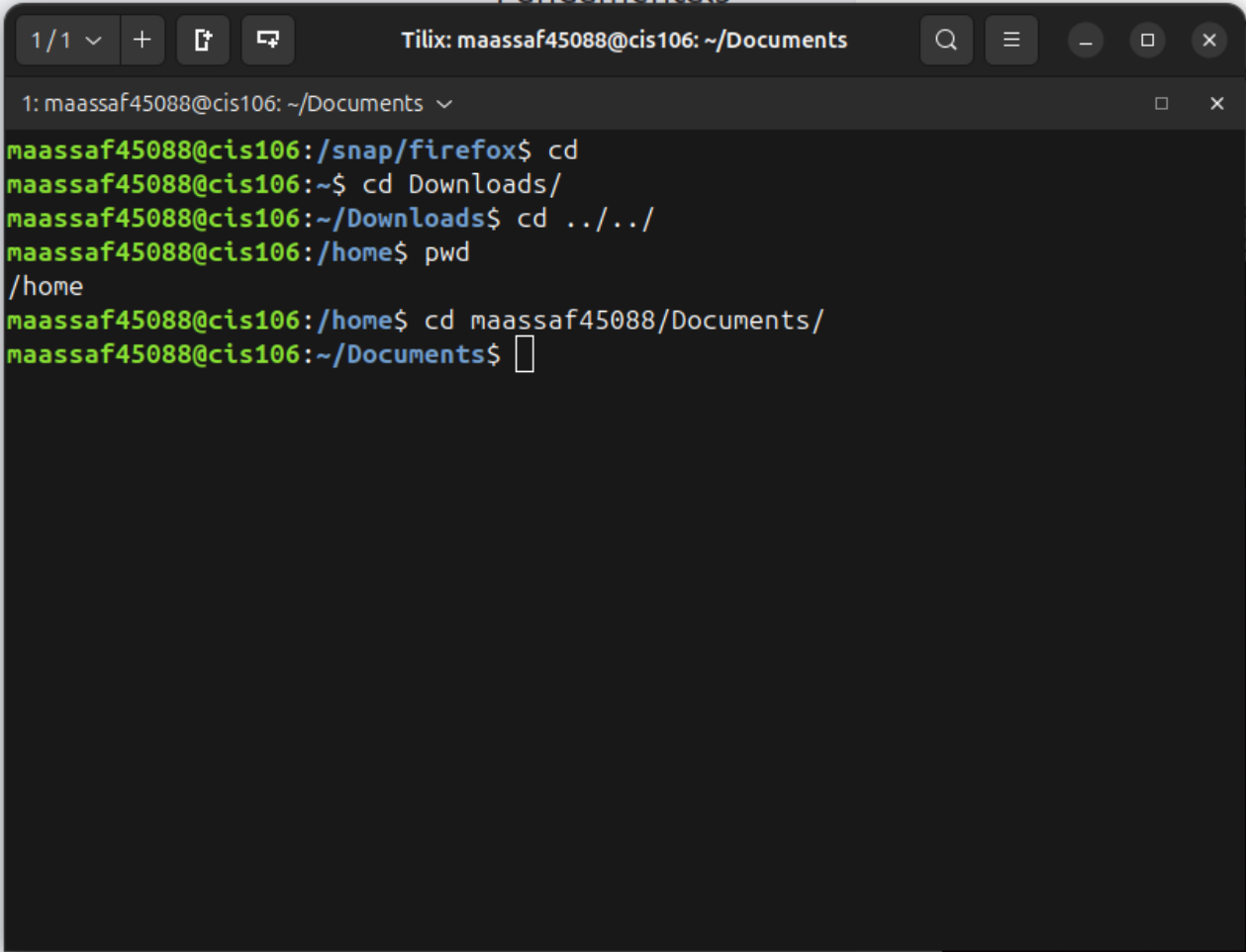
Lab 4 Submission

Question 1



```
Tilix: maassaf45088@cis106: /snap/firefox
1: maassaf45088@cis106: /snap/firefox
maassaf45088@cis106:~$ pwd
/home/maassaf45088
maassaf45088@cis106:~$ cd /usr/share/themes
maassaf45088@cis106:/usr/share/themes$ pwd
/usr/share/themes
maassaf45088@cis106:/usr/share/themes$ cd /
maassaf45088@cis106:/$ cd /snap/firefox/
maassaf45088@cis106:/snap/firefox$
```

Question 2



The screenshot shows a terminal window titled "Tilix: maassaf45088@cis106: ~/Documents". The terminal displays a series of commands and their outputs, demonstrating directory navigation in Linux. The commands and outputs are as follows:

```
1: maassaf45088@cis106: ~/Documents  
maassaf45088@cis106:/snap/firefox$ cd  
maassaf45088@cis106:~$ cd Downloads/  
maassaf45088@cis106:~/Downloads$ cd ../../  
maassaf45088@cis106:/home$ pwd  
/home  
maassaf45088@cis106:/home$ cd maassaf45088/Documents/  
maassaf45088@cis106:~/Documents$
```

Question 3

```
1: maassaf45088@c1s106: ~/lab4files
maassaf45088@c1s106: ~/Documents$ cd
maassaf45088@c1s106: ~/Documents$ cd /usr/share/
bash: cd: /usr/share/: No such file or directory
maassaf45088@c1s106: ~/Documents$ cd /usr/share/
maassaf45088@c1s106: /usr/share$ ls -l /lab4files/
countries.json  csvfile.csv  document.docx  globe.avi  helloWorld.c  Linux.pdf  sample.xls  Tux.png  Ubuntu.pdf  website.html
maassaf45088@c1s106: /usr/share$ cd - /lab4files/
maassaf45088@c1s106: ~/lab4files$ ls -lh
total 6.5M
-rw-rw-r-- 1 maassaf45088 maassaf45088 20K Feb 22 2022 countries.json
-rw-rw-r-- 1 maassaf45088 maassaf45088 278K Feb 22 2022 csvfile.csv
-rw-rw-r-- 1 maassaf45088 maassaf45088 747K Feb 22 2022 document.docx
-rw-rw-r-- 1 maassaf45088 maassaf45088 726K Feb 22 2022 globe.avi
-rw-rw-r-- 1 maassaf45088 maassaf45088 76 Feb 22 2022 helloWorld.c
-rw-rw-r-- 1 maassaf45088 maassaf45088 2.5M Feb 22 2022 Linux.pdf
-rw-rw-r-- 1 maassaf45088 maassaf45088 8.5K Feb 22 2022 sample.xls
-rw-rw-r-- 1 maassaf45088 maassaf45088 42K Feb 22 2022 Tux.png
-rw-rw-r-- 1 maassaf45088 maassaf45088 2.1M Feb 22 2022 Ubuntu.pdf
-rw-rw-r-- 1 maassaf45088 maassaf45088 135K Feb 22 2022 website.html
maassaf45088@c1s106: ~/lab4files$ ls -lhs
total 6.5M
-rw-rw-r-- 1 maassaf45088 maassaf45088 2.5M Feb 22 2022 Linux.pdf
-rw-rw-r-- 1 maassaf45088 maassaf45088 2.1M Feb 22 2022 Ubuntu.pdf
-rw-rw-r-- 1 maassaf45088 maassaf45088 747K Feb 22 2022 document.docx
-rw-rw-r-- 1 maassaf45088 maassaf45088 726K Feb 22 2022 globe.avi
-rw-rw-r-- 1 maassaf45088 maassaf45088 278K Feb 22 2022 csvfile.csv
-rw-rw-r-- 1 maassaf45088 maassaf45088 135K Feb 22 2022 website.html
-rw-rw-r-- 1 maassaf45088 maassaf45088 42K Feb 22 2022 Tux.png
-rw-rw-r-- 1 maassaf45088 maassaf45088 20K Feb 22 2022 countries.json
-rw-rw-r-- 1 maassaf45088 maassaf45088 8.5K Feb 22 2022 sample.xls
-rw-rw-r-- 1 maassaf45088 maassaf45088 76 Feb 22 2022 helloWorld.c
maassaf45088@c1s106: ~/lab4files$ ls -lhs
total 6580
-rw-rw-r-- 1 maassaf45088 maassaf45088 2600138 Feb 22 2022 Linux.pdf
-rw-rw-r-- 1 maassaf45088 maassaf45088 2114053 Feb 22 2022 Ubuntu.pdf
-rw-rw-r-- 1 maassaf45088 maassaf45088 764176 Feb 22 2022 document.docx
-rw-rw-r-- 1 maassaf45088 maassaf45088 742478 Feb 22 2022 globe.avi
-rw-rw-r-- 1 maassaf45088 maassaf45088 284042 Feb 22 2022 csvfile.csv
-rw-rw-r-- 1 maassaf45088 maassaf45088 137453 Feb 22 2022 website.html
-rw-rw-r-- 1 maassaf45088 maassaf45088 42777 Feb 22 2022 Tux.png
-rw-rw-r-- 1 maassaf45088 maassaf45088 20471 Feb 22 2022 countries.json
-rw-rw-r-- 1 maassaf45088 maassaf45088 8704 Feb 22 2022 sample.xls
-rw-rw-r-- 1 maassaf45088 maassaf45088 76 Feb 22 2022 helloWorld.c
maassaf45088@c1s106: ~/lab4files$ ls -lahis --no-group
total 6.5M
536417 -rw-rw-r-- 1 maassaf45088 maassaf45088 2.5M Feb 22 2022 Linux.pdf
536425 -rw-rw-r-- 1 maassaf45088 maassaf45088 2.1M Feb 22 2022 Ubuntu.pdf
536432 -rw-rw-r-- 1 maassaf45088 maassaf45088 747K Feb 22 2022 document.docx
536434 -rw-rw-r-- 1 maassaf45088 maassaf45088 726K Feb 22 2022 globe.avi
536427 -rw-rw-r-- 1 maassaf45088 maassaf45088 278K Feb 22 2022 csvfile.csv
536446 -rw-rw-r-- 1 maassaf45088 maassaf45088 135K Feb 22 2022 website.html
536424 -rw-rw-r-- 1 maassaf45088 maassaf45088 42K Feb 22 2022 Tux.png
536426 -rw-rw-r-- 1 maassaf45088 maassaf45088 20K Feb 22 2022 countries.json
536442 -rw-rw-r-- 1 maassaf45088 maassaf45088 8.5K Feb 22 2022 sample.xls
536416 drwxrwxr-x 2 maassaf45088 maassaf45088 4.0K Feb 22 2022 .
524587 drwxr-x-- 25 maassaf45088 maassaf45088 4.0K Oct 22 23:43 ..
536441 -rw-rw-r-- 1 maassaf45088 maassaf45088 76 Feb 22 2022 helloWorld.c
maassaf45088@c1s106: ~/lab4files$ ls -lXr
total 6580
-rw-rw-r-- 1 maassaf45088 maassaf45088 8704 Feb 22 2022 sample.xls
-rw-rw-r-- 1 maassaf45088 maassaf45088 42777 Feb 22 2022 Tux.png
-rw-rw-r-- 1 maassaf45088 maassaf45088 2114053 Feb 22 2022 Ubuntu.pdf
-rw-rw-r-- 1 maassaf45088 maassaf45088 2600138 Feb 22 2022 Linux.pdf
-rw-rw-r-- 1 maassaf45088 maassaf45088 20471 Feb 22 2022 countries.json
-rw-rw-r-- 1 maassaf45088 maassaf45088 137453 Feb 22 2022 website.html
-rw-rw-r-- 1 maassaf45088 maassaf45088 764176 Feb 22 2022 document.docx
-rw-rw-r-- 1 maassaf45088 maassaf45088 284042 Feb 22 2022 csvfile.csv
-rw-rw-r-- 1 maassaf45088 maassaf45088 76 Feb 22 2022 helloWorld.c
-rw-rw-r-- 1 maassaf45088 maassaf45088 742478 Feb 22 2022 globe.avi
maassaf45088@c1s106: ~/lab4files$
```

Question 4

```
script_env_var.sh
1 #!/bin/bash
2 down="$HOME/Downloads"
3 msg1="The current directory is:"
4 cis="$HOME/cis106"
5 msg2="\nAll files (including hidden files) in"
6
7 echo "The current user is $USER. It's home directory is $HOME"
8 cd $down
9 echo $msg1
10 pwd
11 cd $cis
12 echo $msg1
13 pwd
14
15 echo -e "$msg2 /"
16 ls -mA / --color=auto
17
18
19 echo -e "$msg2 $HOME"
20 ls -mA --color=auto $HOME
21
22
23 echo -e "$msg2 $down"
24 ls -mA --color=auto $down
25
26
27 echo -e "$msg2 $cis"
28 ls -mA --color=auto $cis
29
```

Challenge Question:

```
t:maassaf45088@cis106: ~  
Current PWD: /home/maassaf45088/Videos  
Previous PWD: /home/maassaf45088/Pictures  
Long list of /home/maassaf45088/cis106  
total 28K  
drwxrwxr-x 7 maassaf45088 maassaf45088 4.0K 10/23/24 .  
drwxr-x--- 25 maassaf45088 maassaf45088 4.0K 10/22/24 ..  
drwxrwxr-x 2 maassaf45088 maassaf45088 4.0K 10/22/24 Cheatsheets  
drwxrwxr-x 8 maassaf45088 maassaf45088 4.0K 10/22/24 .git  
drwxrwxr-x 6 maassaf45088 maassaf45088 4.0K 10/23/24 Labs  
drwxrwxr-x 6 maassaf45088 maassaf45088 4.0K 10/22/24 Notes  
drwxrwxr-x 6 maassaf45088 maassaf45088 4.0K 10/22/24 WeekReports  
  
All environment variables:  
maassaf45088@cis106:~$ bash Scripts/challenge_question4.sh  
Changing to: /home/maassaf45088/Pictures  
Changing to: /home/maassaf45088/Videos  
Current PWD: /home/maassaf45088/Videos  
Previous PWD: /home/maassaf45088/Pictures  
Long list of /home/maassaf45088/cis106  
total 28K  
drwxrwxr-x 7 maassaf45088 maassaf45088 4.0K 10/23/24 .  
drwxr-x--- 25 maassaf45088 maassaf45088 4.0K 10/22/24 ..  
drwxrwxr-x 2 maassaf45088 maassaf45088 4.0K 10/22/24 Cheatsheets  
drwxrwxr-x 8 maassaf45088 maassaf45088 4.0K 10/22/24 .git  
drwxrwxr-x 6 maassaf45088 maassaf45088 4.0K 10/23/24 Labs  
drwxrwxr-x 6 maassaf45088 maassaf45088 4.0K 10/22/24 Notes  
drwxrwxr-x 6 maassaf45088 maassaf45088 4.0K 10/22/24 WeekReports  
  
maassaf45088@cis106:~$ bash Scripts/challenge_question4.sh  
Changing to: /home/maassaf45088/Pictures  
Changing to: /home/maassaf45088/Videos  
Current PWD: /home/maassaf45088/Videos  
Previous PWD: /home/maassaf45088/Pictures  
Long list of /home/maassaf45088/cis106  
total 28K  
drwxrwxr-x 7 maassaf45088 maassaf45088 4.0K 10/23/24 .  
drwxr-x--- 25 maassaf45088 maassaf45088 4.0K 10/22/24 ..  
drwxrwxr-x 2 maassaf45088 maassaf45088 4.0K 10/22/24 Cheatsheets  
drwxrwxr-x 8 maassaf45088 maassaf45088 4.0K 10/22/24 .git  
drwxrwxr-x 6 maassaf45088 maassaf45088 4.0K 10/23/24 Labs  
drwxrwxr-x 6 maassaf45088 maassaf45088 4.0K 10/22/24 Notes  
drwxrwxr-x 6 maassaf45088 maassaf45088 4.0K 10/22/24 WeekReports  
maassaf45088@cis106:~$
```

Script Source code for Challenge Question:

[Script_challenge](#)

Lab4 Source Code:

[lab4](#)