

# Lab 4

---

Question 1: Moving around the file system.

```
1/1  +  [ ] [ ]  Tilix: ad@cis106: /snap/firefox  [Q] [≡] [−]
1: ad@cis106: /snap/firefox  v
ad@cis106:~$ pwd
/home/ad
ad@cis106:~$ cd /usr/share/themes/
ad@cis106:/usr/share/themes$ pwd
/usr/share/themes
ad@cis106:/usr/share/themes$ cd /
ad@cis106:/$ cd /snap/firefox
ad@cis106:/snap/firefox$ █
```

```
1/1  +  [ ] [ ]  Tilix: ad@cis106: ~/Documents  [Q] [ ]
1: ad@cis106: ~/Documents  v
ad@cis106:~$ cd
ad@cis106:~$ cd Downloads/
ad@cis106:~/Downloads$ cd ../../
ad@cis106:/home$ pwd
/home
ad@cis106:/home$ cd ad/Documents
ad@cis106:~/Documents$ █
```

Question 2: The `ls` command.

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

1: ad@cis106: ~/lab4files v
ad@cis106:/usr/share$ cd
ad@cis106:~$ cd /usr/share/
ad@cis106:/usr/share$ ls -/lab4files/
ls: invalid option -- '/'
Try 'ls --help' for more information.
ad@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
ad@cis106:/usr/share$ cd ~/lab4files/
ad@cis106:~/lab4files$ ls -lh
total 6.5M
-rw-rw-r-- 1 ad ad 20K Feb 22 2022 countries.json
-rw-rw-r-- 1 ad ad 278K Feb 22 2022 csvfile.csv
-rw-rw-r-- 1 ad ad 747K Feb 22 2022 document.docx
-rw-rw-r-- 1 ad ad 726K Feb 22 2022 globe.avi
-rw-rw-r-- 1 ad ad 76 Feb 22 2022 helloWorld.c
-rw-rw-r-- 1 ad ad 2.5M Feb 22 2022 Linux.pdf
-rw-rw-r-- 1 ad ad 8.5K Feb 22 2022 sample.xls
-rw-rw-r-- 1 ad ad 42K Feb 22 2022 Tux.png
-rw-rw-r-- 1 ad ad 2.1M Feb 22 2022 Ubuntu.pdf
-rw-rw-r-- 1 ad ad 135K Feb 22 2022 website.html
ad@cis106:~/lab4files$ ls -lhs
total 6.5M
-rw-rw-r-- 1 ad ad 2.5M Feb 22 2022 Linux.pdf
-rw-rw-r-- 1 ad ad 2.1M Feb 22 2022 Ubuntu.pdf
-rw-rw-r-- 1 ad ad 747K Feb 22 2022 document.docx
-rw-rw-r-- 1 ad ad 726K Feb 22 2022 globe.avi
-rw-rw-r-- 1 ad ad 278K Feb 22 2022 csvfile.csv
-rw-rw-r-- 1 ad ad 135K Feb 22 2022 website.html
-rw-rw-r-- 1 ad ad 42K Feb 22 2022 Tux.png
ad@cis106:~/lab4files$ ls -lhgS
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
ad@cis106:~/lab4files$ ls -lhgS
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
ad@cis106:~/lab4files$ ls -mr
website.html, Ubuntu.pdf, Tux.png,
sample.xls, Linux.pdf, helloWorld.c,
globe.avi, document.docx, csvfile.csv,
countries.json
ad@cis106:~/lab4files$ ls -lX
globe.avi
helloWorld.c
csvfile.csv
document.docx
website.html
countries.json
Linux.pdf
Ubuntu.pdf
Tux.png
```

```
1/1 v + [ ] [ ] Tilix: ad@cis106: ~/lab4files
1: ad@cis106: ~/lab4files v
ad@cis106:~/lab4files$ ls -lhG
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
ad@cis106:~/lab4files$ ls -mr
website.html, Ubuntu.pdf, Tux.png,
sample.xls, Linux.pdf, helloWorld.c,
globe.avi, document.docx, csvfile.csv,
countries.json
ad@cis106:~/lab4files$ ls -lX
globe.avi
helloWorld.c
csvfile.csv
document.docx
website.html
countries.json
Linux.pdf
Ubuntu.pdf
Tux.png
sample.xls
ad@cis106:~/lab4files$ █
```

### Question 3: Shell Bash.

```

1/1 + [ ] [ ]
Tilix: ad@cis106: ~/Scripts
1: ad@cis106: ~/Scripts
ad@cis106:~$ cd ~/Scripts
ad@cis106:~/Scripts$ bash lab4_script.sh
The current user is ad. It's home directory is /home/ad
The current directory is:
/home/ad/Downloads
The current directory is:
/home/ad/cis106
/home/ad/Downloads
games, thunderbird.tmp
All files (including hidden files in) /home/ad
''$'\001\300\370\261\002''@'$'\260\302\224\016''@8'$'\f''@'$'\006\004''@@@'$'\240\002\240\002\b\003\004\340\002\340\002\340\002\034\034\
001\001\004\204\350\261\002\204\350\261\002\020\001\005\300\350\261\002\300\370\261\002\300\370\261\002\203\017\017\020\001\006''@l'$'\301\
t''@'$'\214\301\t''@'$'\214\301\t''(ta(ta'$'\020\001\006''p'$'\340',
aileendelgado21, .bash_history, .bash_logout, .bashrc, .cache, cis106, .config, Desktop, Documents, .dotnet, Downloads, GAMES,
.gitconfig, .gnupg, .irb_history, lab4files, .lessht, .local, Music, Pictures, .pki, practicels, practicels.tar.xz, .profile, Public,
Scripts, snap, .ssh, .sudo_as_admin_successful, Templates, Videos, .viminfo, .vscode, .wget-hsts
All files (including hidden files in) /home/ad/Downloads
games, thunderbird.tmp
All files (including hidden files in) /home/ad/cis106
cheatsheets, .git, labs, notes, weekReports
ad@cis106:~/Scripts$ █

```

```

Open ▾ [ ] lab4_script.sh Ln 18, Col 22 [ ] [ ] [ ]
~/Scripts

1  #!/bin/bash
2  down="$HOME/Downloads"
3  msg1="The current directory is:"
4  msg2="All files (including hidden files in)"
5  cis="$HOME/cis106"
6
7  echo "The current user is $USER. It's home directory is $HOME"
8  cd $HOME/Downloads
9  echo "$msg1"
10 pwd
11 cd $cis
12 echo "$msg1"
13 pwd
14
15 echo -e "$down"
16 ls -mA --color=auto $down
17

```

Question 4: Challenge-Write A Script.

The screenshot shows a web browser with the URL `https://cis106.com/labs/lab4/`. The page title is "Linux Fundamentals" and it lists various lab topics. The "Solution" section contains two steps: "1 Use the screenshot and write a script that can produce the same" and "2 Modify the script to use variables where needed." Below the solution, there is a text prompt: "Take a screenshot of the terminal and the text editor showing the".

The code editor shows a file named `challenge_question.script` with the following content:

```
1 #!/bin/bash
2
3 # echo "Changing to: $HOME"
4 # echo "Changing to:
5 # echo " Current PWD:
6 # echo "Previous PWD:
7 # echo "pictures: $Pictures"
8 # echo "videos:$Videos"
9
10 # ls %f $HOME $USERNAME
11
12
```

The terminal window shows the following commands and output:

```
1: ad@cis106: ~
bash: /home/ad: Is a directory
ad@cis106:~/Scripts$ bash challenge_question.script
ad@cis106:~/Scripts$ echo $HOME
/home/ad
ad@cis106:~/Scripts$ echo $Pictures
ad@cis106:~/Scripts$ cd
ad@cis106:~$ bash challenge_question.script
bash: challenge_question.script: No such file or directory
ad@cis106:~$ bash challenge_question.sh
bash: challenge_question.sh: No such file or directory
ad@cis106:~$ cd ~ Scripts
bash: cd: too many arguments
ad@cis106:~$ cd ~ /Scripts
bash: cd: too many arguments
ad@cis106:~$ cd Scripts/
ad@cis106:~/Scripts$ bash challenge_question.sh
bash: challenge_question.sh: No such file or directory
ad@cis106:~/Scripts$ cd
ad@cis106:~$ bash challenge_question.Scripts
bash: challenge_question.Scripts: No such file or director
ad@cis106:~$ bash challenge_question.sh
bash: challenge_question.sh: No such file or directory
ad@cis106:~$
```

- I was having trouble with this challenge question.