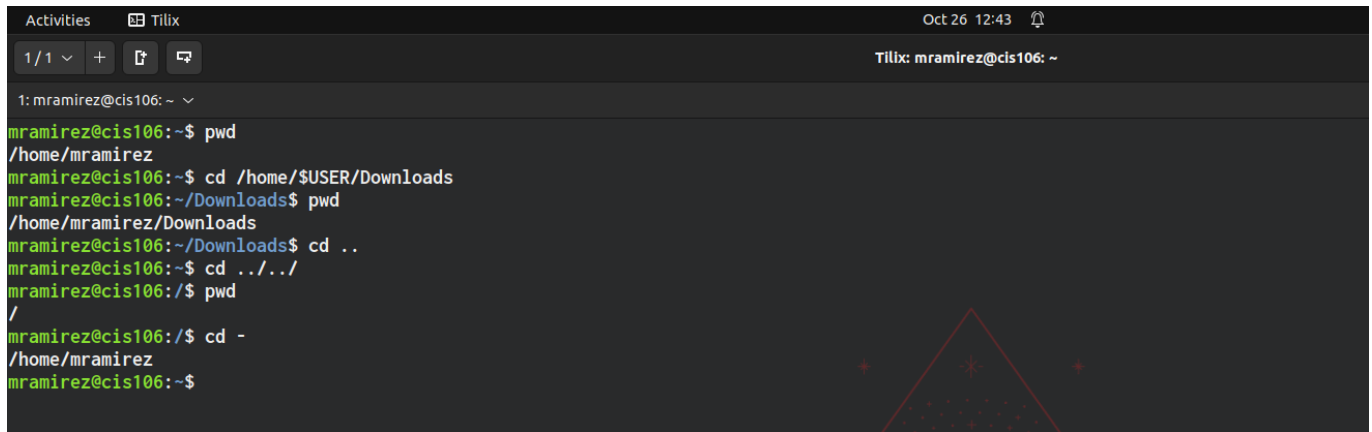


# Week Report 4

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## Practice from the presentation The Linux File system:

### Practice 1



The screenshot shows a terminal window titled 'Activities' and 'Tilix'. The terminal displays a series of commands and their outputs for navigating the file system. The user starts in the home directory, moves to the Downloads directory, and then navigates back to the home directory using relative paths. A decorative red triangle with asterisks is visible in the bottom right corner of the terminal window.

```
Activities Tilix Oct 26 12:43
1/1 + [ ] [ ]
Tilix: mramirez@cis106: ~
1: mramirez@cis106: ~
mramirez@cis106:~$ pwd
/home/mramirez
mramirez@cis106:~$ cd /home/$USER/Downloads
mramirez@cis106:~/Downloads$ pwd
/home/mramirez/Downloads
mramirez@cis106:~/Downloads$ cd ..
mramirez@cis106:~$ cd ../../
mramirez@cis106:/$ pwd
/
mramirez@cis106:/$ cd -
/home/mramirez
mramirez@cis106:~$
```

### Practice 2

```

mramirez@cis106:~$ wget https://cis106.com/assets/practicels.tar.xz
--2023-10-26 13:11:53-- https://cis106.com/assets/practicels.tar.xz
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: 2229212 (2.1M) [application/x-xz]
Saving to: 'practicels.tar.xz'

practicels.tar.xz 100%[=====] 2.12M --.-KB/s in 0.1s

2023-10-26 13:11:53 (16.4 MB/s) - 'practicels.tar.xz' saved [2229212/2229212]

mramirez@cis106:~$ tar Jxf practicels.tar.xz
mramirez@cis106:~$ cd practicels/
mramirez@cis106:~/practicels$ ls
book.txt      history-debian.pdf  movie.mp4  song.mp3      tux-penguin.gif
countries.xml  homework.docx       people.csv  tux-nobg.png
mramirez@cis106:~/practicels$ ls -a
ls: cannot access '-': No such file or directory
ls: cannot access 'a': No such file or directory
mramirez@cis106:~/practicels$ ls -a
.      countries.xml  movie.mp4  tux-nobg.png
..     history-debian.pdf  people.csv  tux-penguin.gif
book.txt  homework.docx  song.mp3
mramirez@cis106:~/practicels$ ls -l
total 2932
-rw-rw-r-- 1 mramirez mramirez 1043 Feb 27 2022 book.txt
-rw-rw-r-- 1 mramirez mramirez 23972 Feb 27 2022 countries.xml
-rw-rw-r-- 1 mramirez mramirez 163057 Feb 27 2022 history-debian.pdf
-rw-rw-r-- 1 mramirez mramirez 111303 Feb 22 2022 homework.docx
-rw-rw-r-- 1 mramirez mramirez 1570024 Feb 27 2022 movie.mp4
-rw-rw-r-- 1 mramirez mramirez 284042 Feb 27 2022 people.csv
-rw-rw-r-- 1 mramirez mramirez 764176 Feb 27 2022 song.mp3
-rw-rw-r-- 1 mramirez mramirez 21314 Feb 27 2022 tux-nobg.png
-rw-rw-r-- 1 mramirez mramirez 44299 Jan 31 2020 tux-penguin.gif
mramirez@cis106:~/practicels$ ls --help
Usage: ls [OPTION]... [FILE]...
List information about the FILES (the current directory by default).
Sort entries alphabetically if none of -cftuvSUX nor --sort is specified.

Mandatory arguments to long options are mandatory for short options too.
-a, --all                do not ignore entries starting with .
-A, --almost-all        do not list implied . and ..
--author                 with -l, print the author of each file
or available locally via: info '(coreutils) ls invocation'
mramirez@cis106:~/practicels$ ls -lh
total 2.9M
-rw-rw-r-- 1 mramirez mramirez 1.1K Feb 27 2022 book.txt
-rw-rw-r-- 1 mramirez mramirez 24K Feb 27 2022 countries.xml
-rw-rw-r-- 1 mramirez mramirez 160K Feb 27 2022 history-debian.pdf
-rw-rw-r-- 1 mramirez mramirez 109K Feb 22 2022 homework.docx
-rw-rw-r-- 1 mramirez mramirez 1.5M Feb 27 2022 movie.mp4
-rw-rw-r-- 1 mramirez mramirez 278K Feb 27 2022 people.csv
-rw-rw-r-- 1 mramirez mramirez 747K Feb 27 2022 song.mp3
-rw-rw-r-- 1 mramirez mramirez 21K Feb 27 2022 tux-nobg.png
-rw-rw-r-- 1 mramirez mramirez 44K Jan 31 2020 tux-penguin.gif
mramirez@cis106:~/practicels$ ls -lht
total 2.9M
-rw-rw-r-- 1 mramirez mramirez 24K Feb 27 2022 countries.xml
-rw-rw-r-- 1 mramirez mramirez 278K Feb 27 2022 people.csv
-rw-rw-r-- 1 mramirez mramirez 747K Feb 27 2022 song.mp3
-rw-rw-r-- 1 mramirez mramirez 1.5M Feb 27 2022 movie.mp4
-rw-rw-r-- 1 mramirez mramirez 160K Feb 27 2022 history-debian.pdf
-rw-rw-r-- 1 mramirez mramirez 21K Feb 27 2022 tux-nobg.png
-rw-rw-r-- 1 mramirez mramirez 1.1K Feb 27 2022 book.txt
-rw-rw-r-- 1 mramirez mramirez 109K Feb 22 2022 homework.docx
-rw-rw-r-- 1 mramirez mramirez 44K Jan 31 2020 tux-penguin.gif
mramirez@cis106:~/practicels$ ls -lhg
total 2.9M
-rw-rw-r-- 1 mramirez 1.1K Feb 27 2022 book.txt
-rw-rw-r-- 1 mramirez 24K Feb 27 2022 countries.xml
-rw-rw-r-- 1 mramirez 160K Feb 27 2022 history-debian.pdf
-rw-rw-r-- 1 mramirez 109K Feb 22 2022 homework.docx
-rw-rw-r-- 1 mramirez 1.5M Feb 27 2022 movie.mp4
-rw-rw-r-- 1 mramirez 278K Feb 27 2022 people.csv
-rw-rw-r-- 1 mramirez 747K Feb 27 2022 song.mp3
-rw-rw-r-- 1 mramirez 21K Feb 27 2022 tux-nobg.png
-rw-rw-r-- 1 mramirez 44K Jan 31 2020 tux-penguin.gif
mramirez@cis106:~/practicels$ ls -lhgS
total 2.9M
-rw-rw-r-- 1 1.5M Feb 27 2022 movie.mp4
-rw-rw-r-- 1 747K Feb 27 2022 song.mp3
-rw-rw-r-- 1 278K Feb 27 2022 people.csv
-rw-rw-r-- 1 160K Feb 27 2022 history-debian.pdf
-rw-rw-r-- 1 109K Feb 22 2022 homework.docx
-rw-rw-r-- 1 44K Jan 31 2020 tux-penguin.gif
-rw-rw-r-- 1 24K Feb 27 2022 countries.xml
-rw-rw-r-- 1 1.1K Feb 27 2022 book.txt
mramirez@cis106:~/practicels$ ls -mr
tux-penguin.gif, tux-nobg.png, song.mp3, people.csv, movie.mp4, homework.docx,
history-debian.pdf, countries.xml, book.txt
mramirez@cis106:~/practicels$ ls -lX
people.csv
homework.docx
tux-penguin.gif
song.mp3
movie.mp4
history-debian.pdf
tux-nobg.png
book.txt
countries.xml

```

## Practice 3

```

mramirez@cis106:~$ pwd
/home/mramirez
mramirez@cis106:~$ cd ~
mramirez@cis106:~$ cd /
mramirez@cis106:/$ cd usr/share/themes
mramirez@cis106:/usr/share/themes$ cd ../../
mramirez@cis106:/usr$ ls -A $HOME
.bash_history  .lesshst      .thunderbird
.bash_logout   .local        .vboxclient-clipboard-tty2-control.pid
.bashrc        .mozilla      .vboxclient-clipboard-tty2-service.pid
.cache         Music         .vboxclient-draganddrop-tty2-control.pid
cis106         myproject     .vboxclient-draganddrop-tty2-service.pid
.cis106.png    Pictures      .vboxclient-hostversion-tty2-control.pid
.config        .pki          .vboxclient-seamless-tty2-control.pid
Desktop        practicels    .vboxclient-seamless-tty2-service.pid
Documents      practicels.tar.xz .vboxclient-vmvga-session-tty2-control.pid
.dotnet        .profile      .vboxclient-vmvga-session-tty2-service.pid
Downloads      Public        Videos
.Fonts         snap          .viminfo
Games          .ssh          .vscode
.gitconfig     .sudo_as_admin_successful Website
.gnupg         Templates

mramirez@cis106:/usr$ cd; ls -tX cis106/
cheatSheets labs weekReports
mramirez@cis106:~$ cd; -rR ~/cis106/
-rR: command not found
mramirez@cis106:~$ ls -rR ~/cis106
/home/mramirez/cis106:
weekReports labs cheatSheets

/home/mramirez/cis106/weekReports:
wr4.pdf      wr4-p2.2.png  wr4-p1.png  wr3.pdf  fs1.3.png  fs1.1.png
wr4-p2.3.png wr4-p2.1.png wr4.md      wr3.md   fs1.2.png

/home/mramirez/cis106/labs:
lab3 lab2 lab1

/home/mramirez/cis106/labs/lab3:
wiki_info.odt q2.1.png q1.1.png presentation.odp lab3.pdf lab3.md

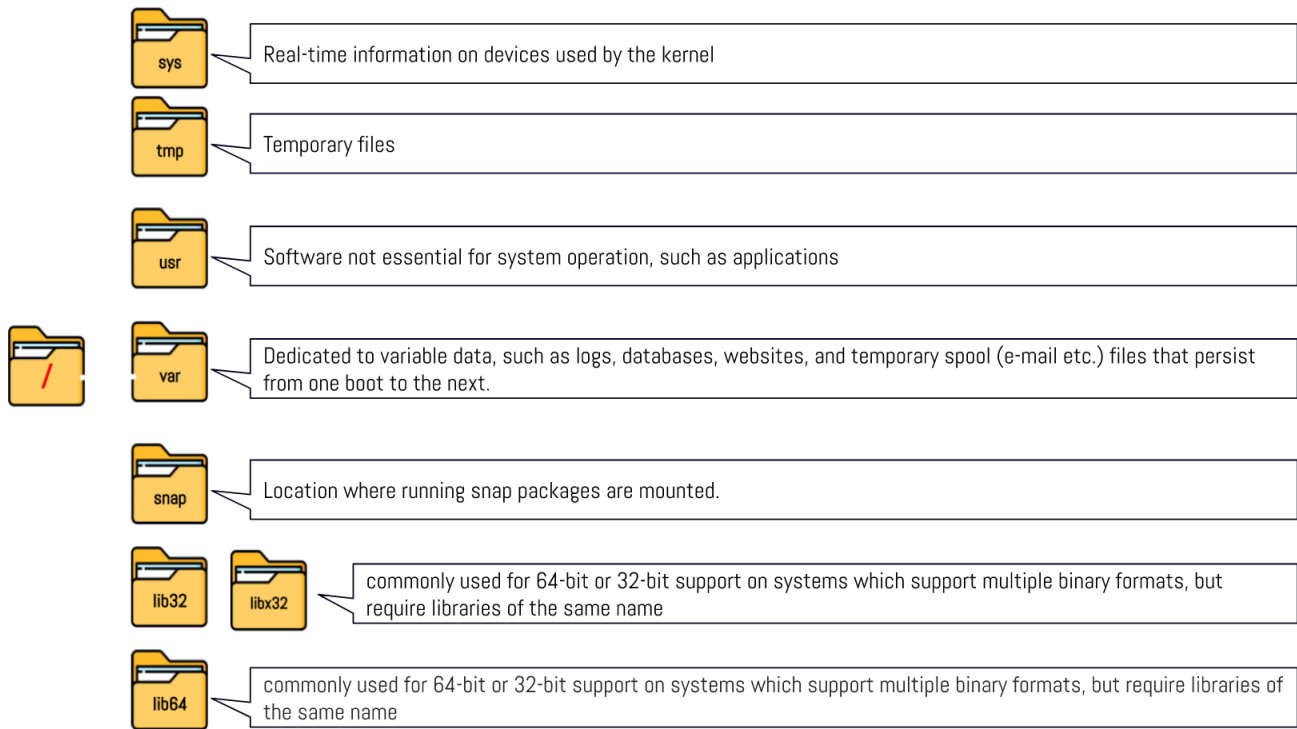
/home/mramirez/cis106/labs/lab2:
question4.png question2.png question1_virtual.png lab2.pdf
question3.png question2.2.png question1_sysinfo.png lab2.md

Linux workshop ubuntu software installation cheat sheet.png gitcommands.txt
mramirez@cis106:~$ ls -lh ~
total 2.2M
drwxrwxr-x 6 mramirez mramirez 4.0K Oct 12 11:06 cis106
drwxr-xr-x 3 mramirez mramirez 4.0K Oct 26 13:08 Desktop
drwxr-xr-x 2 mramirez mramirez 4.0K Oct 12 04:09 Documents
drwxr-xr-x 2 mramirez mramirez 4.0K Oct 26 13:08 Downloads
drwxrwxr-x 3 mramirez mramirez 4.0K Oct 19 18:21 Games
drwxr-xr-x 2 mramirez mramirez 4.0K Oct 19 18:49 Music
drwxrwxr-x 2 mramirez mramirez 4.0K Oct 19 18:49 myproject
drwxr-xr-x 2 mramirez mramirez 4.0K Oct 26 13:20 Pictures
drwxrwxr-x 2 mramirez mramirez 4.0K Feb 27 2022 practicels
-rw-rw-r-- 1 mramirez mramirez 2.2M Oct 14 11:22 practicels.tar.xz
drwxr-xr-x 2 mramirez mramirez 4.0K Sep 29 23:13 Public
drwx----- 5 mramirez mramirez 4.0K Sep 29 23:37 snap
drwxr-xr-x 2 mramirez mramirez 4.0K Sep 29 23:13 Templates
drwxr-xr-x 2 mramirez mramirez 4.0K Oct 19 18:43 Videos
-rw-rw-r-- 1 mramirez mramirez 0 Oct 19 18:26 Website
mramirez@cis106:~$ ls -lgG -full-time ~
ls: invalid option -- '-'
Try 'ls --help' for more information.
mramirez@cis106:~$ ls -lgG --full-time ~
ls: unrecognized option '--full-time'
Try 'ls --help' for more information.
mramirez@cis106:~$ ls -lgG _full-time ~
ls: cannot access '_full-time': No such file or directory
/home/mramirez:
total 2232
drwxrwxr-x 6 4096 Oct 12 11:06 cis106
drwxr-xr-x 3 4096 Oct 26 13:08 Desktop
drwxr-xr-x 2 4096 Oct 12 04:09 Documents
drwxr-xr-x 2 4096 Oct 26 13:08 Downloads
drwxrwxr-x 3 4096 Oct 19 18:21 Games
drwxr-xr-x 2 4096 Oct 19 18:49 Music
drwxrwxr-x 2 4096 Oct 19 18:49 myproject
drwxr-xr-x 2 4096 Oct 26 13:20 Pictures
drwxrwxr-x 2 4096 Feb 27 2022 practicels
-rw-rw-r-- 1 2229212 Oct 14 11:22 practicels.tar.xz
drwxr-xr-x 2 4096 Sep 29 23:13 Public
drwx----- 5 4096 Sep 29 23:37 snap
drwxr-xr-x 2 4096 Sep 29 23:13 Templates
drwxr-xr-x 2 4096 Oct 19 18:43 Videos
-rw-rw-r-- 1 0 Oct 19 18:26 Website

```

The Linux File system directories and their purpose:





## All the commands for navigating the filesystem

Command	What it does	Syntax	Example
pwd	prints current directory	pwd	'pwd'
cd	used to change the current working directory	cd	'cd Downloads'
ls	displays all files inside a given directory	ls	'ls Downloads'

## Basic terminology

- **File system** - The way files are stored and organized.
- **Current directory** - The directory you are at the moment or present working directory.
- **parent directory** - The directory in which you can move forward to a subdirectory or backwards to the previous directory
- **the difference between YOUR HOME directory and THE HOME directory** - The home directory is the user's directory; every user in the system will have a home directory. As for "your home" directory, it is the present user's directory.
- **pathname** - indicates the location of the file in the filesystem (like an address)
- **relative path** - the location of a file starting from the current working directory or a directory that is located inside the current working directory.
- **absolute path** - the location a file starting at the root of the file system.