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Week Report 4

Practice from the presentation The Linux File system:

Practice 1

Practice 2

```
daakwetee@cis106:~$ tar Jxf practicels.tar.xz
daakwetee@cis106:~$ cd practicels/
daakwetee@cis106:~/practicels$ ls
book.txt        history-debian.pdf  movie.mp4    song.mp3       tux-penguin.gif
countries.xml   homework.docx       people.csv   tux-nobg.png
daakwetee@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
daakwetee@cis106:~/practicels$ ls -l
total 2932
-rw-rw-r-- 1 daakwetee daakwetee    1043 Feb 27  2022 book.txt
-rw-rw-r-- 1 daakwetee daakwetee   23972 Feb 27  2022 countries.xml
-rw-rw-r-- 1 daakwetee daakwetee  163057 Feb 27  2022 history-debian.pdf
-rw-rw-r-- 1 daakwetee daakwetee  111303 Feb 22  2022 homework.docx
-rw-rw-r-- 1 daakwetee daakwetee 1570024 Feb 27  2022 movie.mp4
-rw-rw-r-- 1 daakwetee daakwetee  284042 Feb 27  2022 people.csv
-rw-rw-r-- 1 daakwetee daakwetee  764176 Feb 27  2022 song.mp3
-rw-rw-r-- 1 daakwetee daakwetee   21314 Feb 27  2022 tux-nobg.png
-rw-rw-r-- 1 daakwetee daakwetee   44299 Jan 31  2020 tux-penguin.gif
daakwetee@cis106:~/practicels$ ls -lh
total 2.9M
-rw-rw-r-- 1 daakwetee daakwetee 1.1K Feb 27  2022 book.txt
-rw-rw-r-- 1 daakwetee daakwetee  24K Feb 27  2022 countries.xml
-rw-rw-r-- 1 daakwetee daakwetee 160K Feb 27  2022 history-debian.pdf
-rw-rw-r-- 1 daakwetee daakwetee 109K Feb 22  2022 homework.docx
-rw-rw-r-- 1 daakwetee daakwetee 1.5M Feb 27  2022 movie.mp4
-rw-rw-r-- 1 daakwetee daakwetee 278K Feb 27  2022 people.csv
-rw-rw-r-- 1 daakwetee daakwetee 747K Feb 27  2022 song.mp3
-rw-rw-r-- 1 daakwetee daakwetee  21K Feb 27  2022 tux-nobg.png
-rw-rw-r-- 1 daakwetee daakwetee  44K Jan 31  2020 tux-penguin.gif
daakwetee@cis106:~/practicels$ ls -lht
total 2.9M
-rw-rw-r-- 1 daakwetee daakwetee  24K Feb 27  2022 countries.xml
-rw-rw-r-- 1 daakwetee daakwetee 278K Feb 27  2022 people.csv
-rw-rw-r-- 1 daakwetee daakwetee 747K Feb 27  2022 song.mp3
-rw-rw-r-- 1 daakwetee daakwetee 1.5M Feb 27  2022 movie.mp4
-rw-rw-r-- 1 daakwetee daakwetee 160K Feb 27  2022 history-debian.pdf
-rw-rw-r-- 1 daakwetee daakwetee  21K Feb 27  2022 tux-nobg.png
-rw-rw-r-- 1 daakwetee daakwetee 1.1K Feb 27  2022 book.txt
-rw-rw-r-- 1 daakwetee daakwetee 109K Feb 22  2022 homework.docx
-rw-rw-r-- 1 daakwetee daakwetee  44K Jan 31  2020 tux-penguin.gif
daakwetee@cis106:~/practicels$ ls -lhgGS
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  21K Feb 27  2022 tux-nobg.png
-rw-rw-r-- 1 1.1K Feb 27  2022 book.txt
daakwetee@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
daakwetee@cis106:~/practicels$ ls -1X
people.csv
homework.docx
```

```
homework.docx
tux-penguin.gif
song.mp3
movie.mp4
history-debian.pdf
tux-nobg.png
book.txt
countries.xml
daakwetee@cis106:~/practicels$
```

Challenge Question

```
daakwetee@cis106:~/practicels$ pwd
/home/daakwetee/practicels
daakwetee@cis106:~/practicels$ cd -
/home/daakwetee
daakwetee@cis106:~$ cd /
daakwetee@cis106:/$ cd usr/share/themes
daakwetee@cis106:/usr/share/themes$ cd ../../
daakwetee@cis106:/usr$ ls -A ~
.balsa          .cis106.png  Downloads       .lesshst  .pki                  .ssh                                    .vboxclient-draganddrop-tty2-service.pid   Videos
.bash_history   cis106.zip   .fonts          .local    practicels            .sudo_as_admin_successful               .vboxclient-hostversion-tty2-control.pid   .vscode
.bash_logout    .config      gitcommands.txt mail      practicels.tar.xz     Templates                               .vboxclient-seamless-tty2-control.pid
.bashrc         Desktop      .gitconfig      mailbox   .profile              .vboxclient-clipboard-tty2-control.pid  .vboxclient-vmsvga-session-tty2-control.pid
.cache          Documents    .gnupg          Music     Public                .vboxclient-clipboard-tty2-service.pid  .vboxclient-vmsvga-session-tty2-service.pid
cis106          .dotnet      lab4files       Pictures  snap                  .vboxclient-draganddrop-tty2-control.pid
```

```
daakwetee@cis106:~$ cd; ls -tX cis106/
CheatSheets  Labs  weekReport
daakwetee@cis106:~$ ls -rR ~/cis106/
/home/daakwetee/cis106/:
weekReport  Labs  CheatSheets

/home/daakwetee/cis106/weekReport:
wr4Practice2.2.png  wr4Practice2.1.png  wr4Practice1.png  wr4.md  wr3.pdf  wr3.md

/home/daakwetee/cis106/Labs:
Lab4  Lab3  Lab2  Lab1

/home/daakwetee/cis106/Labs/Lab4:
test.md  lab4.pdf  lab4.md

/home/daakwetee/cis106/Labs/Lab3:
q1.1.png  presentation_lab3.odp  lab3.pdf  lab3.md  doc_lab3.pdf.odt  doc_lab3.pdf  cis106lab3_q2.png

/home/daakwetee/cis106/Labs/Lab2:
question4.png  question3.png  question2.png  question1.2.png  question1.1.png  lab2.pdf  lab2.md

/home/daakwetee/cis106/Labs/Lab1:
whatisubuntu.txt                what_is_ubuntu_submission.md    what-is-ubuntu.pdf  ubuntu-desktop.png  resume.pdf  resume.html  johndoeinfo.txt
what_is_ubuntu_submission.pdf  what_is_ubuntu_submission.html  ubuntu-logo.png     resume.png          resume.md   johndoe.jpeg

/home/daakwetee/cis106/CheatSheets:
'Linux Workshop Ubuntu Software installation cheat sheet.png'
daakwetee@cis106:~$ ls -lh ~
total 19M
drwxrwxr-x 6 daakwetee daakwetee 4.0K Oct 29 19:25 cis106
-rw-rw-r-- 1 daakwetee daakwetee  16M Oct 29 19:13 cis106.zip
drwxr-xr-x 2 daakwetee daakwetee 4.0K Oct 11 21:17 Desktop
drwxr-xr-x 2 daakwetee daakwetee 4.0K Sep 28 23:21 Documents
drwxr-xr-x 2 daakwetee daakwetee 4.0K Oct 26 22:15 Downloads
-rw-rw-r-- 1 daakwetee daakwetee  164 Oct 29 19:46 gitcommands.txt
drwxrwxr-x 2 daakwetee daakwetee 4.0K Feb 22  2022 lab4files
drwx------ 2 daakwetee daakwetee 4.0K Oct 12 01:49 mail
-rw------- 1 daakwetee daakwetee    0 Oct 12 01:49 mailbox
drwxr-xr-x 2 daakwetee daakwetee 4.0K Sep 28 23:21 Music
drwxr-xr-x 2 daakwetee daakwetee 4.0K Oct 11 21:01 Pictures
drwxrwxr-x 2 daakwetee daakwetee 4.0K Feb 27  2022 practicels
-rw-rw-r-- 1 daakwetee daakwetee 2.2M Oct 14 11:22 practicels.tar.xz
drwxr-xr-x 2 daakwetee daakwetee 4.0K Sep 28 23:21 Public
drwx------ 5 daakwetee daakwetee 4.0K Sep 29 00:06 snap
drwxr-xr-x 2 daakwetee daakwetee 4.0K Sep 28 23:21 Templates
drwxr-xr-x 2 daakwetee daakwetee 4.0K Sep 28 23:21 Videos
```
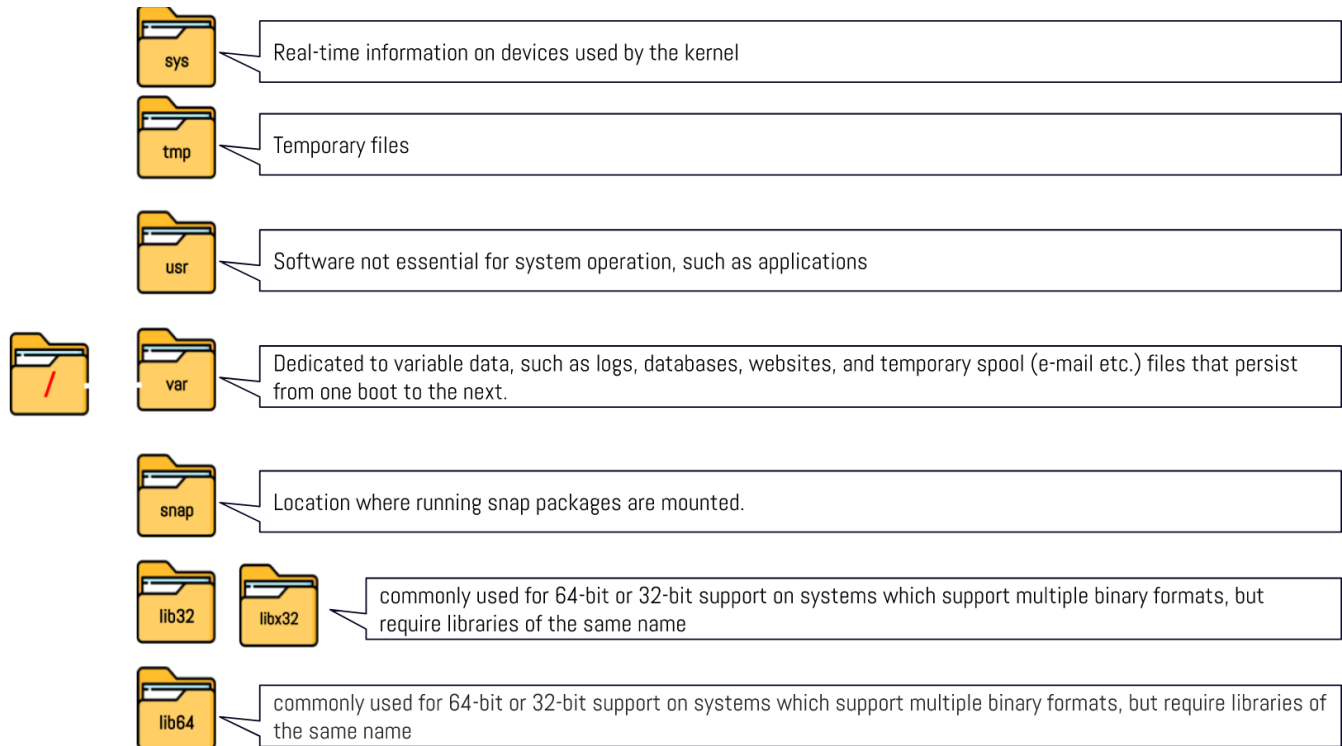
```
daakwetee@cis106:~$ ls -lgG -1 ~
total 18476
drwxrwxr-x 6      4096 Oct 29 19:25 cis106
-rw-rw-r-- 1 16629160 Oct 29 19:13 cis106.zip
drwxr-xr-x 2      4096 Oct 11 21:17 Desktop
drwxr-xr-x 2      4096 Sep 28 23:21 Documents
drwxr-xr-x 2      4096 Oct 26 22:15 Downloads
-rw-rw-r-- 1       164 Oct 29 19:46 gitcommands.txt
drwxrwxr-x 2      4096 Feb 22  2022 lab4files
drwx------ 2      4096 Oct 12 01:49 mail
-rw------- 1         0 Oct 12 01:49 mailbox
drwxr-xr-x 2      4096 Sep 28 23:21 Music
drwxr-xr-x 2      4096 Oct 11 21:01 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 28 23:21 Public
drwx------ 5      4096 Sep 29 00:06 snap
drwxr-xr-x 2      4096 Sep 28 23:21 Templates
drwxr-xr-x 2      4096 Sep 28 23:21 Videos
daakwetee@cis106:~$
```

The Linux File system directories and their purpose:

Folder	Description
bin	Essential commands
boot	Boot loader files, Linux kernel
dev	Device files
etc	System configuration files
home	User home directories
lib	Shared libraries and kernel modules needed to boot the system and run the commands in the root filesystem
media	Mount point for removable media, such as DVDs and floppy disks
mnt	Usual mount point for local, remote file systems, file systems that are additional to the standard, such as a DVD-ROM or another HDD
opt	Add-on software packages
proc	Kernel information, process control, system hardware information
root	Super user (root) home
run	(temporary file system) available early in the boot process where ephemeral run-time data is stored.
sbin	System commands (mostly root only)
srv	Information relating to services that run on the system

Real-time information on devices used by the kernel

Temporary files

Software not essential for system operation, such as applications

Dedicated to variable data, such as logs, databases, websites, and temporary spool (e-mail etc.) files that persist from one boot to the next.

Location where running snap packages are mounted.

commonly used for 64-bit or 32-bit support on systems which support multiple binary formats, but require libraries of the same name

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All the commands for navigating the filesystem

Command	What it does	Syntax	Example
pwd	Prints current directory	pwd	pwd
cd	Changes your current directory	cd + destination	cd Downloads
ls	list all the files in the current directory	ls + option + directory	ls -a

Basic terminology

- **File system:** The way files are store and managed.
- **Current directory:** The directory you are presently at.
- **parent directory:** A particular directory that contains folders or subdirectories.
- **the difference between your home directory and the home directory:** Your home directory is associated with the users account, while the home directory is associated with the root user which is the administrator of your system.
- **pathname:** The location of the file in the filesystem.
- **relative path:** The location of a file starting from the current working directory that is located inside the current working directory.
- **absolute path:** The location of a file starting at the root of the file system.