Linux Cheat Sheet:

Create a File:

- **Cat command:** cat >file1
→ The Cat Command is one of the most universal tools, yet all it does is Copy standard Input to Standard Output.

- touch command: touch file1 file2 file3
→
- Create an Empty File
- Create multiple empty file
- Change all timestamp of a file
- Update only access time of file, modify time of file

→ Time Stamp:
- Access time (last time when a file was access) :: **touch -a**
- Modify time (last time when a file was modified) :: **touch -m**
- Change time (last time when file metadata (information such as: size, file properties, location etc.) was changed)

Q) What is timestamp?
Answer: File created, and three things would be included with the created file

- **vi/vim command:** - A program text editor.
→
It can be used to edit all kinds of plain text, it is especially useful for editing programs Mainly used for Unix Programs.

: w → To Save
:**wq or :x** → To save and quit
:q → quit
:q! → force Quit, no save

- **nano:** nano file1

→ Write any content you want to write.
After you are done you can click ctrl+x
Ask if you want to save it → Y → hit enter

To override the data, click Ctrl + O then Ctrl + X then you can override the data.

→ Editor vi/vim command and nano command where in cat could not edit the created file. Can edit it using these commands, as well as edit the files.

→ 'Vi' is a standard whereas 'nano' has to be available depending on the linux you use.

→ **CASE SENSITIVE**. file1 and File1 is a different. **AVOID USING CAPITAL LETTERS IN LINUX** unless there is a use of it.

Make directory: **mkdir**
To know if it is the directory type: ls -l
- How to Copy a file?
cp file1(source) file2(destination)
- How to Cut and Paste file?
mv file1 dir1

- **Putting a dot in front of the file makes it a hidden file**. It will be created as a hidden file.
touch .file1
- way to view the hidden file is ls -a means list of all.

cd dir → gets you inside the directory
cd dirc/dird/dire → gets you inside the directory e directly
cd .. → gets you out of the current directory to another directory
cd ../../.. → to get out of the directory

- How to remove file from directory?
→ rmdir : This command is used to remove the specified directory (empty).
→ rmdir -p : Remove both the parents and child directory.

→ rmdir -pv : Remove all the parent and subdirectories along with the verbose.
→ rm -rf : Removes even non-empty file and directory
→ rm -rp : Removes non-empty directories including parent and subdirectory.
→ rm -r : Removes empty directories.

→ Create YAML file in Mac terminal: `echo "basic" > basic.yml`
or touch `simple.yml`

Commands:
→ **hostname:** just type hostname and provides you with the name of the host
→ **if config, cat /etc/os-release:**
-- **if config:** IP address of the machine, ethernet port, NIC, etc
-- **hostname -i :** just shows the IP address
-- **cat /etc/os-release:** The first dash / represents **root directory**. Details of OS and versions. This path is called **Absolute Path (we absolutely know the exact path of where we're going)** if we do not know the whole path can put * (/etc/os-rel*)

yum: package or software that is installed configured in Linux by default. Full form is (yellowdog update Modified).

→ **yum install httpd:**
→ **yum remove httpd:**
→ **yum update httpd:**

→ **service httpd start:** to make it (apache) service active
[ ] service httpd start
→ **service httpd status:** shows if the server is it active or not
[ ] service httpd status

→ **chkconfig httpd on:** to make the software run by itself also called (Automation). and not start it manually.
→ **chkconfig httpd off:** if want to start manually then this will stop the Automation.

→ **which:** ones to check individual software installed then there's which command. shows the command that are installed in Linux.
which chef
which tree

→ **whoami:**
[ ] whoami
-- gives output: root user

→ **echo:** Just like in echo in real life. One CPU used by multiple users are connected want to send message or show some message then we use this echo command.
root@ip] # echo "Hello"
gives output-> Hello

→ **check using the following command:**
cat filez
→ **Add new info on the file:**
echo "Hello" >>filez
→ **Delete the content: run empty echo with greater than sign than the file will become empty:**
echo >filez

→ **grep command:** finds the specific things we need, finds out and provides it.
grep root /etc/psswd
-- > output: root
- **grep command is an important command**.

→ **sort:** Arrange in alphabetical order.
sort file1 (file1 is just any filename)

→ **tree**: yum install tree -y (-y so that every yes is done automatically)
- Represents all the directories and file in tree.
just type tree in cmd

→ **chkconfig httpd**: automatically starts the status.
chkconfig httpd on

→ **useradd:** To create user
→ **groupadd:** To create group

→ **gpasswd -a/-M:** To add user into group, to add multiple user
→**ln:** hardlink → Backup.
→ **ln -s:** softlink → shortcut
→ **tar:** Tar is an archiver used to combine multiple files into one

tar -cvf dirx.tar dirx
(cvf): create verbrose forcefully

tar -xvf dirx.tar
(-xvf: extract)

→ **gzip:** gzip is a Compression tool used to reduce the size of a file
→ **wget**: wget is the non-interactive network downloader

Access Modes/Permissions:

Access Mode

r | 4:	**File: To display the content**	**Directory: To list the content**
w | 2:	**File: To modify**	**Directory: To create or remove**
x | 1:	**File: To execute the file**	**Dir: To enter into directory**

chmod → Used to change the access mode of a file
chown → change the Owner of file or Directory

chown rachi dir1

Chgrp → change the group of files or dir

chgrp linux file1

r = read
w = write
x = execute
rwx: Owner or root user.

r_ _: others (other user can read by default permission)
1: Symbolic link
root: owner
root: group
0: File size in Byte
r_x: group

Q. To change the permission of directory or file?
Ans: As an example:

```
chmod 777 dir1
ls -l
```

See the directory permission changed as all the drwxrwxrwx 2 root …

u = User/owner
g = group
o = others
→ To change the permissions another way is:

```
chmod u=r, g=r, o=rw   dir1
chmod 000 file1
```