-- Day2 --

ls	- to list files in directory
tty	- to get the number of tele type terminal
chvt N	- to change the number of tty
date	- to get the date
cal	- to get the calender of the present month
su - uname	- to switch to another user
id [user name]	- to get the id of the user (root = 0), (user >= 1000), (0 < system/services users < 1000)
clear	- to clear the terminal
exit	- to logout the user

-- Day3 --

eject	- to eject the CD tray
eject -t	- to close the CD's open tray (works only on the Desktops)
cat	- (**concatenate**) to view the content inside the .txt files only
cd [path]	- **change directory**, without arguments change the directory to the home user directory
cd ~	- change the directory to the home user directory, like cd only
cd ~[user]	- change the directory to the given home user directory ex: cd ~nu11/path/
cd -	- last working directory
cd .	- present working directory
cd .. = cd ./..	- go to parent directory
pwd	- present/print working/where directory
dir	- same as ls but without coloring the output
touch	- create empty txt file, and can create more than file in the same time, without changing the content inside the file, but changing the last time accessed file
nano	- (basic text editor) to edit the txt files

T!p: to copy more than on file, we can put every one file in a double quotes like this:

cp "file1" "file2" /etc/

Now both file1 and file2, will be copied to the destination path.

-- Day 4 --

tree - represents a directory or a path like a tree figure

mkdir - creates a new directory, ex: mkdir /tmp/newdirname

cp - copys a file and change the name of its copy,

ex: cp [filename] [newfilename], cp [filename] [another_path/filename]

"to copy a file to another path", ex: cp file1 ./../file1_copy

cp -r - recursive, to copy the directory with its content (it overwrites the content of the original file/dir on the new path, only if existed!)

to change the name of copied directory, ex: cp -r d1/ d2/d3/ "new d1 will be named d3, if and only if d3 doesn't exist, if d3 existed it will be copied inside it!!"

mv - moves a file or directory to a new path and remove its source

rm - removes the fle

rmdir - removes the empty directory

rm -r - removes the directory with its content

rm -rf - force removing directory and files

!!**Attention**!! rm -rf dir / "don't let spaces after the name of directory, bcause it will read it as another thing to remove !!"

mv filename newf - to rename a file by indirect way

ls -a - all, list all hidden files

ls -r - reversed, list files with reversed arrangement of alphabet

ls -R - Recursive, list files and directories with its inside content,

ex: ls -R /home/

exit / logout - logout

reset - clear and start a new page of terminal

bg - to continue a pasued command on the background

reboot - reboot

shutdown -r now - reboot now

systemctl reboot - reboot

init 6 - reboot

shutdown - shutdown

shutdown -h now - shutdown now, "-h means hold"

poweroff - shutdown

init 0 - shutdown

systemctl poweroff - shutdown

; - append two commands

useradd [name] - to add a new user

passwd [uname] - to set a passwd for the user (root only)

passwd - to change the password for the current user

systemctl poweroff -i - to shutdown and ignore inhibitors and users (self-learned)

-- Day 5 --

```
groupadd                        - to create a new group for users
useradd -g [gname] [uname]      - to change the primary group for "a new user",
                                  ex: useradd -g groupdc userali
usermod                 - to modify any data and info about the user
usermod -G              - to add/remove a user to another secondary groups,
                          ex: usermod -G groupdc userali
usermod -a -G           - to add the user to additional secondary group,
                          ex: usermod -a -G groupdc uname
usermod -g              - to change the primary group to an existed user,
                          ex: usermod -g group1 ali
userdel                 - to delete a user,    ex: userdel [username]
userdel -r              - to delete the use with his home directory too!
groupdel                - to delete a group,      ex: groupdel [groupname]
ls -l                   - list all files with thier info

chmod                   - change permissions,    ex: chmod [u,g,o] [+,-] [r,w,x] [filename]
                         ex: chmod ug+r,o-wx file1,  chmod a+w file2 (a=all),
       ex: chmod -x file4 (if you didn't select the permission to whom, it will excute to all)
chmod -R                - excute command on all things (directory and what inside it recursively
chown                   - change ownership,      ex: chown [username:groupname] [filename]
./                      - to excute files,       ex: ./[filename]
```

-- Day 6 –

```
0 < [filename]          - to print the input to a file
1 > [filename]          - to print the output to a file
2 > [filename]          - to print the error to a file
cat <file1 >file2       - takes input from file1 and add it to file2
cat <<AnyWord>> file2   - makes you add inputs to the filename
                          and when you write AnyWord in the last line, it closes the inputs
<< or >>                - just to append the new result to the file instead of overwriting it!!
[comnd] >>output 2>> err – Takes the output and error from the same one command at once
                          ex: ls -l file1 file1010 >output 2>error (while file1 doesn’t exist)
&> or 2&>               - Takes the error and output,  ex: ls – l /home/ 2&>output
                          ex: ls -l file1 file1010 2&>outputanderror.text
file [filename]         - to get the type of any file
|                       - takes output from a command as an input to another command
                         ex: ls -lR / | cat
```

less - to view/navigate the content inside the file, page by page

more - to view/navigate the content inside the file, page by page

tee - takes a copy from the output of a command and views it on the terminal and another copy in a file, ex: ls -l | tee [filename.txt]

tee -a - to append the result to the same file

Some commands:!

w - who is login, where and when, and load average

whatis [command] - to tell what the command does

who - who is login now

who am i - who are you

whereis [command] - where the binary of the command is, its 'man' pages and the documentation

last - all login logs, and information about the login users

lastlog - last log of all users

-- Day 7 --

ls -i - to list files with inode number

df - disk free space

df -h - disk free space in Human readable

df -i - get Inode info to the disk space

df -ih - in human readable

-- Day 8 --

ln - to make a hard link to a file

ln -s - to make a soft link

lsblk - to see the connected blocks or disks

-- Day 9 --

fdisk - to go inside the disk, and to manage and change inside it

fdisk -l - list all the connected storage devices

fdisk -l [disk path] - to list the selected disk info

portprobe - to make the kernel scan the disks or partition tables, automatically scan all disks connected

portprobe [disk path] - scan the selected disk

mkfs - make a new filesystem, (by default it will be ext2)

```
mkfs.[fs type]                - specify the new filesystem
mkfs -f                       - to force the overwrite of the filesystem
mkfs -isize=[isize]           - to set the size of the inode
dd                            - disk dump
dd if=[path1] of[path2] bs=[size] count=[nofblocks]
mount [source] [dest]         - to mount any device
umount                        - to unmount
dumpe2fs [prtname]            - to get the partition information
e2fsck                        - to check the extN filesystem
e2fsck -f                     - to force the check of the filesystem
                              -
```

-- Day 10 --

```
mount -t [type]               - to mount a partition with the type of the filesystem
blkid                         - to view the Universal Unique ID of every partition mounted on
the disk
e2label [source] [name]       - to label the partition with a name (only for extN filesystems)
mount -a                      - reads all the /etc/fstab and mount it and check if there
errors!
mount -av                     - (-v) option to see what happens
cfdisk [device path]          - a utility in Linux, that allow to manage fdisk more easily !!
gzip [filename]               - to compress a file with extension .gz
gunzip [filename]             - to decompress the compression of a compressed .gz file
bzip2 [filename]              - to compress a file with extension .bz2
bunzip2 [filename]            - to decompress the compression of a compressed .bz2 file
du [path]                     - to get the space/size for the whole directory and its content
du -sh [path]                 - to summarize, h for human readable
tar cf [filename] [source]    - to make an archive of a directory
tar xf [filename]             - to extract the content inside the .tar file
tar cvf [filename] [source]   - create verbose file (view what files are being archived)
tar xvf [filename]            - extract verbose file (view what files are being extracted)
tar cvfz [filename] [source]  - create verbose file (view what files are being archived)
tar xvfz [filename]           - extract verbose file (view what files are being extracted)
tar tvfz/j [filename]         - t, to list the content without extracting its content
time + command                - to print the time of executing the command
```

-- Day 11 --

```
ps                            - Current working processes from the present terminal only
```

```
ps a                          - Current working processes from the whole terminal opened
ps aux                        - All running processes existed on the system
kill [PID]                    - to kill a background running-process on the GUI
kill -l                       - list all the signals of killing process
kill -[N] [PID]               - to specify the command with the signals
ps -ef                        - to preview the PPID
pstree                        - view in tree
pgrep [Pname]                 - process grep, to get the process ID by the name of it
pkill [Pname]                 - kill the process by its name
[Process name] &              - to make the application running in the background
jobs                          - running background processes
fg %[n]                       - to foreground the process again in the shell, n is the number
of
                                the process in the background running processes
bg %[n]                       - to background the process again
```

-- Day 12 --

```
killall [Pname]               - to kill all processes with the shared name
top                           - information about the system and top running processes and the
                                load of the machine and can kill the real time running
                                processes.
                                Looks like Task Manager in Windows !!
nice -n [value] [PID/Pname]   - to set the nice value of the process with its name
                                you can start the process with a value given with the command
renice -n [value] [PID/Pname]- to set/change the priority for a real-time running process
ps -eo "[more arguments]"     - to print some additional info with the arguments

updatedb                      - to force update for the Database
locate [filename]             - to locate/search for a file with his name
find [path] -name [filename] - the path we want to only search in, and the name of the
file ..
find [path] -iname [filename]- iname = insensitive name, that we don't care whether the
letters
                                are capital or small
find -perm -name              - perm, permission, to search with permission of the file
find -atime                   - access time e.g.(1 for the last 24 hours, +1 for 24 hours and
                                before)
grep [word] [destinationpath]- to search the content of the file, it shows the full line of
the
```

word !!

grep -i - insensitive name

grep -v [word] - grep everything except word,

grep -n [word] - -n, for the line number

grep -R [word] [path] - -R, for recursively, to search the word in every file in the path !!

grep -lR [word] [path] - -l, to list only the files containing the word

cut -f [fieldn] -d [delimiter] [filepath] - while -f, for the field number and -d, for the delimiter between the content words

example : 'cut -f 1,3 -d : /etc/passwd' or '-f 1-4' to get all fields in range

as we can get more than one field in the same time !!

sort - to sort the content or the result of a file in arrangement

by default, it arranges the content as a string !!

sort -n - to sort in numeric arrangement

uniq - to report or omit repeated lines, it compares the line with the line before, and then omit it, so you may see things are repeated

!!! so we can sort first and then uniq !!!

-- Day 13 --

vim - creates a file or open it if it existed

-- Day 14 --

systemctl [service] - to work with the service

journalctl -

systemctl status [service] - to get the status of the service

systemctl -l - to show the result in full

systemctl disable/enable - to change the vendor preset of the service

systemctl start [service] - to start a dead service

systemctl stop [service] - to stop a running service

service [service] start/stop/status – same like systemctl but with init

chkconfig [service] on/off - to change the vendor preset of the service like enable/disable

systemctl is-active/enable [service]- to see if the service is active or not and enabled or not

```
systemctl mask [service]     - mask the service and prevent it from working
systemctl unmask [service]   - unmask the service and make it working again
systemctl get-default        - to get the default target.
systemctl set-default [Mode] - to change/reset the default target of the machine
runlevel                     - to get your run level
systemctl isolate [target]   - to change the systemd target while running the machine
init [run lvl number]        - to change the run level of init run levels
telinit                      - work like init
systemctl list-units         - list all the Unit files of systemd with information about it
                               like if it is running, loaded or active or not ..etc.
systemctl list-unit-files    - list files of the services existed in /usr/lib/systemd/system/
systemctl reload [service]   - to re-read and apply the configuration file of the service.
```

-- Day 15 --

```
grub2-mkconfig              - to re-generate the GRU configuration settings in the terminal
grub2-mkconfig -o [path]    - to make the output in the file to a path, like the main source
of
the GRUB cfg file in the /etc/
ls -Z                       - to view the SELinux LABEL
mount -o remount,rw /sysroot/   - to change the mount mode to read-write mode
                                  in the Recovery Mode
chroot /sysroot/              - to change the root filesystem in the Recovery Mode to the
real
        root filesystem
touch /.autorelabel           -
```

-- Day 16 --

```
systemctl daemon-reload       - to reload the configuration files
nmcli                         - Network Manager
ip addr show                  - to preview your machine ip addresses found on the machine
ip a s                        - same as the above and it can be abbreviated.
ifdown [Interface]            - to take down the Network Interface (disable)
ifup [Interface]              - to bring up the Network Interface (enable)
ifconfig                      - to configure the Network Interface
```

-- Day 17 --

```
nmcli connection show              - to list the connections on your interfaces.

nmcli connection show [Profile]    - to list the Profile with in -depth details about it.

nmcli connection delete [Profile]  – to delete the connection.

nmcli connection add con-name [newName] ifname [InterfaceName] type [type] autoconnect
[yes/no]
                                   - to add a new connection.

nmcli connection modify [name]     - to modify the connections with a specific attribute.
```