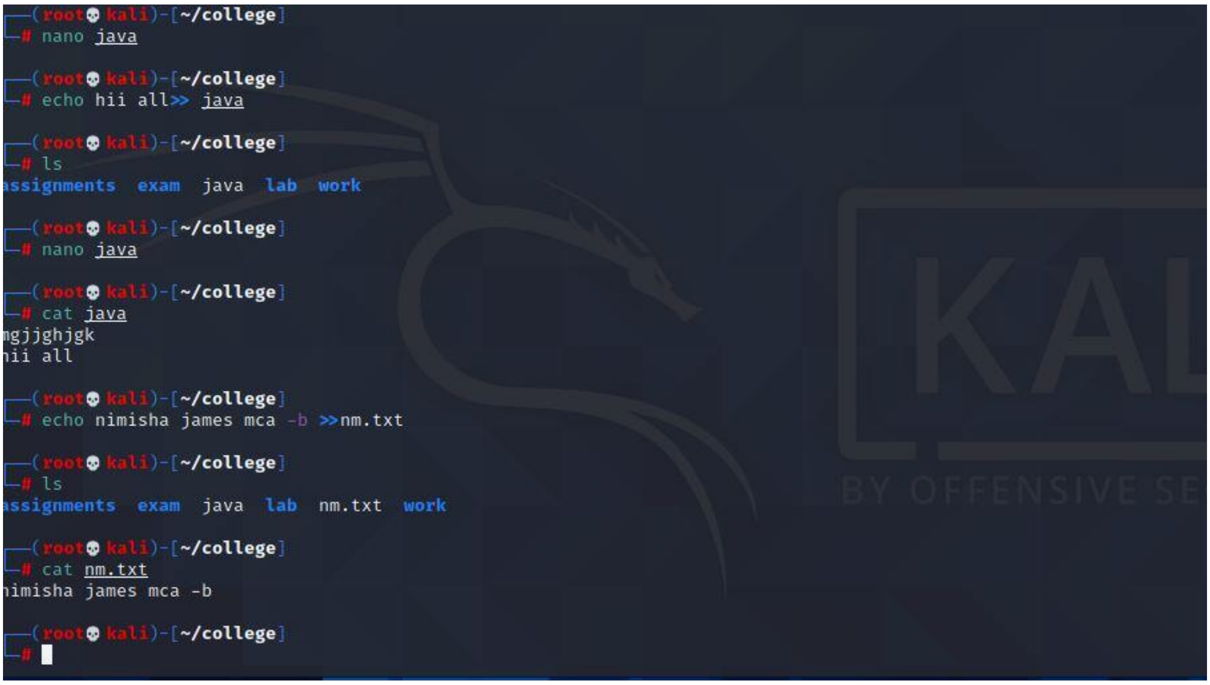
NIMISHA JAMES

MCA-B ROLL NO:11

1.echo

echo command in linux is used to display line of text/string that are passed as an argument . This is a built in command that is mostly used in shell scripts and batch files to output status text to the screen or a file.
Syntax :
echo [option] [string]
Displaying a text/string :
Syntax :
echo [string]



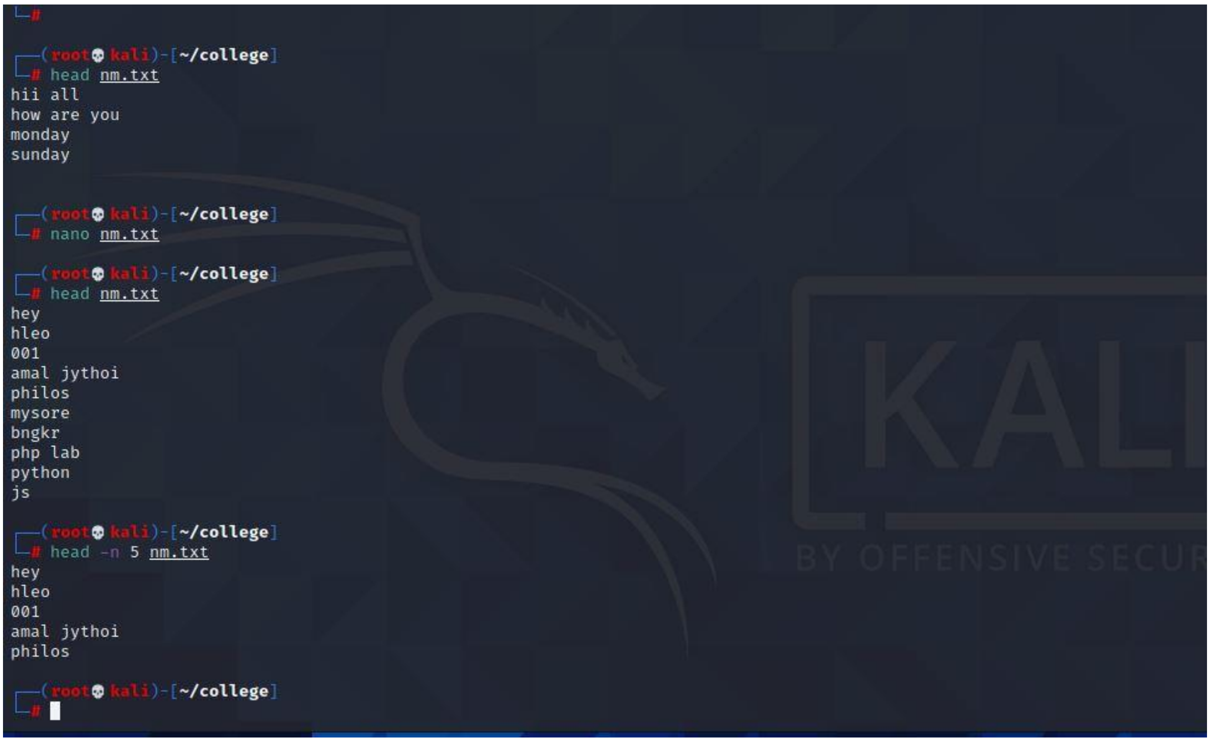
```
┌──(root💀kali)-[~/college]
└─# nano java

┌──(root💀kali)-[~/college]
└─# echo hii all>> java

┌──(root💀kali)-[~/college]
└─# ls
assignments  exam  java  lab  work

┌──(root💀kali)-[~/college]
└─# nano java

┌──(root💀kali)-[~/college]
└─# cat java
mgjjghjgk
hii all

┌──(root💀kali)-[~/college]
└─# echo nimisha james mca -b >>nm.txt

┌──(root💀kali)-[~/college]
└─# ls
assignments  exam  java  lab  nm.txt  work

┌──(root💀kali)-[~/college]
└─# cat nm.txt
nimisha james mca -b

┌──(root💀kali)-[~/college]
└─# █
```

2.head

It is the complementary of Tail command. The head command, as the name implies, print the top N number of data of the given input. By default, it prints the first 10 lines of the specified files. If more than one file name is provided then data from each file is preceded by its file name.
Syntax:

head [OPTION]... [FILE]...

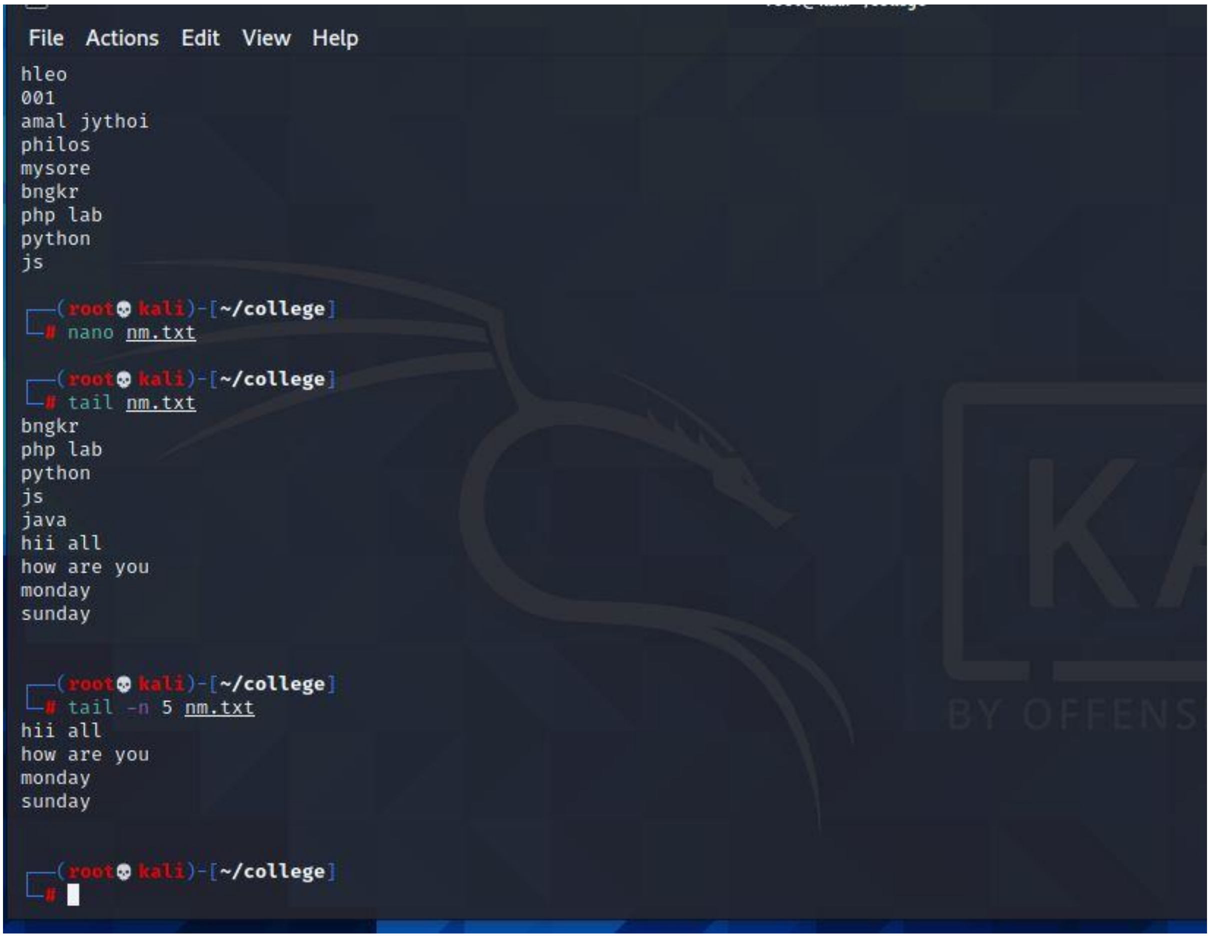
Let us consider two files having
name state.txt and capital.txt contains all the names of the Indian states and capitals respectively.



```
└─#

┌──(root💀kali)-[~/college]
└─# head nm.txt
hii all
how are you
monday
sunday


┌──(root💀kali)-[~/college]
└─# nano nm.txt

┌──(root💀kali)-[~/college]
└─# head nm.txt
hey
hleo
001
amal jythoi
philos
mysore
bngkr
php lab
python
js

┌──(root💀kali)-[~/college]
└─# head -n 5 nm.txt
hey
hleo
001
amal jythoi
philos

┌──(root💀kali)-[~/college]
└─# █
```

3.tail

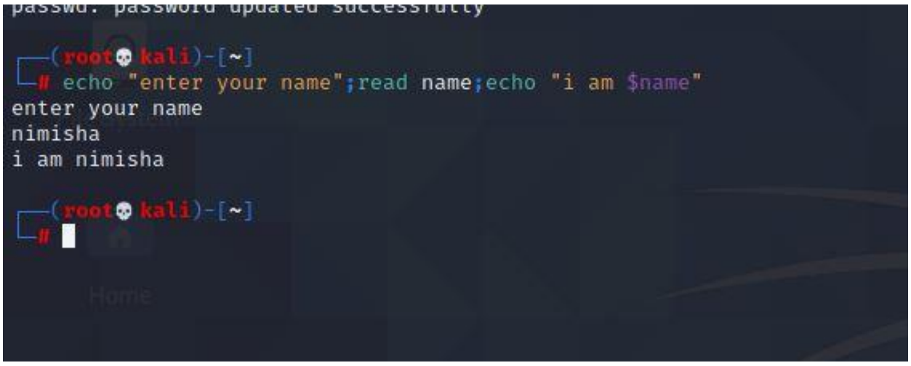
It is the complementary of head command.The tail command, as the name implies, print the last N number of data of the given input. By default it prints the last 10 lines of the specified files. If more than one file name is provided then data from each file is precedes by its file name.



```
hleo
001
amal jythoi
philos
mysore
bngkr
php lab
python
js

┌──(root💀kali)-[~/college]
└─# nano nm.txt

┌──(root💀kali)-[~/college]
└─# tail nm.txt
bngkr
php lab
python
js
java
hii all
how are you
monday
sunday


┌──(root💀kali)-[~/college]
└─# tail -n 5 nm.txt
hii all
how are you
monday
sunday


┌──(root💀kali)-[~/college]
└─# 
```

4. read

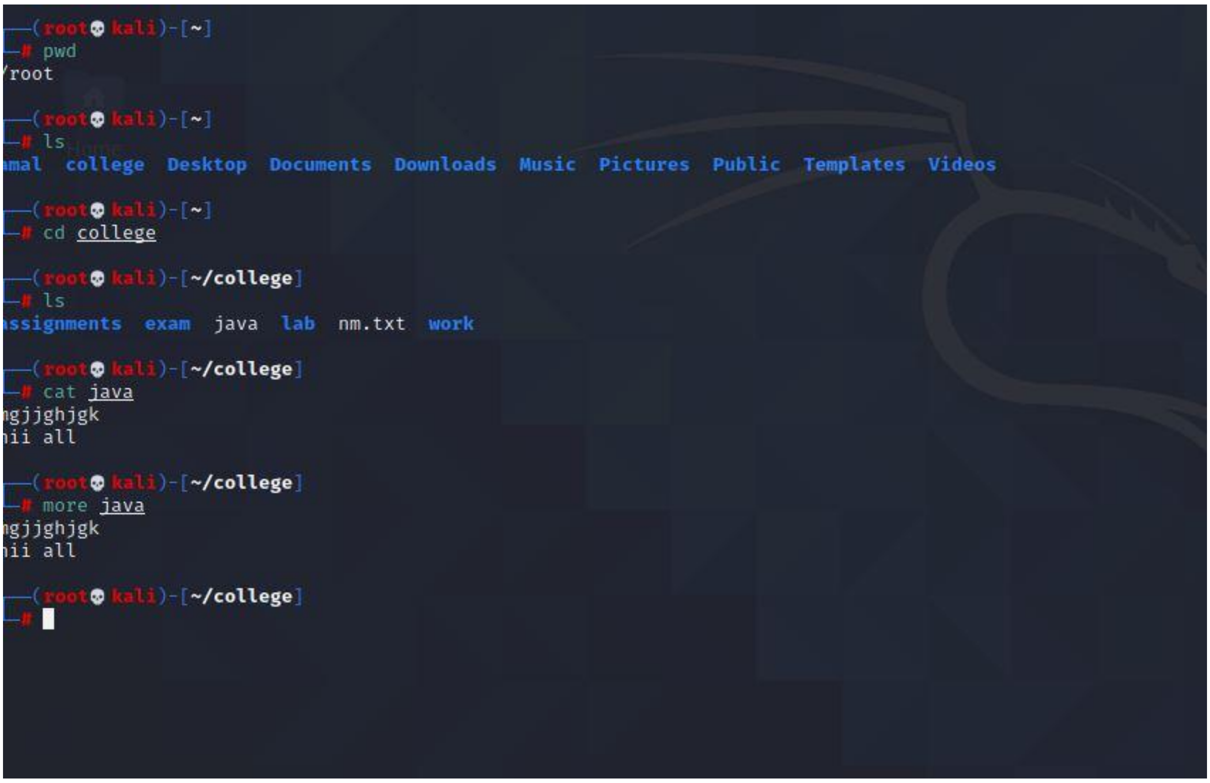
read command in Linux system is used to read from a file descriptor. Basically, this command read up the total number of bytes from the specified file descriptor into the buffer. If the number or count is zero then this command may detect the errors. But on success, it returns the number of bytes read.



```
passwd: password updated successfully

┌──(root💀kali)-[~]
└─# echo "enter your name";read name;echo "i am $name"
enter your name
nimisha
i am nimisha

┌──(root💀kali)-[~]
└─# █
```

5.more

more command is used to view the text files in the command prompt, displaying one screen at a time in case the file is large (For example log files). The more command also allows the user do scroll up and down through the page. The syntax along with options and command is as follows. Another application of more is to use it with some other command after a pipe. When the output is large, we can use more command to see output one by one.



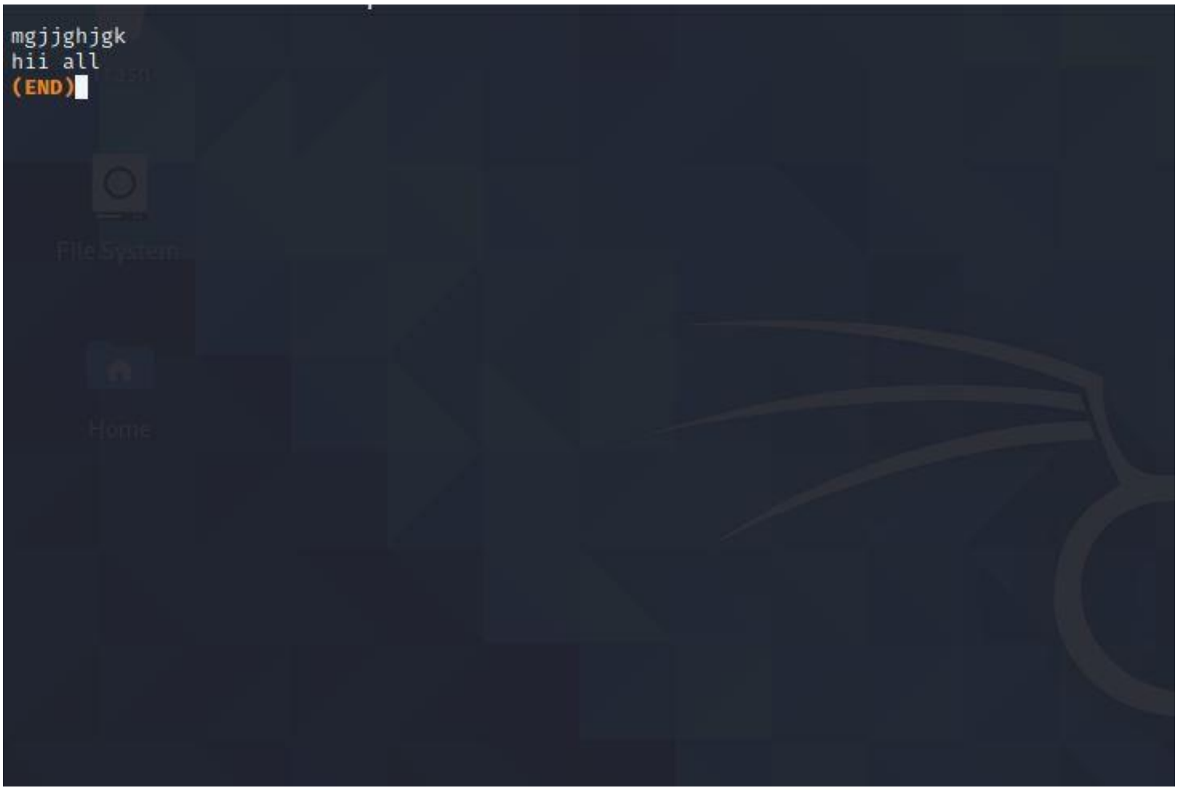
```
──(root💀kali)-[~]
─# pwd
/root

──(root💀kali)-[~]
─# ls
mal  college  Desktop  Documents  Downloads  Music  Pictures  Public  Templates  Videos

──(root💀kali)-[~]
─# cd college

──(root💀kali)-[~/college]
─# ls
ssignments  exam  java  lab  nm.txt  work

──(root💀kali)-[~/college]
─# cat java
ngjjghjgk
hii all

──(root💀kali)-[~/college]
─# more java
ngjjghjgk
hii all

──(root💀kali)-[~/college]
─# █
```

6.less

Less command is linux utility which can be used to read contents of text file one page(one screen) per time. It has faster access because if file is large, it don’t access complete file, but access it page by page.

For example, if it’s a large file and you are reading it using any text editor, then the complete file will be loaded to main memory, but less command don’t load entire file, but load it part by part, which makes it faster.

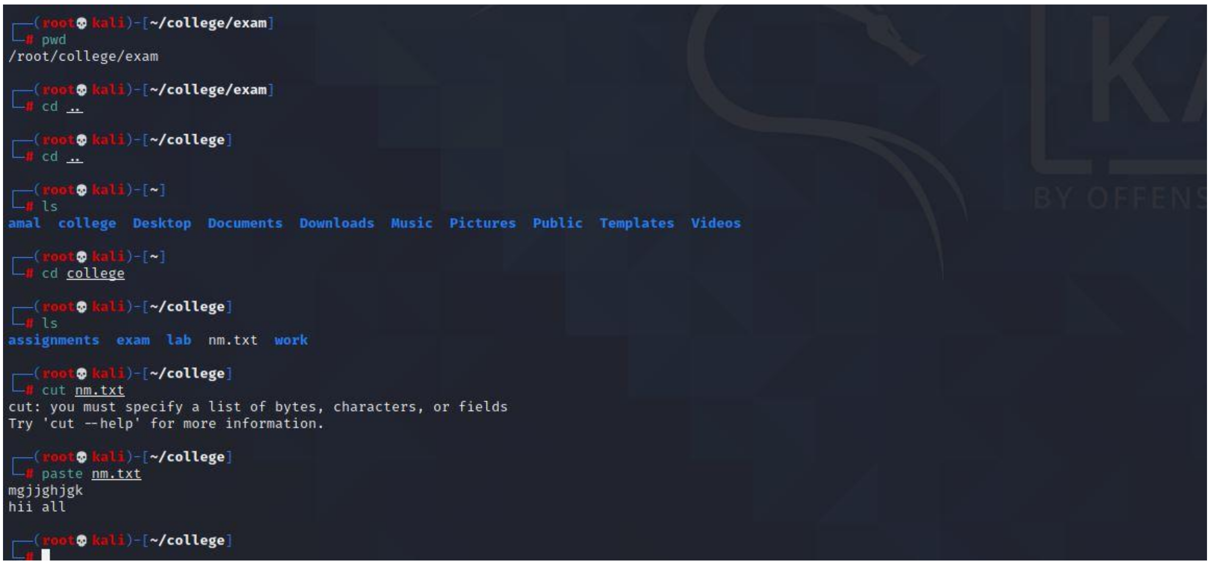
syntax :
less filename



```
mgjjghjgk
hii all
(END)
```

7.cut

The cut n UNIX is a command for cutting out the sections from each line of files and writing the result to standard output. It can be used to cut parts of a line by byte position, character and field. Basically the cut command slices a line and extracts the text. It is necessary to specify option with command otherwise it gives error. If more than one file name is provided then data from each file is not precedes by its file name.
Syntax:
cut OPTION... [FILE]...

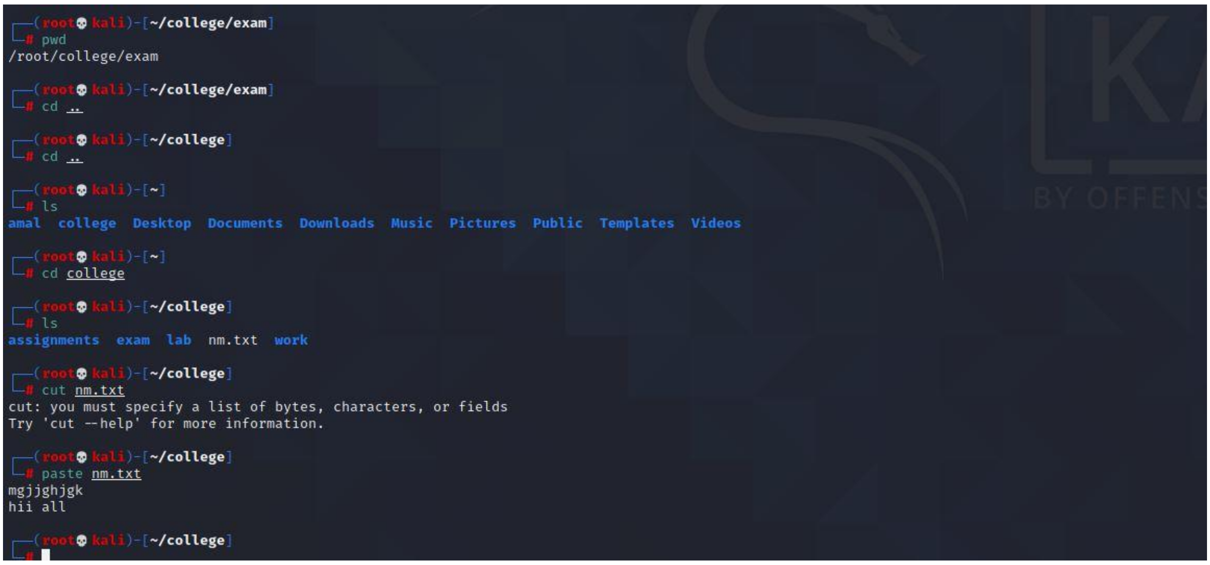


```
┌──(root💀 kali)-[~/college/exam]
└─# pwd
/root/college/exam

┌──(root💀 kali)-[~/college/exam]
└─# cd ..

┌──(root💀 kali)-[~/college]
└─# cd ..

┌──(root💀 kali)-[~]
└─# ls
amal  college  Desktop  Documents  Downloads  Music  Pictures  Public  Templates  Videos

┌──(root💀 kali)-[~]
└─# cd college

┌──(root💀 kali)-[~/college]
└─# ls
assignments  exam  lab  nm.txt  work

┌──(root💀 kali)-[~/college]
└─# cut nm.txt
cut: you must specify a list of bytes, characters, or fields
Try 'cut --help' for more information.

┌──(root💀 kali)-[~/college]
└─# paste nm.txt
mgjjghjgk
hii all

┌──(root💀 kali)-[~/college]
└─#
```

8.paste

Paste command is one of the useful commands in Unix or Linux operating system. It is used to join files horizontally (parallel merging) by outputting lines consisting of lines from each file specified, separated by tab as delimiter, to the standard output. When no file is specified, or put dash (“-“) instead of file name, paste reads from standard input and gives output as it is until a interrupt command [Ctrl-c] is given.
Syntax:

```
paste [OPTION]... [FILES]...
```

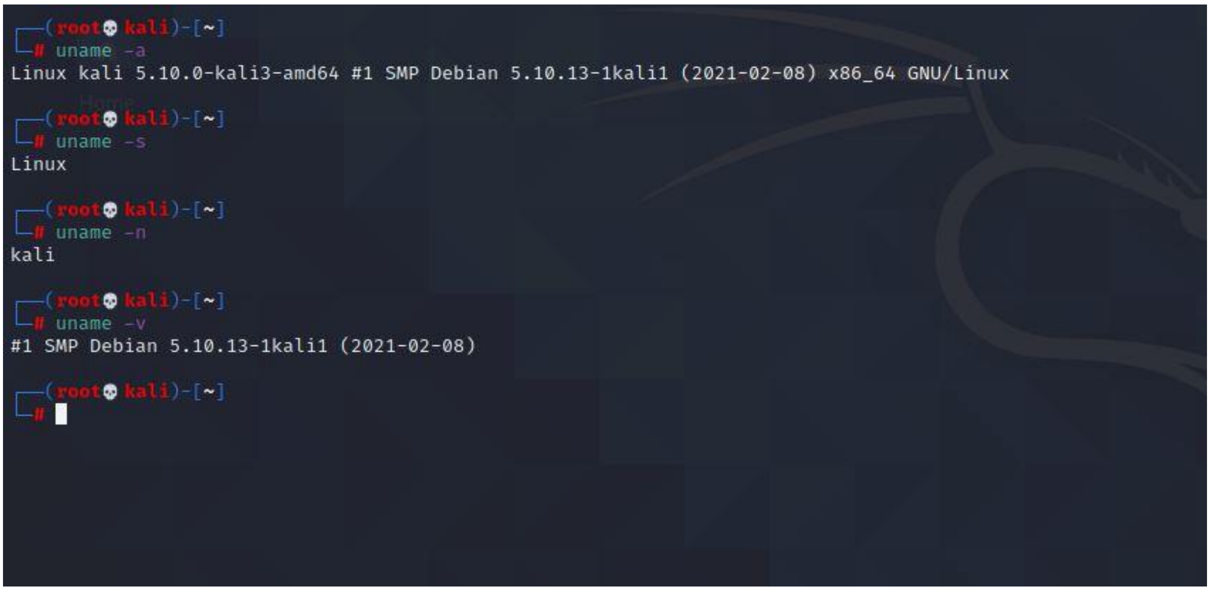


```
┌──(root💀kali)-[~/college/exam]
└─# pwd
/root/college/exam

┌──(root💀kali)-[~/college/exam]
└─# cd ..

┌──(root💀kali)-[~/college]
└─# cd ..

┌──(root💀kali)-[~]
└─# ls
amal  college  Desktop  Documents  Downloads  Music  Pictures  Public  Templates  Videos

┌──(root💀kali)-[~]
└─# cd college

┌──(root💀kali)-[~/college]
└─# ls
assignments  exam  lab  nm.txt  work

┌──(root💀kali)-[~/college]
└─# cut nm.txt
cut: you must specify a list of bytes, characters, or fields
Try 'cut --help' for more information.

┌──(root💀kali)-[~/college]
└─# paste nm.txt
mgjjghjgk
hii all

┌──(root💀kali)-[~/college]
└─# 
```

9.uname

The command ‘*uname*‘ displays the information about the system.
Syntax:
uname [OPTION]

1. -a option: It prints all the system information in the following order: Kernel name, network node hostname, kernel release date, kernel version, machine hardware name, hardware platform, operating system



```
┌──(root💀kali)-[~]
└─# uname -a
Linux kali 5.10.0-kali3-amd64 #1 SMP Debian 5.10.13-1kali1 (2021-02-08) x86_64 GNU/Linux

┌──(root💀kali)-[~]
└─# uname -s
Linux

┌──(root💀kali)-[~]
└─# uname -n
kali

┌──(root💀kali)-[~]
└─# uname -v
#1 SMP Debian 5.10.13-1kali1 (2021-02-08)

┌──(root💀kali)-[~]
└─# █
```

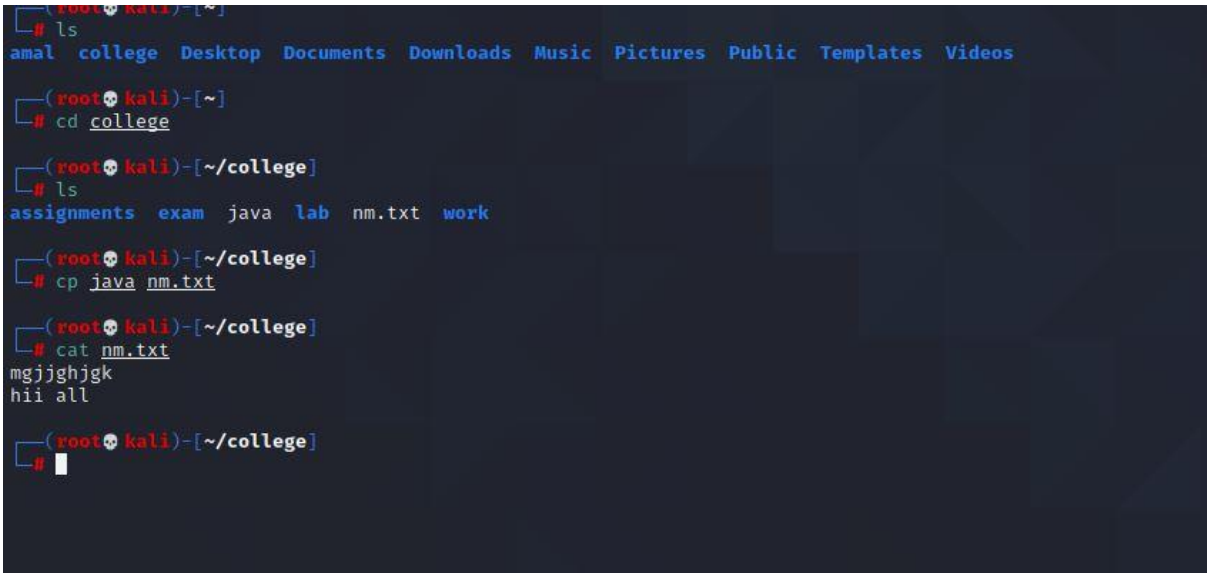
10.cp

cp stands for copy. This command is used to copy files or group of files or directory. It creates an exact image of a file on a disk with different file name. *cp* command require at least two filenames in its arguments.

Syntax:

cp [OPTION] Source Destination
cp [OPTION] Source Directory
cp [OPTION] Source-1 Source-2 Source-3 Source-n Directory

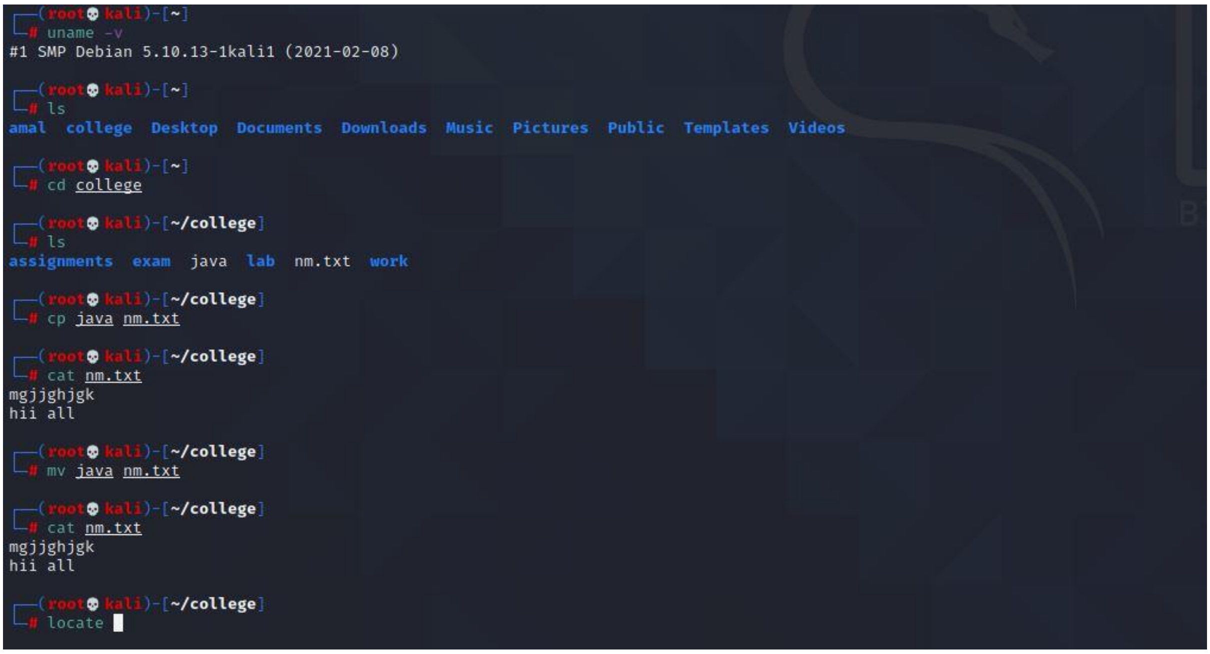
First and second syntax is used to copy Source file to Destination file or Directory.
Third syntax is used to copy multiple Sources(files) to Directory.



```
┌──(root💀 kali)-[~]
└─# ls
amal  college  Desktop  Documents  Downloads  Music  Pictures  Public  Templates  Videos

┌──(root💀 kali)-[~]
└─# cd college

┌──(root💀 kali)-[~/college]
└─# ls
assignments  exam  java  lab  nm.txt  work

┌──(root💀 kali)-[~/college]
└─# cp java nm.txt

┌──(root💀 kali)-[~/college]
└─# cat nm.txt
mgjjghjgk
hii all

┌──(root💀 kali)-[~/college]
└─# █
```

11.mv

mv stands for move. mv is used to move one or more files or directories from one place to another in a file system like UNIX. It has two distinct functions:
(i) It renames a file or folder.
(ii) It moves a group of files to a different directory.
No additional space is consumed on a disk during renaming. This command normally works silently means no prompt for confirmation.
Syntax:
mv [Option] source destination



```
┌──(root💀kali)-[~]
└─# uname -v
#1 SMP Debian 5.10.13-1kali1 (2021-02-08)

┌──(root💀kali)-[~]
└─# ls
amal  college  Desktop  Documents  Downloads  Music  Pictures  Public  Templates  Videos

┌──(root💀kali)-[~]
└─# cd college

┌──(root💀kali)-[~/college]
└─# ls
assignments  exam  java  lab  nm.txt  work

┌──(root💀kali)-[~/college]
└─# cp java nm.txt

┌──(root💀kali)-[~/college]
└─# cat nm.txt
mgjjghjgk
hii all

┌──(root💀kali)-[~/college]
└─# mv java nm.txt

┌──(root💀kali)-[~/college]
└─# cat nm.txt
mgjjghjgk
hii all

┌──(root💀kali)-[~/college]
└─# locate
```

12.locate

locate command in Linux is used to find the files by name. There is two most widely used file searching utilities accessible to users are called find and locate. The locate utility works better and faster than find command counterpart because instead of searching the file system when a file search is initiated, it would look through a database. This database contains bits and parts of files and their corresponding paths on your system. By default, locate command does not check whether the files found in the database still exist and it never reports files created after the most recent update of the relevant database.
Syntax:

```
locate [OPTION]... PATTERN...
```

13.find

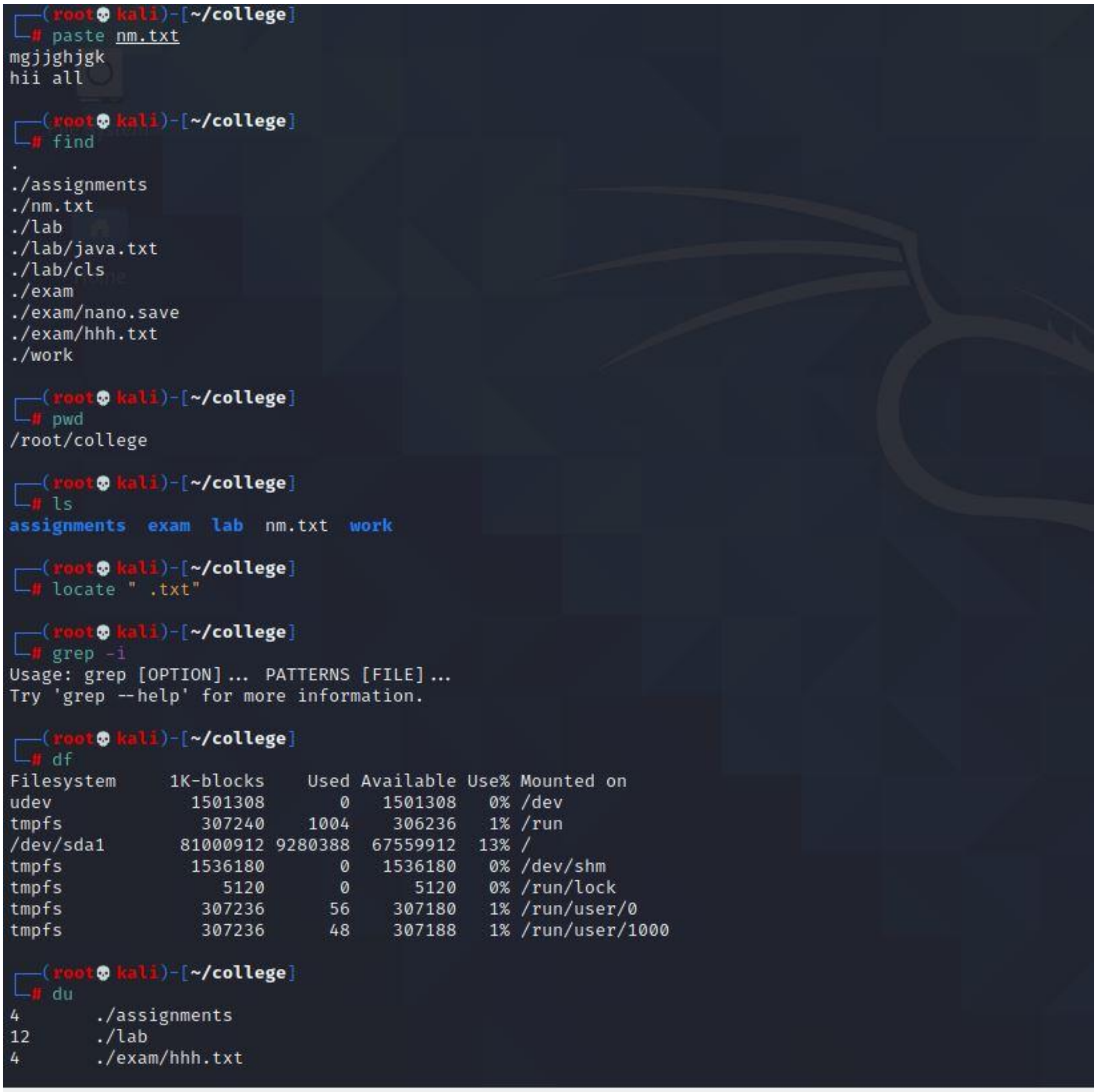
The find command in UNIX is a command line utility for walking a file hierarchy. It can be used to find files and directories and perform subsequent operations on them. It supports searching by file, folder, name, creation date, modification date, owner and permissions. By using the '-exec' other UNIX commands can be executed on files or folders found.
Syntax :

```
$ find [where to start searching from]

 [expression determines what to find] [-options] [what to find]
```

14.grep

The grep filter searches a file for a particular pattern of characters, and displays all lines that contain that pattern. The pattern that is searched in the file is referred to as the regular expression (grep stands for globally search for regular expression and print out).
Syntax:

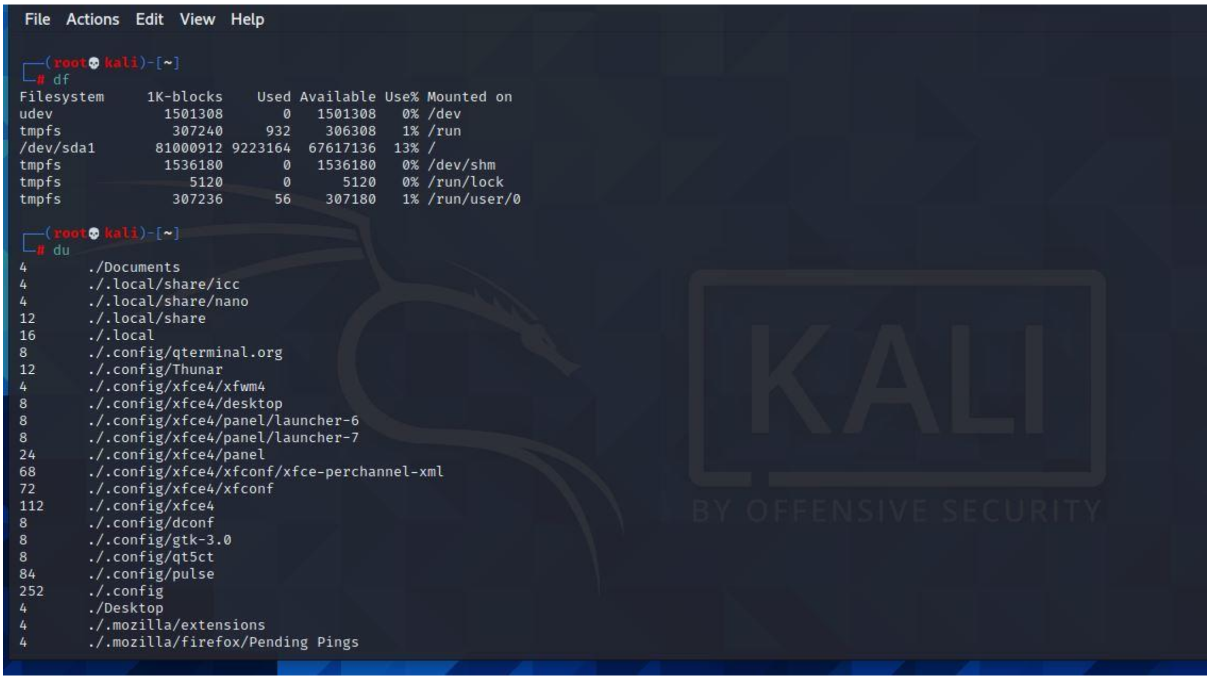
```
grep [options] pattern [files]
```



```
┌──(root💀kali)-[~/college]
└─# paste nm.txt
mgjjghjgk
hii all

┌──(root💀kali)-[~/college]
└─# find
.
./assignments
./nm.txt
./lab
./lab/java.txt
./lab/cls
./exam
./exam/nano.save
./exam/hhh.txt
./work

┌──(root💀kali)-[~/college]
└─# pwd
/root/college

┌──(root💀kali)-[~/college]
└─# ls
assignments  exam  lab  nm.txt  work

┌──(root💀kali)-[~/college]
└─# locate " .txt"

┌──(root💀kali)-[~/college]
└─# grep -i
Usage: grep [OPTION]... PATTERNS [FILE]...
Try 'grep --help' for more information.

┌──(root💀kali)-[~/college]
└─# df
Filesystem     1K-blocks    Used Available Use% Mounted on
udev             1501308       0   1501308   0% /dev
tmpfs             307240    1004    306236   1% /run
/dev/sda1       81000912 9280388  67559912  13% /
tmpfs            1536180       0   1536180   0% /dev/shm
tmpfs               5120       0      5120   0% /run/lock
tmpfs             307236      56    307180   1% /run/user/0
tmpfs             307236      48    307188   1% /run/user/1000

┌──(root💀kali)-[~/college]
└─# du
4       ./assignments
12      ./lab
4       ./exam/hhh.txt
```

15.df

The df command (short for disk free), is used to display information related to file systems about total space and available space.
Syntax :
df [OPTION]... [FILE]...

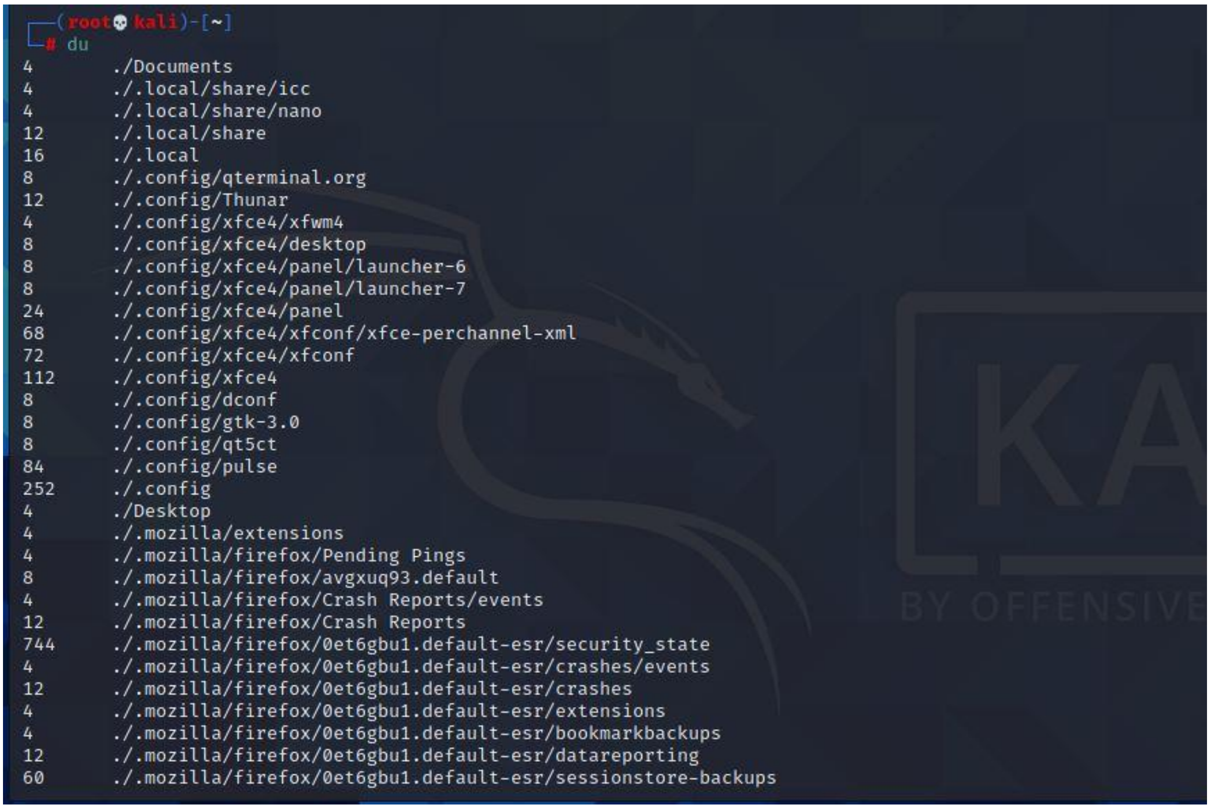


```
┌──(root💀kali)-[~]
└─# df
Filesystem     1K-blocks    Used Available Use% Mounted on
udev             1501308       0   1501308   0% /dev
tmpfs             307240     932    306308   1% /run
/dev/sda1       81000912 9223164  67617136  13% /
tmpfs            1536180       0   1536180   0% /dev/shm
tmpfs               5120       0      5120   0% /run/lock
tmpfs             307236      56    307180   1% /run/user/0

┌──(root💀kali)-[~]
└─# du
4       ./Documents
4       ./.local/share/icc
4       ./.local/share/nano
12      ./.local/share
16      ./.local
8       ./.config/qterminal.org
12      ./.config/Thunar
4       ./.config/xfce4/xfwm4
8       ./.config/xfce4/desktop
8       ./.config/xfce4/panel/launcher-6
8       ./.config/xfce4/panel/launcher-7
24      ./.config/xfce4/panel
68      ./.config/xfce4/xfconf/xfce-perchannel-xml
72      ./.config/xfce4/xfconf
112     ./.config/xfce4
8       ./.config/dconf
8       ./.config/gtk-3.0
8       ./.config/qt5ct
84      ./.config/pulse
252     ./.config
4       ./Desktop
4       ./.mozilla/extensions
4       ./.mozilla/firefox/Pending Pings
```

16.du

du command, short for disk usage, is used to estimate file space usage.
The du command can be used to track the files and directories which are consuming excessive amount of space on hard disk drive.
Syntax :
du [OPTION]... [FILE]...

du [OPTION]... --files0-from=F

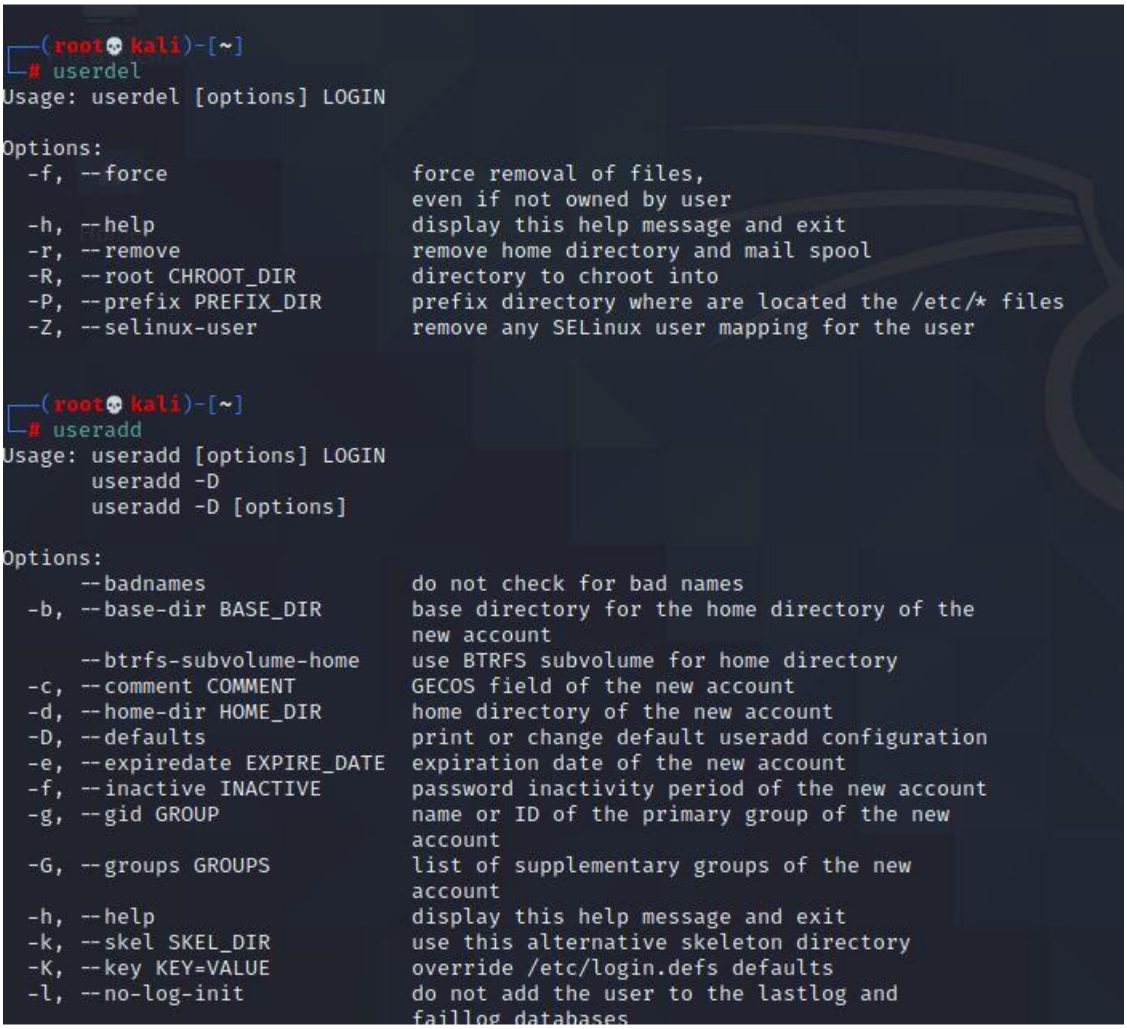


```
┌──(root💀kali)-[~]
└─# du
4       ./Documents
4       ./.local/share/icc
4       ./.local/share/nano
12      ./.local/share
16      ./.local
8       ./.config/qterminal.org
12      ./.config/Thunar
4       ./.config/xfce4/xfwm4
8       ./.config/xfce4/desktop
8       ./.config/xfce4/panel/launcher-6
8       ./.config/xfce4/panel/launcher-7
24      ./.config/xfce4/panel
68      ./.config/xfce4/xfconf/xfce-perchannel-xml
72      ./.config/xfce4/xfconf
112     ./.config/xfce4
8       ./.config/dconf
8       ./.config/gtk-3.0
8       ./.config/qt5ct
84      ./.config/pulse
252     ./.config
4       ./Desktop
4       ./.mozilla/extensions
4       ./.mozilla/firefox/Pending Pings
8       ./.mozilla/firefox/avgxuq93.default
4       ./.mozilla/firefox/Crash Reports/events
12      ./.mozilla/firefox/Crash Reports
744     ./.mozilla/firefox/0et6gbu1.default-esr/security_state
4       ./.mozilla/firefox/0et6gbu1.default-esr/crashes/events
12      ./.mozilla/firefox/0et6gbu1.default-esr/crashes
4       ./.mozilla/firefox/0et6gbu1.default-esr/extensions
4       ./.mozilla/firefox/0et6gbu1.default-esr/bookmarkbackups
12      ./.mozilla/firefox/0et6gbu1.default-esr/datareporting
60      ./.mozilla/firefox/0et6gbu1.default-esr/sessionstore-backups
```

17.useradd

useradd is a command in Linux that is used to add user accounts to your system. It is just a symbolic link to adduser command in Linux and the difference between both of them is that useradd is a native binary compiled with system whereas adduser is a Perl script which uses useradd binary in the background. It make changes to the following files:

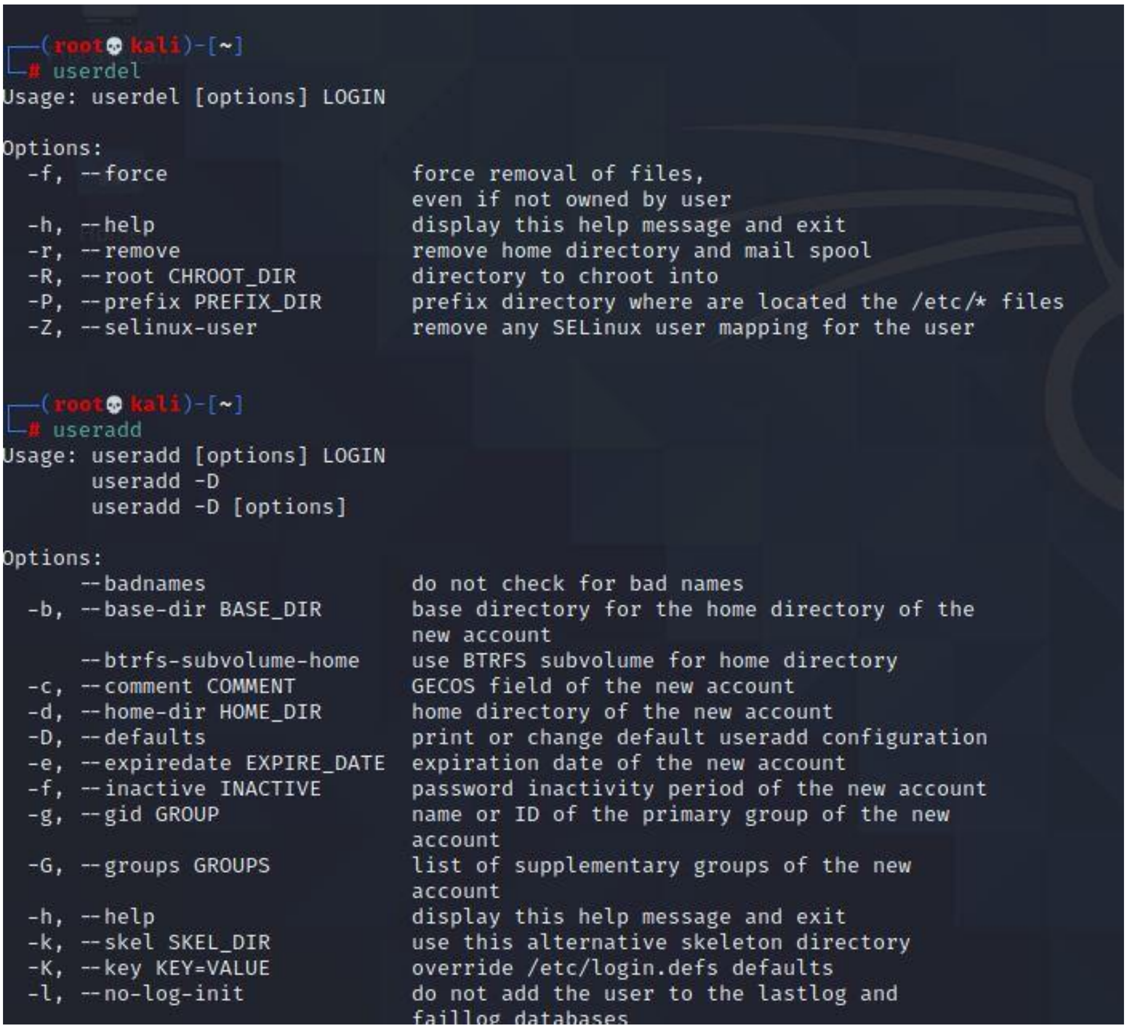
- /etc/passwd
- /etc/shadow
- /etc/group
- /etc/gshadow
- creates a directory for new user in /home



```
┌──(root💀kali)-[~]
└─# userdel
Usage: userdel [options] LOGIN

Options:
  -f, --force                   force removal of files,
                                even if not owned by user
  -h, --help                    display this help message and exit
  -r, --remove                  remove home directory and mail spool
  -R, --root CHROOT_DIR         directory to chroot into
  -P, --prefix PREFIX_DIR       prefix directory where are located the /etc/* files
  -Z, --selinux-user            remove any SELinux user mapping for the user


┌──(root💀kali)-[~]
└─# useradd
Usage: useradd [options] LOGIN
       useradd -D
       useradd -D [options]

Options:
      --badnames                do not check for bad names
  -b, --base-dir BASE_DIR       base directory for the home directory of the
                                new account
      --btrfs-subvolume-home    use BTRFS subvolume for home directory
  -c, --comment COMMENT         GECOS field of the new account
  -d, --home-dir HOME_DIR       home directory of the new account
  -D, --defaults                print or change default useradd configuration
  -e, --expiredate EXPIRE_DATE  expiration date of the new account
  -f, --inactive INACTIVE       password inactivity period of the new account
  -g, --gid GROUP               name or ID of the primary group of the new
                                account
  -G, --groups GROUPS           list of supplementary groups of the new
                                account
  -h, --help                    display this help message and exit
  -k, --skel SKEL_DIR           use this alternative skeleton directory
  -K, --key KEY=VALUE           override /etc/login.defs defaults
  -l, --no-log-init             do not add the user to the lastlog and
                                faillog databases
```

18.userdel

userdel command in Linux system is used to delete a user account and related files. This command basically modifies the system account files, deleting all the entries which refer to the username LOGIN. It is a low-level utility for removing the users.
Syntax:
userdel [options] LOGIN

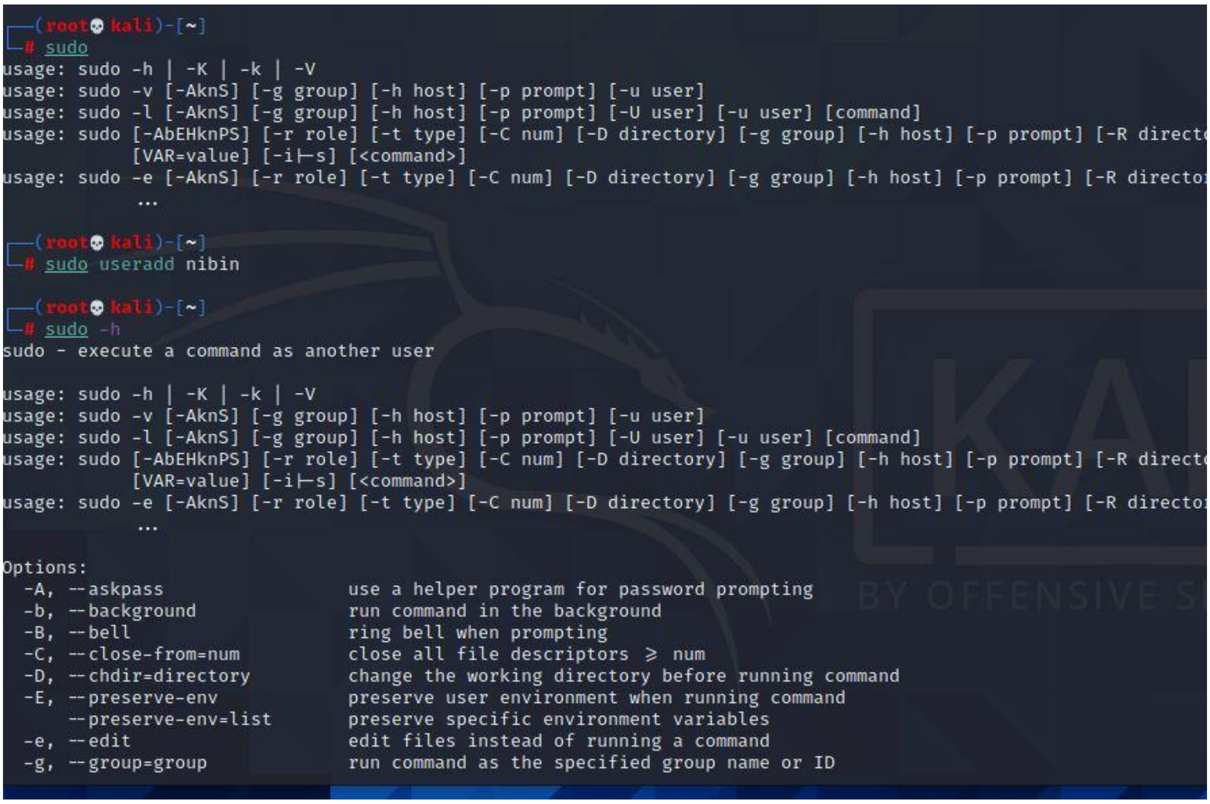


```
┌──(root💀kali)-[~]
└─# userdel
Usage: userdel [options] LOGIN

Options:
  -f, --force                   force removal of files,
                                even if not owned by user
  -h, --help                    display this help message and exit
  -r, --remove                  remove home directory and mail spool
  -R, --root CHROOT_DIR         directory to chroot into
  -P, --prefix PREFIX_DIR       prefix directory where are located the /etc/* files
  -Z, --selinux-user            remove any SELinux user mapping for the user


┌──(root💀kali)-[~]
└─# useradd
Usage: useradd [options] LOGIN
       useradd -D
       useradd -D [options]

Options:
      --badnames                do not check for bad names
  -b, --base-dir BASE_DIR       base directory for the home directory of the
                                new account
      --btrfs-subvolume-home    use BTRFS subvolume for home directory
  -c, --comment COMMENT         GECOS field of the new account
  -d, --home-dir HOME_DIR       home directory of the new account
  -D, --defaults                print or change default useradd configuration
  -e, --expiredate EXPIRE_DATE  expiration date of the new account
  -f, --inactive INACTIVE       password inactivity period of the new account
  -g, --gid GROUP               name or ID of the primary group of the new
                                account
  -G, --groups GROUPS           list of supplementary groups of the new
                                account
  -h, --help                    display this help message and exit
  -k, --skel SKEL_DIR           use this alternative skeleton directory
  -K, --key KEY=VALUE           override /etc/login.defs defaults
  -l, --no-log-init             do not add the user to the lastlog and
                                faillog databases
```

19.sudo

The sudo command allows you to run programs as another user, by default the root user. If you spend a lot of time on the command line, sudo is one of the commands that you will use quite frequently.

Using sudo instead of login in as root is more secure because you can grant limited administrative privileges to individual users without them knowing the root password.



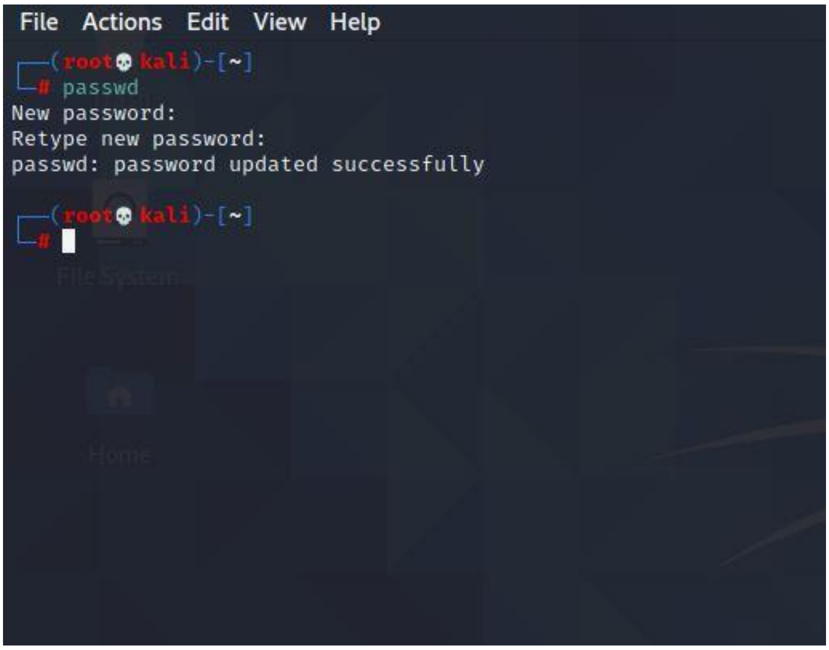
```
┌──(root💀kali)-[~]
└─# sudo
usage: sudo -h | -K | -k | -V
usage: sudo -v [-AknS] [-g group] [-h host] [-p prompt] [-u user]
usage: sudo -l [-AknS] [-g group] [-h host] [-p prompt] [-U user] [-u user] [command]
usage: sudo [-AbEHknPS] [-r role] [-t type] [-C num] [-D directory] [-g group] [-h host] [-p prompt] [-R direct
            [VAR=value] [-i|-s] [<command>]
usage: sudo -e [-AknS] [-r role] [-t type] [-C num] [-D directory] [-g group] [-h host] [-p prompt] [-R directo
             ...

┌──(root💀kali)-[~]
└─# sudo useradd nibin

┌──(root💀kali)-[~]
└─# sudo -h
sudo - execute a command as another user

usage: sudo -h | -K | -k | -V
usage: sudo -v [-AknS] [-g group] [-h host] [-p prompt] [-u user]
usage: sudo -l [-AknS] [-g group] [-h host] [-p prompt] [-U user] [-u user] [command]
usage: sudo [-AbEHknPS] [-r role] [-t type] [-C num] [-D directory] [-g group] [-h host] [-p prompt] [-R direct
            [VAR=value] [-i|-s] [<command>]
usage: sudo -e [-AknS] [-r role] [-t type] [-C num] [-D directory] [-g group] [-h host] [-p prompt] [-R directo
             ...

Options:
  -A, --askpass                 use a helper program for password prompting
  -b, --background              run command in the background
  -B, --bell                    ring bell when prompting
  -C, --close-from=num          close all file descriptors ≥ num
  -D, --chdir=directory         change the working directory before running command
  -E, --preserve-env            preserve user environment when running command
      --preserve-env=list       preserve specific environment variables
  -e, --edit                    edit files instead of running a command
  -g, --group=group             run command as the specified group name or ID
```

20.passwd

passwd command in Linux is used to change the user account passwords. The root user reserves the privilege to change the password for any user on the system, while a normal user can only change the account password for his or her own account.

Syntax:

passwd [options] [username]



```
┌──(root💀kali)-[~]
└─# passwd
New password:
Retype new password:
passwd: password updated successfully

┌──(root💀kali)-[~]
└─# 
```