MuhammadShakir-dev

MASTERING THE LINUX TERMINAL

Hello👋 my readers in this I will tell you about all the basic and beginner level Linux terminal commands. And how to use those commands.

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WHAT IS TERMINAL

The Linux terminal is a text-based interface used to control a Linux computer. It's just one of the many tools provided to Linux users for accomplishing any given task, but it's widely considered the most efficient method available. As most people use an OS with a graphical user interface (GUI) for their day-to-day computing needs, the use of a terminal emulator is a necessity for most Linux server users.

WHY USE THE TERMINAL?

Terminals, also known as command lines or consoles, allow us to accomplish and automate tasks on a computer without the use of a graphical user interface. Using a terminal allows us to send simple text commands to our computer to do things like navigate through a directory or copy a file, and form the basis for many more complex automation and programming skills.

ADVANTAGES OF USING TERMINAL.

1. It can save you time.
2. It can help when you are unable to use the GUI, such as a system crash or a configuration issue.
3. It can enable you to use Linux in ways that using a GUI exclusively can not (such as scripting repetitive tasks).
4. Improve your programming skills.

LIST OF MOST IMPORTANT TERMINAL COMMANDS.

1. ls
2. cd
3. pwd
4. /
5. $
6. Cd..

7. mkdir
8. rm
9. rmdir
10. touch
11. mv
12. cp
13. su
14. ls -r
15. ls -a
16. ls -l
17. clear
18. history
19. chmod
20. ps
21. ps -a
22. kill
23. vim
24. printf

TYPES OF USER

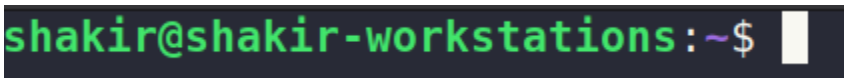
In Linux there are three types of users depending upon their access to the system.

1. REGULAR USER
2. ROOT USER
3. SERVER USER

REGULAR USER.

Regular users are represented by a $ sign in the terminal after the system name. Regular users have access to read, write execute, move, etc in their home directory. If you have multiple users in a system then a regular user not being able to read write things in other users' directories.

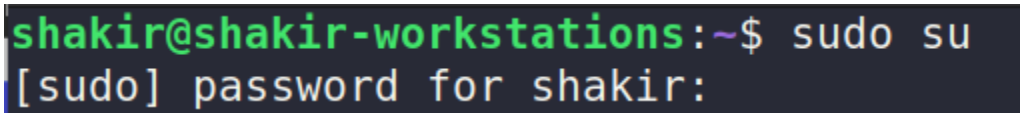
REPRESENTATION.



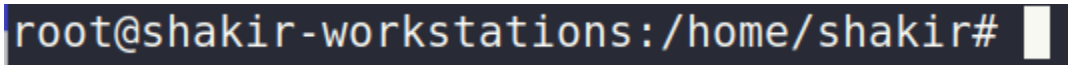
ROOT USER

Root users are also called super users or admin. Because they have access to do anything in any user directory. A root user has all types of permissions to read write and execute. There are two ways to access root or make a root user.

1. By typing the **Sudo** command in your terminal you have been able to perform the root task.
   E.g

2. By typing **Sudo su** in the terminal and hit enter, enter your password and now you became a root user or a superuser.
   E.g

REPRESENTATION.

The root user is represented by a **#** symbol as you can see in the above command.

SERVER USER.

Server users are server-side users primarily there are mainly two types of users but server users are also a user, for now, I will not tell the details of server users just focus on the above user's types.

DEFINITION OF COMMANDS.

Ls

Ls is abbreviated as a list, and the list command is used to list down the folders of the directory in which you are.

cd

cd abbreviated as change directory. If you are in the home directory and want to go in the downloads directory then this command will help you a lot.

pwd

pwd abbreviated as the present working directory. If you are in a directory and you don't know in which directory you are then just type pwd and hit enter and this command will show the path of your current directory.

/

/ is called root directory. Also, it will help you in typing the absolute path.

$

$ is the representation of a regular user.

cd..

There are some shortcuts to help you navigate quickly:

- ➢ cd .. (with two dots) to move one directory up
- ➢ cd to go straight to the home folder
- ➢ cd- (with a hyphen) to move to your previous directory

On a side note, Linux’s shell is case sensitive. So, you have to type the name’s directory exactly as it is.

mkdir

mkdir is abbreviated as make directory. if you type mkdir Music it will create a directory called Music.

rm

The rm command is used to delete directories and the contents within them. If you only want to delete the directory — as an alternative to rmdir — use rm -r.

Note: Be very careful with this command and double-check which directory you are in. This will delete everything and there is no undo.

rmdir

If you need to delete a directory, use the rmdir command. However, rmdir only allows you to delete empty directories.

touch

The touch command allows you to create a blank new file through the Linux command line.

mv

The primary use of the mv command is to move files, although it can also be used to rename files.

cp

Use the cp command to copy files from the current directory to a different directory.

su

su abbreviated as a superuser. If you want to make a superuser then just type **sudo su** and enter your password.

Ls -r, ls -a ls -al

There are variations you can use with the **ls** command:

1. **ls -R** will list all the files in the sub-directories as well
2. **ls -a** will show the hidden files
3. **ls -al** will list the files and directories with detailed information like the permissions, size, owner,

clear

This command will clear all commands from you terminal.

history

If you want to check that which command you use in your past or recent so type history in the terminal then a list of commands will appear.

chmod.

chmod is another Linux command, used to change the read, write, and execute permissions of files and directories. As this command is rather complicated, you can read the full

tutorial in order to execute it properly. you can also change the permission by using the chmod calculator.

ps

ps command will display all the processes that are running in the background.

ps -a

ps -a will display all the background processes that are running in the background.

Kill

If you have an unresponsive program, you can terminate it manually by using the kill command. It will send a certain signal to the misbehaving app and instructs the app to terminate itself.

vim

Using the vim command you can edit any text file.

printf.

In order to print something in your terminal use printf.

IMPLEMENTATION OF THESE COMMANDS

ls

```
shakir@shakir-workstations:~$ ls
```

Output.

```
shakir@shakir-workstations:~$ ls
 build
 chrome-gnome-shell
 conio.h
 Desktop
 Documents
 Downloads
 dsa-3a
 eclipse.desktop
 Electrum-4.1.5
 Electrum-4.1.5.tar.gz
 Electrum-4.1.5.tar.gz.sombernight_releasekey.asc
 Electrum-4.1.5.tar.gz.ThomasV.asc
 english
```

cd

```
shakir@shakir-workstations:~$ cd Documents
```

Output.

```
shakir@shakir-workstations:~/Documents$
```

pwd

```
shakir@shakir-workstations:~/Documents$ pwd
```

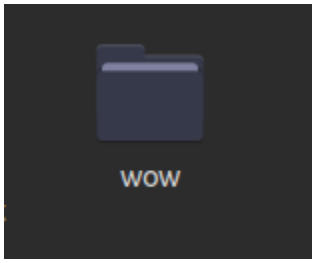
Output.

```
shakir@shakir-workstations:~/Documents$ pwd
/home/shakir/Documents
```

mkdir

```
shakir@shakir-workstations:~/Documents$ mkdir wow
```

Output.



rmdir

```
shakir@shakir-workstations:~/Documents$ rmdir wow
```

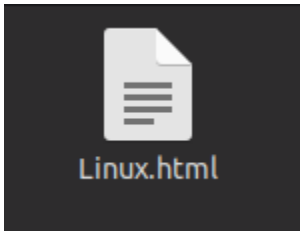
Output.

The wow directory will be removed permanently.

touch.

```
shakir@shakir-workstations:~/Documents$ touch Linux.html
```

Output.



cd ..

```
shakir@shakir-workstations:~/Documents$ cd ..
```

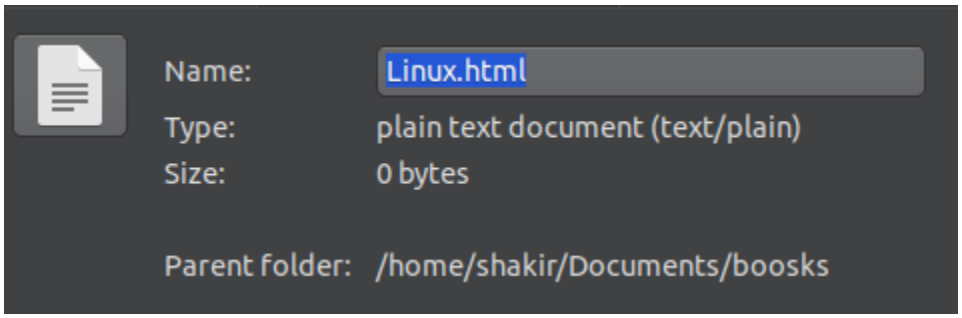
Output.

```
shakir@shakir-workstations:~$ pwd
/home/shakir
```

mv

```
shakir@shakir-workstations:~/Documents$ mv Linux.html boosks/
```

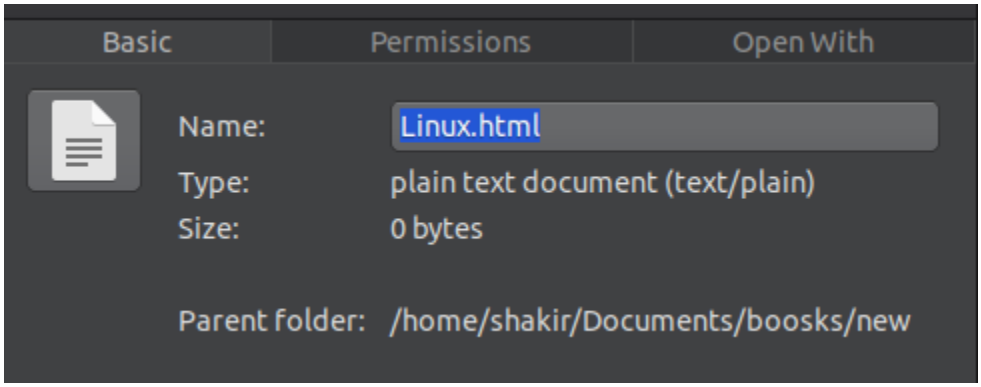
Output.



cp

```
shakir@shakir-workstations:~/Documents/boosks$ cp Linux.html new/
```

Output.



su

```
shakir@shakir-workstations:~/Documents/boosks$ sudo su
```

Output.

```
root@shakir-workstations:/home/shakir/Documents/boosks#
```

ls -l

```
root@shakir-workstations:/home/shakir/Documents# ls -l
```

Output

```
total 320
drwxrwxr-x 7 shakir shakir   4096 2' 2021  13 جولائیA STUBJECTS'
drwxrwxr-x 8 shakir shakir   4096 3' 16:09 7   فروری SEMESTER'
drwxrwxr-x 2 shakir shakir   4096 2021  29    جون 'All subjects assigmnets'
drwxrwxr-x 3 shakir shakir   4096 13:14 6    مارچ  boosks
drwxrwxr-x 4 shakir shakir   4096 2021  27    جون  c++
-rw-rw-r-- 1 shakir shakir      0 2021  27 جولائی  Candy.html
-rw-rw-r-- 1 shakir shakir 231248 2021  12    مئی  gmon.out
drwxrwxr-x 4 shakir shakir   4096 2021  31   اگست 'GTA San Andreas User Files'
drwxrwxr-x 2 shakir shakir   4096 2021  3    اگست  java
drwxrwxr-x 2 shakir shakir   4096 23:28 9   ستمبر  newVScode
drwxrwxr-x 3 shakir shakir   4096 20:43 28  ستمبر 'Practice VS code'
drwxrwxr-x 4 shakir shakir   4096 2020  12 اکتوبر  Projects
drwxrwxr-x 5 shakir shakir   4096 10:41 26  جنوری  Python
drwxrwxr-x 3 shakir shakir   4096 2021  1   ستمبر 'Rockstar Games'
drwxrwxr-x 2 shakir shakir   4096 12:42 29  دسمبر  seminar
drwxrwxr-x 2 shakir shakir   4096 22:22 5   دسمبر  shakir
drwxrwxr-x 2 shakir shakir   4096 20:11 5    مارچ 'SHAKIR ARTICLES'
```

ls -a

```
root@shakir-workstations:/home/shakir# ls -a
```

Output

```
.
..
.anaconda_backup
.android
.anydesk
.atom
.bash_history
.bash_logout
.bashrc
```

ls -r

```
root@shakir-workstations:/home/shakir/Documents# ls -r
```

Output.

```
Zoom                        Projects
ZAR                        'Practice VS code'
Web_Development             newVScode
'VS code'                   java
```

clear

```
root@shakir-workstations:/home/shakir/Documents# clear
```

Output.

```
root@shakir-workstations:/home/shakir/Documents#
```

history

```
root@shakir-workstations:/home/shakir/Documents# history
```

Output.

```
    8  find / -name .themes
    9  clear\
   10  clear
   11  cd
   12  sudo nautilus
   13  apt-get install git
```

ps

```
root@shakir-workstations:/home/shakir/Documents# ps
```

Output

```
    TIME CMD
00:00:00 sudo
00:00:00 su
00:00:00 bash
00:00:00 ps
```

ps -a

```
root@shakir-workstations:/home/shakir# ps -a
```

Output

```
    TIME CMD
00:11:40 Xorg
00:00:00 gnome-session-b
00:00:00 sudo
00:00:00 su
00:00:00 bash
00:00:00 ps
```

printf

```
shakir@shakir-workstations:~$ printf "Muhammad Shakir-dev\n"
```

Output.

```
Muhammad Shakir-dev
```

vim

```
shakir@shakir-workstations:~/Downloads$ vim new.txt
```

Output.

```
hello this is Muhummad Shakir
I am a Front end Developer,
```

chmod

```
shakir@shakir-workstations:~/Downloads$ chmod 744 new.html
```

Output.

```
-rwxr--r-- 1 shakir shakir        0 12:06 6    مارچ  new.html
```

IMPORTANT SUGGESTION.

1. Vim is a file editor so for implementing this command create a simple text file with a touch command and then enter vim plus file name for typing some text in the text file press I and then type when you finished typing press ESC and then type:wq
2. There are also some extra commands for installation updates and upgrade purposes.
3. Sudo su is not the right way because if you incidentally delete any file after becoming a superuser it will not be recovered
4. Type Sudo before any root command will give you root access.
5. For installing something from the terminal type:

   ```
   shakir@shakir-workstations:~$ sudo apt install whatsdesk
   ```

6. For updating the list of packages for Linux.

```
shakir@shakir-workstations:~$ sudo apt update
```

7. For upgrading your system from the terminal.

```
shakir@shakir-workstations:~$ sudo apt upgrade
```

Info

Creator: Muhammad Shakir

Contact

Gmail: chaudhryshakir67@gmail.com

Twitter: @ChShakir_05

Follow Me on

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