

1.Command: *sudo*

This command helps to run commands with administrative privileges just like “run as administrator” in windows

```
Terminal
File Edit View Search Terminal Help
mashiyat@mahjabineshita-22101878:~$sudo
usage: sudo -h | -K | -k | -V
usage: sudo -v [-ABknS] [-g group] [-h host] [-p prompt] [-u user]
usage: sudo -l [-ABknS] [-g group] [-h host] [-p prompt] [-U user] [-u user]
[command]
usage: sudo [-ABbEHknPS] [-r role] [-t type] [-C num] [-D directory] [-g group]
[-h host] [-p prompt] [-R directory] [-T timeout] [-u user]
[VAR=value] [-i|-s] [<command>]
usage: sudo -e [-ABknS] [-r role] [-t type] [-C num] [-D directory] [-g group]
[-h host] [-p prompt] [-R directory] [-T timeout] [-u user] file ...
mashiyat@mahjabineshita-22101878:~$
```

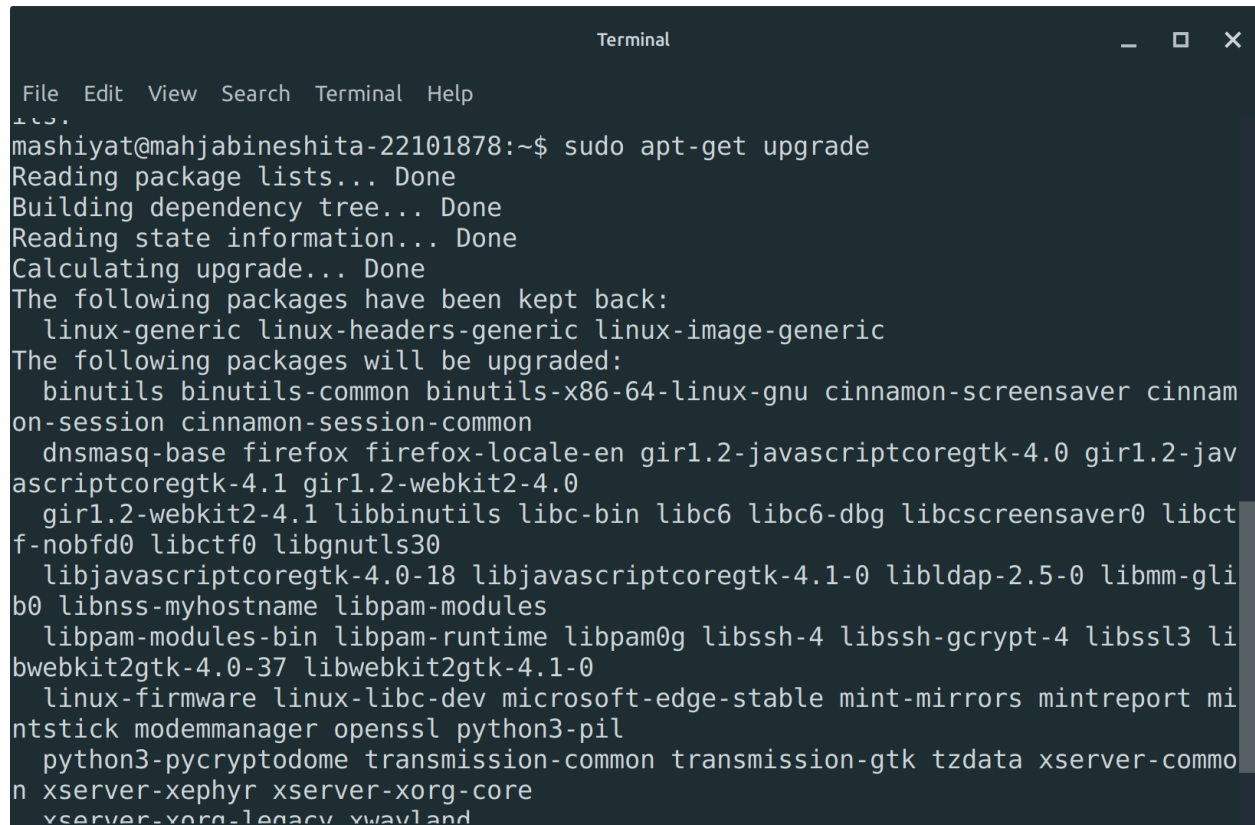
2.Command: *apt-get update*

This command helps to know if there are any packages available in the system. It will gather information from all configured sources and update the local package index .

```
Terminal
File Edit View Search Terminal Help
mashiyat@mahjabineshita-22101878:~$sudo
usage: sudo -h | -K | -k | -V
usage: sudo -v [-ABknS] [-g group] [-h host] [-p prompt] [-u user]
usage: sudo -l [-ABknS] [-g group] [-h host] [-p prompt] [-U user] [-u user]
[command]
usage: sudo [-ABbEHknPS] [-r role] [-t type] [-C num] [-D directory] [-g group]
[-h host] [-p prompt] [-R directory] [-T timeout] [-u user]
[VAR=value] [-i|-s] [<command>]
usage: sudo -e [-ABknS] [-r role] [-t type] [-C num] [-D directory] [-g group]
[-h host] [-p prompt] [-R directory] [-T timeout] [-u user] file ...
mashiyat@mahjabineshita-22101878:~$sudo apt-get update
[sudo] password for eshita:
Hit:1 http://security.ubuntu.com/ubuntu jammy-security InRelease
Ign:2 http://packages.linuxmint.com virginia InRelease
Get:3 http://repository.spotify.com stable InRelease [3,316 B]
Err:3 http://repository.spotify.com stable InRelease
  The following signatures couldn't be verified because the public key is not available: NO_PUBKEY 6224F9941A8AA6D1
Hit:4 http://packages.linuxmint.com virginia Release
Hit:5 http://archive.ubuntu.com/ubuntu jammy InRelease
Hit:7 http://archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:8 http://archive.ubuntu.com/ubuntu jammy-backports InRelease
Hit:9 https://packages.microsoft.com/repos/edge stable InRelease
Reading package lists... Done
W: GPG error: http://repository.spotify.com stable InRelease: The following signatures couldn't be verified because the public
key is not available: NO_PUBKEY 6224F9941A8AA6D1
E: The repository 'http://repository.spotify.com stable InRelease' is not signed.
N: Updating from such a repository can't be done securely, and is therefore disabled by default.
N: See apt-secure(8) manpage for repository creation and user configuration details.
mashiyat@mahjabineshita-22101878:~$
```

3. Command: *sudo apt-get upgrade*

After updating the packages I have used this command to upgrade my database. It is for upgrading all the packages with their newer versions.

A terminal window titled "Terminal" with a dark background and light text. The window shows the output of the command "sudo apt-get upgrade". The output indicates that several packages will be upgraded, including binutils, firefox, gir1.2-javascriptcoregtk, libbinutils, libc-bin, libc6, libcscreensaver0, libctf-nobfd0, libctf0, libgnutls30, libjavascriptcoregtk-4.0-18, libjavascriptcoregtk-4.1-0, libldap-2.5-0, libmm-glib0, libnss-myhostname, libpam-modules, libpam-modules-bin, libpam-runtime, libpam0g, libssh-4, libssh-gcrypt-4, libssl3, libwebkit2gtk-4.0-37, libwebkit2gtk-4.1-0, linux-firmware, linux-libc-dev, microsoft-edge-stable, mint-mirrors, mintreport, mintstick, modemmanager, openssl, python3-pil, python3-pycryptodome, transmission-common, transmission-gtk, tzdata, xserver-common, xserver-xephyr, xserver-xorg-core, xserver-xorg-legacy, and xwayland. The terminal window also shows the command prompt "mashiyat@mahjabineshita-22101878:~\$" and the command "sudo apt-get upgrade".

```
Terminal
File Edit View Search Terminal Help
mashiyat@mahjabineshita-22101878:~$ sudo apt-get upgrade
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Calculating upgrade... Done
The following packages have been kept back:
  linux-generic linux-headers-generic linux-image-generic
The following packages will be upgraded:
  binutils binutils-common binutils-x86-64-linux-gnu cinnamon-screensaver cinnam
on-session cinnamon-session-common
  dnsmasq-base firefox firefox-locale-en gir1.2-javascriptcoregtk-4.0 gir1.2-jav
ascriptcoregtk-4.1 gir1.2-webkit2-4.0
  gir1.2-webkit2-4.1 libbinutils libc-bin libc6 libc6-dbg libcscreensaver0 libct
f-nobfd0 libctf0 libgnutls30
  libjavascriptcoregtk-4.0-18 libjavascriptcoregtk-4.1-0 libldap-2.5-0 libmm-gli
b0 libnss-myhostname libpam-modules
  libpam-modules-bin libpam-runtime libpam0g libssh-4 libssh-gcrypt-4 libssl3 li
bwebkit2gtk-4.0-37 libwebkit2gtk-4.1-0
  linux-firmware linux-libc-dev microsoft-edge-stable mint-mirrors mintreport mi
ntstick modemmanager openssl python3-pil
  python3-pycryptodome transmission-common transmission-gtk tzdata xserver-commo
n xserver-xephyr xserver-xorg-core
  xserver-xorg-legacy xwayland
```

4. Command: *sudo apt-get install gimp*

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I am installing the gimp package here.

```
exit /home/eshita
File Edit View Search Terminal Help
mashiyat@mahjabineshita-22101878:~$sudo apt-get install gimp
[sudo] password for eshita:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  gimp-data graphviz libamd2 libann0 libbabl-0.1-0 libcamd2 libccolamd2
  libcdt5 libcgraph6 libcholmod3 libgegl-0.4-0 libgegl-common libgimp2.0
  libgts-0.7-5 libgts-bin libgvc6 libgvpr2 liblab-gamut1 libmetis5 libmng2
  libmypaint-1.5-1 libmypaint-common libpathplan4 libumfpack5
Suggested packages:
  gimp-help-en | gimp-help gimp-data-extras graphviz-doc
The following NEW packages will be installed:
  gimp gimp-data graphviz libamd2 libann0 libbabl-0.1-0 libcamd2 libccolamd2
  libcdt5 libcgraph6 libcholmod3 libgegl-0.4-0 libgegl-common libgimp2.0
  libgts-0.7-5 libgts-bin libgvc6 libgvpr2 liblab-gamut1 libmetis5 libmng2
  libmypaint-1.5-1 libmypaint-common libpathplan4 libumfpack5
0 upgraded, 25 newly installed, 0 to remove and 56 not upgraded.
Need to get 20.8 MB of archives.
After this operation, 100 MB of additional disk space will be used.
Do you want to continue? [Y/n]
```

5.Command: *sudo apt-get autoclean*

I am using this command to remove those cache files that can not be downloaded from their sources now.

Cleaned everything, the PC restarted so I could not take the screen shot. But after returning to the terminal everything was clean.

```
Terminal
File Edit View Search Terminal Help
mashiyat@mahjabineshita-22101878:~$
```

6. Command: *date*

I used this command to see the current date and time. I can use this to manipulate the time zone and specific times and dates using this command.

```
Terminal
File Edit View Search Terminal Help
mashiyat@mahjabineshita-22101878:~$date
Wed Jan 31 06:19:34 PM +06 2024
mashiyat@mahjabineshita-22101878:~$
```

7. Command: *df*

This command displays information about the disk space usage of all mounted file systems.

Here, the file system shows the name of the system

Size shows the total size of the file system

There are other things like Used, Available, Use%, and Mounted on

```
Terminal
File Edit View Search Terminal Help
mashiyat@mahjabineshita-22101878:~$df
Filesystem      1K-blocks      Used Available Use% Mounted on
tmpfs            780080         2000    778080   1% /run
/dev/nvme0n1p2 490617784 19985836 445636468   5% /
tmpfs            3900388        78324   3822064   3% /dev/shm
tmpfs             5120           4        5116   1% /run/lock
/dev/nvme0n1p1  523248        6220    517028   2% /boot/efi
tmpfs            780076         104    779972   1% /run/user/1000
mashiyat@mahjabineshita-22101878:~$
```

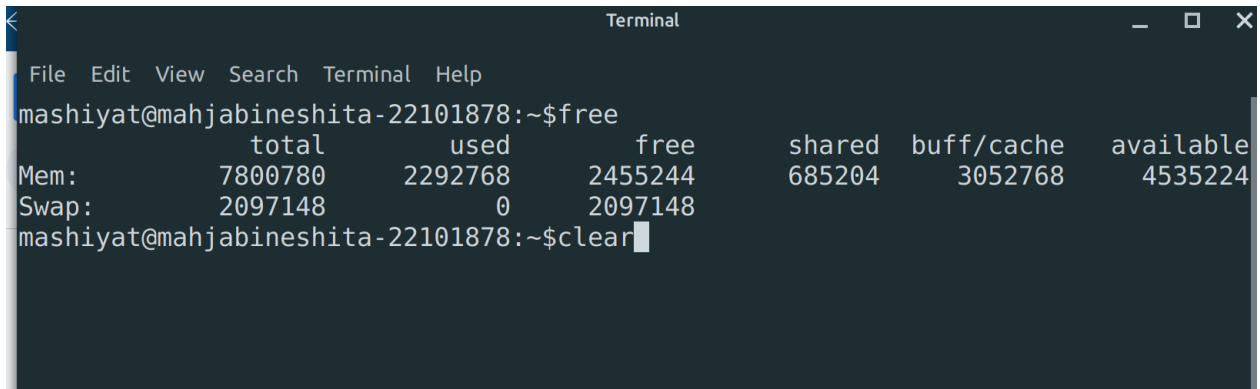
8. Command: *free*

This command shows the free space available on my system. After using the command I get to know they show total, used, free, shared, buffers, cached space of the system

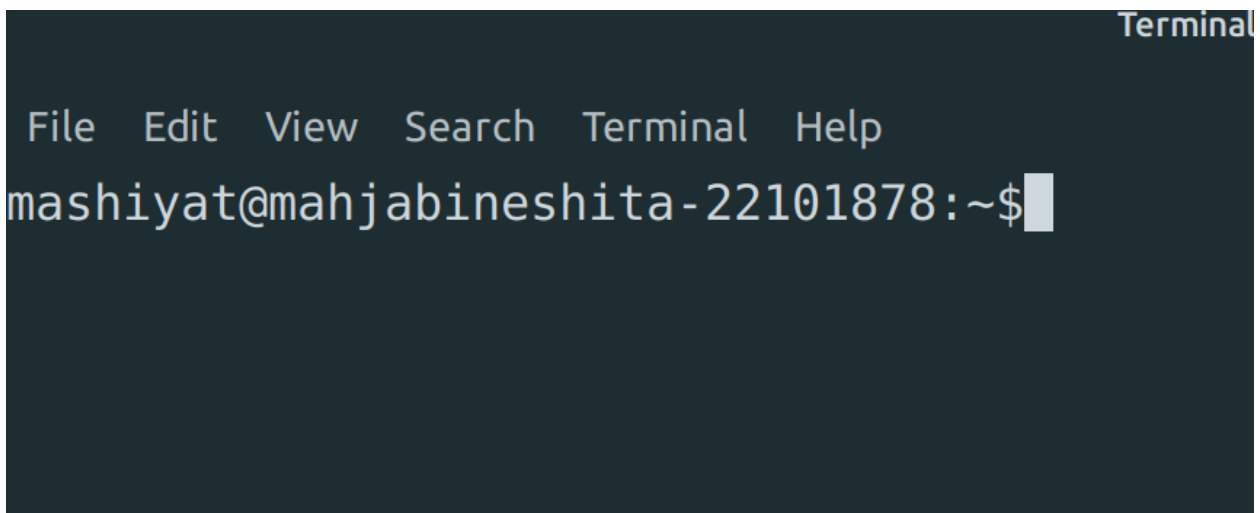
```
Terminal
File Edit View Search Terminal Help
mashiyat@mahjabineshita-22101878:~$free
              total        used        free      shared  buff/cache   available
Mem:          7800780      2292768      2455244      685204     3052768     4535224
Swap:         2097148           0      2097148
mashiyat@mahjabineshita-22101878:~$
```

9. Command: *clear*

Using this command for clearing up my terminal every time but as this is clearing my terminal

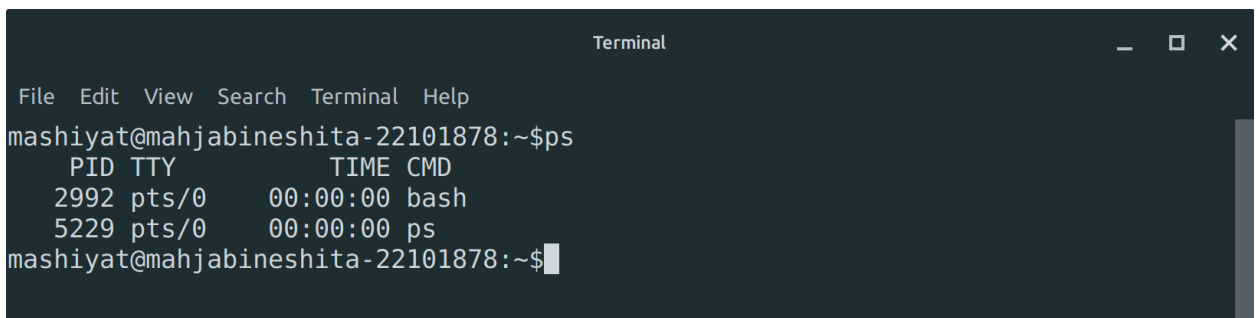
A terminal window titled "Terminal" with a menu bar (File, Edit, View, Search, Terminal, Help). The prompt is "mashiyat@mahjabineshita-22101878:~\$". The command "free" has been executed, displaying system memory usage statistics.

	total	used	free	shared	buff/cache	available
Mem:	7800780	2292768	2455244	685204	3052768	4535224
Swap:	2097148	0	2097148			

The prompt is now "mashiyat@mahjabineshita-22101878:~\$clear".A terminal window titled "Terminal" with a menu bar (File, Edit, View, Search, Terminal, Help). The prompt is "mashiyat@mahjabineshita-22101878:~\$". The screen is clear of previous output.

10. Command: *ps*

Ps command helps me to get information about the running process of the current situation.

A terminal window titled "Terminal" with a menu bar (File, Edit, View, Search, Terminal, Help). The prompt is "mashiyat@mahjabineshita-22101878:~\$". The command "ps" has been executed, displaying the following table:

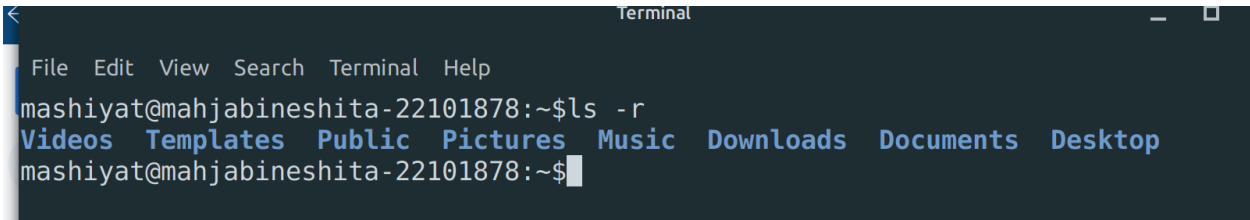
PID	TTY	TIME	CMD
2992	pts/0	00:00:00	bash
5229	pts/0	00:00:00	ps

The prompt is now "mashiyat@mahjabineshita-22101878:~\$".

11. Command: *ls*

The ls command shows to list the content of the directory. After running the ls command in a terminal, I can see the files and directories that are currently working. This command shows the file names, their permissions, ownership information, and the date of the last modification.

Here, using ls-r reverse the order of the sort

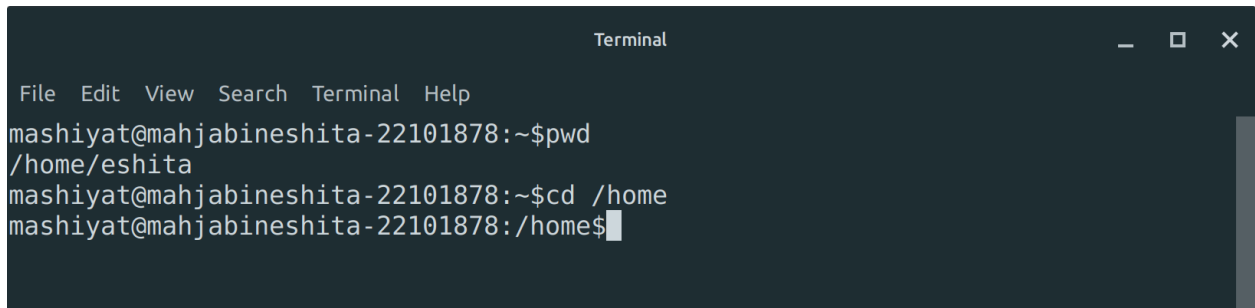


```
Terminal
File Edit View Search Terminal Help
mashiyat@mahjabineshita-22101878:~$ls -r
Videos Templates Public Pictures Music Downloads Documents Desktop
mashiyat@mahjabineshita-22101878:~$
```

12. Command: *cd*

Cd is used for seeing the current working directory. Here cd / (Takes me to the root directory) and there are two other commands such as, cd.. , cd - - which are used for up and previous directory respectively.

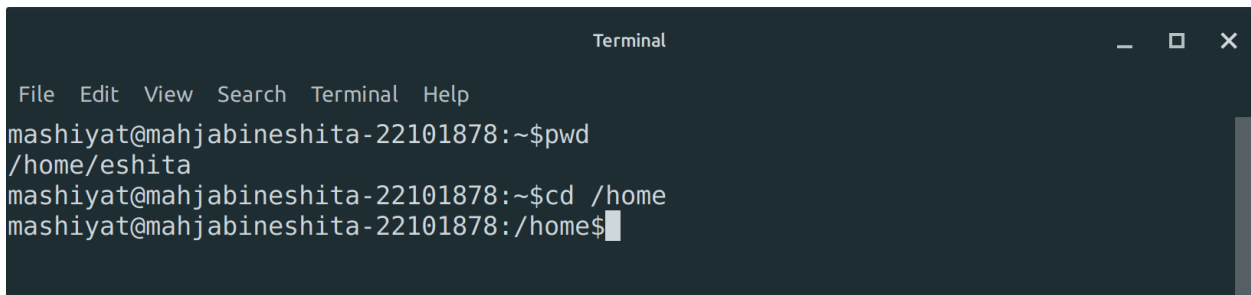
For example, when I used cd /home it opened the home folder in the current directory.



```
Terminal
File Edit View Search Terminal Help
mashiyat@mahjabineshita-22101878:~$pwd
/home/eshita
mashiyat@mahjabineshita-22101878:~$cd /home
mashiyat@mahjabineshita-22101878:/home$
```

13. Command: *pwd*

I used the pwd command to see the full pathname of the current working directory. Whenever I need to know the current working directory I can use this command.



```
Terminal
File Edit View Search Terminal Help
mashiyat@mahjabineshita-22101878:~$pwd
/home/eshita
mashiyat@mahjabineshita-22101878:~$cd /home
mashiyat@mahjabineshita-22101878:/home$
```

14. Command: *history*

This command helped me by showing a list of the previously executed commands, with the

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unique numbers assigned to the commands.

```
Terminal
File Edit View Search Terminal Help
mashiyat@mahjabineshita-22101878:/home$history
1 sudo apt install fish
2 fish
3 ls -la ~/.bashrc
4 stat ~/.bashrc
5 nano ~/.bashrc
6 source ~/.bashrc
7 clear
8 fish
9 sudo
10 sudo apt-get update
11 clear
12 fish
13 clean
14 clear
15 sudo apt-get install gimp
16 sudo apt-get autoclean
17 clear
18 sudo apt-get autoclean
19 shutdown -Ph now
20 sudo rm /etc/polkit-1/localauthority/90-mandatory.d/99-mintupdate-temporary.pkla
21 dpkg -- configure -a
22 sudo dpkg -- configure -a
23 clear
24 date
25 clear
26 df
27 clear
28 free
29 clear
30 ps
```

15. Command: *man*

Here, the man command displays a manual page. It helps me to know about the manual itself.

```
Terminal
File Edit View Search Terminal Help
mashiyat@mahjabineshita-22101878:~$man
What manual page do you want?
For example, try 'man man'.
mashiyat@mahjabineshita-22101878:~$man man
mashiyat@mahjabineshita-22101878:~$
```

```
Terminal
File Edit View Search Terminal Help
MAN(1) Manual pager utils MAN(1)

NAME
man - an interface to the system reference manuals

SYNOPSIS
man [man options] [[section] page ...] ...
man -k [apropos options] regexp ...
man -K [man options] [section] term ...
man -f [whatis options] page ...
man -l [man options] file ...
man -w|-W [man options] page ...

DESCRIPTION
man is the system's manual pager. Each page argument given to man is normally the name of a program, utility or function. The manual page associated with each of these arguments is then found and displayed. A section, if provided, will direct man to look only in that section of the manual. The default action is to search in all of the available sections following a pre-defined order (see DEFAULTS), and to show only the first page found, even if page exists in several sections.

The table below shows the section numbers of the manual followed by the types of pages they contain.

1 Executable programs or shell commands
2 System calls (functions provided by the kernel)
3 Library calls (functions within program libraries)
4 Special files (usually found in /dev)
5 File formats and conventions, e.g. /etc/passwd
6 Games
7 Miscellaneous (including macro packages and conventions), e.g. man(7), groff(7), man-pages(7)
Manual page man(1) line 1 (press h for help or q to quit)
```

16. Command: *info*

Here, Using info is similar to man but it provides more precise information.

```
Terminal
File Edit View Search Terminal Help
File: dir, Node: Top, This is the top of the INFO tree.

This is the Info main menu (aka directory node).
A few useful Info commands:

'q' quits;
'H' lists all Info commands;
'h' starts the Info tutorial;
'mTexinfo RET' visits the Texinfo manual, etc.

* Menu:

Basics
* Common options: (coreutils)Common options.
* Coreutils: (coreutils). Core GNU (file, text, shell) utilities.
* Date input formats: (coreutils)Date input formats.
* Ed: (ed). The GNU line editor
* File permissions: (coreutils)File permissions.
Access modes.
* Finding files: (find). Operating on files matching certain criteria.
* Time: (time). time

C++ libraries
* autosprintf: (autosprintf). Support for printf format strings in C++.

Compression
* Gzip: (gzip). General (de)compression of files (lzw).
* Lzip: (lzip). LZMA lossless data compressor
-----Info: (dir)Top, 266 lines --Top-----
Welcome to Info version 6.8. Type H for help, h for tutorial.
```

17. Command: *whatis* <command>

This command displayed to me a brief description of what is the functionality of a specific built-in Linux command.

Mashiyat Mahjabin Eshita (22101878)

For example, I used `whatis -r ls` command to see the functionality.

```
Terminal
File Edit View Search Terminal Help
mashiyat@mahjabineshita-22101878:/home$whatis -r ls
List::UtilsBy (3pm) - higher-order list utility functions
llseek (2) - reposition read/write file offset
alsa-info (8) - command-line utility to gather information about the ALSA subsystem
alsabat (1) - command-line sound tester for ALSA sound card driver
alsactl (1) - advanced controls for ALSA soundcard driver
alsactl_init (7) - alsa control management - initialization
alsaloop (1) - command-line PCM loopback
alsamixer (1) - soundcard mixer for ALSA soundcard driver, with ncurses interface
alsatplg (1) - ALSA Topology Compiler
alsaucm (1) - ALSA Use Case Manager
backtrace_symbols (3) - support for application self-debugging
backtrace_symbols_fd (3) - support for application self-debugging
credentials (7) - process identifiers
deb-src-symbols (5) - Debian's extended shared library template file
deb-symbols (5) - Debian's extended shared library information file
dlsym (3) - obtain address of a symbol in a shared object or executable
dpkg-gensymbols (1) - generate symbols files (shared library dependency information)
enchant-lsmud-2 (1) - list provider and dictionary information
EVP_KDF-TLS13_KDF (7ssl) - The TLS 1.3 EVP_KDF implementation
EVP_KDF-TLS1_PRF (7ssl) - The TLS1 PRF EVP_KDF implementation
ExtUtils::Depends (3pm) - Easily build XS extensions that depend on XS extensions
false (1) - do nothing, unsuccessfully
flatpak-remote-ls (1) - Show available runtimes and applications
Font::TTF::AATutils (3pm) - Utility functions for AAT tables
Font::TTF::Utils (3pm) - Utility functions to save fingers
Glib::Utils (3pm) - Miscellaneous utility functions
grub-menulst2cfg (1) - transform legacy menu.lst into grub.cfg
hp-levels (1) - Supply Levels Utility
initramfs-tools (7) - an introduction to writing scripts for mkiniframfs
IO::Socket::SSL::Utils (3pm) - - loading, storing, creating certificates and keys
```

18. Command: *ls -l*

Here, this command lists files and directories in the current directory in long format.

```
Terminal
File Edit View Search Terminal Help
mashiyat@mahjabineshita-22101878:/home$ls -l
total 4
drwxr-x--- 19 eshita eshita 4096 Jan 31 18:56 eshita
mashiyat@mahjabineshita-22101878:/home$
```

19. Command: *echo*

Using echo command helps me to print anything in the terminal.

```
Terminal
File Edit View Search Terminal Help
mashiyat@mahjabineshita-22101878:/home$echo "Hello, This is Mashiyat!! Nice to meet you :) "
echo "Hello, This is Mashiyatclear Nice to meet you :) "
Hello, This is Mashiyatclear Nice to meet you :)
mashiyat@mahjabineshita-22101878:/home$
```

20. Command: *echo grep*

This command shows something that is written in the string if they can find it. For example, if I `grep "Hello"` then it will be printed but if the string is not found then it will not be shown as an

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output.

```
Terminal
File Edit View Search Terminal Help
mashiyat@mahjabineshita-22101878:/home$echo "Hello World, everything good?"
Hello World, everything good?
mashiyat@mahjabineshita-22101878:/home$echo "Hello World, everything good?"|grep "Panda"
mashiyat@mahjabineshita-22101878:/home$echo "Hello World, everything good?" | grep "World"
Hello World, everything good?
mashiyat@mahjabineshita-22101878:/home$
```