LINUX COMMANDS
RAJEEV KUMAR (2105085) CSE-20

1.
ls

```
rajeev@rajeev-VirtualBox:~$ ls
Desktop     Downloads  Pictures  RAJEEV      Videos
Documents  Music      Public    Templates
rajeev@rajeev-VirtualBox:~$ 
```

2.
pwd

```
rajeev@rajeev-VirtualBox:~$ pwd
/home/rajeev
rajeev@rajeev-VirtualBox:~$ 
```

3.
cat

```
rajeev@rajeev-VirtualBox:~/RAJEEV$ cat rj
namaste
rajeev@rajeev-VirtualBox:~/RAJEEV$
```

4.
mkdir

```
rajeev@rajeev-VirtualBox:~/RAJEEV$ mkdir jha
rajeev@rajeev-VirtualBox:~/RAJEEV$ ls
jha  rj
rajeev@rajeev-VirtualBox:~/RAJEEV$
```

5.
cd name(directory)

```
rajeev@rajeev-VirtualBox:~/RAJEEV$ cd jha
rajeev@rajeev-VirtualBox:~/RAJEEV/jha$
```

6.
cd ..

```
rajeev@rajeev-VirtualBox:~/RAJEEV/jha$ cd ..
rajeev@rajeev-VirtualBox:~/RAJEEV$ cd ..
rajeev@rajeev-VirtualBox:~$
```

7.
touch

```
rajeev@rajeev-VirtualBox:~/RAJEEV$ touch kumar
rajeev@rajeev-VirtualBox:~/RAJEEV$ ls
jha   kumar  rj
rajeev@rajeev-VirtualBox:~/RAJEEV$
```

8.
rmdir

```
rajeev@rajeev-VirtualBox:~/RAJEEV$ rmdir jha
rajeev@rajeev-VirtualBox:~/RAJEEV$ ls
kumar  rj
rajeev@rajeev-VirtualBox:~/RAJEEV$
```

9.
rm

```
rajeev@rajeev-VirtualBox:~/RAJEEV$ rm kumar
rajeev@rajeev-VirtualBox:~/RAJEEV$ ls
rj
rajeev@rajeev-VirtualBox:~/RAJEEV$ █
```

10.
mv

```
rajeev@rajeev-VirtualBox:~/RAJEEV$ touch rj
rajeev@rajeev-VirtualBox:~/RAJEEV$ ls
rj
rajeev@rajeev-VirtualBox:~/RAJEEV$ cd ..
rajeev@rajeev-VirtualBox:~$ mv kr RAJEEV
rajeev@rajeev-VirtualBox:~$ cd RAJEEV
rajeev@rajeev-VirtualBox:~/RAJEEV$ ls
kr  rj
rajeev@rajeev-VirtualBox:~/RAJEEV$ █
```

11.
clear

```
rajeev@rajeev-VirtualBox:~/RAJEEV$ █
```

12.
cp

```
rajeev@rajeev-VirtualBox:~/RAJEEV$ cp kr rj
rajeev@rajeev-VirtualBox:~/RAJEEV$ cat rj
namaste!
rajeev@rajeev-VirtualBox:~/RAJEEV$ █
```

13.
apt-get

```
rajeev@rajeev-VirtualBox:~/RAJEEV$ apt-get
apt 2.0.6 (amd64)
Usage: apt-get [options] command
       apt-get [options] install|remove pkg1 [pkg2 ...]
       apt-get [options] source pkg1 [pkg2 ...]

apt-get is a command line interface for retrieval of packages
and information about them from authenticated sources and
for installation, upgrade and removal of packages together
with their dependencies.

Most used commands:
  update - Retrieve new lists of packages
  upgrade - Perform an upgrade
  install - Install new packages (pkg is libc6 not libc6.deb)
  reinstall - Reinstall packages (pkg is libc6 not libc6.deb)
  remove - Remove packages
  purge - Remove packages and config files
  autoremove - Remove automatically all unused packages
  dist-upgrade - Distribution upgrade, see apt-get(8)
  dselect-upgrade - Follow dselect selections
  build-dep - Configure build-dependencies for source packages
  satisfy - Satisfy dependency strings
  clean - Erase downloaded archive files
  autoclean - Erase old downloaded archive files
  check - Verify that there are no broken dependencies
  source - Download source archives
  download - Download the binary package into the current directory
  changelog - Download and display the changelog for the given package

See apt-get(8) for more information about the available commands.
Configuration options and syntax is detailed in apt.conf(5).
Information about how to configure sources can be found in sources.list(5).
Package and version choices can be expressed via apt_preferences(5).
Security details are available in apt-secure(8).
                                This APT has Super Cow Powers.
rajeev@rajeev-VirtualBox:~/RAJEEV$ ▆
```

14.
apt

```
rajeev@rajeev-VirtualBox:~/RAJEEV$ apt
apt 2.0.6 (amd64)
Usage: apt [options] command

apt is a commandline package manager and provides commands for
searching and managing as well as querying information about packages.
It provides the same functionality as the specialized APT tools,
like apt-get and apt-cache, but enables options more suitable for
interactive use by default.

Most used commands:
  list - list packages based on package names
  search - search in package descriptions
  show - show package details
  install - install packages
  reinstall - reinstall packages
  remove - remove packages
  autoremove - Remove automatically all unused packages
  update - update list of available packages
  upgrade - upgrade the system by installing/upgrading packages
  full-upgrade - upgrade the system by removing/installing/upgrading packages
  edit-sources - edit the source information file
  satisfy - satisfy dependency strings

See apt(8) for more information about the available commands.
Configuration options and syntax is detailed in apt.conf(5).
Information about how to configure sources can be found in sources.list(5).
Package and version choices can be expressed via apt_preferences(5).
Security details are available in apt-secure(8).
                                This APT has Super Cow Powers.
rajeev@rajeev-VirtualBox:~/RAJEEV$
```

15.
Awk

```
rajeev@rajeev-VirtualBox:~/RAJEEV$ awk
Usage: mawk [Options] [Program] [file ...]

Program:
    The -f option value is the name of a file containing program text.
    If no -f option is given, a "--" ends option processing; the following
    parameters are the program text.

Options:
    -f program-file  Program  text is read from file instead of from the
                     command-line.  Multiple -f options are accepted.
    -F value         sets the field separator, FS, to value.
    -v var=value     assigns value to program variable var.
    --               unambiguous end of options.

    Implementation-specific options are prefixed with "-W".  They can be
    abbreviated:

    -W version       show version information and exit.
    -W dump          show assembler-like listing of program and exit.
    -W help          show this message and exit.
    -W interactive   set unbuffered output, line-buffered input.
    -W exec file     use file as program as well as last option.
    -W random=number set initial random seed.
    -W sprintf=number adjust size of sprintf buffer.
    -W posix_space   do not consider "\n" a space.
    -W usage         show this message and exit.
rajeev@rajeev-VirtualBox:~/RAJEEV$ ▆
```

16.
dir

```
rajeev@rajeev-VirtualBox:~$ dir
Desktop    Downloads  Pictures  RAJEEV     Videos
Documents  Music      Public    Templates
rajeev@rajeev-VirtualBox:~$
```

17.
ls -R

```
rajeev@rajeev-VirtualBox:~$ ls -R
.:
Desktop  Documents  Downloads  Music  Pictures  Public  RAJEEV  Templates  Videos

./Desktop:

./Documents:

./Downloads:

./Music:

./Pictures:

./Public:

./RAJEEV:
kr  rj

./Templates:

./Videos:
rajeev@rajeev-VirtualBox:~$
```

18.
ls -al

```
rajeev@rajeev-VirtualBox:~$ ls -al
total 92
drwxr-xr-x 15 rajeev rajeev 4096 Jan 12 19:16 .
drwxr-xr-x  3 root   root   4096 Jul 19 09:06 ..
-rw-------  1 rajeev rajeev  543 Jan 12 19:30 .bash_history
-rw-r--r--  1 rajeev rajeev  220 Jul 19 09:06 .bash_logout
-rw-r--r--  1 rajeev rajeev 3771 Jul 19 09:06 .bashrc
drwxrwxr-x 12 rajeev rajeev 4096 Jul 19 09:41 .cache
drwx------ 14 rajeev rajeev 4096 Jan 12 19:13 .config
drwxr-xr-x  2 rajeev rajeev 4096 Jul 19 09:13 Desktop
drwxr-xr-x  2 rajeev rajeev 4096 Jul 19 09:13 Documents
drwxr-xr-x  2 rajeev rajeev 4096 Jul 19 09:13 Downloads
drwx------  3 rajeev rajeev 4096 Jul 19 09:13 .gnupg
drwxr-xr-x  3 rajeev rajeev 4096 Jul 19 09:13 .local
drwxr-xr-x  2 rajeev rajeev 4096 Jul 19 09:13 Music
drwxr-xr-x  2 rajeev rajeev 4096 Jul 19 09:13 Pictures
-rw-r--r--  1 rajeev rajeev  807 Jul 19 09:06 .profile
drwxr-xr-x  2 rajeev rajeev 4096 Jul 19 09:13 Public
drwxrwxr-x  2 rajeev rajeev 4096 Jan 12 19:16 RAJEEV
-rw-r--r--  1 rajeev rajeev    0 Jul 19 09:21 .sudo_as_admin_successful
drwxr-xr-x  2 rajeev rajeev 4096 Jul 19 09:13 Templates
-rw-r-----  1 rajeev rajeev    5 Jan 12 12:03 .vboxclient-clipboard.pid
-rw-r-----  1 rajeev rajeev    5 Jan 12 12:03 .vboxclient-display-svga-x11.pid
-rw-r-----  1 rajeev rajeev    5 Jan 12 12:03 .vboxclient-draganddrop.pid
-rw-r-----  1 rajeev rajeev    5 Jan 12 12:03 .vboxclient-seamless.pid
drwxr-xr-x  2 rajeev rajeev 4096 Jul 19 09:13 Videos
rajeev@rajeev-VirtualBox:~$
```

19.
ls -a

```
rajeev@rajeev-VirtualBox:~$ ls -a
.   .bash_history  .bashrc   .config  Documents  .gnupg  Music    .profile  RAJEEV                    Templates              .vboxclient-display-svga-x11.pid  .vboxclient-seamless.pid
..  .bash_logout   .cache    Desktop  Downloads  .local  Pictures  Public   .sudo_as_admin_successful  .vboxclient-clipboard.pid  .vboxclient-draganddrop.pid         Videos
```

20.
cd /

```
rajeev@rajeev-VirtualBox:~/RAJEEV$ cd /
rajeev@rajeev-VirtualBox:/$ pwd
/
rajeev@rajeev-VirtualBox:/$
```

21.
head

```
rajeev@rajeev-VirtualBox:~/RAJEEV$ head kr
namaste
pranam
namaskar

nomoshkar
sat sri akal
vanakkam
kem cho
kaise hain aap
hello
rajeev@rajeev-VirtualBox:~/RAJEEV$
```

22.
tail

```
rajeev@rajeev-VirtualBox:~/RAJEEV$ tail kr
namaskar

nomoshkar
sat sri akal
vanakkam
kem cho
kaise hain aap
hello

sanskrit
rajeev@rajeev-VirtualBox:~/RAJEEV$
```

23.
uname

```
rajeev@rajeev-VirtualBox:~$ uname
Linux
```

24.

unname -a

```
rajeev@rajeev-VirtualBox:~$ uname -a
Linux rajeev-VirtualBox 5.13.0-30-generic #33~20.04.1-Ubuntu SMP Mon Feb 7 14:25:10 UTC 2022 x86_64 x86_64 x86_64 GNU/Linux
rajeev@rajeev-VirtualBox:~$
```

25.

wget

```
rajeev@rajeev-VirtualBox:~$ wget https://www.whatsapp.com/download
--2023-01-12 19:54:21--  https://www.whatsapp.com/download
Resolving www.whatsapp.com (www.whatsapp.com)... 157.240.192.52, 2a03:2880:f237:1d1:face:b00c:0:167
Connecting to www.whatsapp.com (www.whatsapp.com)|157.240.192.52|:443... connected.
HTTP request sent, awaiting response... 302 Found
Location: https://www.facebook.com/unsupportedbrowser [following]
--2023-01-12 19:54:32--  https://www.facebook.com/unsupportedbrowser
Resolving www.facebook.com (www.facebook.com)... 157.240.16.35, 2a03:2880:f137:182:face:b00c:0:25de
Connecting to www.facebook.com (www.facebook.com)|157.240.16.35|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: unspecified [text/html]
Saving to: 'download'

download                       [ <=>                          ] 50.15K  165KB/s    in 0.3s

2023-01-12 19:54:33 (165 KB/s) - 'download' saved [51354]

rajeev@rajeev-VirtualBox:~$
```

26.

sudo apt install

```
rajeev@rajeev-VirtualBox:~$ sudo apt install vlc
[sudo] password for rajeev:
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  i965-va-driver intel-media-va-driver liba52-0.7.4 libaacs0 libaom0 libaribb24-0 libass9 libavcodec58 libavformat58 libavutil56 libbasicusageenvironment1 libbdplus0 libbluray2 libcddb2 libchromaprint1
  libcodec2-0.9 libdc1394-22 libdca0 libdouble-conversion3 libdvbpsi10 libdvdnav4 libdvdread7 libebml4v5 libfaad2 libgme0 libgroupsock8 libgsm1 libigdgmm11 libixml10 libkate1 liblivemedia77 liblua5.2-0
  libmad0 libmatroska6v5 libmpcdec6 libmpeg2-4 libmysofa1 libopennmpt-modplug1 libopenmpt0 libpcre2-16-0 libplacebo7 libpostproc55 libprotobuf-lite17 libproxy-tools libqt5core5a libqt5dbus5 libqt5gui5
  libqt5network5 libqt5svg5 libqt5widgets5 libqt5x11extras5 libresid-builder0c2a libsdl-image1.2 libsdl1.2debian libshine3 libsidplay2 libsnappy1v5 libsndio7.0 libspatialaudio0 libsrt1 libssh-gcrypt-4
  libssh2-1 libswresample3 libswscale5 libupnp13 libusageenvironment3 libva-drm2 libva-wayland2 libva-x11-2 libva2 libvdpau1 libvlc-bin libvlc5 libvlccore9 libx264-155 libx265-179 libxcb-xinerama0
  libxcb-xinput0 libxvidcore4 libzvbi-common libzvbi0 mesa-va-drivers mesa-vdpau-drivers ocl-icd-libopencl1 qt5-gtk-platformtheme qttranslations5-l10n va-driver-all vdpau-driver-all vlc-bin vlc-data
  vlc-l10n vlc-plugin-base vlc-plugin-notify vlc-plugin-qt vlc-plugin-samba vlc-plugin-skins2 vlc-plugin-video-output vlc-plugin-video-splitter vlc-plugin-visualization
Suggested packages:
  i965-va-driver-shaders libbluray-bdj libdvdcss2 qt5-image-formats-plugins qtwayland5 sndiod opencl-icd libvdpau-va-gl1 nvidia-vdpau-driver nvidia-legacy-340xx-vdpau-driver
  nvidia-legacy-304xx-vdpau-driver
The following NEW packages will be installed:
  i965-va-driver intel-media-va-driver liba52-0.7.4 libaacs0 libaom0 libaribb24-0 libass9 libavcodec58 libavformat58 libavutil56 libbasicusageenvironment1 libbdplus0 libbluray2 libcddb2 libchromaprint1
  libcodec2-0.9 libdc1394-22 libdca0 libdouble-conversion3 libdvbpsi10 libdvdnav4 libdvdread7 libebml4v5 libfaad2 libgme0 libgroupsock8 libgsm1 libigdgmm11 libixml10 libkate1 liblivemedia77 liblua5.2-0
  libmad0 libmatroska6v5 libmpcdec6 libmpeg2-4 libmysofa1 libopennmpt-modplug1 libopenmpt0 libpcre2-16-0 libplacebo7 libpostproc55 libprotobuf-lite17 libproxy-tools libqt5core5a libqt5dbus5 libqt5gui5
  libqt5network5 libqt5svg5 libqt5widgets5 libqt5x11extras5 libresid-builder0c2a libsdl-image1.2 libsdl1.2debian libshine3 libsidplay2 libsnappy1v5 libsndio7.0 libspatialaudio0 libsrt1 libssh-gcrypt-4
  libssh2-1 libswresample3 libswscale5 libupnp13 libusageenvironment3 libva-drm2 libva-wayland2 libva-x11-2 libva2 libvdpau1 libvlc-bin libvlc5 libvlccore9 libx264-155 libx265-179 libxcb-xinerama0
  libxcb-xinput0 libxvidcore4 libzvbi-common libzvbi0 mesa-va-drivers mesa-vdpau-drivers ocl-icd-libopencl1 qt5-gtk-platformtheme qttranslations5-l10n va-driver-all vdpau-driver-all vlc vlc-bin
  vlc-data vlc-l10n vlc-plugin-base vlc-plugin-notify vlc-plugin-qt vlc-plugin-samba vlc-plugin-skins2 vlc-plugin-video-output vlc-plugin-video-splitter vlc-plugin-visualization
0 upgraded, 100 newly installed, 0 to remove and 233 not upgraded.
Need to get 52.3 MB of archives.
After this operation, 284 MB of additional disk space will be used.
Do you want to continue? [Y/n]
```

27.

sudo apt remove

```
rajeev@rajeev-VirtualBox:~$ sudo apt remove vlc
```

28.

History

```
rajeev@rajeev-VirtualBox:~$ history
    1  sudo apt-get update
    2  gedit --version
    3  sudo apt-get install g++
    4  g++ --version
    5  exit
    6  cat rj
    7  cat raj
    8  cat rj.txt
    9  cat > rj
   10  cat rj
   11  cat > rj
```

29.
!(history number)

```
rajeev@rajeev-VirtualBox:~$ !2
gedit --version
gedit - Version 3.36.2
rajeev@rajeev-VirtualBox:~$
```

30.
grep

```
rajeev@rajeev-VirtualBox:~/RAJEEV$ cat kr | grep nam
namaste
pranam
namaskar
rajeev@rajeev-VirtualBox:~/RAJEEV$
```

31.
man command_name

```
rajeev@rajeev-VirtualBox:~/RAJEEV$ man sudo
rajeev@rajeev-VirtualBox:~/RAJEEV$
```

```
SUDO(8)                                          BSD System Manager's Manual                                          SUDO(8)

NAME
     sudo, sudoedit — execute a command as another user

SYNOPSIS
     sudo -h | -K | -k | -V
     sudo -v [-ABknS] [-g group] [-h host] [-p prompt] [-u user]
     sudo -l [-ABknS] [-g group] [-h host] [-p prompt] [-U user] [command]
     sudo [-ABbEHnPS] [-C num] [-g group] [-h host] [-p prompt] [-r role] [-t type] [-T timeout] [-u user] [VAR=value] [-l | -s] [command]
     sudoedit [-ABknS] [-C num] [-g group] [-h host] [-p prompt] [-T timeout] [-u user] file ...

DESCRIPTION
     sudo allows a permitted user to execute a command as the superuser or another user, as specified by the security policy.  The invoking user's real (not effective) user-ID is used to determine
     the user name with which to query the security policy.

     sudo supports a plugin architecture for security policies and input/output logging.  Third parties can develop and distribute their own policy and I/O logging plugins to work seamlessly with
     the sudo front end.  The default security policy is sudoers, which is configured via the file /etc/sudoers, or via LDAP.  See the Plugins section for more information.

     The security policy determines what privileges, if any, a user has to run sudo.  The policy may require that users authenticate themselves with a password or another authentication mechanism.
     If authentication is required, sudo will exit if the user's password is not entered within a configurable time limit.  This limit is policy-specific; the default password prompt timeout for
     the sudoers security policy is 0 minutes.

     Security policies may support credential caching to allow the user to run sudo again for a period of time without requiring authentication.  By default, the sudoers policy caches credentials
     on a per-terminal basis for 15 minutes.  See the timestamp_type and timestamp_timeout options in sudoers(5) for more information.  By running sudo with the -v option, a user can update the
     cached credentials without running a command.

     When invoked as sudoedit, the -e option (described below), is implied.

     Security policies may log successful and failed attempts to use sudo.  If an I/O plugin is configured, the running command's input and output may be logged as well.

     The options are as follows:

     -A, --askpass
              Normally, if sudo requires a password, it will read it from the user's terminal.  If the -A (askpass) option is specified, a (possibly graphical) helper program is executed to read
              the user's password and output the password to the standard output.  If the SUDO_ASKPASS environment variable is set, it specifies the path to the helper program.  Otherwise, if
              sudo.conf(5) contains a line specifying the askpass program, that value will be used.  For example:

                  # Path to askpass helper program
                  Path askpass /usr/X11R6/bin/ssh-askpass

              If no askpass program is available, sudo will exit with an error.

     -B, --bell  Ring the bell as part of the password promp when a terminal is present.  This option has no effect if an askpass program is used.
 Manual page sudo(8) line 1 (press h for help or q to quit)
```

32.
ps

```
rajeev@rajeev-VirtualBox:~/RAJEEV$ ps
   PID TTY          TIME CMD
 23204 pts/1    00:00:00 bash
 23269 pts/1    00:00:00 ps
rajeev@rajeev-VirtualBox:~/RAJEEV$
```

33.
gzip

```
rajeev@rajeev-VirtualBox:~/RAJEEV$ gzip kr
rajeev@rajeev-VirtualBox:~/RAJEEV$ ls
kr.gz  rj
rajeev@rajeev-VirtualBox:~/RAJEEV$
```

34.
gunzip

```
rajeev@rajeev-VirtualBox:~/RAJEEV$ gunzip kr
rajeev@rajeev-VirtualBox:~/RAJEEV$ ls
kr  rj
rajeev@rajeev-VirtualBox:~/RAJEEV$
```

35.
hostname

```
rajeev@rajeev-VirtualBox:~/RAJEEV$ hostname
rajeev-VirtualBox
rajeev@rajeev-VirtualBox:~/RAJEEV$
```

36.
ping

```
rajeev@rajeev-VirtualBox:~$ ping youtube.com
PING youtube.com (142.250.77.110) 56(84) bytes of data.
64 bytes from maa05s15-in-f14.1e100.net (142.250.77.110): icmp_seq=3 ttl=116 time=260 ms
64 bytes from maa05s15-in-f14.1e100.net (142.250.77.110): icmp_seq=4 ttl=116 time=130 ms
64 bytes from maa05s15-in-f14.1e100.net (142.250.77.110): icmp_seq=7 ttl=116 time=144 ms
64 bytes from maa05s15-in-f14.1e100.net (142.250.77.110): icmp_seq=8 ttl=116 time=147 ms
64 bytes from maa05s15-in-f14.1e100.net (142.250.77.110): icmp_seq=9 ttl=116 time=85.7 ms
64 bytes from maa05s15-in-f14.1e100.net (142.250.77.110): icmp_seq=10 ttl=116 time=160 ms
64 bytes from maa05s15-in-f14.1e100.net (142.250.77.110): icmp_seq=11 ttl=116 time=65.8 ms
64 bytes from maa05s15-in-f14.1e100.net (142.250.77.110): icmp_seq=12 ttl=116 time=48.3 ms
64 bytes from maa05s15-in-f14.1e100.net (142.250.77.110): icmp_seq=13 ttl=116 time=49.6 ms
64 bytes from maa05s15-in-f14.1e100.net (142.250.77.110): icmp_seq=14 ttl=116 time=120 ms
64 bytes from maa05s15-in-f14.1e100.net (142.250.77.110): icmp_seq=16 ttl=116 time=51.6 ms
64 bytes from maa05s15-in-f14.1e100.net (142.250.77.110): icmp_seq=17 ttl=116 time=155 ms
64 bytes from maa05s15-in-f14.1e100.net (142.250.77.110): icmp_seq=19 ttl=116 time=136 ms
64 bytes from maa05s15-in-f14.1e100.net (142.250.77.110): icmp_seq=21 ttl=116 time=50.1 ms
64 bytes from maa05s15-in-f14.1e100.net (142.250.77.110): icmp_seq=23 ttl=116 time=126 ms
64 bytes from maa05s15-in-f14.1e100.net (142.250.77.110): icmp_seq=24 ttl=116 time=23.5 ms
64 bytes from maa05s15-in-f14.1e100.net (142.250.77.110): icmp_seq=25 ttl=116 time=25.1 ms
```

37.
w

```
rajeev@rajeev-VirtualBox:~$ w
 20:36:33 up 4 min,  1 user,  load average: 0.43, 0.60, 0.31
USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU WHAT
rajeev   :0       :0               20:33    ?xdm?  1:19   0.06s /usr/lib/gdm3/g
rajeev@rajeev-VirtualBox:~$
```

38.
useradd

```
rajeev@rajeev-VirtualBox:~$ sudo useradd samrat
[sudo] password for rajeev:
```

39.
passwd

```
rajeev@rajeev-VirtualBox:~$ passwd rajeev
Changing password for rajeev.
Current password:
```
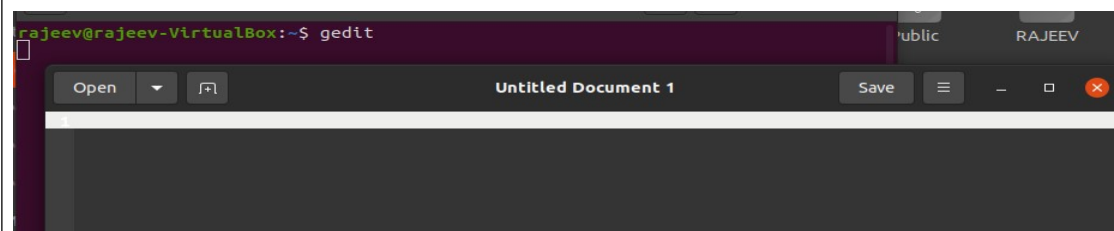
40.
nano

```
  GNU nano 4.8                        New Buffer



^G Get Help    ^O Write Out   ^W Where Is    ^K Cut Text    ^J Justify
^X Exit        ^R Read File   ^\ Replace     ^U Paste Text  ^T To Spell
```

41.
gedit

```
rajeev@rajeev-VirtualBox:~$ gedit                                ublic    RAJEEV

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```

42.
lsblk

```
rajeev@rajeev-VirtualBox:~$ lsblk
NAME      MAJ:MIN RM    SIZE RO TYPE MOUNTPOINT
loop0      7:0     0   63.3M  1 loop /snap/core20/1778
loop1      7:1     0   61.9M  1 loop /snap/core20/1328
loop2      7:2     0      4K  1 loop /snap/bare/5
loop3      7:3     0  346.3M  1 loop /snap/gnome-3-38-2004/119
loop4      7:4     0  248.8M  1 loop /snap/gnome-3-38-2004/99
loop5      7:5     0   54.2M  1 loop /snap/snap-store/558
loop6      7:6     0     46M  1 loop /snap/snap-store/638
loop7      7:7     0   91.7M  1 loop /snap/gtk-common-themes/1535
loop8      7:8     0   49.8M  1 loop /snap/snapd/17950
loop9      7:9     0   65.2M  1 loop /snap/gtk-common-themes/1519
sda        8:0     0    200G  0 disk
├─sda1     8:1     0    512M  0 part /boot/efi
├─sda2     8:2     0      1K  0 part
└─sda5     8:5     0  199.5G  0 part /
sr0       11:0     1   60.9M  0 rom  /media/rajeev/VBox_GAs_6.1.40
rajeev@rajeev-VirtualBox:~$
```

43.
lshw

```
rajeev@rajeev-VirtualBox:~$ lshw
WARNING: you should run this program as super-user.
rajeev-virtualbox
    description: Computer
    width: 64 bits
    capabilities: smp vsyscall32
  *-core
       description: Motherboard
       physical id: 0
     *-memory
          description: System memory
          physical id: 0
          size: 10GiB
     *-cpu
          product: AMD Ryzen 7 5700U with Radeon Graphics
          vendor: Advanced Micro Devices [AMD]
          physical id: 1
          bus info: cpu@0
          width: 64 bits
          capabilities: fpu fpu_exception wp vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush mmx fxsr sse sse2 ht syscall nx fxsr_opt rdtscp x86-64 constant_tsc rep_good nopl
nonstop_tsc cpuid extd_apicid tsc_known_freq pni ssse3 cx16 sse4_1 sse4_2 hypervisor lahf_lm cmp_legacy cr8_legacy 3dnowprefetch ssbd vmmcall fsgsbase arat
        *-pci
             description: Host bridge
             product: 440FX - 82441FX PMC [Natoma]
             vendor: Intel Corporation
             physical id: 100
             bus info: pci@0000:00:00.0
             version: 02
             width: 32 bits
             clock: 33MHz
           *-isa
                description: ISA bridge
                product: 82371SB PIIX3 ISA [Natoma/Triton II]
                vendor: Intel Corporation
                physical id: 1
                bus info: pci@0000:00:01.0
                version: 00
                width: 32 bits
                clock: 33MHz
                capabilities: isa bus master
```

44.
ip a

```
rajeev@rajeev-VirtualBox:~$ ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
       valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
       valid_lft forever preferred_lft forever
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 08:00:27:a4:b9:27 brd ff:ff:ff:ff:ff:ff
    inet 10.0.2.15/24 brd 10.0.2.255 scope global dynamic noprefixroute enp0s3
       valid_lft 85431sec preferred_lft 85431sec
    inet6 fe80::8b17:357e:a773:a5db/64 scope link noprefixroute
       valid_lft forever preferred_lft forever
rajeev@rajeev-VirtualBox:~$
```

46.
lspci

```
rajeev@rajeev-VirtualBox:~$ lspci
00:00.0 Host bridge: Intel Corporation 440FX - 82441FX PMC [Natoma] (rev 02)
00:01.0 ISA bridge: Intel Corporation 82371SB PIIX3 ISA [Natoma/Triton II]
00:01.1 IDE interface: Intel Corporation 82371AB/EB/MB PIIX4 IDE (rev 01)
00:02.0 VGA compatible controller: VMware SVGA II Adapter
00:03.0 Ethernet controller: Intel Corporation 82540EM Gigabit Ethernet Controller (rev 02)
00:04.0 System peripheral: InnoTek Systemberatung GmbH VirtualBox Guest Service
00:05.0 Multimedia audio controller: Intel Corporation 82801AA AC'97 Audio Controller (rev 01)
00:06.0 USB controller: Apple Inc. KeyLargo/Intrepid USB
00:07.0 Bridge: Intel Corporation 82371AB/EB/MB PIIX4 ACPI (rev 08)
00:0d.0 SATA controller: Intel Corporation 82801HM/HEM (ICH8M/ICH8M-E) SATA Controller [AHCI mode] (rev 02)
rajeev@rajeev-VirtualBox:~$
```

47.
lsmod

```
rajeev@rajeev-VirtualBox:~$ lsmod
Module                  Size  Used by
isofs                  49152  1
vboxvideo              24576  0
drm_vram_helper        24576  1 vboxvideo
drm_ttm_helper         16384  1 drm_vram_helper
nls_iso8859_1          16384  1
binfmt_misc            24576  1
snd_intel8x0           45056  2
snd_ac97_codec        139264  1 snd_intel8x0
ac97_bus               16384  1 snd_ac97_codec
snd_pcm               114688  2 snd_intel8x0,snd_ac97_codec
snd_seq_midi           20480  0
snd_seq_midi_event     16384  1 snd_seq_midi
vmwgfx                319488  2
snd_rawmidi            36864  1 snd_seq_midi
ttm                    69632  3 vmwgfx,drm_vram_helper,drm_ttm_helper
snd_seq                73728  2 snd_seq_midi,snd_seq_midi_event
intel_rapl_msr         20480  0
drm_kms_helper        253952  3 vmwgfx,drm_vram_helper,vboxvideo
snd_seq_device         16384  3 snd_seq,snd_seq_midi,snd_rawmidi
cec                    53248  1 drm_kms_helper
intel_rapl_common      24576  1 intel_rapl_msr
rc_core                61440  1 cec
snd_timer              40960  2 snd_seq,snd_pcm
joydev                 28672  0
fb_sys_fops            16384  1 drm_kms_helper
syscopyarea            16384  1 drm_kms_helper
sysfillrect            16384  1 drm_kms_helper
snd                    94208  11 snd_seq,snd_seq_device,snd_intel8x0,snd_timer,snd_ac97_codec,snd_p
```

48.
df -h

```
rajeev@rajeev-VirtualBox:~$ df -h
Filesystem      Size  Used Avail Use% Mounted on
udev            4.9G     0  4.9G   0% /dev
tmpfs           996M  1.4M  995M   1% /run
/dev/sda5       196G  9.2G  177G   5% /
tmpfs           4.9G     0  4.9G   0% /dev/shm
tmpfs           5.0M  4.0K  5.0M   1% /run/lock
tmpfs           4.9G     0  4.9G   0% /sys/fs/cgroup
/dev/loop0       64M   64M     0 100% /snap/core20/1778
/dev/loop2      128K  128K     0 100% /snap/bare/5
/dev/loop1       62M   62M     0 100% /snap/core20/1328
/dev/loop3      347M  347M     0 100% /snap/gnome-3-38-2004/119
/dev/loop4      249M  249M     0 100% /snap/gnome-3-38-2004/99
/dev/loop5       55M   55M     0 100% /snap/snap-store/558
/dev/loop6       46M   46M     0 100% /snap/snap-store/638
/dev/loop7       92M   92M     0 100% /snap/gtk-common-themes/1535
/dev/loop8       50M   50M     0 100% /snap/snapd/17950
/dev/loop9       66M   66M     0 100% /snap/gtk-common-themes/1519
/dev/sda1       511M  4.0K  511M   1% /boot/efi
tmpfs           996M   28K  996M   1% /run/user/1000
/dev/sr0         61M   61M     0 100% /media/rajeev/VBox_GAs_6.1.40
rajeev@rajeev-VirtualBox:~$
```

49.
shutdown -r now

50.
exit

```
rajeev@rajeev-VirtualBox:~$ exit
```