```
parth@parth-HP-Laptop-15-di2xxx:~$ 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 ...
parth@parth-HP-Laptop-15-di2xxx:~$ pwd
/home/parth
parth@parth-HP-Laptop-15-di2xxx:~$ cd A4
parth@parth-HP-Laptop-15-di2xxx:~/A4$ ls
a.out   file.txt   main.c   search.c   search.h   sort.c   sort.h
parth@parth-HP-Laptop-15-di2xxx:~/A4$ cp sort.h file.txt
parth@parth-HP-Laptop-15-di2xxx:~/A4$ mv file.txt copy.txt
parth@parth-HP-Laptop-15-di2xxx:~/A4$ mkdir command
parth@parth-HP-Laptop-15-di2xxx:~/A4$ ls
a.out   command   copy.txt   main.c   search.c   search.h   sort.c   sort.h
parth@parth-HP-Laptop-15-di2xxx:~/A4$ rmdir command
parth@parth-HP-Laptop-15-di2xxx:~/A4$ ls
a.out   copy.txt   main.c   search.c   search.h   sort.c   sort.h
```

```
parth@parth-HP-Laptop-15-di2xxx:~$ touch /home/parth/Documents/index.html
parth@parth-HP-Laptop-15-di2xxx:~$ plocate index.html
/home/parth/Documents/index.html
/snap/gnome-3-38-2004/112/usr/share/devhelp/books/vala-0.48/index.html
/snap/gnome-3-38-2004/112/usr/share/gtk-doc/html/gudev/index.html
/snap/gnome-3-38-2004/112/usr/share/gtk-doc/html/libpsl/deprecated-api-index.html
/snap/gnome-3-38-2004/112/usr/share/gtk-doc/html/libpsl/index.html
/snap/gnome-3-38-2004/112/usr/share/gtk-doc/html/libsecret-1/index.html
/snap/gnome-3-38-2004/112/usr/share/gtk-doc/html/p11-kit/index.html
/snap/gnome-3-38-2004/119/usr/share/devhelp/books/vala-0.48/index.html
/snap/gnome-3-38-2004/119/usr/share/gtk-doc/html/gudev/index.html
/snap/gnome-3-38-2004/119/usr/share/gtk-doc/html/libpsl/deprecated-api-index.html
/snap/gnome-3-38-2004/119/usr/share/gtk-doc/html/libpsl/index.html
/snap/gnome-3-38-2004/119/usr/share/gtk-doc/html/libsecret-1/index.html
/snap/gnome-3-38-2004/119/usr/share/gtk-doc/html/p11-kit/index.html
/snap/snap-store/599/usr/share/doc/shared-mime-info/shared-mime-info-spec.html/index.html
/snap/snap-store/638/usr/share/doc/shared-mime-info/shared-mime-info-spec.html/index.html
/usr/share/code/resources/app/extensions/github-authentication/media/index.html
/usr/share/code/resources/app/extensions/microsoft-authentication/media/index.html
/usr/share/code/resources/app/out/vs/workbench/contrib/webview/browser/pre/index.html
/usr/share/cups/doc-root/index.html
/usr/share/cups/doc-root/da/index.html
/usr/share/cups/doc-root/de/index.html
/usr/share/cups/doc-root/es/index.html
/usr/share/cups/doc-root/fr/index.html
/usr/share/cups/doc-root/ja/index.html
/usr/share/cups/doc-root/pt_BR/index.html
/usr/share/cups/doc-root/ru/index.html
/usr/share/doc/adduser/examples/adduser.local.conf.examples/skel.other/index.html
/usr/share/doc/gdisk/index.html
/usr/share/doc/info/html/index.html
/usr/share/doc/shared-mime-info/shared-mime-info-spec.html/index.html
/usr/share/doc/xorg/index.html
/usr/share/gtk-doc/html/totem/index.html
/usr/share/libreoffice/help/index.html
/usr/share/libreoffice/help/en-US/text/swriter/guide/indices_index.html
/usr/share/transmission/web/index.html
parth@parth-HP-Laptop-15-di2xxx:~$ find ./Documents -name index.html
./Documents/index.html
```

```
parth@parth-HP-Laptop-15-di2xxx:~/Documents$ cd text
parth@parth-HP-Laptop-15-di2xxx:~/Documents/text$ cat bot.txt
A robot is a machine—especially one programmable by a computer—capable of carrying out a complex series of actions automatically.
A robot can be guided by an external control device, or the control may be embedded within.
Robots may be constructed to evoke human form, but most robots are task-performing machines, designed with an emphasis on stark functionality, rather than expressive aesthetics.
Robots can be autonomous or semi-autonomous and range from humanoids such as Honda's Advanced Step in Innovative Mobility (ASIMO) and TOSY's TOSY Ping Pong Playing Robot (TOPIO) to industrial robots, medical operating robots, patient assist robots, dog therapy robots, collectively programmed swarm robots, UAV drones such as General Atomics MQ-1 Predator, and even microscopic nano robots.
By mimicking a lifelike appearance or automating movements, a robot may convey a sense of intelligence or thought of its own.
Autonomous things are expected to proliferate in the future, with home robotics and the autonomous car as some of the main drivers.
parth@parth-HP-Laptop-15-di2xxx:~/Documents/text$ grep -o "autonomous" bot.txt
autonomous
autonomous
autonomous
parth@parth-HP-Laptop-15-di2xxx:~/Documents/text$ df -k bot.txt
Filesystem     1K-blocks     Used Available Use% Mounted on
/dev/nvme0n1p6  87376912 12275416  70617044  15% /
parth@parth-HP-Laptop-15-di2xxx:~/Documents/text$ du -s bot.txt
4       bot.txt
parth@parth-HP-Laptop-15-di2xxx:~/Documents/text$ head -n 2 bot.txt
A robot is a machine—especially one programmable by a computer—capable of carrying out a complex series of actions automatically.
A robot can be guided by an external control device, or the control may be embedded within.
parth@parth-HP-Laptop-15-di2xxx:~/Documents/text$ tail -n 1 bot.txt
Autonomous things are expected to proliferate in the future, with home robotics and the autonomous car as some of the main drivers.
parth@parth-HP-Laptop-15-di2xxx:~/Documents/text$ diff bot.txt modbot.txt
6c6,7
< Autonomous things are expected to proliferate in the future, with home robotics and the autonomous car as some of the main drivers.
---
> Autonomous things are expected to proliferate in the future, with home-robotics and the autonomous car as some of the main drivers.
> The branch of technology that deals with the design, construction, operation, and application of robots, as well as computer systems for their control, sensory feedback, and information processing is robotics.
parth@parth-HP-Laptop-15-di2xxx:~/Documents/text$ cd ..
parth@parth-HP-Laptop-15-di2xxx:~/Documents$ tar -zcvf sample.tar.gz text
text/
text/bot.txt
text/modbot.txt
parth@parth-HP-Laptop-15-di2xxx:~/Documents$ cd text
parth@parth-HP-Laptop-15-di2xxx:~/Documents/text$ ls -l bot.txt
-rw-rw-r-- 1 parth parth 1056 Jan 19 21:47 bot.txt
parth@parth-HP-Laptop-15-di2xxx:~/Documents/text$ chmod u=r bot.txt
parth@parth-HP-Laptop-15-di2xxx:~/Documents/text$ ls -l bot.txt
-r--rw-r-- 1 parth parth 1056 Jan 19 21:47 bot.txt
parth@parth-HP-Laptop-15-di2xxx:~/Documents/text$ chown anvay bot.txt
chown: invalid user: 'anvay'
parth@parth-HP-Laptop-15-di2xxx:~/Documents/text$
```

```
parth@parth-HP-Laptop-15-di2xxx:~$ kill -l
 1) SIGHUP        2) SIGINT        3) SIGQUIT       4) SIGILL        5) SIGTRAP
 6) SIGABRT       7) SIGBUS        8) SIGFPE        9) SIGKILL      10) SIGUSR1
11) SIGSEGV      12) SIGUSR2      13) SIGPIPE      14) SIGALRM      15) SIGTERM
16) SIGSTKFLT    17) SIGCHLD      18) SIGCONT      19) SIGSTOP      20) SIGTSTP
21) SIGTTIN      22) SIGTTOU      23) SIGURG       24) SIGXCPU      25) SIGXFSZ
26) SIGVTALRM    27) SIGPROF      28) SIGWINCH     29) SIGIO        30) SIGPWR
31) SIGSYS       34) SIGRTMIN     35) SIGRTMIN+1   36) SIGRTMIN+2   37) SIGRTMIN+3
38) SIGRTMIN+4   39) SIGRTMIN+5   40) SIGRTMIN+6   41) SIGRTMIN+7   42) SIGRTMIN+8
43) SIGRTMIN+9   44) SIGRTMIN+10  45) SIGRTMIN+11  46) SIGRTMIN+12  47) SIGRTMIN+13
48) SIGRTMIN+14  49) SIGRTMIN+15  50) SIGRTMAX-14  51) SIGRTMAX-13  52) SIGRTMAX-12
53) SIGRTMAX-11  54) SIGRTMAX-10  55) SIGRTMAX-9   56) SIGRTMAX-8   57) SIGRTMAX-7
58) SIGRTMAX-6   59) SIGRTMAX-5   60) SIGRTMAX-4   61) SIGRTMAX-3   62) SIGRTMAX-2
63) SIGRTMAX-1   64) SIGRTMAX
parth@parth-HP-Laptop-15-di2xxx:~$ 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: eno1: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc fq_codel state DOWN group default qlen 1000
    link/ether e8:d8:d1:dc:96:b0 brd ff:ff:ff:ff:ff:ff
    altname enp1s0
3: wlo1: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc noqueue state UP group default qlen 1000
    link/ether c0:e4:34:d7:27:1f brd ff:ff:ff:ff:ff:ff
    altname wlp2s0
    inet 192.168.209.245/24 brd 192.168.209.255 scope global dynamic noprefixroute wlo1
       valid_lft 3330sec preferred_lft 3330sec
    inet6 2409:4081:2c09:334f:3cfa:d6b4:684d:d3a4/64 scope global temporary dynamic
       valid_lft 3339sec preferred_lft 3339sec
    inet6 2409:4081:2c09:334f:65c1:f4c1:fbe5:e26c/64 scope global dynamic mngtmpaddr noprefixroute
       valid_lft 3339sec preferred_lft 3339sec
    inet6 fe80::5e94:ab5e:33c0:60c6/64 scope link noprefixroute
       valid_lft forever preferred_lft forever
parth@parth-HP-Laptop-15-di2xxx:~$ ping -s 40 -c 5 192.168.209.245
PING 192.168.209.245 (192.168.209.245) 40(68) bytes of data.
48 bytes from 192.168.209.245: icmp_seq=1 ttl=64 time=0.079 ms
48 bytes from 192.168.209.245: icmp_seq=2 ttl=64 time=0.073 ms
48 bytes from 192.168.209.245: icmp_seq=3 ttl=64 time=0.074 ms
48 bytes from 192.168.209.245: icmp_seq=4 ttl=64 time=0.067 ms
48 bytes from 192.168.209.245: icmp_seq=5 ttl=64 time=0.074 ms

--- 192.168.209.245 ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 4073ms
rtt min/avg/max/mdev = 0.067/0.073/0.079/0.003 ms
parth@parth-HP-Laptop-15-di2xxx:~$ uname -a
Linux parth-HP-Laptop-15-di2xxx 5.15.0-52-generic #58-Ubuntu SMP Thu Oct 13 08:03:55 UTC 2022 x86_64 x86_64 x86_64 GNU/Linux
parth@parth-HP-Laptop-15-di2xxx:~$
```

```
parth@parth-HP-Laptop-15-di2xxx:~$ top

top - 04:27:32 up 20 min,  1 user,  load average: 0.47, 0.73, 0.63
Tasks: 269 total,   1 running, 268 sleeping,   0 stopped,   0 zombie
%Cpu(s):  0.5 us,  0.2 sy,  0.0 ni, 99.1 id,  0.2 wa,  0.0 hi,  0.0 si,  0.0 st
MiB Mem :  15805.9 total,  12455.0 free,   1453.1 used,   1897.8 buff/cache
MiB Swap:  15259.0 total,  15259.0 free,      0.0 used.  13516.9 avail Mem

  PID USER      PR  NI    VIRT    RES    SHR S  %CPU  %MEM     TIME+ COMMAND
 4128 parth     20   0  569940  59896  46472 S   2.0   0.4   0:01.17 gnome-terminal-
 3551 parth     20   0   32.5g 241724 160940 S   1.7   1.5   0:33.77 chrome
 1689 parth     20   0 5546172 303872 150640 S   1.3   1.9   1:52.57 gnome-shell
 3596 parth     20   0   32.7g 155976 109224 S   1.3   1.0   0:26.24 chrome
    8 root      20   0       0      0      0 I   0.3   0.0   0:03.43 kworker/u16:0-phy0
  119 root      20   0       0      0      0 I   0.3   0.0   0:00.51 kworker/1:1-mm_percpu_wq
  534 root     -51   0       0      0      0 S   0.3   0.0   0:04.02 irq/138-rtw88_p
 3597 parth     20   0   32.4g 112552  89884 S   0.3   0.7   0:09.21 chrome
 4153 parth     20   0   21880   4220   3364 R   0.3   0.0   0:00.05 top
    1 root      20   0  166772  11768   8016 S   0.0   0.1   0:03.80 systemd
    2 root      20   0       0      0      0 S   0.0   0.0   0:00.01 kthreadd
    3 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 rcu_gp
    4 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 rcu_par_gp
    5 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 netns
    7 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kworker/0:0H-events_highpri
    9 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 mm_percpu_wq
   10 root      20   0       0      0      0 S   0.0   0.0   0:00.00 rcu_tasks_rude_
   11 root      20   0       0      0      0 S   0.0   0.0   0:00.00 rcu_tasks_trace
   12 root      20   0       0      0      0 S   0.0   0.0   0:00.05 ksoftirqd/0
   13 root      20   0       0      0      0 I   0.0   0.0   0:02.29 rcu_sched
   14 root      rt   0       0      0      0 S   0.0   0.0   0:00.02 migration/0
   15 root     -51   0       0      0      0 S   0.0   0.0   0:00.00 idle_inject/0
   16 root      20   0       0      0      0 I   0.0   0.0   0:00.34 kworker/0:1-cgroup_destroy
   17 root      20   0       0      0      0 S   0.0   0.0   0:00.00 cpuhp/0
   18 root      20   0       0      0      0 S   0.0   0.0   0:00.00 cpuhp/1
   19 root     -51   0       0      0      0 S   0.0   0.0   0:00.00 idle_inject/1
   20 root      rt   0       0      0      0 S   0.0   0.0   0:00.25 migration/1
   21 root      20   0       0      0      0 S   0.0   0.0   0:00.04 ksoftirqd/1
   23 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kworker/1:0H-events_highpri
   24 root      20   0       0      0      0 S   0.0   0.0   0:00.00 cpuhp/2
   25 root     -51   0       0      0      0 S   0.0   0.0   0:00.00 idle_inject/2
   26 root      rt   0       0      0      0 S   0.0   0.0   0:00.26 migration/2
   27 root      20   0       0      0      0 S   0.0   0.0   0:00.04 ksoftirqd/2
   29 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kworker/2:0H-events_highpri
   30 root      20   0       0      0      0 S   0.0   0.0   0:00.00 cpuhp/3
   31 root     -51   0       0      0      0 S   0.0   0.0   0:00.00 idle_inject/3
   32 root      rt   0       0      0      0 S   0.0   0.0   0:00.27 migration/3
   33 root      20   0       0      0      0 S   0.0   0.0   0:00.03 ksoftirqd/3
   35 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kworker/3:0H-events_highpri
   36 root      20   0       0      0      0 S   0.0   0.0   0:00.00 cpuhp/4
   37 root     -51   0       0      0      0 S   0.0   0.0   0:00.00 idle_inject/4
   38 root      rt   0       0      0      0 S   0.0   0.0   0:00.27 migration/4
   39 root      20   0       0      0      0 S   0.0   0.0   0:00.04 ksoftirqd/4
   40 root      20   0       0      0      0 I   0.0   0.0   0:00.31 kworker/4:0-cgroup_destroy
   41 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kworker/4:0H-events_highpri
   42 root      20   0       0      0      0 S   0.0   0.0   0:00.00 cpuhp/5
   43 root     -51   0       0      0      0 S   0.0   0.0   0:00.00 idle_inject/5
   44 root      rt   0       0      0      0 S   0.0   0.0   0:00.28 migration/5
   45 root      20   0       0      0      0 S   0.0   0.0   0:00.04 ksoftirqd/5
   47 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kworker/5:0H-events_highpri
   48 root      20   0       0      0      0 S   0.0   0.0   0:00.00 cpuhp/6
```

```
parth@parth-HP-Laptop-15-di2xxx:~$ history
    1  mkdir prog
    2  cd prog
    3  vi p.c
    4  sudo apt update~
    5  ubuntu version
    6  man sudo_root
    7  sudo apt update
    8  sudo apt install gcc g++
    9  gcc --version
   10  g++ --version
   11  lsb_release -a
   12  vim
   13  sudo apt install vim
   14  sudo apt install vim-tiny
   15  sudo apt install neovim
   16  sudo apt install vim-athena
   17  sudo apt install vim-gtk3
   18  sudo apt install vim-nox
   19  vim
   20  vi parth
   21  mkdir c_programming
   22  cd c_programming
   23  vi p.c
   24  cc p.c
   25  ls
   26  ./a.out
   27  cd Assignment 1
   28  cd Assignment1
   29  cc Q1.c
   30  ls
   31  cc Q1.c
   32  ./a.out
   33  cc Q2.c
   34  ./a.out
   35  cc Q3_i.c
   36  ./a.out
   37  cc Q3_ii.c
   38  ./a.out
   39  cc Q3_ii.c
   40  vi Q3_ii.c
   41  cc Q3_ii.c
   42  ./a.out
   43  cc Q1.c
   44  ./a.out
   45  vi Q1.c
   46  cc Q4.c
   47  ./a.out
   48  cc Q4.c
   49  ./a.out
   50  cc Q5.c
   51  ./a.out
   52  cc Q6.c
   53  ./a.out
   54  cc Q7.c
   55  ./a.out
   56  cc Q7.c
   57  vi Q7.c
   58  cc Q7.c
   59  vi Q7.c
```

```
INTRO(1)                                        Linux User's Manual                                        INTRO(1)

NAME
       intro - introduction to user commands

DESCRIPTION
       Section 1 of the manual describes user commands and tools, for example, file manipulation tools, shells, compilers, web browsers, file and image viewers and editors, and so on.

NOTES
       Linux is a flavor of UNIX, and as a first approximation all user commands under UNIX work precisely the same under Linux (and FreeBSD and lots of other UNIX-like systems).

       Under  Linux,  there  are  GUIs (graphical user interfaces), where you can point and click and drag, and hopefully get work done without first reading lots of documentation.  The traditional
       UNIX environment is a CLI (command line interface), where you type commands to tell the computer what to do.  That is faster and more powerful, but requires finding  out  what  the  commands
       are.  Below a bare minimum, to get started.

   Login
       In order to start working, you probably first have to open a session by giving your username and password.  The program login(1) now starts a shell (command interpreter) for you.  In case of
       a graphical login, you get a screen with menus or icons and a mouse click will start a shell in a window.  See also xterm(1).

   The shell
       One types commands to the shell, the command interpreter.  It is not built-in, but is just a program and you can change your shell.  Everybody has their own favorite one.  The  standard  one
       is called sh.  See also ash(1), bash(1), chsh(1), csh(1), dash(1), ksh(1), zsh(1).

       A session might go like:

           knuth login: aeb
           Password: ********
           $ date
           Tue Aug  6 23:50:44 CEST 2002
           $ cal
                August 2002
           Su Mo Tu We Th Fr Sa
                         1  2  3
            4  5  6  7  8  9 10
           11 12 13 14 15 16 17
           18 19 20 21 22 23 24
           25 26 27 28 29 30 31

           $ ls
           bin  tel
           $ ls -l
           total 2
           drwxrwxr-x   2 aeb        1024 Aug  6 23:51 bin
           -rw-rw-r--   1 aeb          37 Aug  6 23:52 tel
           $ cat tel
           maja    0501-1136285
           peter   0136-7399214
           $ cp tel tel2
           $ ls -l
           total 3
           drwxr-xr-x   2 aeb        1024 Aug  6 23:51 bin
           -rw-r--r--   1 aeb          37 Aug  6 23:52 tel
           -rw-r--r--   1 aeb          37 Aug  6 23:53 tel2
           $ mv tel tel1
           $ ls -l
           total 3
           drwxr-xr-x   2 aeb        1024 Aug  6 23:51 bin
           -rw-r--r--   1 aeb          37 Aug  6 23:52 tel1
Manual page intro(1) line 1 (press h for help or q to quit)
```

```
parth@parth-HP-Laptop-15-di2xxx:~$ wget https://i.gadgets360cdn.com/large/moon_stitched_image_twitter_andrew_mccarthy_connor_ma
therne_1661381185852.jpg?downsize=950:*
--2023-01-22 04:53:52--  https://i.gadgets360cdn.com/large/moon_stitched_image_twitter_andrew_mccarthy_connor_matherne_16613811
85852.jpg?downsize=950:*
Resolving i.gadgets360cdn.com (i.gadgets360cdn.com)... 2405:200:1630:188d::24e8, 2405:200:1630:18b1::24e8, 23.212.245.31
Connecting to i.gadgets360cdn.com (i.gadgets360cdn.com)|2405:200:1630:188d::24e8|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 131857 (129K) [image/jpeg]
Saving to: 'moon_stitched_image_twitter_andrew_mccarthy_connor_matherne_1661381185852.jpg?downsize=950:*.2'

moon_stitched_image_twitter_andrew_mccarthy_connor 100%[===================================================================
=====================================>] 128.77K    226KB/s    in 0.6s

2023-01-22 04:53:53 (226 KB/s) - 'moon_stitched_image_twitter_andrew_mccarthy_connor_matherne_1661381185852.jpg?downsize=950:*.
2' saved [131857/131857]

parth@parth-HP-Laptop-15-di2xxx:~$ echo -e "Parth \nMilind \nYewale"
Parth
Milind
Yewale
parth@parth-HP-Laptop-15-di2xxx:~$ hostname
parth-HP-Laptop-15-di2xxx
parth@parth-HP-Laptop-15-di2xxx:~$ hostname -i
127.0.1.1
parth@parth-HP-Laptop-15-di2xxx:~$ nano pass.txt
parth@parth-HP-Laptop-15-di2xxx:~$ vi pass.txt
parth@parth-HP-Laptop-15-di2xxx:~$ jed
parth@parth-HP-Laptop-15-di2xxx:~$ alias p='parth'
parth@parth-HP-Laptop-15-di2xxx:~$ unalias p
parth@parth-HP-Laptop-15-di2xxx:~$ su parth
Password:
parth@parth-HP-Laptop-15-di2xxx:~$ htop -u parth
parth@parth-HP-Laptop-15-di2xxx:~$
```

```
parth@parth-HP-Laptop-15-di2xxx:~$ ps -e
  PID TTY          TIME CMD
    1 ?        00:00:03 systemd
    2 ?        00:00:00 kthreadd
    3 ?        00:00:00 rcu_gp
    4 ?        00:00:00 rcu_par_gp
    5 ?        00:00:00 netns
    7 ?        00:00:00 kworker/0:0H-events_highpri
    9 ?        00:00:00 mm_percpu_wq
   10 ?        00:00:00 rcu_tasks_rude_
   11 ?        00:00:00 rcu_tasks_trace
   12 ?        00:00:00 ksoftirqd/0
   13 ?        00:00:06 rcu_sched
   14 ?        00:00:00 migration/0
   15 ?        00:00:00 idle_inject/0
   17 ?        00:00:00 cpuhp/0
   18 ?        00:00:00 cpuhp/1
   19 ?        00:00:00 idle_inject/1
   20 ?        00:00:00 migration/1
   21 ?        00:00:00 ksoftirqd/1
   23 ?        00:00:00 kworker/1:0H-events_highpri
   24 ?        00:00:00 cpuhp/2
   25 ?        00:00:00 idle_inject/2
   26 ?        00:00:00 migration/2
   27 ?        00:00:00 ksoftirqd/2
   29 ?        00:00:00 kworker/2:0H-events_highpri
   30 ?        00:00:00 cpuhp/3
   31 ?        00:00:00 idle_inject/3
   32 ?        00:00:00 migration/3
   33 ?        00:00:00 ksoftirqd/3
   35 ?        00:00:00 kworker/3:0H-events_highpri
   36 ?        00:00:00 cpuhp/4
   37 ?        00:00:00 idle_inject/4
   38 ?        00:00:00 migration/4
   39 ?        00:00:00 ksoftirqd/4
   41 ?        00:00:00 kworker/4:0H-events_highpri
   42 ?        00:00:00 cpuhp/5
   43 ?        00:00:00 idle_inject/5
   44 ?        00:00:00 migration/5
   45 ?        00:00:00 ksoftirqd/5
   47 ?        00:00:00 kworker/5:0H-events_highpri
   48 ?        00:00:00 cpuhp/6
   49 ?        00:00:00 idle_inject/6
   50 ?        00:00:00 migration/6
   51 ?        00:00:06 ksoftirqd/6
   53 ?        00:00:00 kworker/6:0H-events_highpri
   54 ?        00:00:00 cpuhp/7
   55 ?        00:00:00 idle_inject/7
   56 ?        00:00:00 migration/7
   57 ?        00:00:00 ksoftirqd/7
   59 ?        00:00:00 kworker/7:0H-events_highpri
   60 ?        00:00:00 kdevtmpfs
   61 ?        00:00:00 inet_frag_wq
   62 ?        00:00:00 kauditd
   63 ?        00:00:00 khungtaskd
   64 ?        00:00:00 oom_reaper
   65 ?        00:00:00 writeback
   66 ?        00:00:00 kcompactd0
   67 ?        00:00:00 ksmd
   68 ?        00:00:00 khugepaged
```

```
parth@parth-HP-Laptop-15-di2xxx:~$ cd A4
parth@parth-HP-Laptop-15-di2xxx:~/A4$ ls
a.out  copy.txt  main.c  search.c  search.h  sort.c  sort.h
parth@parth-HP-Laptop-15-di2xxx:~/A4$ zip compress a.out main.c search.c search.h sort.c sort.h
  adding: a.out (deflated 78%)
  adding: main.c (deflated 63%)
  adding: search.c (deflated 61%)
  adding: search.h (deflated 41%)
  adding: sort.c (deflated 58%)
  adding: sort.h (deflated 46%)
parth@parth-HP-Laptop-15-di2xxx:~/A4$ ls
a.out  compress.zip  copy.txt  main.c  search.c  search.h  sort.c  sort.h
parth@parth-HP-Laptop-15-di2xxx:~/A4$ unzip compress.zip
Archive:  compress.zip
replace a.out? [y]es, [n]o, [A]ll, [N]one, [r]ename: y
  inflating: a.out
replace main.c? [y]es, [n]o, [A]ll, [N]one, [r]ename: y
  inflating: main.c
replace search.c? [y]es, [n]o, [A]ll, [N]one, [r]ename: y
  inflating: search.c
replace search.h? [y]es, [n]o, [A]ll, [N]one, [r]ename: y
  inflating: search.h
replace sort.c? [y]es, [n]o, [A]ll, [N]one, [r]ename: y
  inflating: sort.c
replace sort.h? [y]es, [n]o, [A]ll, [N]one, [r]ename: y
  inflating: sort.h
parth@parth-HP-Laptop-15-di2xxx:~/A4$ sudo useradd student
[sudo] password for parth:
parth@parth-HP-Laptop-15-di2xxx:~/A4$
```