

```
som@BT-21052258:~$ ls
a.out  abc.cc      basic1.cpp  hello.c      hello.cppY.save
abc    abc.cc.save file.c      hello.cppY   new
som@BT-21052258:~$ ls -R
.:
a.out  abc.cc      basic1.cpp  hello.c      hello.cppY.save
abc    abc.cc.save file.c      hello.cppY   new

./new:
d2.txt  n1

./new/n1:
demo.txt

som@BT-21052258:~$ mkdir new_directory
som@BT-21052258:~$ ls
a.out  abc.cc      basic1.cpp  hello.c      hello.cppY.save  new_directory
abc    abc.cc.save file.c      hello.cppY   new
```

```
som@BT-21052258:~$ cd new
som@BT-21052258:~/new$ touch example_file ex2 ex3
som@BT-21052258:~/new$ ls
d2.txt  ex2  ex3  example_file  n1
som@BT-21052258:~/new$ cat > ex2.txt
This is the task of First OS LAB
som@BT-21052258:~/new$ cat ex2.txt
This is the task of First OS LAB
```

```
som@BT-21052258:~/new$ rm ex3
```

```
som@BT-21052258:~/new$ ls
```

```
ex2  ex2.txt  example_file  n1
```

```
som@BT-21052258:~/new$ cp example_file ex2
```

```
som@BT-21052258:~/new$ head ex2.txt
```

This is the task of First OS LAB

```
#include <iostream>
```

```
using namespace std;
```

```
void swapcbv(int x, int y)
```

```
{
```

```
    x = x + y;
```

```
    y = x - y;
```

```
    x = x - y;
```

```
    cout << "After swapping: " << x << " " << y << endl;
```

```
}
```

```
som@BT-21052258:~/new$ tail ex2.txt
```

```
    cout << "Enter 2 numbers" << endl;
```

```
    cin >> a >> b;
```

```
    cout << "before swapping " << a << " " << b << endl;
```

```
    swapcbv(a, b);
```

```
    swapcbr(a, b);
```

```
    return 0;
```

```
}
```

```
som@BT-21052258:~/new$ cat ex2.txt
```

This is the task of First OS LAB

```
#include <iostream>
using namespace std;
void swapcbv(int x, int y)
{
    x = x + y;
    y = x - y;
    x = x - y;
    cout << "After swapping: " << x << " " << y << endl;
}
void swapcbr(int &x, int &y)
{
    x = x + y;
    y = x - y;
    x = x - y;
    cout << "After swapping: " << x << " " << y << endl;
}

int main(int argc, char const *argv[])
{
    int a, b;
    cout << "Enter 2 numbers" << endl;
    cin >> a >> b;
    cout << "before swapping " << a << " " << b << endl;
    swapcbv(a, b);
    swapcbr(a, b);

    return 0;
}
```

som@BT-21052258:~/new\$ tac ex2.txt

```
}  
    return 0;  
  
    swapcbr(a, b);  
    swapcbv(a, b);  
    cout << "before swapping " << a << " " << b << endl;  
    cin >> a >> b;  
    cout << "Enter 2 numbers" << endl;  
    int a, b;  
{  
int main(int argc, char const *argv[])  
  
}  
    cout << "After swapping: " << x << " " << y << endl;  
    x = x - y;  
    y = x - y;  
    x = x + y;  
{  
void swapcbr(int &x, int &y)  
}  
    cout << "After swapping: " << x << " " << y << endl;  
    x = x - y;  
    y = x - y;  
    x = x + y;  
{  
void swapcbv(int x, int y)  
using namespace std;  
#include <iostream>  
This is the task of First OS LAB
```



```
som@BT-21052258:~/new$ ls
ex2  ex2.txt  example_file  n1
som@BT-21052258:~/new$ rm ex2
som@BT-21052258:~/new$ history
  1  gcc --version
  2  gcc -v
  3  clear
  4  sudo apt-get install gcc
  5  sudo apt-get build-essential
  6  sudo apt-get install build-essential
  7  gcc --version
  8  sudo apt instal gcc
  9  clear
 10  sudo apt update
 11  sudo apt install gcc g++
 12  gcc --version
 13  g++ --version
 14  clear
 15  cd Desktop/
 16  touch hello.c
 17  clear
 18  g++ --version
 19  clear
 20  cd C programming
 21  cd shit
 22  cd test
 23  clear
 24  sudo apt install gedit
 25  cd c_prog
```

```
140 rm ex2
```

```
141 history
```

```
om@BT-21052258:~/new$ clear
```


kiit@BT-21052258:~\$ sudo apt-get update

[sudo] password for kiit:

Err:1 http://archive.ubuntu.com/ubuntu focal InRelease

```
kiit@BT-21052258:~$ sudo apt-get install packagename  
Reading package lists... Done  
Building dependency tree
```

```
kiit@BT-21052258:~$ alias cls=clear
```

```
kiit@BT-21052258:~$ cls
```

```
kiit@BT-21052258:~$ curl -s https://github.com/muktesh-m/h1n1_Vaccine_ML-model/blob/main/Vaccine%20Project.ipynb
```

kiit@BT-21052258:~\$ ss

Netid	State	Recv-Q	Send-Q	Local Address:Port	Peer Address:Port	Process
v_str	ESTAB	0	0	*:3099003688	2:50000	
v_str	ESTAB	0	0	*:3099003689	2:50000	
v_str	ESTAB	0	0	*:3099003690	2:50000	
v_str	ESTAB	0	0	*:3099003691	2:50001	
v_str	ESTAB	0	0	*:3099003692	2:50000	
v_str	ESTAB	0	0	*:3099003693	2:50000	
v_str	ESTAB	0	0	*:3099003707	2:50000	
v_str	ESTAB	0	0	*:3099003708	2:50001	
v_str	ESTAB	0	0	*:3099003709	2:50001	
v_str	ESTAB	0	0	*:3099003711	2:1878123013	
v_str	ESTAB	0	0	*:3099003712	2:1878123017	
v_str	ESTAB	0	0	*:3099003712	2:1878123016	
v_str	ESTAB	0	0	*:3099003712	2:1878123015	
v_str	ESTAB	0	0	*:3099003712	2:1878123014	

kiit@BT-21052258:~\$

kiit@BT-21052258:~\$ dd

0+0 records in

0+0 records out

0 bytes copied, 3.58233 s, 0.0 kB/s

```
kiit@BT-21052258:~$ chown --help
```

```
Usage: chown [OPTION]... [OWNER][:[GROUP]] FILE...
```

```
or: chown [OPTION]... --reference=RFILE FILE...
```

Change the owner and/or group of each FILE to OWNER and/or GROUP.

With --reference, change the owner and group of each FILE to those of RFILE.

-c, --changes	like verbose but report only when a change is made
-f, --silent, --quiet	suppress most error messages
-v, --verbose	output a diagnostic for every file processed
--dereference	affect the referent of each symbolic link (this is the default), rather than the symbolic link itself
-h, --no-dereference	affect symbolic links instead of any referenced file (useful only on systems that can change the ownership of a symlink)
--from=CURRENT_OWNER:CURRENT_GROUP	change the owner and/or group of each file only if its current owner and/or group match those specified here. Either may be omitted, in which case a match is not required for the omitted attribute
--no-preserve-root	do not treat '/' specially (the default)
--preserve-root	fail to operate recursively on '/'
--reference=RFILE	use RFILE's owner and group rather than specifying OWNER:GROUP values
-R, --recursive	operate on files and directories recursively

The following options modify how a hierarchy is traversed when the -R option is also specified. If more than one is specified, only the final one takes effect.

-H	if a command line argument is a symbolic link to a directory, traverse it
-L	traverse every symbolic link to a directory encountered
-P	do not traverse any symbolic links (default)


```
/dev/pts/0
kiit@BT-21052258:~$ kill
kill: usage: kill [-s sigspec | -n signum | -sigspec] pid | jobspec ... or kill -l [sigspec]
kiit@BT-21052258:~$ mount
/dev/sdc on / type ext4 (rw,relatime,discard,errors=remount-ro,data=ordered)
none on /mnt/wsl type tmpfs (rw,relatime)
tools on /init type 9p (ro,relatime,dirsync,aname=tools;fmask=022,loose,access=client,msize=65536,trans=fd,rfd=7,wfd=7)
none on /dev type devtmpfs (rw,nosuid,relatime,size=3905940k,nr_inodes=976485,mode=755)
sysfs on /sys type sysfs (rw,nosuid,nodev,noexec,noatime)
proc on /proc type proc (rw,nosuid,nodev,noexec,noatime)
devpts on /dev/pts type devpts (rw,nosuid,noexec,noatime,gid=5,mode=620,ptmxmode=000)
none on /run type tmpfs (rw,nosuid,noexec,noatime,mode=755)
none on /run/lock type tmpfs (rw,nosuid,nodev,noexec,noatime)
none on /run/shm type tmpfs (rw,nosuid,nodev,noatime)
none on /run/user type tmpfs (rw,nosuid,nodev,noexec,noatime,mode=755)
binfmt_misc on /proc/sys/fs/binfmt_misc type binfmt_misc (rw,relatime)
tmpfs on /sys/fs/cgroup type tmpfs (rw,nosuid,nodev,noexec,relatime,mode=755)
cgroup2 on /sys/fs/cgroup/unified type cgroup2 (rw,nosuid,nodev,noexec,relatime,nsdelegate)
cgroup on /sys/fs/cgroup/cpuset type cgroup (rw,nosuid,nodev,noexec,relatime,cpuset)
cgroup on /sys/fs/cgroup/cpu type cgroup (rw,nosuid,nodev,noexec,relatime,cpu)
cgroup on /sys/fs/cgroup/cpuacct type cgroup (rw,nosuid,nodev,noexec,relatime,cpuacct)
```

```
kiit@BT-21052258:~$ whoami
```

```
kiit
```

```
kiit@BT-21052258:~$ fdisk
```

```
fdisk: bad usage
```

```
Try 'fdisk --help' for more information.
```

```
kiit@BT-21052258:~$ nohup
```

```
kiit@BT-21052258:~$ xargs
```

```
chroot
```

```
chroot
```

```
kiit@BT-21052258:~$ chroot
```

```
chroot: cannot mount root filesystem
```

Try 'chroot --help' for more information.

kiit@BT-21052258:~\$ md5sum

dmesg

5e586b12552daf93c7af22dccbbf673b -

kiit@BT-21052258:~\$ dmesg

```
[ 0.000000] Linux version 5.10.16.3-microsoft-standard-WSL2 (oe-user@oe-host) (x86_64-msft-linux-gcc (GCC) 9.3.0, GNU ld (GNU B
[ 0.000000] Command line: initrd=\initrd.img panic=-1 nr_cpus=16 swiotlb=force earlycon=uart8250,io,0x3f8,115200 console=hvc0 d
[ 0.000000] KERNEL supported cpus:
[ 0.000000]   Intel GenuineIntel
[ 0.000000]   AMD AuthenticAMD
[ 0.000000]   Centaur CentaurHauls
[ 0.000000] x86/fpu: Supporting XSAVE feature 0x001: 'x87 floating point registers'
[ 0.000000] x86/fpu: Supporting XSAVE feature 0x002: 'SSE registers'
[ 0.000000] x86/fpu: Supporting XSAVE feature 0x004: 'AVX registers'
[ 0.000000] x86/fpu: xstate_offset[2]: 576, xstate_sizes[2]: 256
[ 0.000000] x86/fpu: Enabled xstate features 0x7, context size is 832 bytes, using 'compacted' format.
[ 0.000000] BIOS-provided physical RAM map:
[ 0.000000] BIOS-e820: [mem 0x0000000000000000-0x0000000000009ffff] usable
[ 0.000000] BIOS-e820: [mem 0x000000000000e0000-0x000000000000e0fff] reserved
[ 0.000000] BIOS-e820: [mem 0x00000000000100000-0x000000000001fffff] ACPI data
[ 0.000000] BIOS-e820: [mem 0x00000000000200000-0x00000000000f7fffff] usable
[ 0.000000] BIOS-e820: [mem 0x0000000000010000000-0x000000000001f39fffff] usable
[ 0.000000] earlycon: uart8250 at I/O port 0x3f8 (options '115200')
[ 0.000000] printk: bootconsole [uart8250] enabled
[ 0.000000] NX (Execute Disable) protection: active
[ 0.000000] DMI not present or invalid.
[ 0.000000] Hypervisor detected: Microsoft Hyper-V
[ 0.000000] Hyper-V: features 0xae7f, privilege high: 0x3b8030, hints 0xc2c, misc 0xe0bed7b2
[ 0.000000] Hyper-V Host Build:22621-10.0-0-0.963
[ 0.000000] Hyper-V: LAPIC Timer Frequency: 0x1e8480
[ 0.000000] Hyper-V: Using hypercall for remote TLB flush
[ 0.000000] clocksource: hyperv_clocksource_tsc_page: mask: 0xffffffffffffffff max_cycles: 0x24e6a1710, max_idle_ns: 4407952021
[ 0.000007] tsc: Detected 1796.563 MHz processor
[ 0.000000] x86: update [mem 0x000000000-0x00000055f] usable to reserved
```

```
kiit@BT-21052258:~$ du
```

```
4    ./Documents
```

```
4    ./som.c
```

```
4    ./muktesh
```

```
4    ./landscape
```

```
4    ./Downloads
```

```
4    ./cache/gvfs
```

```
4    ./cache/evolution/tasks/trash
```

```
8    ./cache/evolution/tasks
```

```
4    ./cache/evolution/memos/trash
```

```
8    ./cache/evolution/memos
```

```
4    ./cache/evolution/sources/trash
```

```
8    ./cache/evolution/sources
```

```
4    ./cache/evolution/addressbook/trash
```

```
8    ./cache/evolution/addressbook
```

```
4    ./cache/evolution/calendar/trash
```

```
8    ./cache/evolution/calendar
```

```
4    ./cache/evolution/mail/trash
```

```
8    ./cache/evolution/mail
```

```
kiit@BT-21052258:~$ fsck
fsck from util-linux 2.34
fsck.ext4: Unable to resolve 'LABEL=cloudimg-rootfs'
kiit@BT-21052258:~$ cp
cp: missing file operand
Try 'cp --help' for more information.
kiit@BT-21052258:~$ bzip2
bzip2: I won't write compressed data to a terminal.
bzip2: For help, type: `bzip2 --help'.
kiit@BT-21052258:~$
```



```
kiit@BT-21052258:~$ echo $USER
```

```
kiit
```

```
kiit@BT-21052258:~$ echo $HOME
```

```
/home/kiit
```

```
kiit@BT-21052258:~$ echo $PATH
```

```
/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local/games:/usr/lib/wsl/lib:/mnt/c/Program Files/Python310/Scripts:/mnt/c/Program Files/Python310:/mnt/c/oraclexe/app/oracle/product/11.2.0/server/bin:/mnt/c/Program Files/Common Files/Oracle/Java/javapath:/mnt/c/Program Files (x86)/Common Files/Oracle/Java/javapath:/mnt/c/WINDOWS/system32:/mnt/c/WINDOWS:/mnt/c/WINDOWS/System32/Wbem:/mnt/c/WINDOWS/System32/WindowsPowerShell/v1.0:/mnt/c/WINDOWS/System32/OpenSSH:/mnt/c/Program Files/dotnet:/mnt/c/MinGW/bin:/mnt/c/Program Files/Git/cmd:/mnt/c/Program Files/Cloudflare/Cloudflare WARP:/mnt/c/Users/KIIT/AppData/Local/Programs/Microsoft VS Code/bin:/mnt/c/msys64/mingw64/bin:/mnt/c/Users/KIIT/AppData/Local/GitHubDesktop/bin:/mnt/c/Users/KIIT/AppData/Local/Microsoft/WindowsApps:/mnt/c/Program Files/Multipass/bin:/snap/bin
```

```
kiit@BT-21052258:~$
```



```
kiit@BT-21052258:~$ uname -a
Linux BT-21052258 5.10.16.3-microsoft-standard-WSL2 #1 SMP Fri Apr 2 22:23:49 UTC 2021 x86_64 x86_64 x86_64 GNU/Linux
kiit@BT-21052258:~$ uname -s
Linux
kiit@BT-21052258:~$ uname -v
#1 SMP Fri Apr 2 22:23:49 UTC 2021
kiit@BT-21052258:~$ finger smith

Command 'finger' not found, but can be installed with:

sudo apt install finger

kiit@BT-21052258:~$ finger -p smith

Command 'finger' not found, but can be installed with:

sudo apt install finger

kiit@BT-21052258:~$ free
              total        used        free      shared  buff/cache   available
Mem:           7816052       123796       7371708          72       320548       7463888
Swap:          2097152           0       2097152

kiit@BT-21052258:~$ groups smith
groups: 'smith': no such user
kiit@BT-21052258:~$ groups kiit
kiit : kiit adm dialout cdrom floppy sudo audio dip video plugdev netdev
kiit@BT-21052258:~$ w
 20:49:15 up  1:49,  0 users,  load average: 0.00, 0.00, 0.00
USER      TTY      FROM              LOGIN@   IDLE   JCPU   PCPU   WHAT
kiit@BT-21052258:~$ w user
 20:49:19 up  1:49,  0 users,  load average: 0.00, 0.00, 0.00
USER      TTY      FROM              LOGIN@   IDLE   JCPU   PCPU   WHAT
kiit@BT-21052258:~$ ls
Desktop  Downloads  Pictures  Templates  add.c  hello.c  new      new_directory  thinclient_drives
Documents Music      Public   Videos    file.c  muktesh  new.txt  som.c
kiit@BT-21052258:~$ shutdown +1
```

```
kiit@BT-21052258:~$ shutdown +1
System has not been booted with systemd as init system (PID 1). Can't operate.
Failed to connect to bus: Host is down
kiit@BT-21052258:~$ pwd -L
/home/kiit
kiit@BT-21052258:~$ pwd -P
pwd-P: command not found
kiit@BT-21052258:~$ pwd -P
/home/kiit
kiit@BT-21052258:~$ ps -e
```

PID	TTY	TIME	CMD
1	?	00:00:00	init
7	?	00:00:00	init
8	?	00:00:00	init
9	pts/0	00:00:00	bash
186	pts/0	00:00:00	ps

```
kiit@BT-21052258:~$ declare var
kiit@BT-21052258:~$ var=kiit
kiit@BT-21052258:~$ declare -p
declare -- BASH="/bin/bash"
declare -r BASHOPTS="checkwinsize:cmdhist:complete_fullquote:expand_aliases
extquote:force_ignores:globasciiranges:histappend:interactive_comments:logi
rogcomp:promptvars:sourcepath"
declare -i BASHPID
declare -A BASH_ALIASES=()
declare -a BASH_ARGC=([0]="0")
declare -a BASH_ARGV=()
declare -- BASH_ARGV0
declare -A BASH_CMDS=()
declare -- BASH_COMMAND
declare -a BASH_COMPLETION_VERSIONINFO=([0]="2" [1]="10")
declare -a BASH_LINENO=()
declare -a BASH_SOURCE=()
declare -- BASH_SUBSHELL
declare -ar BASH_VERSIONINFO=([0]="5" [1]="0" [2]="17" [3]="1" [4]="release" [
4-pc-linux-gnu")
```

```
kiit@BT-21052258:~$ bash
kiit@BT-21052258:~$ exec ls
Desktop      Music      Templates  file.c     new        som.c
Documents    Pictures   Videos    hello.c    new.txt    thinclient_drives
Downloads    Public     add.c      muktesh    new_directory
kiit@BT-21052258:~$ awk '{print}' hello.c
#include<stdio.h>

int main()
{
    printf("Hello World\n");
    return 0;
}
```