```
1. List all the files and directories and its attribues
bmsce@bmsce-Precision-T1700:~$ ls -l
total 313684
drwxr-xr-x  2 bmsce bmsce     4096 Apr 20  2022  1BM20CS404
-rw-r--r--  1 bmsce bmsce       36 Dec 16  2021  abc
drwxrwxr-x  3 bmsce bmsce     4096 Feb  4  2020  Android
drwxrwxr-x  7 bmsce bmsce     4096 Feb 11  2020  AndroidStudioProjects
drwxrwxr-x  6 bmsce bmsce     4096 Dec 20  2021  Anjali
-rwxr-xr-x  1 bmsce bmsce    16552 Jan  3  2022  a.out
-rw-r--r--  1 bmsce bmsce       94 Nov 11  2021  area.sh
-rw-r--r--  1 bmsce bmsce       94 Oct 28  2021  area.sh~
-rw-r--r--  1 bmsce bmsce      314 Dec  9  2021  armstrong.sh
-rw-r--r--  1 bmsce bmsce      314 Dec  9  2021  armstrong.sh~
-rw-r--r--  1 bmsce bmsce      184 Dec 13 12:47  as1.sh
-rw-r--r--  1 bmsce bmsce      205 Oct 25  2021  biggest.sh
-rw-r--r--  1 bmsce bmsce      294 Nov 11  2021  calc.sh
-rw-r--r--  1 bmsce bmsce      294 Nov 11  2021  calc.sh~
-rwxr-xr-x  1 bmsce bmsce      353 Dec  3  2021  calcsimu.sh
drwxr-xr-x  3 bmsce bmsce     4096 Nov 23  2019  cassandra
-rw-r--r--  1 bmsce bmsce        5 Aug  3  2019  cassandra.pid
-rwxr--r--  1 bmsce bmsce      172 Dec  3  2021  combination.sh
-rwxr-xr-x  1 bmsce bmsce       98 Nov 15  2021  combi.sh
drwxr-xr-x  2 bmsce bmsce     4096 Jan  3 12:54  yathri


2. List only directories and its attributes
bmsce@bmsce-Precision-T1700:~$ ls -ld
drwxrwxr-x 66 bmsce bmsce 12288 Jan 10 11:30 .


3.Change the permission using relative mode for the following
Give execution  permission to all on file start
bmsce@bmsce-Precision-T1700:~$ ls -l simple
-rw-r--r-- 1 bmsce bmsce 19 Jan 10 11:49 simple
bmsce@bmsce-Precision-T1700:~$ chmod a+x simple
bmsce@bmsce-Precision-T1700:~$ ls -l simple
-rwxr-xr-x 1 bmsce bmsce 19 Jan 10 11:49 simple


Give execution permission to all on file start Assign all permission to
users and only read and execute permission to group and others on file
end
bmsce@bmsce-Precision-T1700:~$ ls -l simple
-rwxr-xr-x 1 bmsce bmsce 19 Jan 10 11:49 simple
bmsce@bmsce-Precision-T1700:~$ chmod a+rwx simple
bmsce@bmsce-Precision-T1700:~$ ls -l simple
-rwxrwxrwx 1 bmsce bmsce 19 Jan 10 11:49 simple
bmsce@bmsce-Precision-T1700:~$ chmod go-w simple
bmsce@bmsce-Precision-T1700:~$ ls -l simple
-rwxr-xr-x 1 bmsce bmsce 19 Jan 10 11:49 simple


Remove execute permission from all and assign read and execute permission
on rest two.
bmsce@bmsce-Precision-T1700:~$ ls -l simple
-rwxr-xr-x 1 bmsce bmsce 19 Jan 10 11:49 simple
bmsce@bmsce-Precision-T1700:~$ chmod a-x simple
bmsce@bmsce-Precision-T1700:~$ ls -l simple
-rw-r--r-- 1 bmsce bmsce 19 Jan 10 11:49 simple
bmsce@bmsce-Precision-T1700:~$ chmod go+rx simple
bmsce@bmsce-Precision-T1700:~$ ls -l simple
-rw-r-xr-x 1 bmsce bmsce 19 Jan 10 11:49 simple
```

```
4.Change using absolute permission
Assign only read and write permission to all
bmsce@bmsce-Precision-T1700:~$ ls -l simple
-rw-r-xr-x 1 bmsce bmsce 19 Jan 10 11:49 simple
bmsce@bmsce-Precision-T1700:~$ chmod 666 simple
bmsce@bmsce-Precision-T1700:~$ ls -l simple
-rw-rw-rw- 1 bmsce bmsce 19 Jan 10 11:49 simple

Assign only execute permission to users and group
bmsce@bmsce-Precision-T1700:~$ ls -l simple
-rw-rw-rw- 1 bmsce bmsce 19 Jan 10 11:49 simple
bmsce@bmsce-Precision-T1700:~$ chmod 116 simple
bmsce@bmsce-Precision-T1700:~$ ls -l simple
---x--xrw- 1 bmsce bmsce 19 Jan 10 11:49 simple

5. create a file called workfile.txt.
bmsce@bmsce-Precision-T1700:~$ cat > workfile
welcome home
^C
bmsce@bmsce-Precision-T1700:~$ ls -l workfile
-rw-r--r-- 1 bmsce bmsce 13 Jan 10 12:18 workfile

Change the file permission of the file to ---xrw-rwx.
bmsce@bmsce-Precision-T1700:~$ ls -l workfile
-rw-r--r-- 1 bmsce bmsce 13 Jan 10 12:18 workfile
bmsce@bmsce-Precision-T1700:~$ chmod 167 workfile
bmsce@bmsce-Precision-T1700:~$ ls -l workfile
---xrw-rwx 1 bmsce bmsce 13 Jan 10 12:18 workfile

Change the file permission of the file to -rwx---r-x.
bmsce@bmsce-Precision-T1700:~$ ls -l workfile
---xrw-rwx 1 bmsce bmsce 13 Jan 10 12:18 workfile
bmsce@bmsce-Precision-T1700:~$ chmod 605 workfile
bmsce@bmsce-Precision-T1700:~$ ls -l workfile
-rw----r-x 1 bmsce bmsce 13 Jan 10 12:18 workfile

Remove all file permission from the file, so that the file permission is
----------.
bmsce@bmsce-Precision-T1700:~$ ls -l workfile
-rw----r-x 1 bmsce bmsce 13 Jan 10 12:18 workfile
bmsce@bmsce-Precision-T1700:~$ chmod 000 workfile
bmsce@bmsce-Precision-T1700:~$ ls -l workfile
---------- 1 bmsce bmsce 13 Jan 10 12:18 workfile

6. Change the default permission of file to 022
bmsce@bmsce-Precision-T1700:~$ cat > simple2
hello
hi
^C
bmsce@bmsce-Precision-T1700:~$ ls -l simple2
-rw-r--r-- 1 bmsce bmsce 9 Jan 10 12:32 simple2
bmsce@bmsce-Precision-T1700:~$ chmod 022 simple2
bmsce@bmsce-Precision-T1700:~$ ls -l simple2
-----w--w- 1 bmsce bmsce 9 Jan 10 12:32 simple2

7. List the files with hard links
bmsce@bmsce-Precision-T1700:~$ ls -li simple2
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7353536 -----w--w- 1 bmsce bmsce 9 Jan 10 12:32 simple2
bmsce@bmsce-Precision-T1700:~$ ln simple2 smp
bmsce@bmsce-Precision-T1700:~$ ls -li simple2 smp
7353536 -rwxrwxrwx 2 bmsce bmsce 9 Jan 10 12:32 simple2
7353536 -rwxrwxrwx 2 bmsce bmsce 9 Jan 10 12:32 smp

8. Create a symbolic file on a existing file
bmsce@bmsce-Precision-T1700:~$ ls -l simple2
-rwxrwxrwx 1 bmsce bmsce 9 Jan 10 12:32 simple2
bmsce@bmsce-Precision-T1700:~$ ln -s simple2 smp
bmsce@bmsce-Precision-T1700:~$ ls -li simple2 smp
7353536 -rwxrwxrwx 1 bmsce bmsce 9 Jan 10 12:32 simple2
7353724 lrwxrwxrwx 1 bmsce bmsce 7 Jan 10 12:41 smp -> simple2

9. Change modification time and acces time using touch command
bmsce@bmsce-Precision-T1700:~$ ls -lu simple2
-rwxrwxrwx 1 bmsce bmsce 9 Jan 10 12:37 simple2
bmsce@bmsce-Precision-T1700:~$ ls -l simple2
-rwxrwxrwx 1 bmsce bmsce 9 Jan 10 12:32 simple2
bmsce@bmsce-Precision-T1700:~$ touch 01\09\0945 simple2
bmsce@bmsce-Precision-T1700:~$ ls -lu simple2
-rwxrwxrwx 1 bmsce bmsce 9 Jan 10 12:46 simple2
```