

6)

a) 1

```
24mca39@mcaserver:~/nsal$ nano testfile2
24mca39@mcaserver:~/nsal$ nano testfile3
24mca39@mcaserver:~/nsal$ chmod o+r testfile2
24mca39@mcaserver:~/nsal$ ls -l
total 0
-rw-rw-r-- 1 24mca39 24mca39 0 May  6 09:57 testfile2
-rw-rw-r-- 1 24mca39 24mca39 0 May  6 09:58 testfile3
24mca39@mcaserver:~/nsal$
```

a) 2

```
24mca39@mcaserver:~/nsal$ chmod u-w testfile2
24mca39@mcaserver:~/nsal$ ls -l
total 0
-r--rw-r-- 1 24mca39 24mca39 0 May  6 09:57 testfile2
-rw-rw-r-- 1 24mca39 24mca39 0 May  6 09:58 testfile3
24mca39@mcaserver:~/nsal$
```

a) 3

```
24mca39@mcaserver:~/nsal$ chmod g=x testfile2
24mca39@mcaserver:~/nsal$ ls -l
total 0
-r---x-r-- 1 24mca39 24mca39 0 May  6 09:57 testfile2
-rw-rw-r-- 1 24mca39 24mca39 0 May  6 09:58 testfile3
24mca39@mcaserver:~/nsal$
```

a) 4

```
24mca39@mcaserver:~/nsal$ chmod u+r,o-r,g=r testfile2
24mca39@mcaserver:~/nsal$ ls -l
total 0
-r--r----- 1 24mca39 24mca39 0 May  6 09:57 testfile2
-rw-rw-r-- 1 24mca39 24mca39 0 May  6 09:58 testfile3
24mca39@mcaserver:~/nsal$
```

a) 5

```
24mca39@mcaserver:~/nsal$ chmod a+rw testfile2
24mca39@mcaserver:~/nsal$ ls -l
total 0
-rw-rw-rw- 1 24mca39 24mca39 0 May  6 09:57 testfile2
-rw-rw-r-- 1 24mca39 24mca39 0 May  6 09:58 testfile3
24mca39@mcaserver:~/nsal$
```

b) 1

```
24mca39@mcaserver:~/nsal$ chmod 666 testfile3
24mca39@mcaserver:~/nsal$ ls -l
total 0
-rw-rw-rw- 1 24mca39 24mca39 0 May  6 09:57 testfile2
-rw-rw-rw- 1 24mca39 24mca39 0 May  6 09:58 testfile3
24mca39@mcaserver:~/nsal$
```

b) 2

```
24mca39@mcaserver:~/nsal$ chmod 754 testfile3
24mca39@mcaserver:~/nsal$ ls -l
total 0
-rw-rw-rw- 1 24mca39 24mca39 0 May  6 09:57 testfile2
-rwxr-xr-- 1 24mca39 24mca39 0 May  6 09:58 testfile3
24mca39@mcaserver:~/nsal$
```

c)

```
24mca39@mcaserver:~/nsal$ chmod 754 testfile2
24mca39@mcaserver:~/nsal$ ls -l
total 0
-rwxr-xr-- 1 24mca39 24mca39 0 May  6 09:57 testfile2
-rwxr-xr-- 1 24mca39 24mca39 0 May  6 09:58 testfile3
24mca39@mcaserver:~/nsal$
```

d)

```
24mca39@mcaserver:~/nsal$ mkdir dir1
24mca39@mcaserver:~/nsal$ find dir1 -type d -exec chmod 664 {} \;
24mca39@mcaserver:~/nsal$ ls -l
total 4
drw-rw-r-- 2 24mca39 24mca39 4096 May  6 10:10 dir1
-rwxr-xr-- 1 24mca39 24mca39  0 May  6 09:57 testfile2
-rwxr-xr-- 1 24mca39 24mca39  0 May  6 09:58 testfile3
24mca39@mcaserver:~/nsal$
```

7)

```
24mca39@mcaserver:~/nsal$ mkdir dir2
24mca39@mcaserver:~/nsal$ chown -R student:student dir2
24mca39@mcaserver:~/nsal$
```

8)

```
24mca39@mcaserver:~/nsal$ pwd
/home/2024/24mca39/nsal
24mca39@mcaserver:~/nsal$
```

9) i.

```
24mca39@mcaserver:~/nsal$ ls
dir1 dir2 testfile2 testfile3
24mca39@mcaserver:~/nsal$
```

ii.

```
24mca39@mcaserver:~/nsal$ ls -lt
total 8
drwxrwxr-x 2 24mca39 24mca39 4096 May  6 10:12 dir2
drw-rw-r-- 2 24mca39 24mca39 4096 May  6 10:10 dir1
-rwxr-xr-- 1 24mca39 24mca39  0 May  6 09:58 testfile3
-rwxr-xr-- 1 24mca39 24mca39  0 May  6 09:57 testfile2
24mca39@mcaserver:~/nsal$
```

iii.

```
24mca39@mcaserver:~/nsal$ ls -ls
total 8
drw-rw-r-- 2 24mca39 24mca39 4096 May  6 10:10 dir1
drwxrwxr-x 2 24mca39 24mca39 4096 May  6 10:12 dir2
-rwxr-xr-- 1 24mca39 24mca39  0 May  6 09:57 testfile2
-rwxr-xr-- 1 24mca39 24mca39  0 May  6 09:58 testfile3
24mca39@mcaserver:~/nsal$
```

iv.

```
24mca39@mcaserver:~/nsal$ ls -r
testfile3 testfile2 dir2 dir1
```

v.

```
24mca39@mcaserver:~/nsal$ ls -lsr
total 8
-rwxr-xr-- 1 24mca39 24mca39 0 May 6 09:58 testfile3
-rwxr-xr-- 1 24mca39 24mca39 0 May 6 09:57 testfile2
drwxrwxr-x 2 24mca39 24mca39 4096 May 6 10:12 dir2
drw-rw-r-- 2 24mca39 24mca39 4096 May 6 10:10 dir1
24mca39@mcaserver:~/nsal$
```

vi.

```
24mca39@mcaserver:~/nsal$ ls -lh
total 8.0K
drw-rw-r-- 2 24mca39 24mca39 4.0K May 6 10:10 dir1
drwxrwxr-x 2 24mca39 24mca39 4.0K May 6 10:12 dir2
-rwxr-xr-- 1 24mca39 24mca39 0 May 6 09:57 testfile2
-rwxr-xr-- 1 24mca39 24mca39 0 May 6 09:58 testfile3
```

10)

a.

```
24mca39@mcaserver:~/nsal$ ls > lsoutput
24mca39@mcaserver:~/nsal$ cat lsoutput
dir1
dir2
lsoutput
testfile2
testfile3
```

b.

```
24mca39@mcaserver:~/nsal$ ls -l >> lsoutput
24mca39@mcaserver:~/nsal$ cat lsoutput
dir1
dir2
lsoutput
testfile2
testfile3
total 12
drw-rw-r-- 2 24mca39 24mca39 4096 May 6 10:10 dir1
drwxrwxr-x 2 24mca39 24mca39 4096 May 6 10:12 dir2
-rw-rw-r-- 1 24mca39 24mca39 39 May 6 10:22 lsoutput
-rwxr-xr-- 1 24mca39 24mca39 0 May 6 09:57 testfile2
-rwxr-xr-- 1 24mca39 24mca39 0 May 6 09:58 testfile3
```

11)

```
24mca39@mcaserver:~/nsal$ ls -l|less
```

```
total 12
drw-rw-r-- 2 24mca39 24mca39 4096 May 6 10:10 dir1
drwxrwxr-x 2 24mca39 24mca39 4096 May 6 10:12 dir2
-rw-rw-r-- 1 24mca39 24mca39 322 May 6 10:23 lsoutput
-rwxr-xr-- 1 24mca39 24mca39 0 May 6 09:57 testfile2
-rwxr-xr-- 1 24mca39 24mca39 0 May 6 09:58 testfile3
(END)
```

12)

a.

```
24mca39@mcaserver:~/nsal$ echo "Hello,">file1
24mca39@mcaserver:~/nsal$ cat file1
Hello,
```

b.

```
24mca39@mcaserver:~/nsal$ nano file2
24mca39@mcaserver:~/nsal$ echo ", Greetings!!" > file2
24mca39@mcaserver:~/nsal$ cat file2
, Greetings!!
```

c.

```
24mca39@mcaserver:~/nsal$ cat file1 && echo -n "Nandana" && cat file2
Hello,
Nandana, Greetings!!
```

13)

```
24mca39@mcaserver:~/nsal$ cp file1 newfile
24mca39@mcaserver:~/nsal$ cp -n file1 newfile
24mca39@mcaserver:~/nsal$ cp -i file1 newfile
cp: overwrite 'newfile'? yes
24mca39@mcaserver:~/nsal$ cp -u file1 newfile
24mca39@mcaserver:~/nsal$ cp -f file1 newfile
24mca39@mcaserver:~/nsal$ ln file1 newfile
ln: failed to create hard link 'newfile': File exists
24mca39@mcaserver:~/nsal$ ln file1 newfile1
24mca39@mcaserver:~/nsal$ cp -R dir1 dir5
24mca39@mcaserver:~/nsal$ ls
dir1  dir5  file2  newfile  testfile2
dir2  file1  lsoutput  newfile1  testfile3
```

exp6

3)

```
24mca39@mcaserver:~$ netstat -t
Active Internet connections (w/o servers)
Proto Recv-Q Send-Q Local Address           Foreign Address         State
tcp        0      0 localhost:38904          localhost:27017         ESTABLISHED
tcp        0      0 localhost:35122          localhost:27017         ESTABLISHED
tcp        0      0 localhost:52802          localhost:27017         ESTABLISHED
```

8)

```
24mca39@mcaserver:~$ ifconfig
caliab49becf0a3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1450
    inet6 fe80::ecee:eeff:feee:eeee prefixlen 64 scopeid 0x20<link>
    ether ee:ee:ee:ee:ee:ee txqueuelen 0 (Ethernet)
    RX packets 12499 bytes 1018786 (1.0 MB)
    RX errors 0 dropped 1 overruns 0 frame 0
    TX packets 12622 bytes 1129398 (1.1 MB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

7)

```
24mca39@mcaserver:~$ route -n
Kernel IP routing table
Destination Gateway Genmask Flags Metric Ref Use Iface
0.0.0.0 192.168.20.100 0.0.0.0 UG 20100 0 0 eno1
10.1.188.192 0.0.0.0 255.255.255.192 U 0 0 0 *
10.1.188.193 0.0.0.0 255.255.255.255 UH 0 0 0 caliab49
becf0a3
10.1.188.195 0.0.0.0 255.255.255.255 UH 0 0 0 calie4fd
90626fa
169.254.0.0 0.0.0.0 255.255.0.0 U 1000 0 0 eno1
172.17.0.0 0.0.0.0 255.255.0.0 U 0 0 0 docker0
192.168.20.0 0.0.0.0 255.255.255.0 U 100 0 0 eno1
```

5)

```
24mca39@mcaserver:~$ ip route
default via 192.168.20.100 dev eno1 proto static metric 20100
blackhole 10.1.188.192/26 proto 80
10.1.188.193 dev caliab49becf0a3 scope link
10.1.188.195 dev calie4fd90626fa scope link
169.254.0.0/16 dev eno1 scope link metric 1000
172.17.0.0/16 dev docker0 proto kernel scope link src 172.17.0.1 linkdown
192.168.20.0/24 dev eno1 proto kernel scope link src 192.168.20.100 metric 100
```

1)

```
24mca39@mcaserver:~$ ping 192.168.1.1
PING 192.168.1.1 (192.168.1.1) 56(84) bytes of data.
```

6)

```
24mca39@mcaserver:~$ nslookup google.com
;; Got SERVFAIL reply from 127.0.0.53
Server: 127.0.0.53
Address: 127.0.0.53#53

** server can't find google.com: SERVFAIL
```

exp7

```
24mca39@mcaserver:~$ nano hellomake.c
24mca39@mcaserver:~$ nano hellofunc.c
24mca39@mcaserver:~$ nano hellomake.h
24mca39@mcaserver:~$ ls
adbms  hellofunc.c  hellomake.h  nsa  pylab
dsiab  hellomake.c  javalab     nsal  snap
24mca39@mcaserver:~$ gcc -o hellomake hellomake.c hellofunc.c -I.
24mca39@mcaserver:~$ sudo ./hellomake
Hello makefiles!
```