- Compiling using Makefile :

```
hp@hp-HP-Pavilion-Laptop-15-cc1xx:~/DD/ques2_partb$ make
make -C /lib/modules/5.8.0-49-generic/build M=/home/hp/DD/ques2_partb modules
make[1]: Entering directory '/usr/src/linux-headers-5.8.0-49-generic'
  CC [M]  /home/hp/DD/ques2_partb/ques2_partb.o
  MODPOST /home/hp/DD/ques2_partb/Module.symvers
  CC [M]  /home/hp/DD/ques2_partb/ques2_partb.mod.o
  LD [M]  /home/hp/DD/ques2_partb/ques2_partb.ko
make[1]: Leaving directory '/usr/src/linux-headers-5.8.0-49-generic'
```

- Inserting the module  ques2_partb.ko using insmod command :

```
hp@hp-HP-Pavilion-Laptop-15-cc1xx:~/DD/ques2_partb$ sudo insmod ques2_partb.ko
[sudo] password for hp:
hp@hp-HP-Pavilion-Laptop-15-cc1xx:~/DD/ques2_partb$ lsmod
Module                  Size  Used by
ques2_partb            16384  0
nfnetlink_log          20480  0
nfnetlink              20480  1 nfnetlink_log
btrfs                1318912  0
blake2b_generic        20480  0
```

- Checking if the module is inserted using the lsmod command and the output of the command is shown below :

```
hp@hp-HP-Pavilion-Laptop-15-cc1xx:~/DD/ques2_partb$ lsmod
Module                  Size  Used by
ques2_partb            16384  0
nfnetlink_log          20480  0
nfnetlink              20480  1 nfnetlink_log
btrfs                1318912  0
blake2b_generic        20480  0
xor                    24576  1 btrfs
raid6_pq              114688  1 btrfs
ufs                    81920  0
qnx4                   16384  0
hfsplus               110592  0
hfs                    61440  0
minix                  45056  0
ntfs                  106496  0
msdos                  20480  0
```

We can see that the ques2_partb module is inserted successfully.

- Next, checking the messages printed in the log file :

```
hp@hp-HP-Pavilion-Laptop-15-cc1xx:~/DD/ques2_partb$ sudo dmesg | tail -3
[19371.527358] Loading the ques2_partb module...
[19371.527359] DD Lab Exam
[19371.527360] My name is Arul Lakshmi PK .
```

Name is printed in the logfile.

- Removing the module and checking if its removed successfully :

```
hp@hp-HP-Pavilion-Laptop-15-cc1xx:~/DD/ques2_partb$ sudo rmmod ques2_partb.ko
hp@hp-HP-Pavilion-Laptop-15-cc1xx:~/DD/ques2_partb$ sudo dmesg | tail -2
[19371.527360] My name is Arul Lakshmi PK .
[19408.518632] Goodbye...See you later!!
hp@hp-HP-Pavilion-Laptop-15-cc1xx:~/DD/ques2_partb$ lsmod
Module                  Size  Used by
nfnetlink_log          20480  0
nfnetlink              20480  1 nfnetlink_log
btrfs                1318912  0
blake2b_generic        20480  0
xor                    24576  1 btrfs
raid6_pq              114688  1 btrfs
ufs                    81920  0
qnx4                   16384  0
hfsplus               110592  0
hfs                    61440  0
minix                  45056  0
```

"Goodbye..See you later !!" message is printed in the log file after the module is removed and we can also see that it is not present when checked with lsmod command.