

Device Driver

End Sem Lab Exam

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CED171047

1.

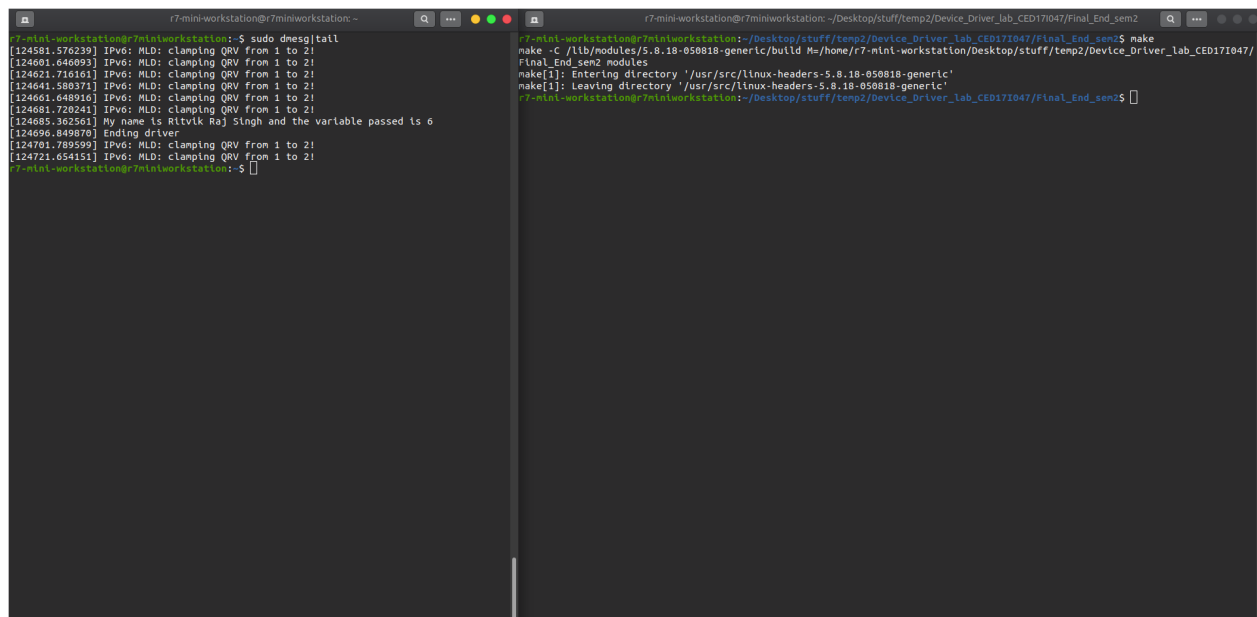
(a) Write a module that can take an integer parameter when it is loaded with insmod command.

AND

(b) Write a module which prints your name in log.

Sol :

1 .Compilation , Make



```
r7-mini-workstation@r7miniworkstation: ~$ sudo dmesg|tail
[124581.576239] IPv6: MLD: clamping QRV from 1 to 2!
[124601.646093] IPv6: MLD: clamping QRV from 1 to 2!
[124621.710101] IPv6: MLD: clamping QRV from 1 to 2!
[124641.580371] IPv6: MLD: clamping QRV from 1 to 2!
[124661.648910] IPv6: MLD: clamping QRV from 1 to 2!
[124681.720241] IPv6: MLD: clamping QRV from 1 to 2!
[124685.362591] My name is Ritvik Raj Singh and the variable passed is 6
[124696.849870] Ending driver
[124701.789599] IPv6: MLD: clamping QRV from 1 to 2!
[124721.654151] IPv6: MLD: clamping QRV from 1 to 2!
r7-mini-workstation@r7miniworkstation: ~$

r7-mini-workstation@r7miniworkstation: ~/Desktop/stuff/temp2/Device_Driver_lab_CED171047/Final_End_sem2$ make
make -C /lib/modules/5.8.18-050818-generic/built M=/home/r7-mini-workstation/Desktop/stuff/temp2/Device_Driver_lab_CED171047/Final_End_sem2 modules
make[1]: Entering directory '/usr/src/linux-headers-5.8.18-050818-generic'
make[1]: Leaving directory '/usr/src/linux-headers-5.8.18-050818-generic'
r7-mini-workstation@r7miniworkstation: ~/Desktop/stuff/temp2/Device_Driver_lab_CED171047/Final_End_sem2$
```

2 .Inserting Module and Log Output

```
r7-mini-workstation@r7miniworkstation:~$ sudo dmesg|tail
[124581.576239] IPv6: MLD: clamping QRV from 1 to 2!
[124601.646093] IPv6: MLD: clamping QRV from 1 to 2!
[124621.716161] IPv6: MLD: clamping QRV from 1 to 2!
[124641.580371] IPv6: MLD: clamping QRV from 1 to 2!
[124661.648916] IPv6: MLD: clamping QRV from 1 to 2!
[124681.720241] IPv6: MLD: clamping QRV from 1 to 2!
[124685.362561] My name is Ritvik Raj Singh and the variable passed is 6
[124696.849870] Ending driver
[124701.789599] IPv6: MLD: clamping QRV from 1 to 2!
[124721.654151] IPv6: MLD: clamping QRV from 1 to 2!
r7-mini-workstation@r7miniworkstation:~$ sudo dmesg|tail
[124621.716161] IPv6: MLD: clamping QRV from 1 to 2!
[124641.580371] IPv6: MLD: clamping QRV from 1 to 2!
[124661.648916] IPv6: MLD: clamping QRV from 1 to 2!
[124681.720241] IPv6: MLD: clamping QRV from 1 to 2!
[124685.362561] My name is Ritvik Raj Singh and the variable passed is 6
[124696.849870] Ending driver
[124701.789599] IPv6: MLD: clamping QRV from 1 to 2!
[124721.654151] IPv6: MLD: clamping QRV from 1 to 2!
[124741.448924] My name is Ritvik Raj Singh and the variable passed is 123
[124741.723911] IPv6: MLD: clamping QRV from 1 to 2!
r7-mini-workstation@r7miniworkstation:~$

r7-mini-workstation@r7miniworkstation:~/Desktop/stuff/temp2/Device_Driver_lab_CED171047/Final_End_sem2$ make
make -C /lib/modules/5.8.18-050818-generic/build M=/home/r7-mini-workstation/Desktop/stuff/temp2/Device_Driver_lab_CED171047/Final_End_sem2 modules
make[1]: Entering directory '/usr/src/linux-headers-5.8.18-050818-generic'
make[1]: Leaving directory '/usr/src/linux-headers-5.8.18-050818-generic'
r7-mini-workstation@r7miniworkstation:~/Desktop/stuff/temp2/Device_Driver_lab_CED171047/Final_End_sem2$ sudo insmod Q1.ko myvar=123
r7-mini-workstation@r7miniworkstation:~/Desktop/stuff/temp2/Device_Driver_lab_CED171047/Final_End_sem2$
```

3 .Delete Module

```
r7-mini-workstation@r7miniworkstation:~$ sudo dmesg|tail
[124581.576239] IPv6: MLD: clamping QRV from 1 to 2!
[124601.646093] IPv6: MLD: clamping QRV from 1 to 2!
[124621.716161] IPv6: MLD: clamping QRV from 1 to 2!
[124641.580371] IPv6: MLD: clamping QRV from 1 to 2!
[124661.648916] IPv6: MLD: clamping QRV from 1 to 2!
[124681.720241] IPv6: MLD: clamping QRV from 1 to 2!
[124685.362561] My name is Ritvik Raj Singh and the variable passed is 6
[124696.849870] Ending driver
[124701.789599] IPv6: MLD: clamping QRV from 1 to 2!
[124721.654151] IPv6: MLD: clamping QRV from 1 to 2!
r7-mini-workstation@r7miniworkstation:~$ sudo dmesg|tail
[124621.716161] IPv6: MLD: clamping QRV from 1 to 2!
[124641.580371] IPv6: MLD: clamping QRV from 1 to 2!
[124661.648916] IPv6: MLD: clamping QRV from 1 to 2!
[124681.720241] IPv6: MLD: clamping QRV from 1 to 2!
[124685.362561] My name is Ritvik Raj Singh and the variable passed is 6
[124696.849870] Ending driver
[124701.789599] IPv6: MLD: clamping QRV from 1 to 2!
[124721.654151] IPv6: MLD: clamping QRV from 1 to 2!
[124741.448924] My name is Ritvik Raj Singh and the variable passed is 123
[124741.723911] IPv6: MLD: clamping QRV from 1 to 2!
r7-mini-workstation@r7miniworkstation:~$ sudo dmesg|tail
[124641.580371] IPv6: MLD: clamping QRV from 1 to 2!
[124661.648916] IPv6: MLD: clamping QRV from 1 to 2!
[124681.720241] IPv6: MLD: clamping QRV from 1 to 2!
[124685.362561] My name is Ritvik Raj Singh and the variable passed is 6
[124696.849870] Ending driver
[124701.789599] IPv6: MLD: clamping QRV from 1 to 2!
[124721.654151] IPv6: MLD: clamping QRV from 1 to 2!
[124741.448924] My name is Ritvik Raj Singh and the variable passed is 123
[124741.723911] IPv6: MLD: clamping QRV from 1 to 2!
[124752.329393] Ending driver
r7-mini-workstation@r7miniworkstation:~$

r7-mini-workstation@r7miniworkstation:~/Desktop/stuff/temp2/Device_Driver_lab_CED171047/Final_End_sem2$ make
make -C /lib/modules/5.8.18-050818-generic/build M=/home/r7-mini-workstation/Desktop/stuff/temp2/Device_Driver_lab_CED171047/Final_End_sem2 modules
make[1]: Entering directory '/usr/src/linux-headers-5.8.18-050818-generic'
make[1]: Leaving directory '/usr/src/linux-headers-5.8.18-050818-generic'
r7-mini-workstation@r7miniworkstation:~/Desktop/stuff/temp2/Device_Driver_lab_CED171047/Final_End_sem2$ sudo insmod Q1.ko myvar=123
r7-mini-workstation@r7miniworkstation:~/Desktop/stuff/temp2/Device_Driver_lab_CED171047/Final_End_sem2$ sudo rmmod Q1
r7-mini-workstation@r7miniworkstation:~/Desktop/stuff/temp2/Device_Driver_lab_CED171047/Final_End_sem2$
```