**For Q3:**

Include header files.

Define module initialization function

Define module cleanup function

Add MODULE\_LICENSE and MODULE\_AUTHOR

To compile the module, run the following command:

1. Make

This will generate a “q3.ko” file, which can be installed into the kernel using the ‘insmod’ command:

1. Sudo insmod q3.ko

To remove the module from the kernel, use the ‘rmmod’ command:

1. Sudo rmmod q3

And now run dmesg.

**For Q1:**

We have used semaphores using #include <semaphore.h>

We will only permit 4 philosopher to enter room in order to prevent deadlock to solve the problem.

For second part:

At one time only 2 philosopher will be able to access sauce bowls and also used semaphore for the same.