

Assignment 4

- The 2 files are **P.c** & **C.c** as required by the problem statement.
- The 2 system calls are **writer()** and **reader()**.
- **P.c** reads 8 bytes from **/dev/urandom** which are passed to **writer()**.
- **writer()** system call accepts long int (8 bytes).
- **writer()** uses **kmalloc()** to store these bytes and returns the address as a long pointer.
- **P.c** sends this address to **C.c** in a message queue.
- **C.c** calls and passes this long pointer to **reader** system call which reads the dynamically allocated bytes. Then **reader()** frees the allocated memory using **kfree()**.
- Semaphores are used to call the system calls so they don't try to access the same memory simultaneously.

Instruction to Run:

1. run **make** in terminal.
2. run **./P** for the producer that calls **writer()**.
3. run **./C** for the consumer that calls **reader()**.