

# OPERATING SYSTEMS LAB

## Ex:5 Producer Consumer Problem using pthreads

- a. Create a process that has multiple producer and consumer threads which share a common bounded buffer. A producer thread performs the following tasks:

1. randomly sleeps for some time
2. checks if the buffer is not full
3. If yes, writes a message in the buffer
4. If no, waits until the buffer is not full to write a message

A consumer thread performs the following tasks:

1. randomly sleeps for some time
2. checks if the buffer is nonempty
3. If yes, reads a message from the buffer
4. If no, waits until the buffer is nonempty to read a message

**Hint:** Apart from the `pthread mutex variable` discussed in the class, use

- i. `pthread_cond_wait()`
- ii. `pthread_cond_signal()`