

Operating System Labs July-Dec-2017

Assignment 3

Exercise 1: Implement multi-threaded and multi-queue Round Robin scheduling algorithm by creating three threads in main program. Thread one will generate one or many processes after some time slice (using random numbers for process arrival time starting from 0 to n, its Burst time) and you can assume any suitable time quantum. The generated arrival time should be in increasing order. This thread should create two process queues such that process generated at odd position goes to first queue and others goes to second queue.

The other two thread perform the actual execution of processes in one queue as per Round Robin algorithm and display the process execution sequence. At last, main program will display various performance matrices merged for both process queues including completion time, turnaround time, waiting time, response time and their averages for this execution.

Note: Ideally multi-queue scheduling uses different scheduling algorithms in different queue as each queue contains processes of different nature [priority, size, owner (system or user) etc.]