Operating System

Assignment 5

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Q) Explain in the report how could this be exploited by a process

This can be exploited by a process, as just when the time-slice is about to expire, the process can voluntarily relinquish control of the CPU, and get inserted in the same queue again. If it ran as normal, then due to time-slice getting expired, it would have been preempted to a lower priority queue. The process, after exploitation, will remain in the higher priority queue, so that it can run again sooner than it should have.

COMPARING THE WAIT TIMES

DEFAULT - WAIT TIME: **7280**

FCFS - WAIT TIME: **9502**

PBS - WAIT TIME: **6254**

We can see that the wait time for FCFS is largest, which is justified as if a process that requires a large I/O time comes first then it makes all the other processes wait for the CPU. The wait time for PBS and DEFAULT is lesser than that for FCFS, also PBS is preemptive and makes lesser context switches than Round Robin hence is slightly faster. Also for the case where the PBS had all the processes with the same priority, the wait time for DEFAULT **(7450)** and PBS **(7692)** was nearly the same as all the processes initially have the same priority and for both the algorithms the processes are scheduled in Round Robin (DEFAULT) fashion.