

# MLQ - Multilevel Queue Scheduling (preemptive)

- ➔ Associate a priority with each thread and execute highest priority thread first. If same priority, do round-robin.



- ⦿ **Problem 1 :** starvation of low priority thread
- ⦿ **Problem 2 :** (possibly) starvation of high priority thread
- ⦿ **Problem 3 :** how to decide on the priority?

# MLQ - Starvation of high priority thread

1. T1 (low priority) starts, runs and acquires the lock 1
2. T2 (medium priority) starts, preempts the CPU and runs
3. T3 (high priority) starts, preempts the CPU, runs but gets blocked while trying to acquire the lock 1
4. T2 is elected to run (highest priority thread to be ready to run)

⦿ **Problem** : starvation of a high priority thread

✓ **Solution** : priority donation