ROUND ROBIN SCHEDULING

Write a program to implement the Round Robin CPU scheduling. Round Robin is a scheduling algorithm designed for time sharing systems. CPU switches between the processes. When the time quantum expires, the CPU switches to another job. A small unit of time called a time quantum or time slice.

A time quantum is generally is a Circular queue new processes are added to the tail of the ready queue. If the process may have a CPU burst of less than one time slice then the process releases the CPU voluntarily. The scheduler will then process to next process ready queue otherwise; the process will be put at the tail of the ready queue.

Requirements:

You are required to build a simulator to calculate the following criteria after running for a sufficient time period.

Thoughput: Number of jobs completed by the CPU with in a time period.

Turnaround time: Time interval between the submission of the process and the time of the completion.

Turnaround time = Finished time – arrival time

Waiting time: it is the sum of the periods spent waiting by a process in the ready queue

Waiting time=Starting time- arrival time

CPU Utilization: This is the percentage of time that the processor is busy. CPU utilization may range from 0 to 100%