

CPU Scheduling Algorithms

Objective

To schedule the processes using Shortest Remaining Time First (SRTF) scheduling algorithm.

Description

Shortest Remaining Time First algorithm is the preemptive version of shortest job first scheduling. In SRTF, the execution of the process can be stopped after certain amount of time. At the arrival of every process, the short-term scheduler schedules the process with the least remaining burst time among the list of available processes and the running process.

Once all the processes are available in the ready queue, no preemption will be done, and the algorithm will work as SJF scheduling. The context of the process is saved in the Process Control Block when the process is removed from the execution and the next process is scheduled. This PCB is accessed on the next execution of this process.

Quiz Task

Marks 20

Suppose there are five processes in the ready queue with different arrival times and burst times.

Process ID	Arrival Time	Burst Time
pid_0	2	6
pid_1	5	2
pid_2	1	8
pid_3	0	3
pid_4	4	4

Calculate the waiting time, turn-around time, average waiting time and average turn-around time for the above set of processes in the ready queue.

Good Luck.