



RESEARCH ARTICLE

Comparative Study of Different CPU Scheduling Algorithms

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Abstract— In Multiprogramming operating system, CPU scheduling plays a very important role. CPU scheduling deals with the problem that to which process the CPU should be allocated. For scheduling the processes in different ways, there are many different scheduling algorithms.

This article deals with various scheduling algorithms like First-Come-First-Serve (FCFS) scheduling algorithm, Shortest Job First (SJF) scheduling algorithm, Priority scheduling algorithm, Round Robin (R-R) scheduling algorithm, Multilevel Queue scheduling algorithm and Multilevel Feedback Queue scheduling algorithm.

FCFS scheduling algorithm is based on First-in-first-out concept and is non-pre-emptive scheduling algorithm. It is generally suitable for batch systems. SJF scheduling algorithm can be either pre-emptive or non-pre-emptive and it is based on burst time of the processes. Priority scheduling algorithm is necessarily a form of pre-emptive scheduling algorithm and it is based on the priorities given to the processes. R-R scheduling algorithm is also a pre-emptive scheduling algorithm and is based on the given time-quantum. It is generally suitable for time sharing systems. In multilevel queue scheduling, when the process enters in the system, it is permanently assigned to a queue depending upon its nature. It is pre-emptive in nature. Multilevel feedback queue is also pre-emptive and it allows the processes to move between queues.

Keywords— Scheduling algorithm; First-Come-First-Serve scheduling; Shortest Job First scheduling; Priority scheduling; Round Robin scheduling; Multilevel Queue scheduling; Multilevel Feedback Queue scheduling

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