Improvised Optimum Multilevel Dynamic Round Robin Algorithm for Optimizing CPU Scheduling

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Abstract

CPU scheduling has strong effect on resource utilization as well as overall performance of the system. In order to simulate the behavior of multiple jobs in a multiprogramming computer system needs to be specified. The most important aspect of job scheduling is the ability to create a multi-tasking environment. The intention should be allowed as many as possible running processes at all time in order to make best use of CPU. Round Robin algorithm performs optimally in timeshared systems, but it is not suitable for soft real time systems, because it gives more number of context switches, larger waiting time and larger response time. The main objective of this paper is to improve the previous OMDRRS with calculates intelligent time slice and warps after every round of execution and assumed that all the processes were come at randomly as well as all the processes have priority. In order to simulate the behavior of various CPU scheduling algorithms and to improve Round Robin scheduling algorithm using dynamic time slice concept, we purpose new improved CPU scheduling algorithm called “Optimum Dynamic Round Robin Scheduling” (OMDRR). Our experimental results show that our proposed algorithm performs better in terms of reducing the number of context switch,
average waiting time and average turnaround time.

References

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Index Terms

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Keywords

CPU Scheduling, Round Robin Scheduling, OMDRR, Context Switch, Turn Around Time, Waiting Time