Abstract

CPU scheduling has valiant effect on resource utilization as well as overall quality of the system. Round Robin algorithm performs optimally in timeshared systems, but it performs more number of context switches, larger waiting time and larger response time. The devised tool "OMDRRS" was utilized to simulate the four algorithms (FCFS, SJF, ROUND ROBIN & Proposed Dynamic Round Robin Algorithm) utilizing either manual entered process with burst time as well as system generated processes with randomly generated burst time. In order to simulate the behavior of various CPU scheduling algorithms and to improve Round Robin scheduling algorithm using dynamic time slice concept, in this paper we produce the implementation of new CPU scheduling algorithm called An Optimum Multilevel Dynamic Round Robin Scheduling (OMDRRS), which calculates intelligent time slice and warps after every round of execution. The results display the robustness of this software, especially for academic, research and experimental use, as well as proving the desirability and efficiency of the probabilistic algorithm over the other existing techniques and it is observed that this OMDRRS projects good performance as compared to the other existing CPU scheduling algorithms.
Simulation of an Optimum Multilevel Dynamic Round Robin Scheduling Algorithm

- http://www.codeplex.com/cpuss
- http://www.ontko.com/moss

Index Terms

Computer Science

Algorithms
Simulation of an Optimum Multilevel Dynamic Round Robin Scheduling Algorithm

Keywords
- Operating System
- FCFS
- SJF
- Dynamic Time Slice
- Context Switch
- Waiting time
- Turnaround time