Abstract

Process management is considered as an important function in the operating system where several scheduling algorithms are used to maintain it. Round Robin is one of the most conventional CPU scheduling algorithms which is frequently used in operating system. The performance of round robin algorithm differs on the choice of time quantum which is clarified by the researchers. In this paper, a new round robin scheduling algorithm has been proposed where time quantum is selected dynamically. An experimental evaluation has been conducted to evaluate the performance of the proposed algorithm. Also a comparative analysis has been performed where the obtained result of this proposed algorithm has been compared with some existing algorithms. The experimental result shows that the performance of the proposed algorithm performs much better than some mentioned algorithms in terms of average waiting time and average turnaround time.
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Index Terms

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Keywords

Operating System, CPU scheduling, Round Robin, Time Quantum, Waiting Time, Turnaround time, Context Switching