Abstract

The Round Robin (RR) CPU scheduling algorithm is a fair scheduling algorithm that gives equal time quantum to all processes. The choice of the time quantum is critical as it affects the algorithm's performance. This paper proposes a new algorithm that further improved on the Improved Round Robin CPU (IRR) scheduling algorithm by Manish and AbdulKadir. The proposed algorithm was implemented and benchmarked against five other algorithms available in the literature. The proposed algorithm compared with the other algorithms, produces minimal average waiting time (AWT), average turnaround time (ATAT), and number of context switches (NCS). Based on these results, the proposed algorithm should be preferred over other scheduling algorithms for systems that adopt RR CPU scheduling.

References


Index Terms

Computer Science

Algorithms

Keywords

Operating system  Scheduling algorithms  Round Robin  Time quantum  Time sharing systems

Real time systems