

Algorithm	Criteria	Effect	Advantages	Disadvantages
First-Come, First-Served (FCFS)	Arrival time	Non-preemptive, processes are executed in the order of arrival	Easy to understand and implement	Poor performance for processes with long execution times, can cause Convoy effect
Shortest-Job-First (SJF)	Burst time	Non-preemptive or preemptive, processes are executed in order of shortest burst time	Reduces waiting time and average turnaround time, efficient for batch processing	Difficult to predict the exact burst time, not suitable for real-time systems, can cause starvation
Priority Scheduling	Priority level	Non-preemptive or preemptive, processes are executed in order of priority level	Allows high-priority processes to execute first, suitable for real-time systems	Low-priority processes may never get executed, can cause starvation
Round-Robin (RR)	Time quantum	Preemptive, each process is executed for a fixed time quantum	Fair share of CPU time for all processes, suitable for time-sharing systems	High context-switching overhead, performance depends on time quantum value
Multilevel Queue	Different criteria for each queue	Non-preemptive or preemptive, processes are assigned to different queues based on their characteristics	Provides separate queues for different types of processes, improves throughput	Complex to implement and maintain, can cause starvation

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Multilevel Feedback Queue	Different criteria for each queue and feedback mechanism	Preemptive, processes are assigned to different queues based on their characteristics and can move between queues based on their behavior	Provides dynamic priority adjustment and feedback mechanism, improves responsiveness	Complex to implement and maintain, can cause starvation
Guaranteed Scheduling	Guaranteed CPU time	Preemptive, each process is guaranteed a minimum amount of CPU time	Provides fairness and response time guarantees, suitable for real-time systems	Overhead of guaranteeing CPU time, can cause low CPU utilization
Lottery Scheduling	Lottery tickets	Preemptive, processes are assigned lottery tickets and CPU time is allocated based on the number of tickets	Provides probabilistic fairness and avoids starvation, suitable for resource allocation problems	Overhead of ticket allocation and bookkeeping