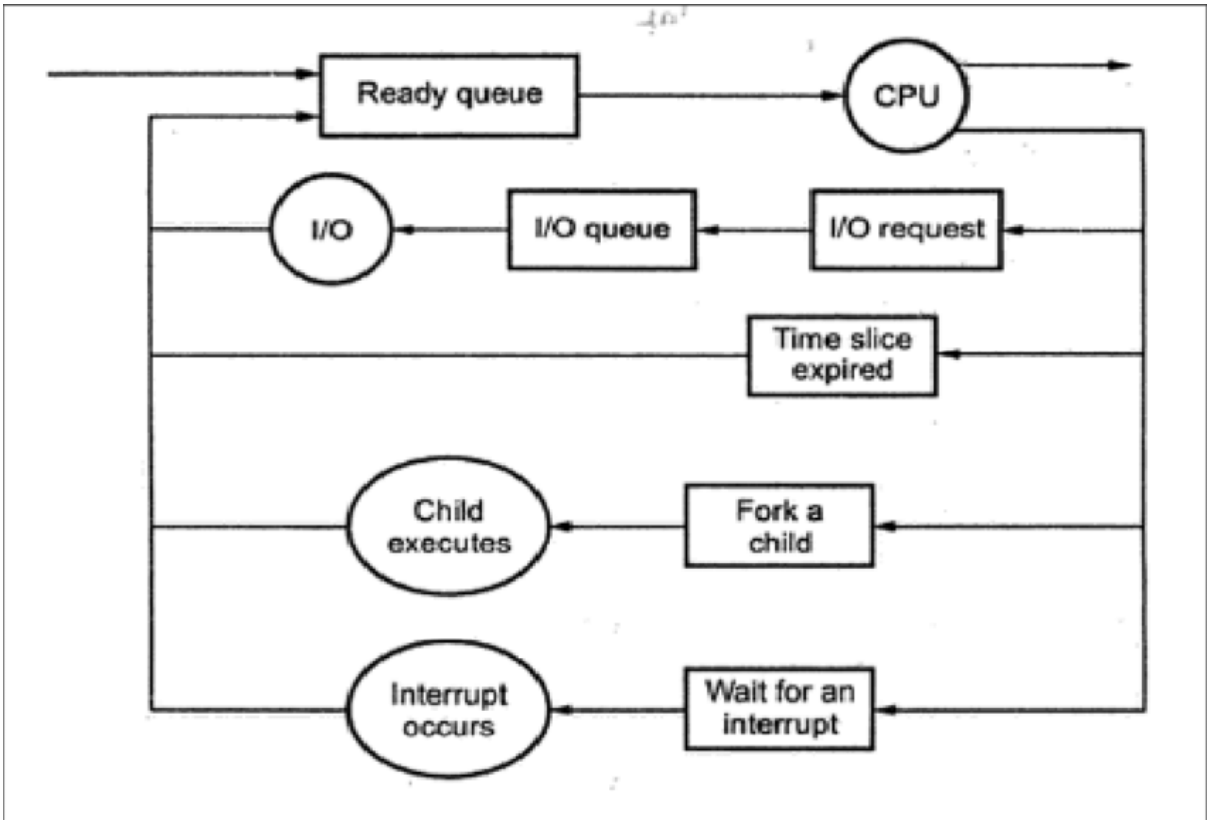
SCHEDULER



Degree of multiprogramming describes the maximum number of process that a single processor system can accommodate efficiently

a) it depends on amount of memory available

b) OS by which resources are allocated to processes

c) program I/O needs, program CPU needs, memory and disk access speed

*Scheduler in OS are special system software

*They help in scheduling the process in various ways

*They are mainly responsible for selecting eligible process from the system

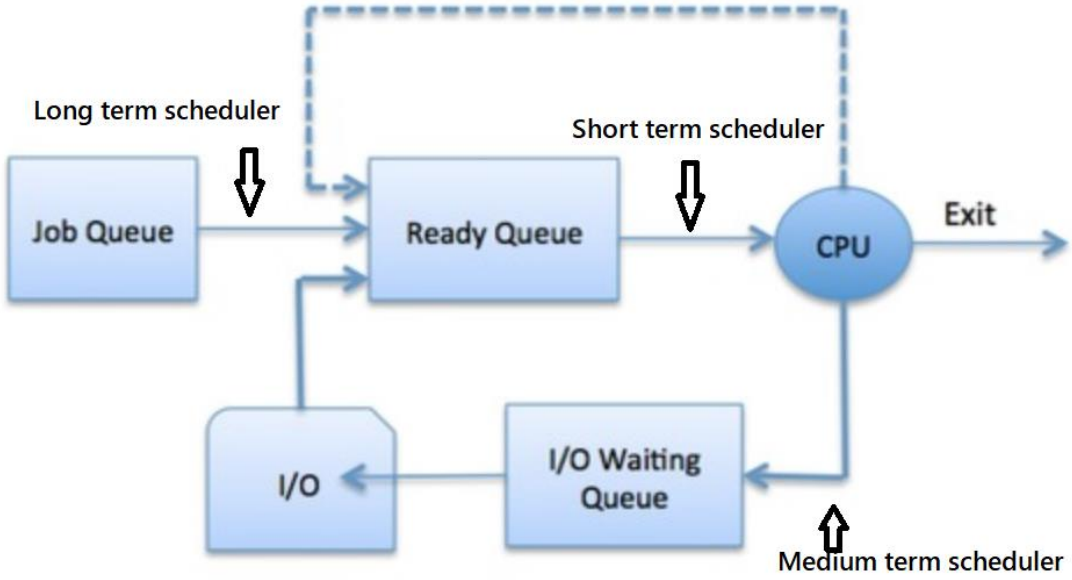
and deciding which process to run

Types

Long-term / Job schedulers

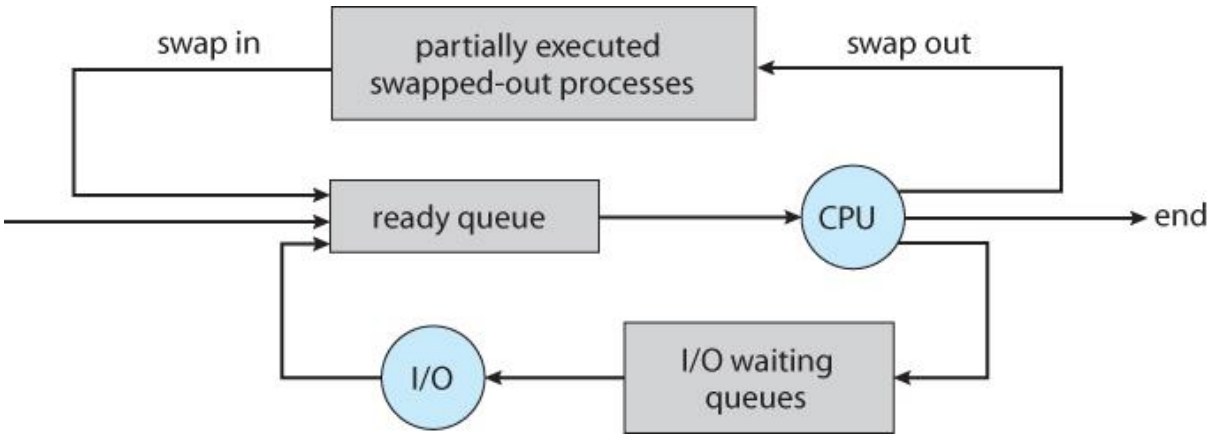
Short-term / CPU schedulers

Medium-term Scheduler



Scheduler manages the running process in the system.

Scheduler is an integral part of OS



Job queue is a data structure maintained by job scheduler software containing jobs to run.

Users submit their programs that they want executed, "jobs", to the queue for batch processing. The scheduler software maintains the queue as the pool of jobs available for it to run.

Mid-term scheduler is used for swapping in and outing process from “swap area”.

Swap space is **the area on a hard disk which is part of the Virtual Memory of your machine**, which is a combination of accessible physical memory (RAM) and the swap space. Swap space temporarily holds memory pages that are inactive.

Medium term scheduler can be added if degree of multiprogramming needs to decrease.

Swapping: Remove process from memory, store on disk, bring back in from disk to continue processing.

Long-term	Short-term	Medium-term
also known as a job scheduler	also known as CPU scheduler	also called swapping scheduler
Speed is less compared to the short term scheduler.	Speed is the fastest compared to the short-term and medium-term scheduler.	It offers medium speed.
Allow you to select processes from the loads and pool back into the memory	It only selects processes that is in a ready state of the execution.	It helps you to send process back to memory.