

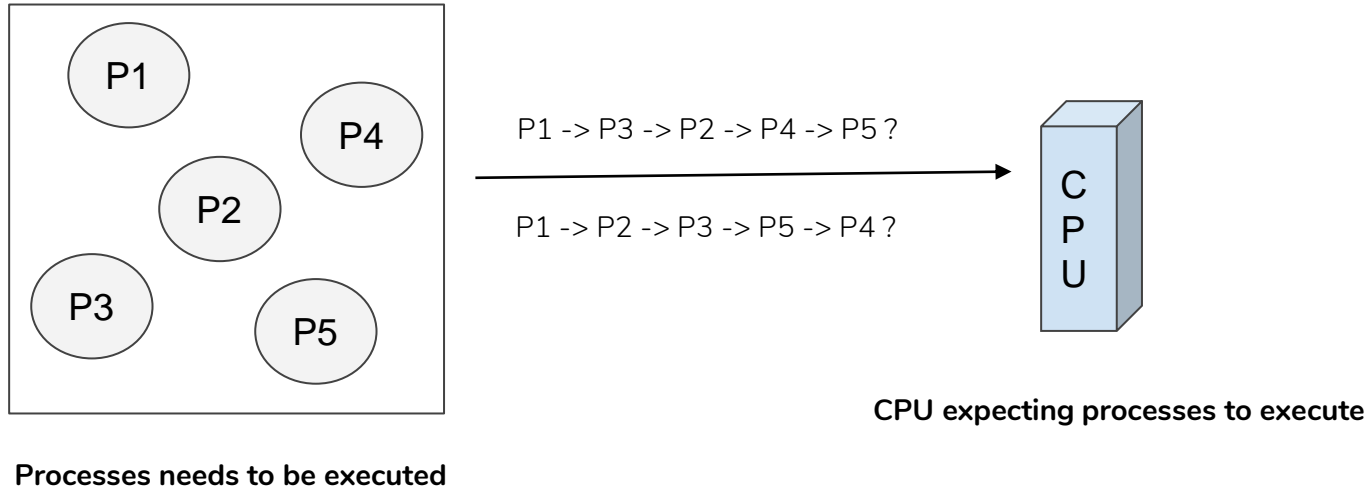
Process





Process Scheduling

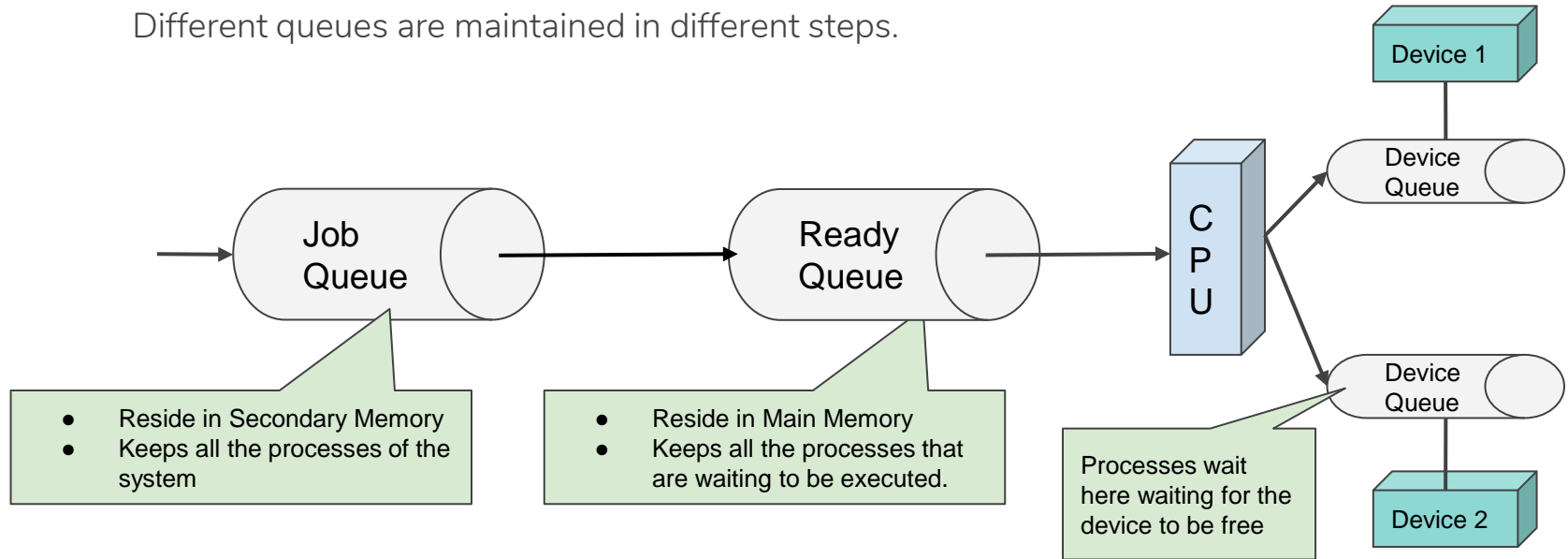
Multiple process is ready to execute.
But, which Process should be executed first?



Scheduling Queue

Stores the processes in different steps of OS.

Different queues are maintained in different steps.



Queueing Diagram

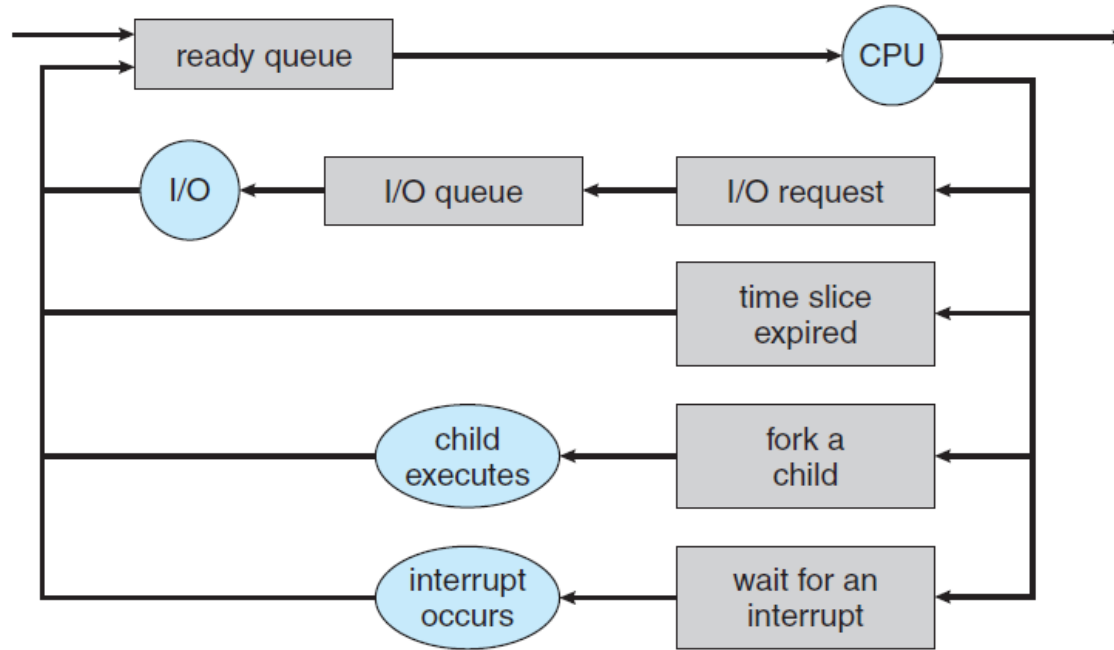
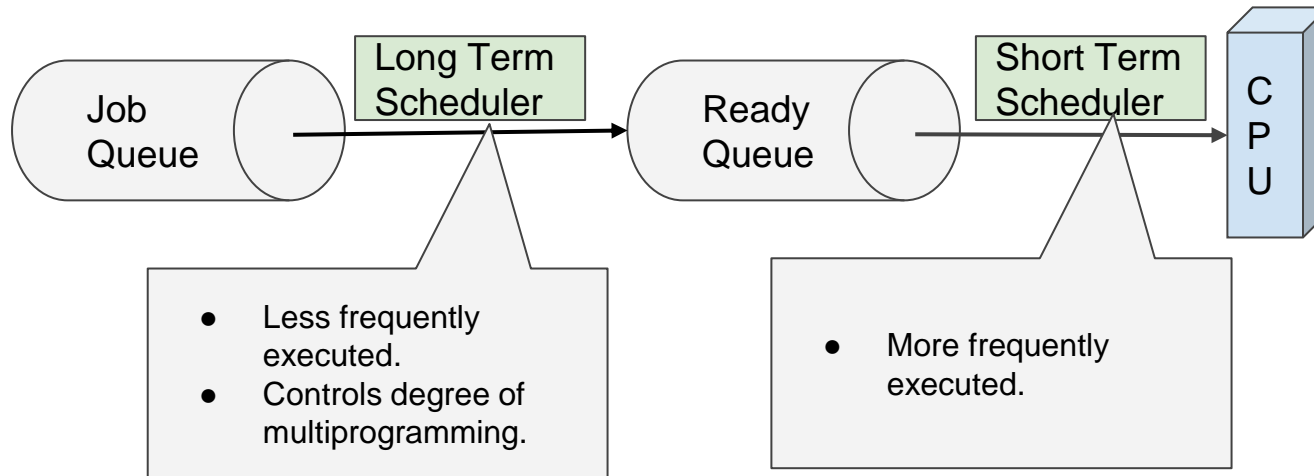


Fig: Representation of Process Scheduling using Queueing-Diagram

Schedulers

Schedulers select processes from different queues to be passed to the next phase.





CPU Bound Vs I/O Bound Process

CPU bound processes spend more time doing computation using processors than I/O.

I/O bound processes spend more time in I/O than CPU.

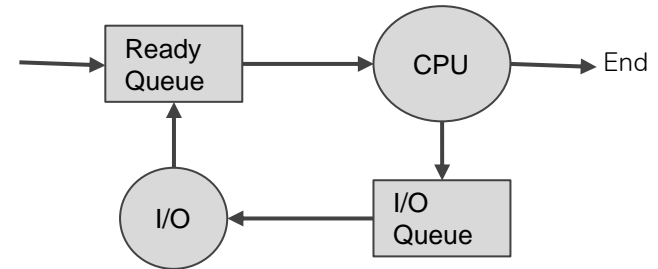
Long Term Scheduler must select wisely !

What will happen if all processes are I/O bound ?

=> Empty ready queue

What will happen if all processes are CPU bound ?

=> Empty waiting queue





Medium Term Scheduler

Time-sharing system may use this scheduler.

Swapping reduce the degree of multiprogramming.

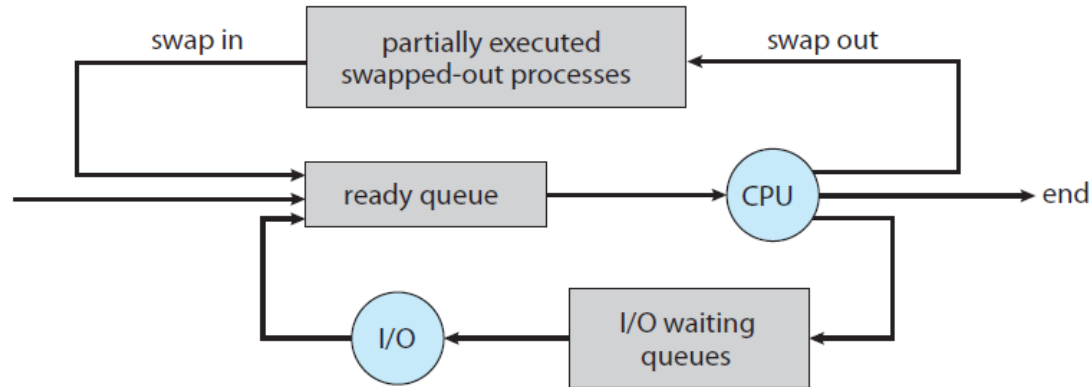


Fig: Addition of swapping in Queueing-Diagram



Context Switch

When an interrupt occurs, the system needs to save the current **context** (state) of the process running on the CPU.

- Context Switch: 1. Storing currently executed process context
2. Restoring the next process context to execute

