**PROCESS SCHEDULING**

It is the activity of process manager that handles the removal of the running processes from the CPU and selection of another processes on the basis of particular strategy.

It is an essential part of multi-programming Operating System. Such O.S. allow more than one process to be loaded into executable memory at a time and loaded process shares the CPU using time multiplexing.

**SCHEDULING QUEUES**

* Operating System maintains all PCB’s in process scheduling queues.
* Operating System maintains a separate queue for each of the process state.
* PCB’s of all processes in the same execution state are placed in same queue.
* When the process state is changed, its PCB is unlinked from its current queue and moved to new state queue.
* Operating System maintains the following important process scheduling queues.

1. JOB QUEUE

This queue keeps all the processes in the system as processes enter the system they are put into job queue.

1. READY QUEUE

Keeps the set of all processes residing in main memory, ready and waiting to execute. A new process is always put in this queue.

1. DEVICE QUEUE

The list of processes waiting for a particular I/O device is called device queue.

**WORKING OF SCHEDULING QUEUES**

A new process is initially put into ready queue. It waits in ready queue until it is selected for execution (or dispatched). Once the process is assigned to CPU and is executing, one of several events could occur.

1. The process could issue an I/O request and then be placed in an I/O queue.
2. Process could create a new sub process and wait for its termination.
3. The process could be removed forcibly from the user, as a result of an interrupt, and be put back to ready queue.

In the first two cases, the process eventually switches from the waiting state to the ready state and is put back to ready queue.