**2. Priority Scheduling**

In Priority scheduling, there is a priority number assigned to each process. In some systems, the lower the number, the higher the priority. While, in the others, the higher the number, the higher will be the priority.

The Process with the higher priority among the available processes is given the CPU. There are two types of priority scheduling algorithm exists. One is Preemptive priority scheduling while the other is Non Preemptive Priority scheduling.

Types of Priority Scheduling Algorithm

Priority scheduling can be of two types:

Preemptive Priority Scheduling: If the new process arrived at the ready queue has a higher priority than the currently running process, the CPU is preempted, which means the processing of the current process is stopped and the incoming new process with higher priority gets the CPU for its execution.

Non-Preemptive Priority Scheduling: In case of non-preemptive priority scheduling algorithm if a new process arrives with a higher priority than the current running process, the incoming process is put at the head of the ready queue, which means after the execution of the current process it will be processed.

Problem with Priority Scheduling Algorithm

In priority scheduling algorithm, the chances of indefinite blocking or starvation. A process is considered blocked when it is ready to run but has to wait for the CPU as some other process is running currently. But in case of priority scheduling if new higher priority processes keeps coming in the ready queue then the processes waiting in the ready queue with lower priority may have to wait for long durations before getting the CPU for execution.

Using Aging Technique with Priority Scheduling

To prevent starvation of any process, we can use the concept of aging where we keep on increasing the priority of low-priority process based on the its waiting time.

**Characteristics of Priority Scheduling**

* A CPU algorithm that schedules processes based on priority.
* It used in Operating systems for performing batch processes.
* If two jobs having the same priority are READY, it works on a FIRST COME, FIRST SERVED basis.
* In priority scheduling, a number is assigned to each process that indicates its priority level.
* Lower the number, higher is the priority.
* In this type of scheduling algorithm, if a newer process arrives, that is having a higher priority than the currently running process, then the currently running process is preempted.