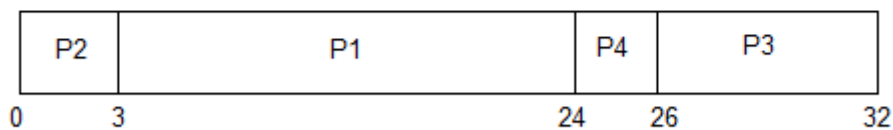# Priority Scheduling

- Priority is assigned for each process.
- Process with highest priority is executed first and so on.
- Processes with same priority are executed in FCFS manner.
- Priority can be decided based on memory requirements, time requirements or any other resource requirement.

PROCESS	BURST TIME	PRIORITY
P1	21	2
P2	3	1
P3	6	4
P4	2	3

The GANTT chart for following processes based on Priority scheduling will be,

P2	P1	P4	P3
0 3	24	26	32

The average waiting time will be, (0 + 3 + 24 + 26)/4 = 13.25 ms

Priority Scheduling

The SJF is a special case of general priority scheduling algorithm.
A Priority (an integer) is associated with each process.

The CPU is allocated to the process with the highest priority.

Generally smallest integer is considered as the highest priority.

Equal priority processes are scheduled in First Come First serve order.

It can be preemptive or Non-preemptive.

Non-preemptive Priority Scheduling

In this type of scheduling the CPU is allocated to the process with the highest priority after completing the present running process.

P_1	P_2	P_4	P_3
0 4	10	12	15
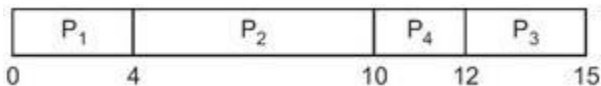
Advantage

- Good response for the highest priority processes.

Disadvantage

- Starvation may be possible for the lowest priority processes.

OPERATING SYSTEM   PROCESS / CPU SCHEDULING

PRIORITY SCHEDULING

ADVANTAGES

i) Gives Good Response Time For the highest Priority Processes by Non-Preemptive Priority Scheduling

ii) Very Good 'Response Time' for the highest Priority processes Over Non-Preemptive Priority Scheduling.

DISADVANTAGES

→ Starvation is possible due to more high Priority Processes.

→ Aging : It is a mechanism by which Operating System gradually increases the Priority of those processes who waits more.

→ In Preemptive Version Context Switch Overhead Is there