PRIORITY SCHEDULING

A priority number is associated with each process

The CPU is allocated to the process with the highest priority (smallest number = highest priority)

Types:

Preemptive

Nonpreemptive

SJF is priority scheduling where priority is the inverse of predicted next CPU burst time

Problem:

Starvation -> low priority process may never execute

Solution:

Aging -> as time progresses increase the priority of the process

Non-preemptive version

Process	Burst Time	Priority
P_1	10	3
P_2	1	1
P_3	2	4
P_4	1	5
P_5	5	2

- Priority scheduling Gantt Chart

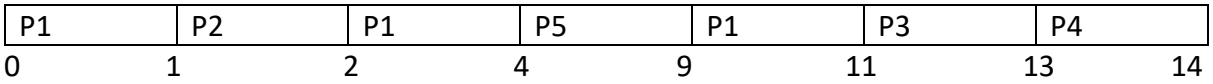
- Average waiting time = 8.2 msec

preemptive

PROCESS	BURST TIME	PRIORITY	ARRIVAL TIME
P1	5	3	0
P2	1	1	1
P3	2	4	2

P4	1	5	3
P5	5	2	4

Chart



WT

P1 = (0 - 0) + (2 - 1) + (9 - 4) = 6ms (1^{st} arrival – waiting time) + (2^{nd} waiting time for p2 - p1 last burst time) + (3^{rd} waiting time until p5 complete – last p1 burst time)

P2 = 1 – 1 = 0ms

P3 = 11 – 2 = 9ms

P4 = 13 – 3 = 10ms

P5 = 4 – 4 = 0ms