Preemptive Algorithms

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Shortest Remaining Time First(SRTF) / SJF

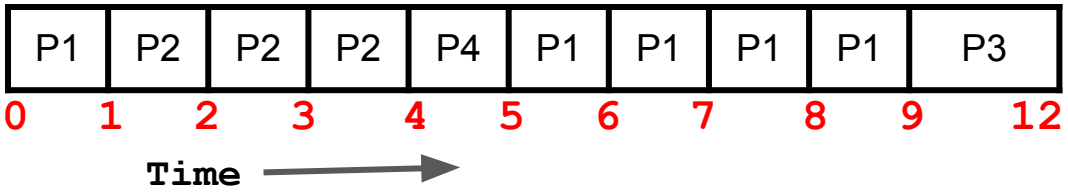
Process No	Arrival Time	Burst Time / Execution Time
P1	0	5
P2	1	3
P3	2	4
P4	4	1

Criteria = Burts Time
Mode = Preemptive
TAT = CT - AT
WT = TAT - BT
RT = CPU First Time - AT

Shortest Remaining Time First(SRTF) / SJF

Process No	Arrival Time	Burst Time / Execution Time	Completion Time	Turned Around Time	Waiting Time	Response Time
P1	0	5				
P2	1	3				
P3	2	4				
P4	4	1				

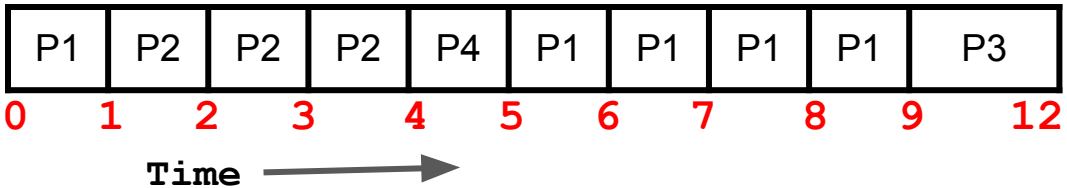
Gantt Chart



Shortest Remaining Time First(SRTF) / SJF

Process No	Arrival Time	Burst Time / Execution Time	Completion Time	Turned Around Time	Waiting Time	Response Time
P1	0	5	9	9	4	0
P2	1	3	14	3	0	0
P3	2	4	13	11	7	7
P4	4	1	5	1	0	0

Gantt Chart



Avg TAT = 24/4 = 6
Avg WT = 11/4 = 2.75
Avg RT = 7/4 = 1.75

Longest Remaining Time First(LRTF) / LJF

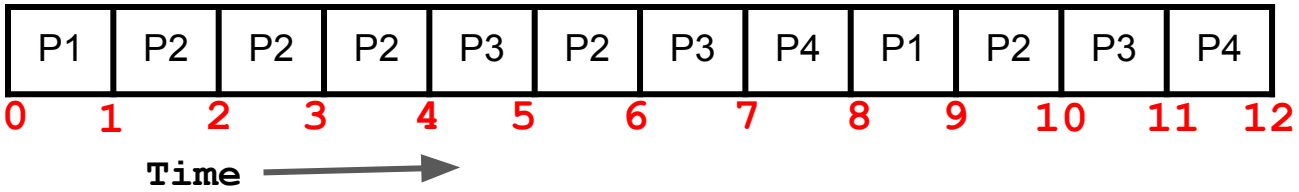
Process No	Arrival Time	Burst Time / Execution Time
P1	0	2
P2	1	5
P3	4	3
P4	5	2

Criteria = Burts Time
Mode = Preemptive
TAT = CT - AT
WT = TAT - BT
RT = CPU First Time - AT

Longest Remaining Time First(LRTF) / LJF

Process No	Arrival Time	Burst Time / Execution Time	Completion Time	Turned Around Time	Waiting Time	Response Time
P1	0	2				
P2	1	5				
P3	4	3				
P4	5	2				

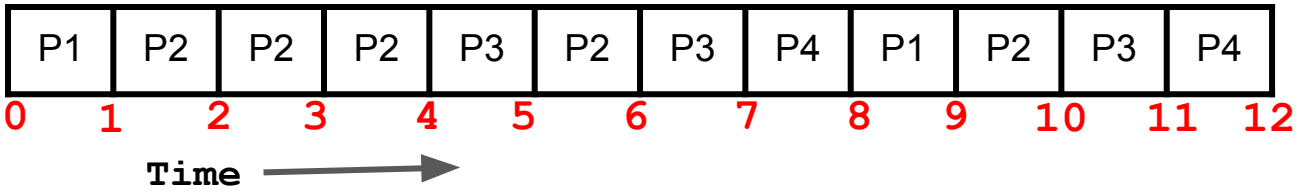
Gantt Chart



Longest Remaining Time First(LRTF) / LJF

Process No	Arrival Time	Burst Time / Execution Time	Completion Time	Turned Around Time	Waiting Time	Response Time
P1	0	2	9	9	7	0
P2	1	5	10	9	4	0
P3	4	3	11	7	4	0
P4	5	2	12	7	5	2

Gantt Chart



Avg TAT = ?
Avg WT = ?
Avg RT = ?

Round Robin(RR)

Process No	Arrival Time	Burst Time / Execution Time
P1	0	5
P2	1	4
P3	2	2
P4	4	1

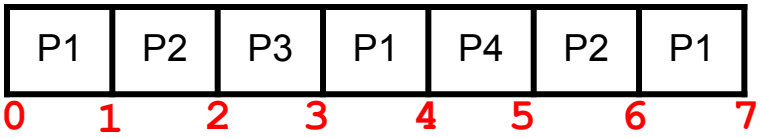
Given,
Time Quantum = 2

Criteria = Time Quantum
Mode = Preemptive
TAT = CT - AT
WT = TAT - BT
RT = CPU First Time - AT

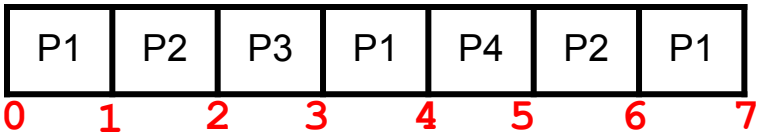
Round Robin(RR)

Process No	Arrival Time	Burst Time / Execution Time	Completion Time	Turned Around Time	Waiting Time	Response Time
P1	0	5				
P2	1	4				
P3	2	2				
P4	4	1				

Ready Queue



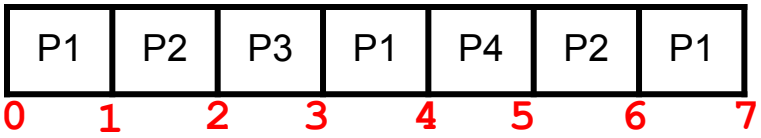
Gantt Chart



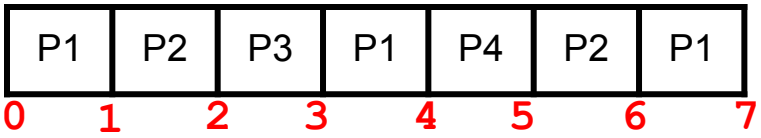
Round Robin(RR)

Process No	Arrival Time	Burst Time / Execution Time	Completion Time	Turned Around Time	Waiting Time	Response Time
P1	0	5	12	12	7	0
P2	1	4	11	10	6	1
P3	2	2	6	4	2	2
P4	4	1	9	5	4	4

Ready Queue



Gantt Chart



Avg TAT = ?
Avg WT = ?
Avg RT = ?

Priority Scheduling

Priority	Process No	Arrival Time	Burst Time / Execution Time
10	P1	0	5
20	P2	1	4
30	P3	2	2
40	P4	4	1

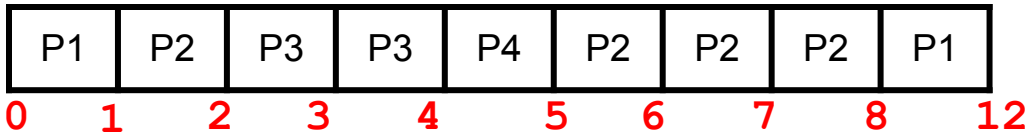
Given,
Time Quantum = 2

Criteria = Priority
Mode = Preemptive
TAT = CT - AT
WT = TAT - BT
RT = CPU First Time - AT

Priority Scheduling

Process No	Arrival Time	Burst Time / Execution Time	Completion Time	Turned Around Time	Waiting Time	Response Time
P1	0	5				
P2	1	4				
P3	2	2				
P4	4	1				

Gantt Chart

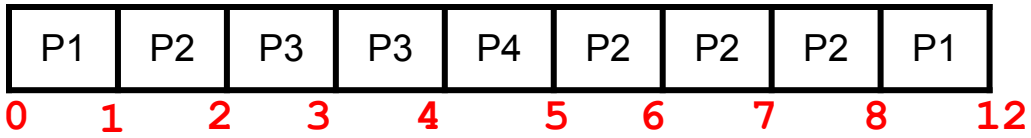


Note: Higher the number, higher the priority

Priority Scheduling

Process No	Arrival Time	Burst Time / Execution Time	Completion Time	Turned Around Time	Waiting Time	Response Time
P1	0	5	12	12	7	0
P2	1	4	8	7	3	0
P3	2	2	4	2	0	0
P4	4	1	5	1	0	0

Gantt Chart



Avg TAT = ?
Avg WT = ?
Avg RT = ?

Note: Higher the number, higher the priority