

HO CHI MINH UNIVERSITY OF TECHNOLOGY
FACULTY OF COMPUTER SCIENCE AND ENGINEERING



OPERATING SYSTEM LAB (CO2018)

LAB 7 : SCHEDULING

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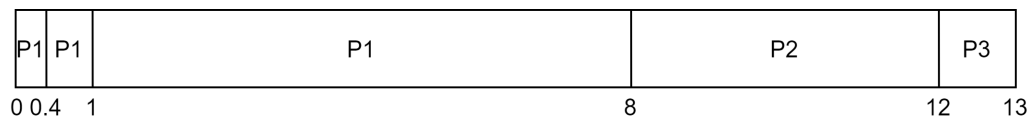
1	PROBLEM 1 :	2
2	PROBLEM 2 :	3

1 PROBLEM 1 :

Process	Arrival Time	Burst Time
P1	0.0	8
P2	0.4	4
P3	1.0	1

a) FCFS scheduling algorithm

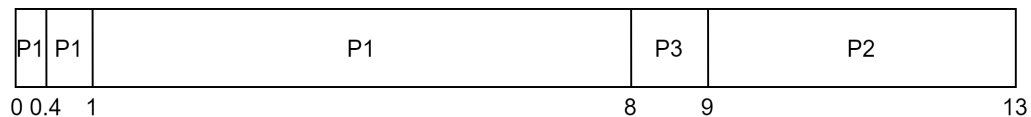
Gantt charts :



Process	Arrival Time	Completion Time	Turnaround Time
P1	0	8	8
P2	0.4	12	11.6
P3	1	13	12
Average = 10.53			

b) SJF scheduling algorithm

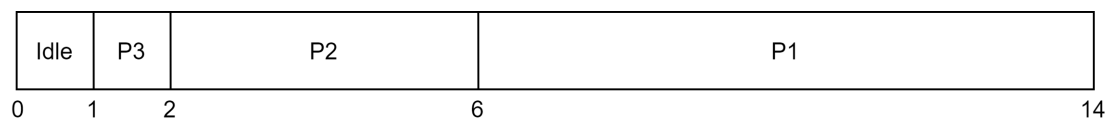
Gantt charts :



Process	Arrival Time	Completion Time	Turnaround Time
P1	0	8	8
P2	0.4	13	12.6
P3	1	9	8
Average = 9.53			

c) Future-knowledge scheduling algorithm

Gantt charts :



Process	Arrival Time	Completion Time	Turnaround Time
P1	0	14	14
P2	0.4	6	5.6
P3	1	2	1
Average = 6.87			

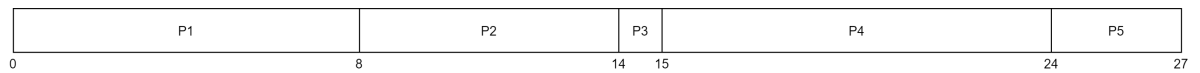


2 PROBLEM 2 :

Process	Burst Time	Priority
P1	8	4
P2	6	1
P3	1	2
P4	9	2
P5	3	3

a) FCFS scheduling algorithm

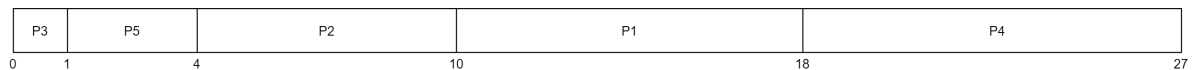
Gantt charts :



Process	Arrival Time	Completion Time	Turnaround Time	Waiting Time
P1	0	8	8	0
P2	0	14	14	8
P3	0	15	15	14
P4	0	24	24	15
P5	0	27	27	24
			Average = 17.6	Average = 12.2

b) SJF scheduling algorithm

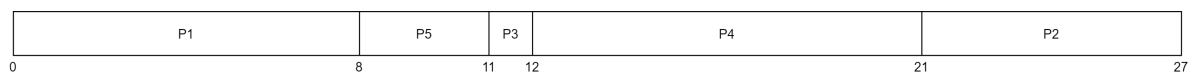
Gantt charts :



Process	Arrival Time	Completion Time	Turnaround Time	Waiting Time
P1	0	18	18	10
P2	0	10	10	4
P3	0	1	1	0
P4	0	27	27	18
P5	0	4	4	1
			Average = 12	Average = 6.6

c) Non-preemptive Priority scheduling

Gantt charts :





Process	Arrival Time	Completion Time	Turnaround Time	Waiting Time
P1	0	8	8	0
P2	0	27	27	21
P3	0	12	12	11
P4	0	21	21	12
P5	0	11	11	8
			Average = 15.8	Average = 10.4

d) Round-robin scheduling

Gantt charts :

P1	P2	P3	P4	P5	P1	P2	P4	P5	P1	P2	P4	P5	P1	P2	P4	P1	P2	P4	P1	P2	P4	P1	P4	P1	P4	P4	
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27

Process	Arrival Time	Completion Time	Turnaround Time	Waiting Time
P1	0	25	25	0
P2	0	21	21	0
P3	0	3	3	0
P4	0	27	27	0
P5	0	13	13	0
			Average = 17.8	Average = 0