

Operating system course
Lab 2 (helping material)
CPU Scheduling algorithms

Pif_1.txt

1000,0,10
1001,5,5
1002,5,10
1003,5,15
1004,10,5

Output results:

FCFS:

PID	Waiting Time	Turnaround Time
1000	0	10
1001	5	10
1002	10	20
1003	20	35
1004	30	35

Average waiting time: 13 ms

Average turnaround time: 22 ms

SJF:

PID	Waiting Time	Turnaround Time
1000	0	10
1001	5	10
1002	15	25
1003	25	40
1004	5	10

Average waiting time: 10 ms

Average turnaround time: 19 ms

RR (Time quantum = 2):

PID	Waiting Time	Turnaround Time
1000	14	24
1001	15	20
1002	23	33
1003	25	40
1004	17	22

Average waiting time: 18.8 ms

Average turnaround time: 27.8 ms

Pif_2.txt

1000,3,4
1001,5,3
1002,0,2
1003,5,1
1004,4,3

Results:

FCFS:

PID	Waiting Time	Turnaround Time
1000	0	2
1001	0	4
1002	3	6
1003	5	8
1004	8	9

Average waiting time: 3.2 ms

Average turnaround time: 5.8 ms

SJF:

PID	Waiting Time	Turnaround Time
1000	0	2
1001	0	4
1002	4	7
1003	6	9
1004	2	3

Average waiting time: 2.4 ms

Average turnaround time: 5 ms

RR (Time quantum = 2):

PID	Waiting Time	Turnaround Time
1000	0	2
1001	5	9
1002	6	9
1003	6	9
1004	4	5

Average waiting time: 4.2 ms

Average turnaround time: 6.8 ms

Pif_3.txt

1000,7,5
1001,5,5
1002,9,7
1003,11,10
1004,17,15

Results:

FCFS:

PID	Waiting Time	Turnaround Time
1000	0	5
1001	3	8
1002	6	13
1003	11	21
1004	15	30

Average waiting time: 7 ms

Average turnaround time: 15.5 ms

SJF:

PID	Waiting Time	Turnaround Time
1000	0	5
1001	3	8
1002	6	13
1003	11	21
1004	15	30

Average waiting time: 7ms

Average turnaround time: 15.4 ms

RR (Time quantum = 2):

PID	Waiting Time	Turnaround Time
1000	8	13
1001	9	14
1002	16	23
1003	19	29
1004	15	30

Average waiting time: 13.4 ms

Average turnaround time: 21.8 ms