

PRAKTIKUM SISTEM OPERASI
MODUL 11



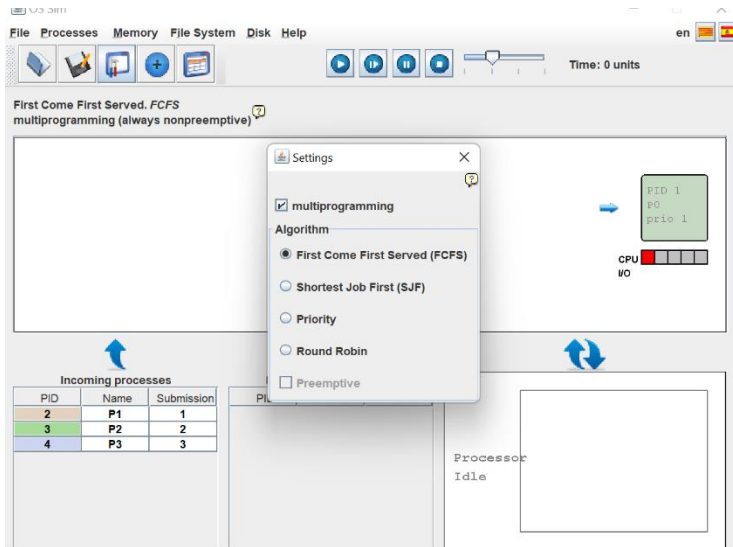
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PROGRAM STUDI TEKNIK INFORMATIKA
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TAHUN 2022/2023

- 1.FCFS



US Sim

File Processes Memory File System Disk Help

Time: 22 units

Process Scheduling Information

Efficiency (%) 1.00

Throughput (processes/time unit) 0.18

Avg. Turnaround Time (time) 11.25

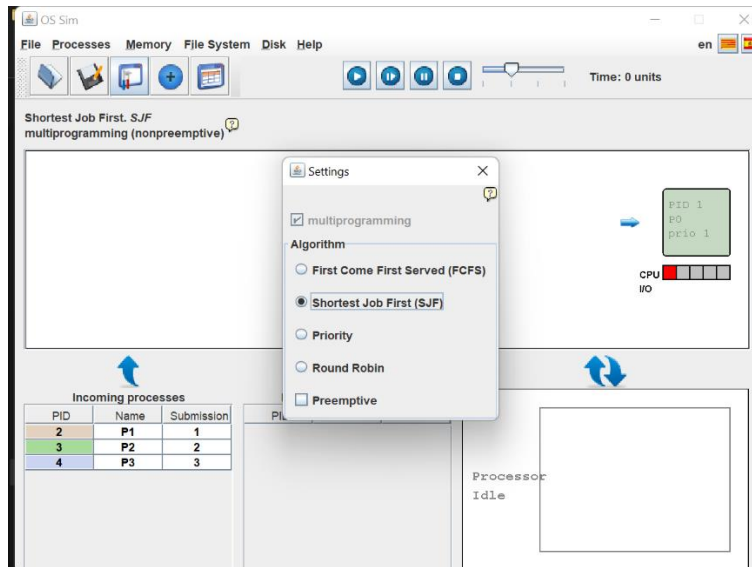
Avg. Waiting Time (time) 5.75

Avg. Response Time (time) 5.75

PID	Name	Priority	Submission	Periodic	CPU	Response	Waiting	Turnaround	% CPU	% IO
5	P0	1	0	-	5	0	0	5	1.0	0.0
6	P1	1	1	-	3	4	4	7	0.428571428...	0.0
7	P2	1	2	-	8	6	6	14	0.571428571...	0.0
8	P3	1	3	-	6	13	13	19	0.315789473...	0.0

Processes	Wait time : Service Time - Arrival Time
P0	0
P1	4
P2	6
P3	13
AV wait time	5.75

- 2. SJF-Non Preventive



The screenshot shows the OS Sim application window with the "Process Scheduling Information" window open. The title bar reads "OS Sim". The menu bar includes "File", "Processes", "Memory", "File System", "Disk", and "Help". The toolbar contains icons for file operations and a play button. The main window displays "Time: 32 units". The "Process Scheduling Information" window shows the following statistics:

Efficiency (%)	0.66
Throughput (processes/time unit)	0.13
Avg. Turnaround Time (time)	10.25
Avg. Waiting Time (time)	5.00
Avg. Response Time (time)	5.00

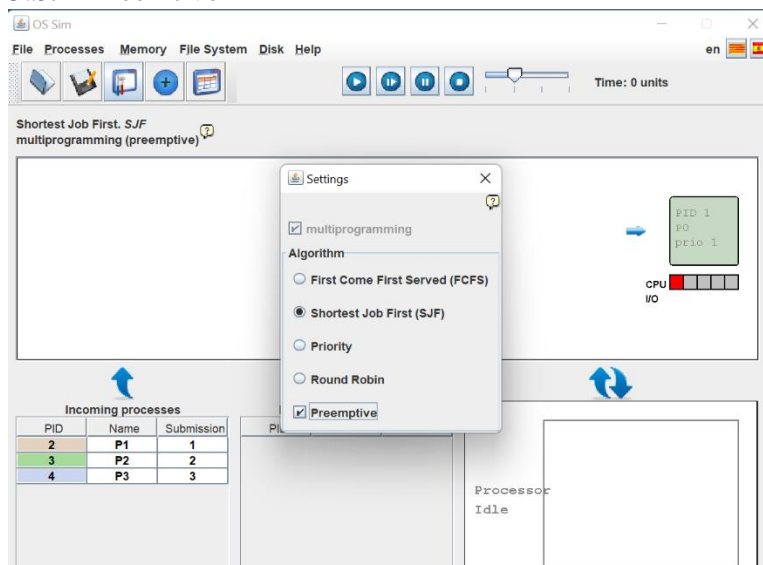
Below the statistics is a table with the following data:

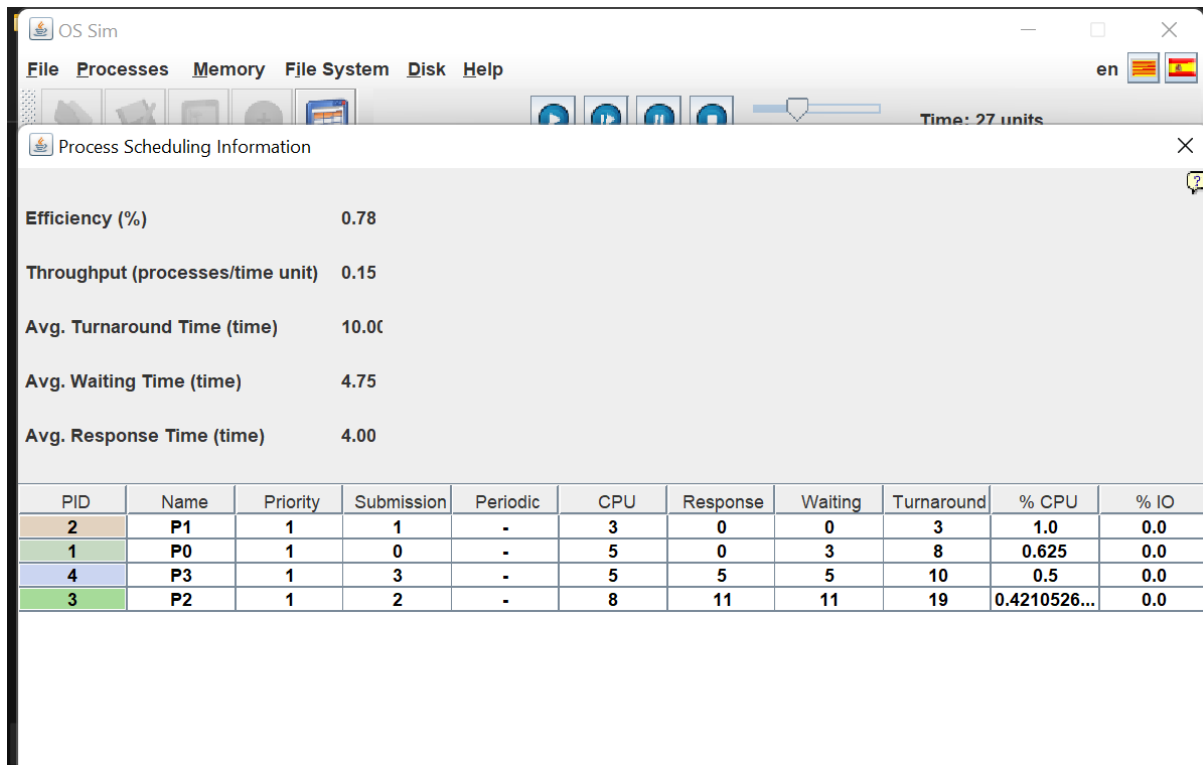
PID	Name	Priority	Submission	Periodic	CPU	Response	Waiting	Turnaround	% CPU	% IO
1	P0	1	0	-	5	0	0	5	1.0	0.0
2	P1	1	1	-	3	4	4	7	0.4285714...	0.0
4	P3	1	3	-	5	5	5	10	0.5	0.0
3	P2	1	2	-	8	11	11	19	0.4210526...	0.0

- **Non-Preemptive**

Process	Wait time : Service Time – Arrival Time
P0	0
P1	4
P2	5
P3	11
AV wait time	5

- **3.SJF-Preemptive**

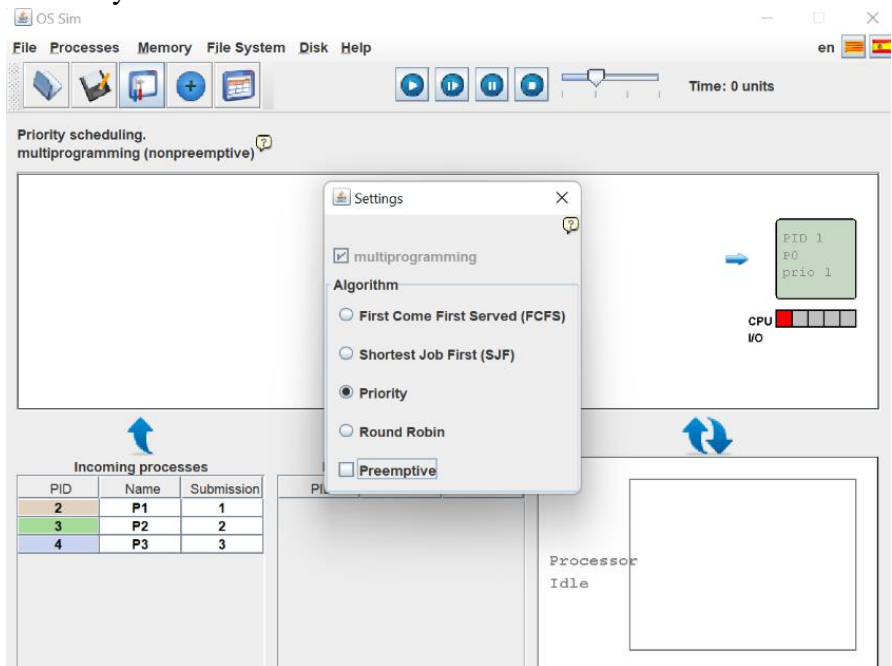




- Preemptive

Process	Wait time : Service Time – Arrival Time
P0	0
P1	3
P2	5
P3	11
AV wait time	4.75

- 4.Priority



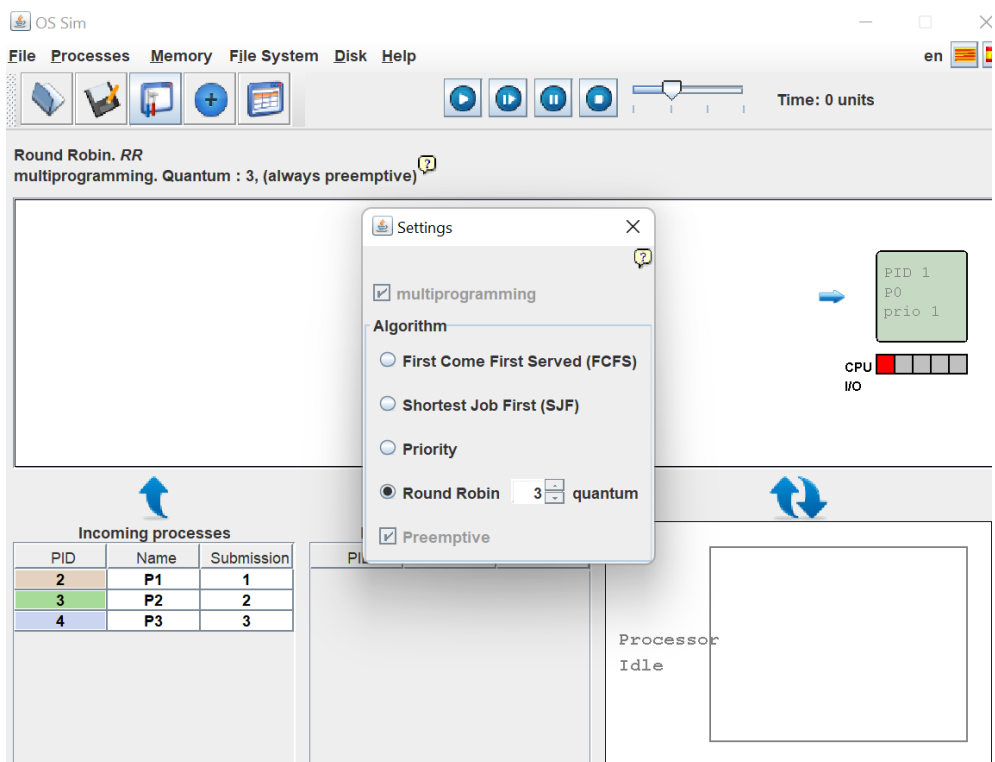
The screenshot shows the OS Sim interface with the 'Process Scheduling Information' window open. The window displays various performance metrics and a table of process data.

PID	Name	Priority	Submission	Periodic	CPU	Response	Waiting	Turnaround	% CPU	% IO
1	P0	1	0	-	5	0	0	5	1.0	0.0
4	P3	3	3	-	6	2	2	8	0.75	0.0
2	P1	2	1	-	3	10	10	13	0.2307692...	0.0
3	P2	1	2	-	8	12	12	20	0.4	0.0

- **Priority**

Process	Wait time : Service Time – Arrival Time
P0	0
P1	2
P2	10
P3	12
AV wait time	6

- **5. Round Robin**



US Sim

File Processes Memory File System Disk Help

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Time: 28 units

Process Scheduling Information

Efficiency (%) 0.79

Throughput (processes/time unit) 0.14

Avg. Turnaround Time (time) 14.00

Avg. Waiting Time (time) 8.50

Avg. Response Time (time) 3.00

PID	Name	Priority	Submission	Periodic	CPU	Response	Waiting	Turnaround	% CPU	% IO
2	P1	2	1	-	3	2	2	5	0.6	0.0
1	P0	1	0	-	5	0	9	14	0.3571428...	0.0
4	P3	3	3	-	6	6	11	17	0.3529411...	0.0
3	P2	1	2	-	8	4	12	20	0.4	0.0

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- **Round Robin**

Process	Wait time : Service Time – Arrival Time
P0	2
P1	9
P2	11
P3	12
Avg wait time	8.50

- Kesimpulan : Pada praktikum penjadwalan bertujuan untuk memberi pengetahuan mengenai penjadwalan CPU dengan mengamati CPU saat ini menjalankan program yang diberikan, ada yang bernama burst cycle atau disebut juga proses – proses yang menunjang kesuksesan penjadwalan. Proses penjadwalan memiliki algoritma penjadwalan. Beberapa penjadwalan meliputi FCFS(Penjadwalan yang paling sederhana yang digunakan CPU),SJF(Penjadwalan terpendek),Priority(metode penjadwalan yang mendahulukan task prioritas tertinggi), dan Round Robin(metode penjadwalan yang membagi semua proses dengan porsi waktu yang sama).