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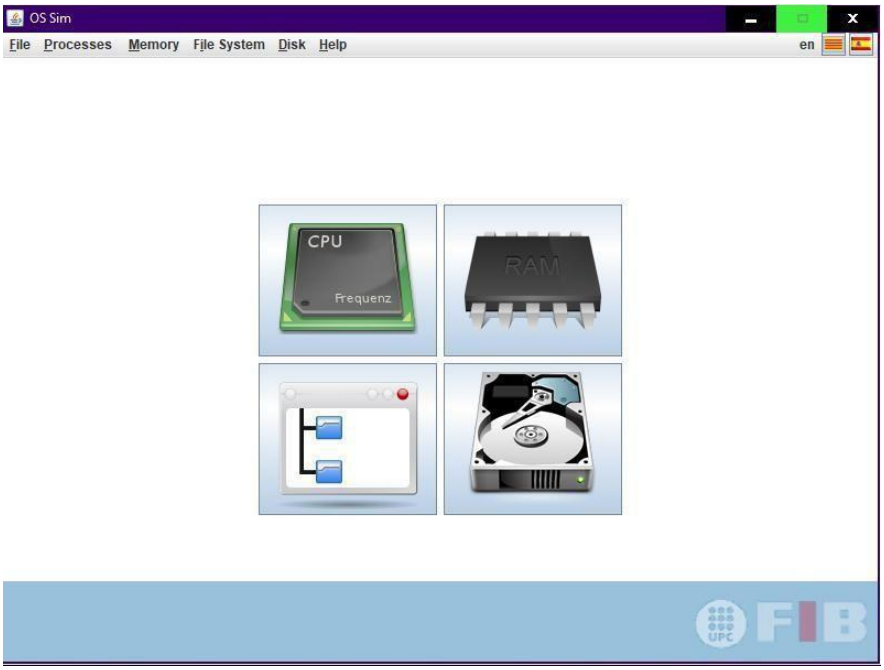
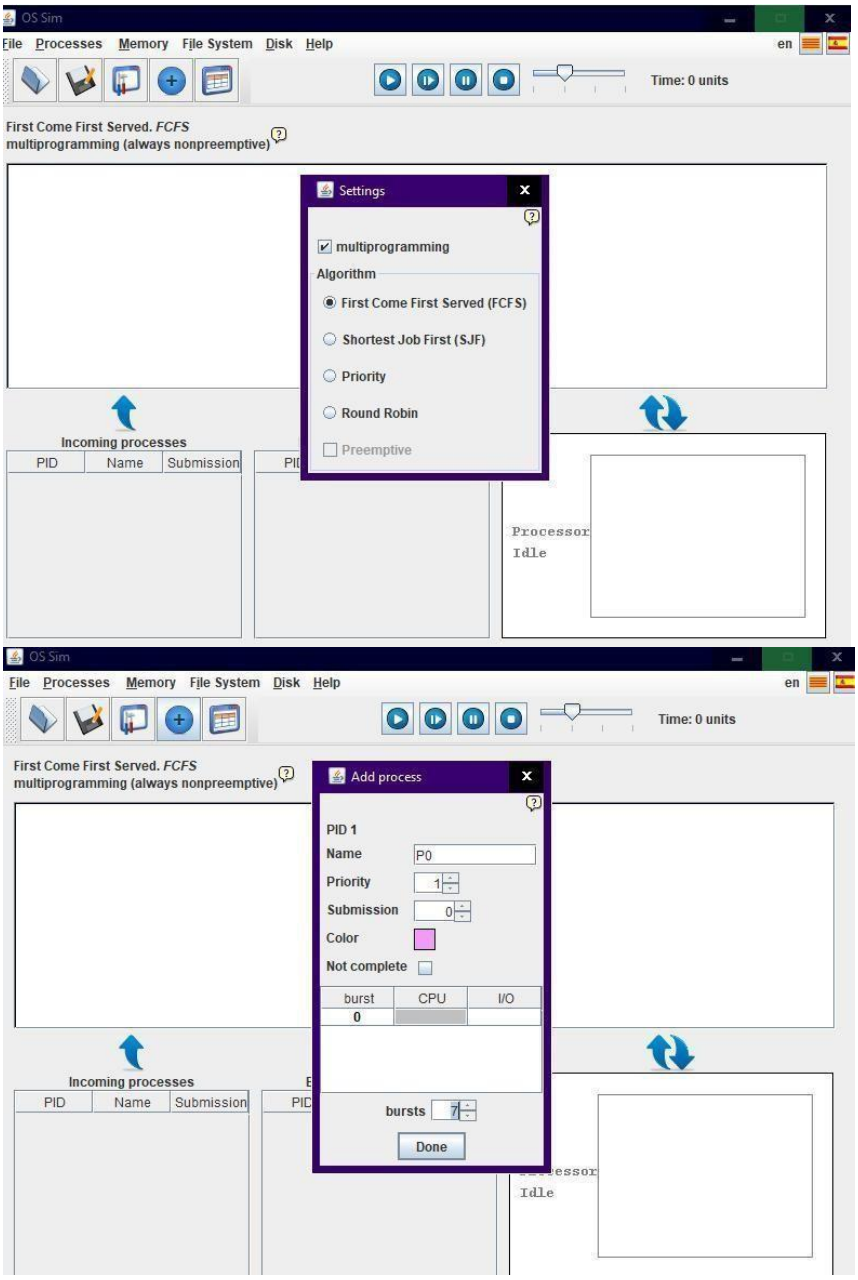
NIM : L200180105
Kelas : C

# MODUL 11

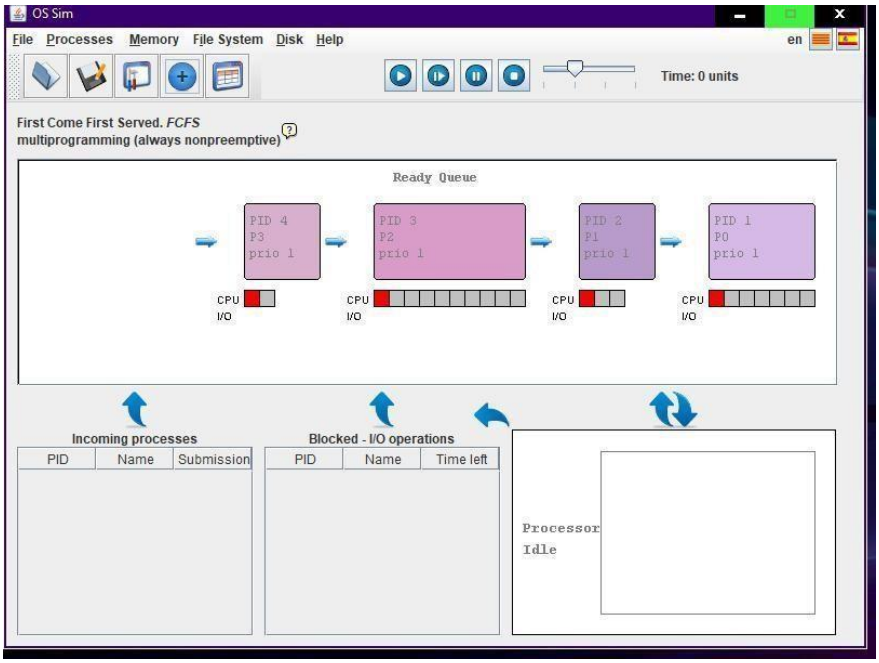
## 1. FCFS

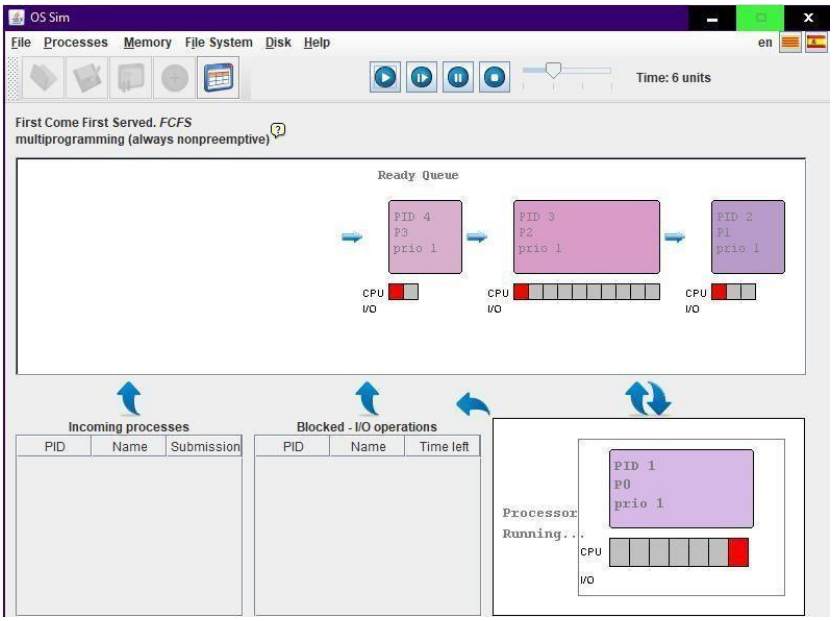
| Proses | Arrival time | Burst time | Service time | Priority |
|---|---|---|---|---|
| P0 | 0 | 7 | 0 | 4 |
| P1 | 1 | 3 | 7 | 2 |
| P2 | 2 | 10 | 10 | 1 |
| P3 | 3 | 2 | 20 | 3 |

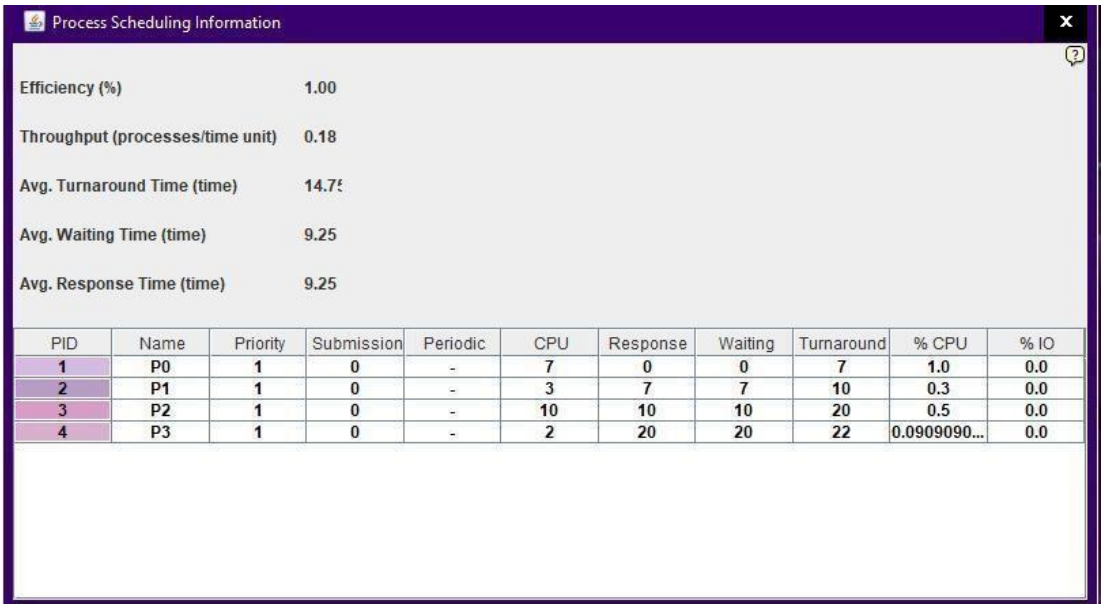



OS Sim
File Processes Memory File System Disk Help
en
Time: 0 units
First Come First Served. FCFS
multiprogramming (always nonpreemptive)
Settings
multiprogramming
Algorithm
First Come First Served (FCFS)
Shortest Job First (SJF)
Priority
Round Robin
Preemptive
Incoming processes
PID
Name
Submission
Processor
Idle


OS Sim
File Processes Memory File System Disk Help
en
Time: 0 units
First Come First Served. FCFS
multiprogramming (always nonpreemptive)
Add process
PID 1
Name
P0
Priority
1
Submission
0
Color
Not complete
burst
CPU
I/O
0
bursts
7
Done
Incoming processes
PID
Name
Submission
Idle


OS Sim
File Processes Memory File System Disk Help
en
Time: 0 units
First Come First Served. FCFS
multiprogramming (always nonpreemptive)
Ready Queue
PID 4
P3
prio 1
PID 3
P2
prio 1
PID 2
P1
prio 1
PID 1
P0
prio 1
CPU
I/O
Incoming processes
PID
Name
Submission
Blocked - I/O operations
PID
Name
Time left
Processor
Idle

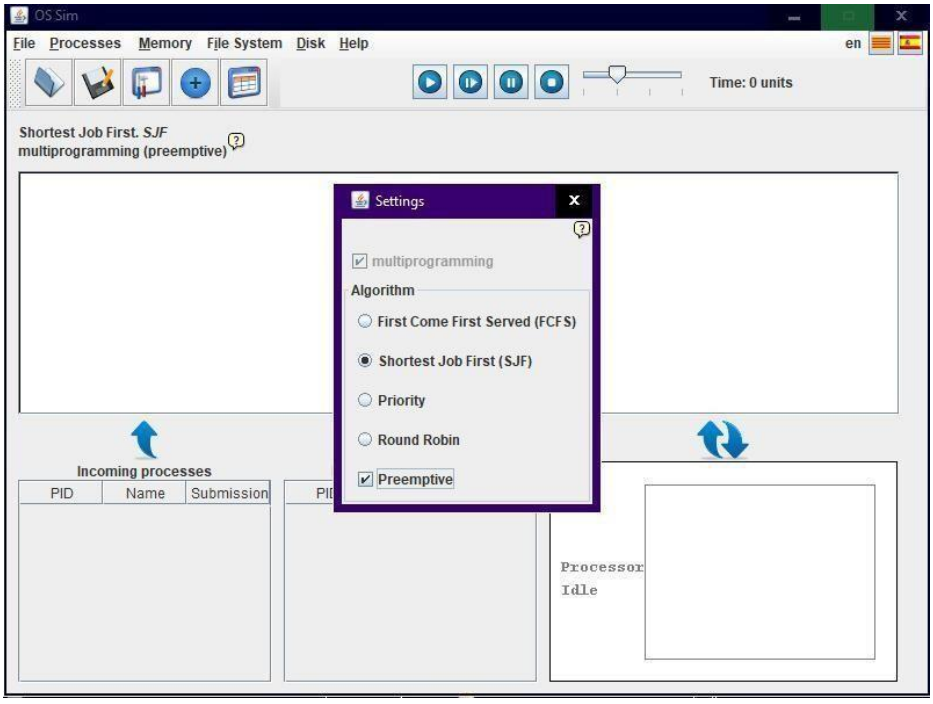

OS Sim
File Processes Memory File System Disk Help
en
Time: 6 units
First Come First Served. FCFS
multiprogramming (always nonpreemptive)
Ready Queue
PID 4
P3
prio 1
PID 3
P2
prio 1
PID 2
P1
prio 1
CPU
I/O
Incoming processes
PID
Name
Submission
Blocked - I/O operations
PID
Name
Time left
Processor
Running...
PID 1
P0
prio 1
CPU
I/O

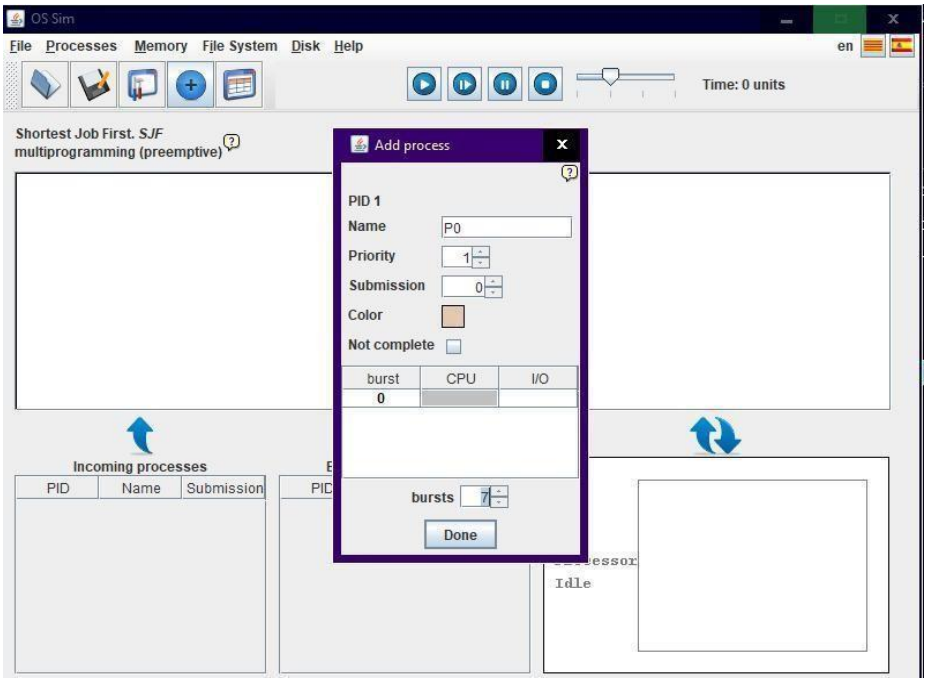


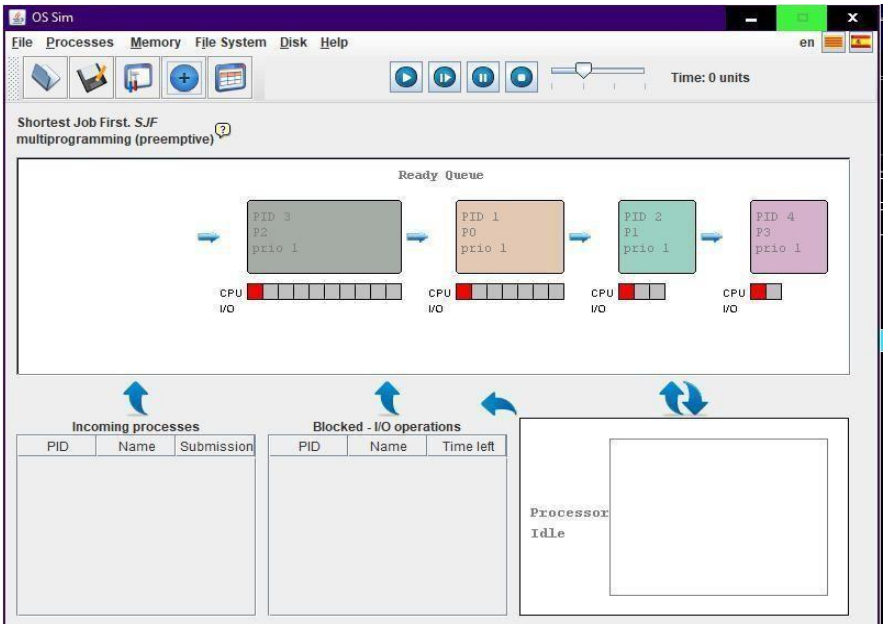

| Process | Wait time |
|---|---|
| P0 | 0 |
| P1 | 7 |
| P2 | 10 |
| P3 | 20 |
| Avg. waiting time | 9.25 |
| Avg. Turnaround | 14.75 |
| Avg. Response | 9.25 |

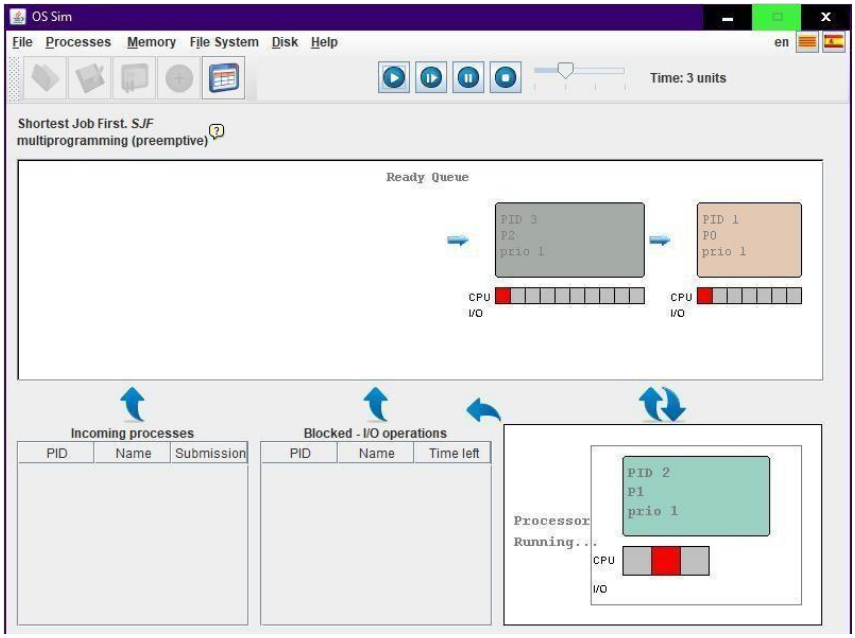
## 2. SJFS

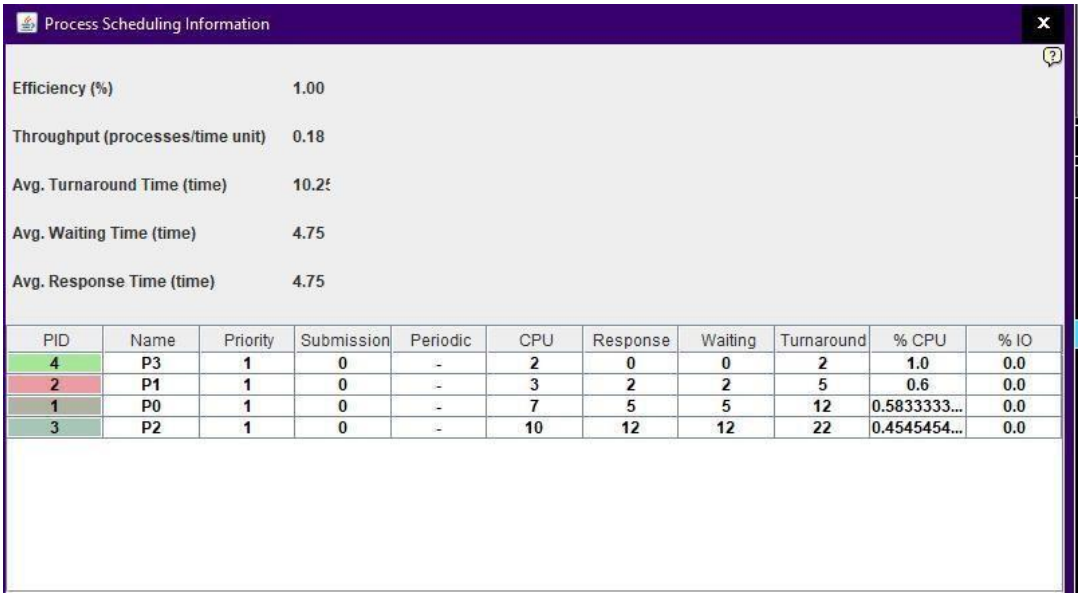
### a. Premivite




OS Sim
File Processes Memory File System Disk Help
en
Time: 0 units
Shortest Job First. SJF
multiprogramming (preemptive)
Add process
PID 1
Name
P0
Priority
1
Submission
0
Color
Not complete
burst
CPU
I/O
0
bursts
7
Done
Incoming processes
PID
Name
Submission
Idle

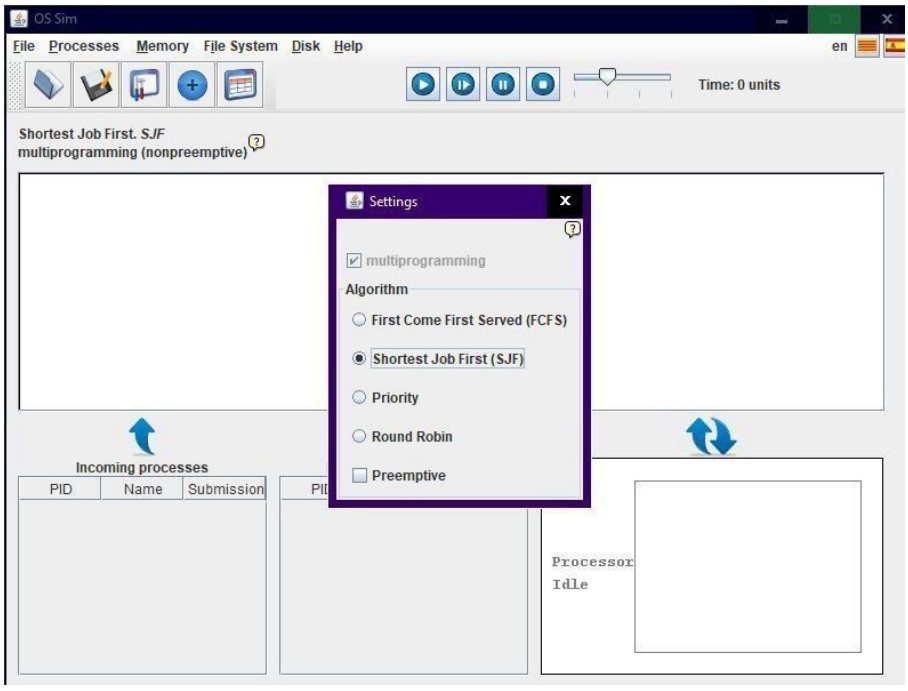

OS Sim
File Processes Memory File System Disk Help
en
Time: 0 units
Shortest Job First. SJF
multiprogramming (preemptive)
Ready Queue
PID 3
P2
prio 1
PID 1
P0
prio 1
PID 2
P1
prio 1
PID 4
P3
prio 1
CPU
I/O
Incoming processes
PID
Name
Submission
Blocked - I/O operations
PID
Name
Time left
Processor
Idle

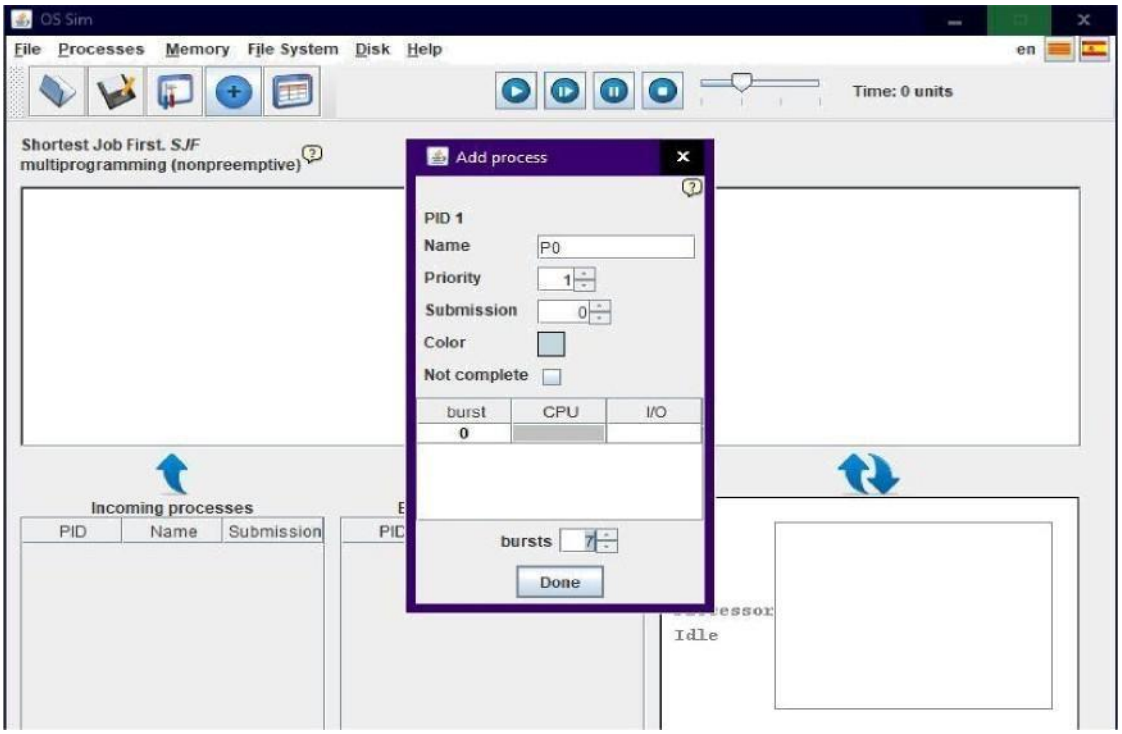

OS Sim
File Processes Memory File System Disk Help
en
Time: 3 units
Shortest Job First. SJF
multiprogramming (preemptive)
Ready Queue
PID 3
P2
prio 1
PID 1
P0
prio 1
CPU
I/O
Incoming processes
PID
Name
Submission
Blocked - I/O operations
PID
Name
Time left
Processor
Running...
PID 2
P1
prio 1
CPU
I/O

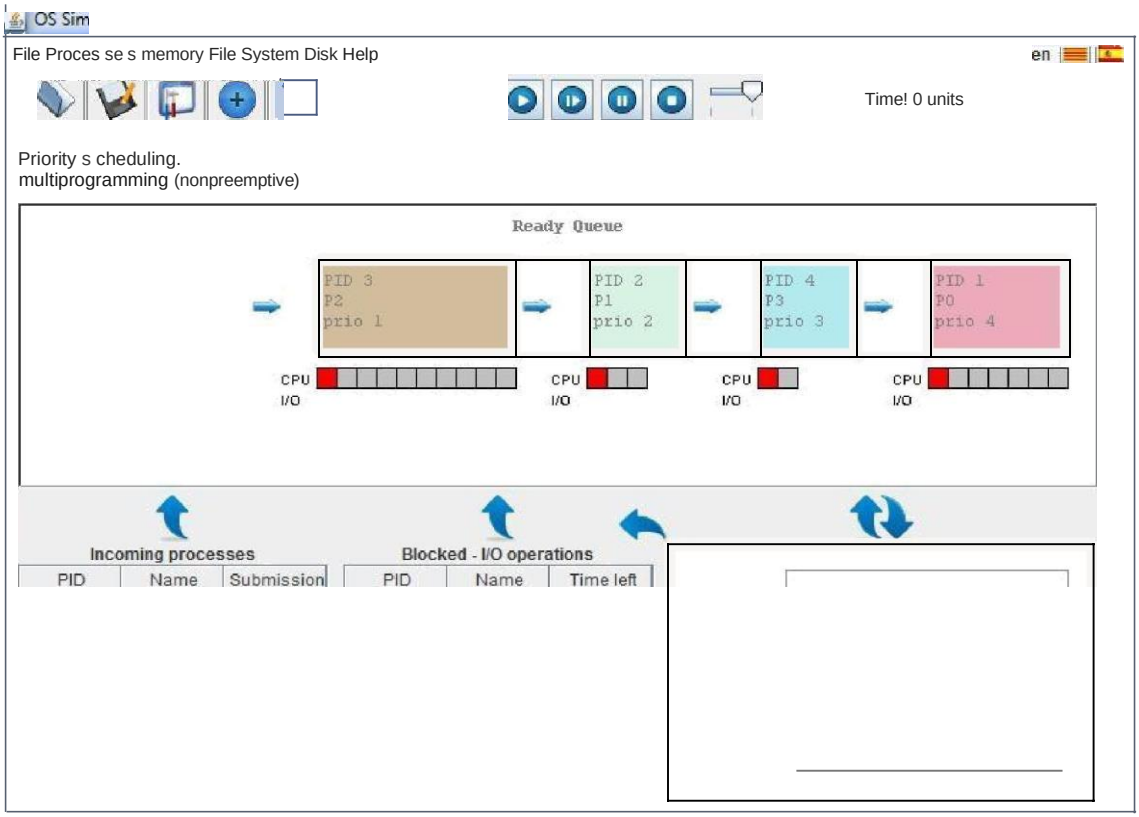


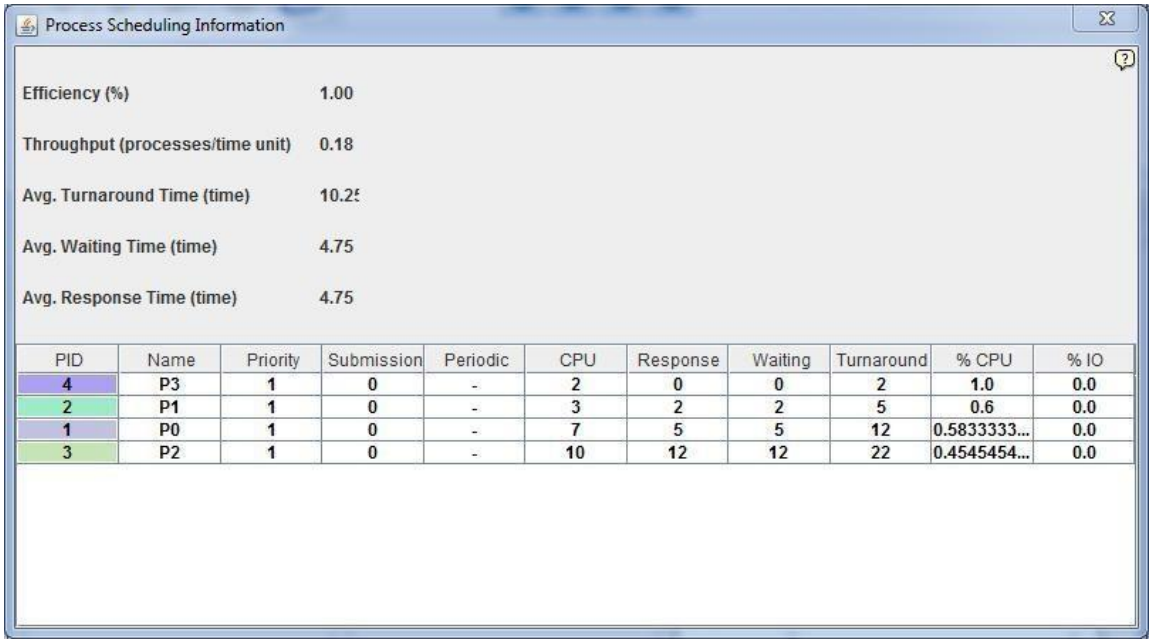

| Process | Wait time |
|---|---|
| P0 | 5 |
| P1 | 2 |
| P2 | 12 |
| P3 | 0 |
| Avg. waiting time | 4.75 |
| Avg. Turnaround | 10.25 |
| Avg. Response | 4.75 |

**b. Non premitive**



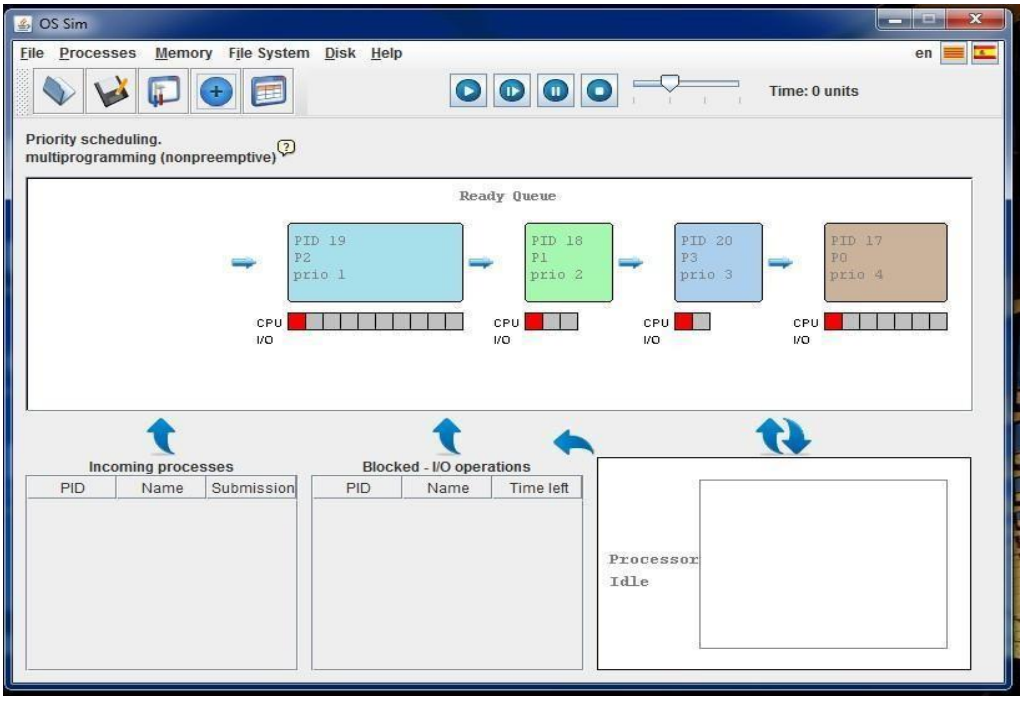

OS Sim
File Processes Memory File System Disk Help
en
Time: 0 units
Shortest Job First. SJF
multiprogramming (nonpreemptive)
Add process
PID 1
Name
P0
Priority
1
Submission
0
Color
Not complete
burst
CPU
I/O
0
bursts
7
Done
Incoming processes
PID
Name
Submission
Idle

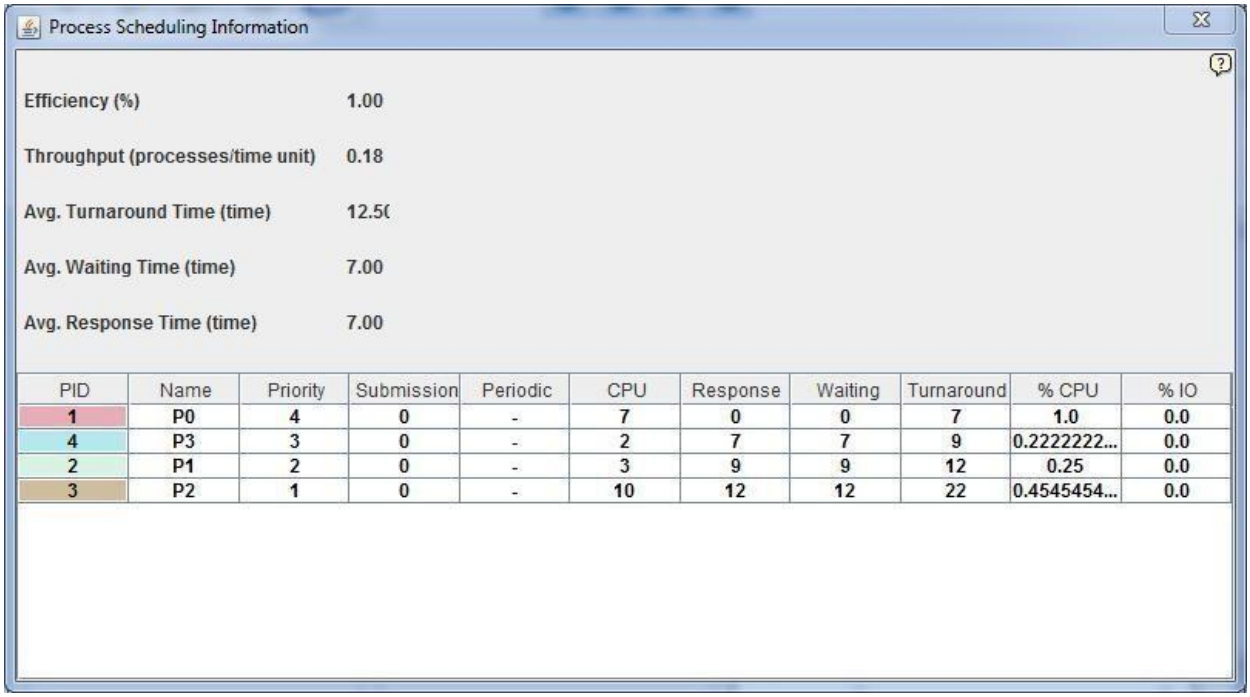

OS Sim
File Proces se s memory File System Disk Help
en
Time! 0 units
Priority s cheduling.
multiprogramming (nonpreemptive)
Ready Queue
PID 3
P2
prio 1
PID 2
P1
prio 2
PID 4
P3
prio 3
PID 1
P0
prio 4
CPU
I/O
Incoming processes
PID
Name
Submission
Blocked - I/O operations
PID
Name
Time left




| Process | Wait time |
|---|---|
| P0 | 5 |
| P1 | 2 |
| P2 | 12 |
| P3 | 0 |
| Avg. waiting time | 4.75 |
| Avg. Turnaround | 10.25 |
| Avg. Response | 4.75 |

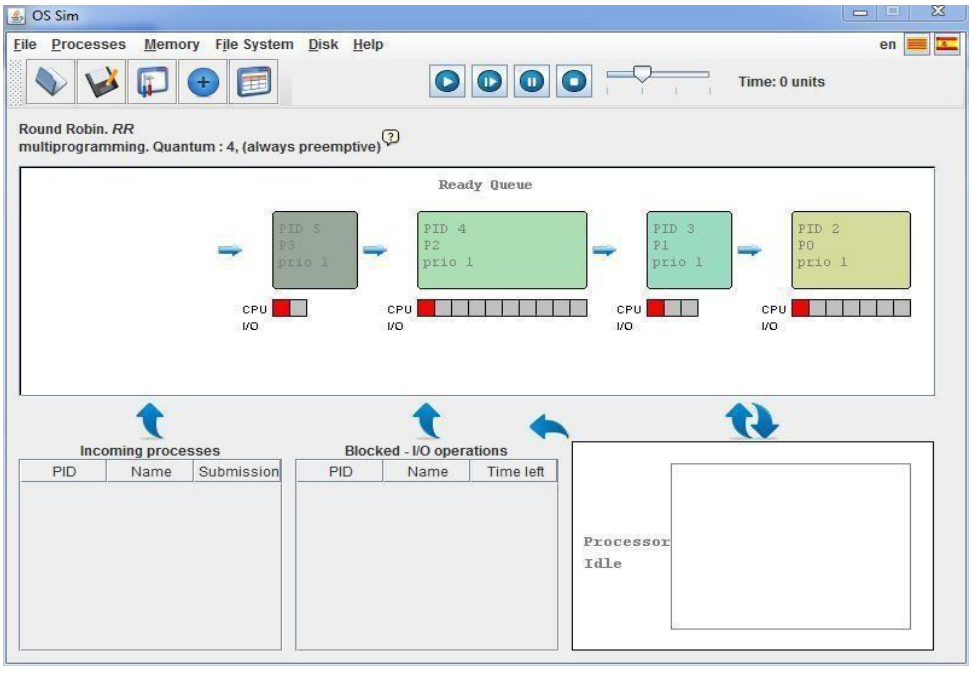
## 3. Priority scheduling

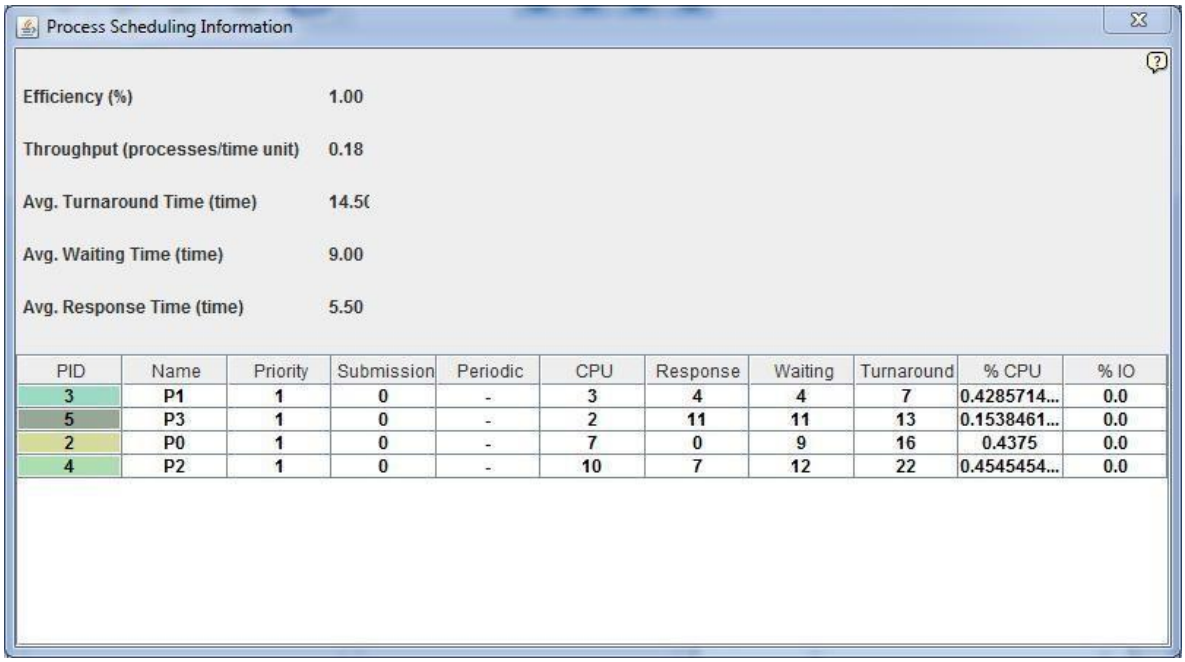





| Process | Wait time |
|---|---|
| P0 | 0 |
| P1 | 9 |
| P2 | 12 |
| P3 | 7 |
| Avg. waiting time | 7.00 |
| Avg. Turnaround | 12.50 |
| Avg. Response | 7.00 |

## 4. Round robin (Quantum = 4)






| Process | Wait time |
|---|---|
| P0 | 9 |
| P1 | 4 |
| P2 | 12 |
| P3 | 11 |
| Avg. waiting time | 9.00 |
| Avg. Turnaround | 14.50 |
| Avg. Response | 5.50 |