

Modul 11

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1 FCFS

The screenshot displays the OS Sim application window. The main interface is titled "OS Sim" and includes a menu bar (File, Processes, Memory, File System, Disk, Help) and a toolbar with various icons. The status bar at the top indicates "Time: 0 units".

The central area is labeled "Ready Queue" and contains a green box representing a process with the following details:

- PID 1
- P0
- Prio 1

To the right of the process box is a "CPU I/O" indicator with a red bar and a green bar.

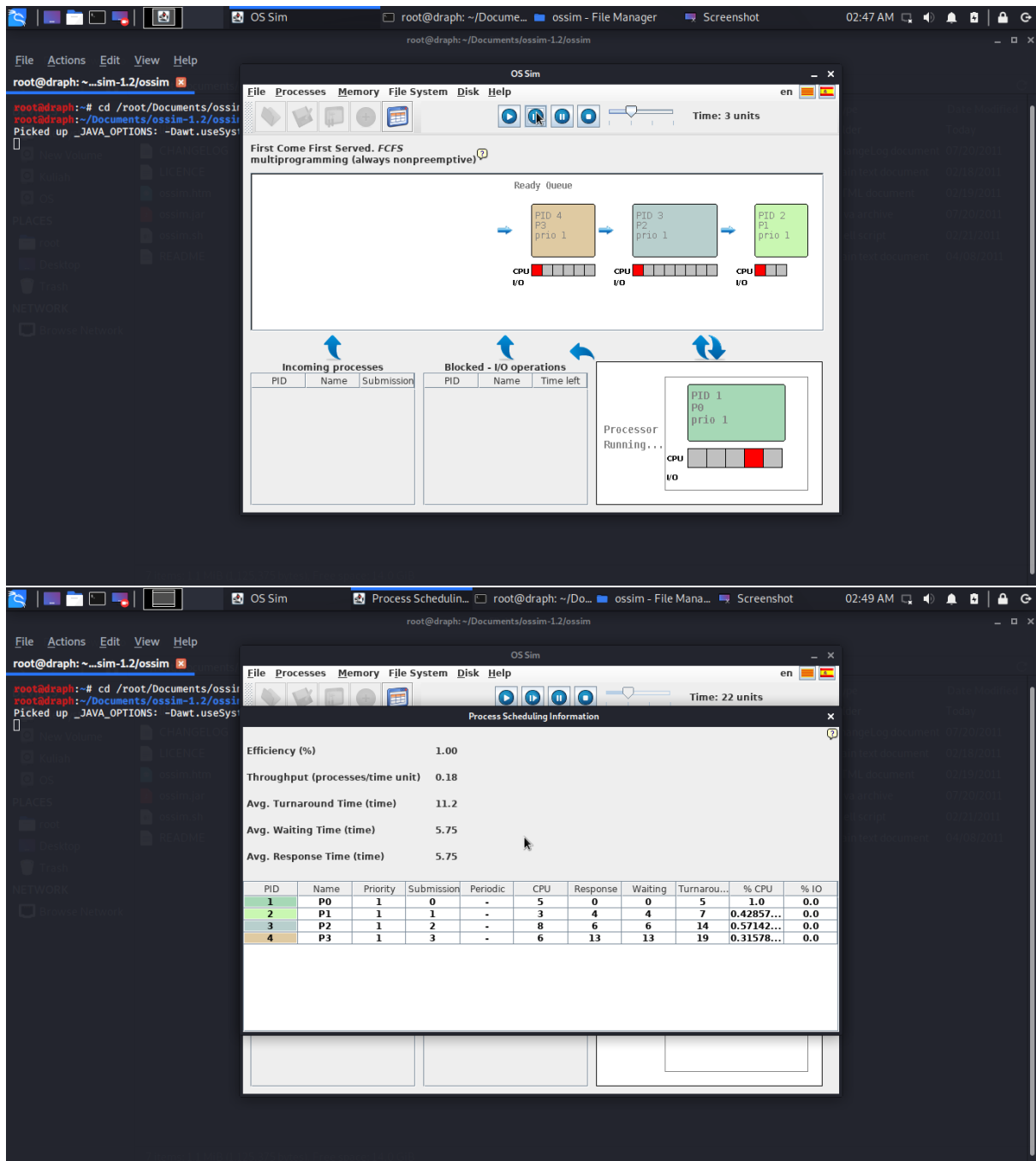
Below the Ready Queue are three panels:

- Incoming processes:** A table with columns PID, Name, and Submission. It lists three processes: P1 (Submission 1), P2 (Submission 2), and P3 (Submission 3).
- Blocked - I/O operations:** A table with columns PID, Name, and Time left. It is currently empty.
- Processor:** A box labeled "Idle".

Arrows indicate the flow of processes between these states: from Incoming processes to Ready Queue, from Ready Queue to Processor, and from Processor to Blocked - I/O operations.

The background shows a terminal window with the following commands and output:

```
root@draph: ~...sim-1.2/ossim
root@draph:~# cd /root/Documents/ossim
root@draph:~/Documents/ossim-1.2/ossim
Picked up _JAVA_OPTIONS: -Dawt.useSys...
```



Proses	Wait time
P0	0
P1	4
P2	6
P3	13
AV Wait time	5.75
AV Turnarround Time	11.2
AV Responses Time	5.75

2 SJF Nonpreemptive dan Preemptive

SJF Nonpreemptive

OS Sim

File Processes Memory File System Disk Help

Time: 0 units

Shortest Job First. SJF multiprogramming (nonpreemptive)

Ready Queue

PID 1
P0
prio 1

CPU I/O

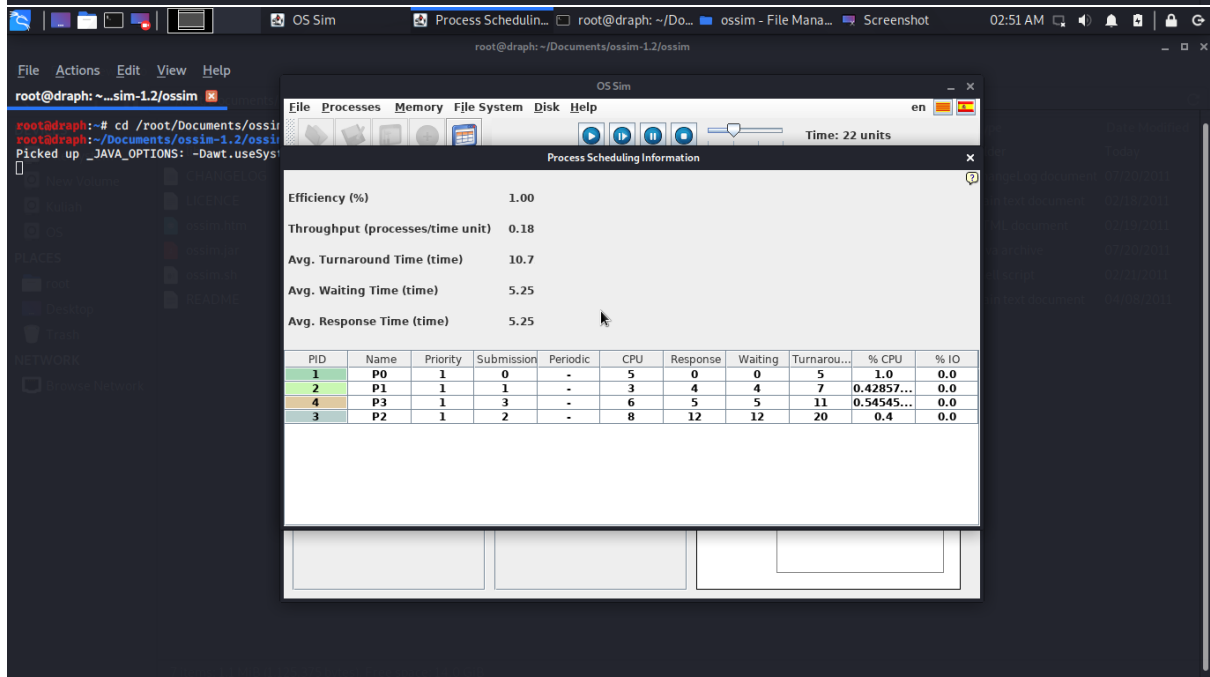
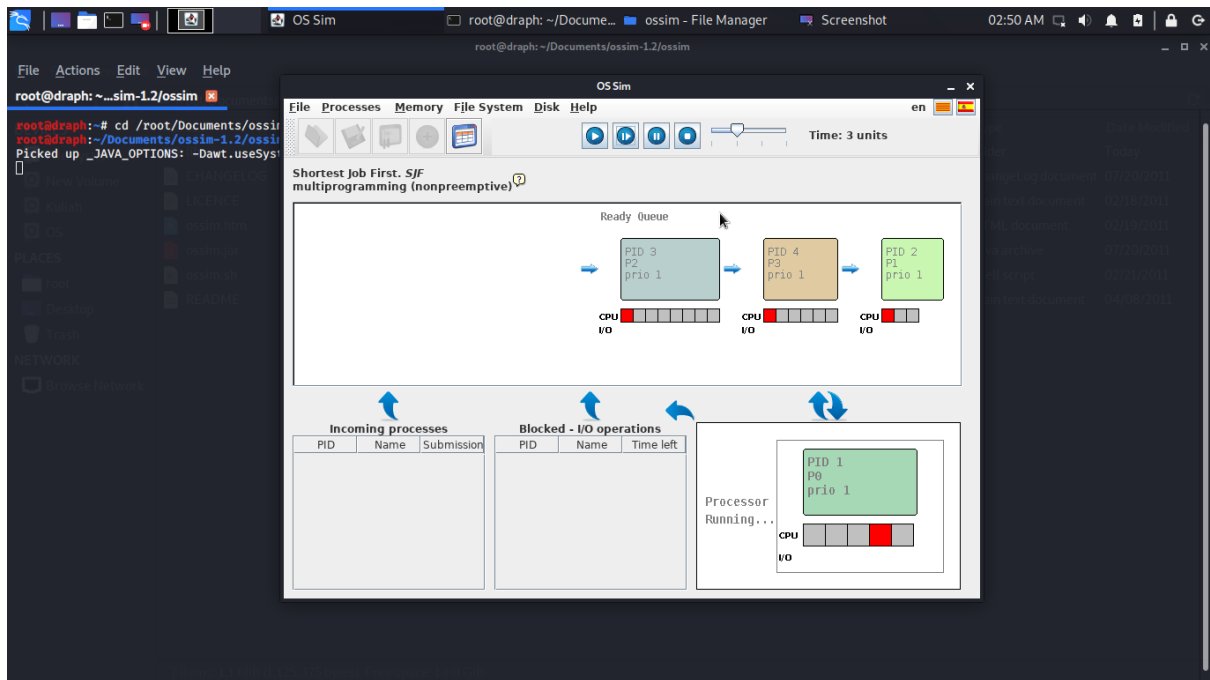
Incoming processes

PID	Name	Submission
2	P1	1
3	P2	2
4	P3	3

Blocked - I/O operations

PID	Name	Time left
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Processor Idle



Proses	Wait time
P0	0
P1	4
P2	12
P3	5
AV Wait Time	5.25
AV Turnarround	10.7
AV Responses Time	5.25

SJF Preemptive

OS Sim

File Processes Memory File System Disk Help

Time: 0 units

Shortest Job First. SJF multiprogramming (preemptive)

Ready Queue

PID 1
P0
prio 1

CPU I/O

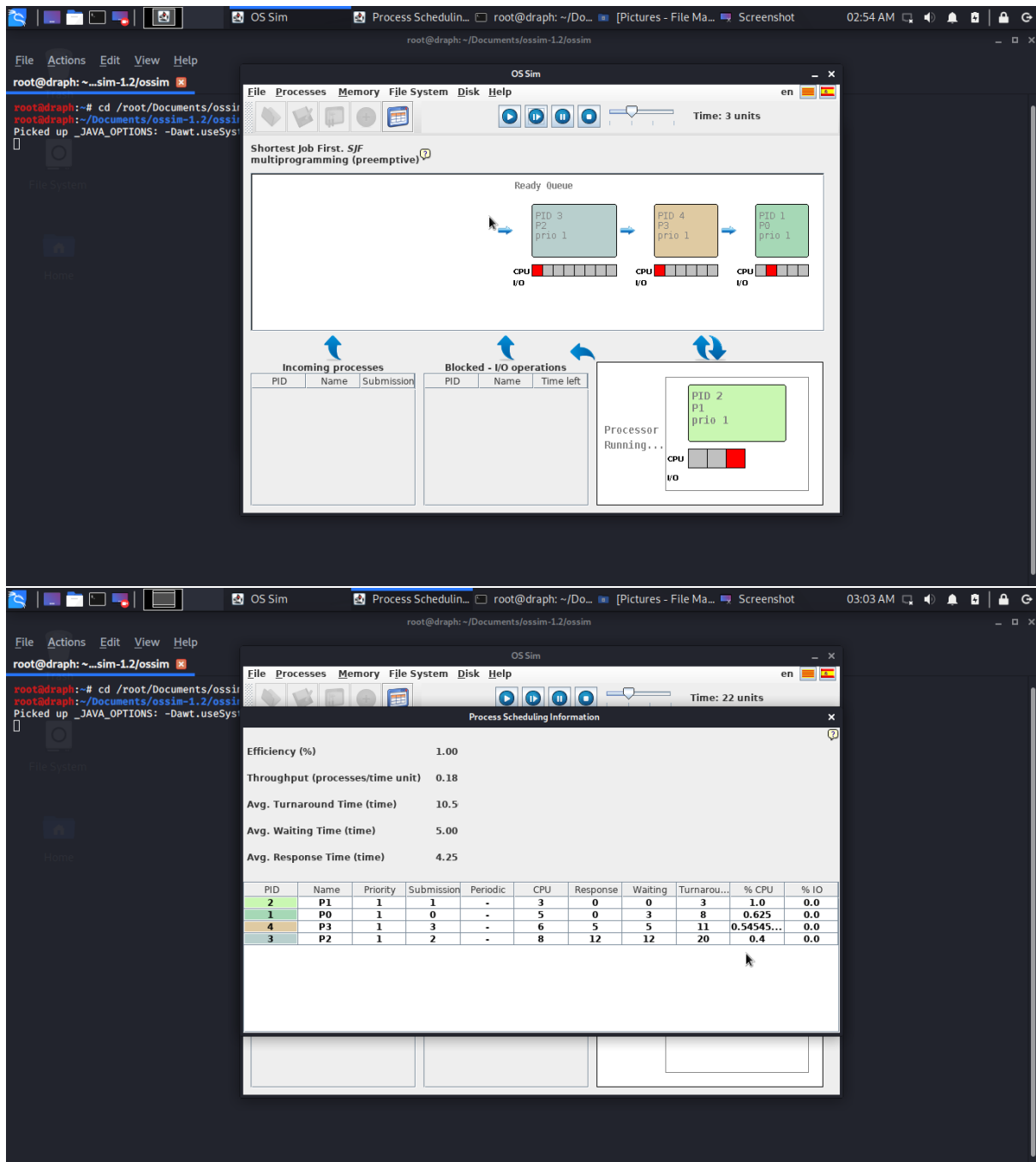
Incoming processes

PID	Name	Submission
2	P1	1
3	P2	2
4	P3	3

Blocked - I/O operations

PID	Name	Time left
-----	------	-----------

Processor Idle



Proses	Wait time
P0	8
P1	0
P2	12
P3	5
AV Wait time	5.00
AV Turnarround Time	10.5
AV Responses Time	4.25

3 Priority

The screenshot displays the OS Sim application window. The main interface is titled "OS Sim" and shows a "Ready Queue" with a single process (PID 1, PO 1, prio 1) being scheduled. The CPU usage bar is at 100%. The "Incoming processes" table lists three processes: P1 (Submission 1), P2 (Submission 2), and P3 (Submission 3). The "Blocked - I/O operations" table is empty. The "Processor" is currently "Idle".

OS Sim

File Processes Memory File System Disk Help

Time: 0 units

Priority scheduling, multiprogramming (nonpreemptive)

Ready Queue

PID 1
PO 1
prio 1

CPU I/O

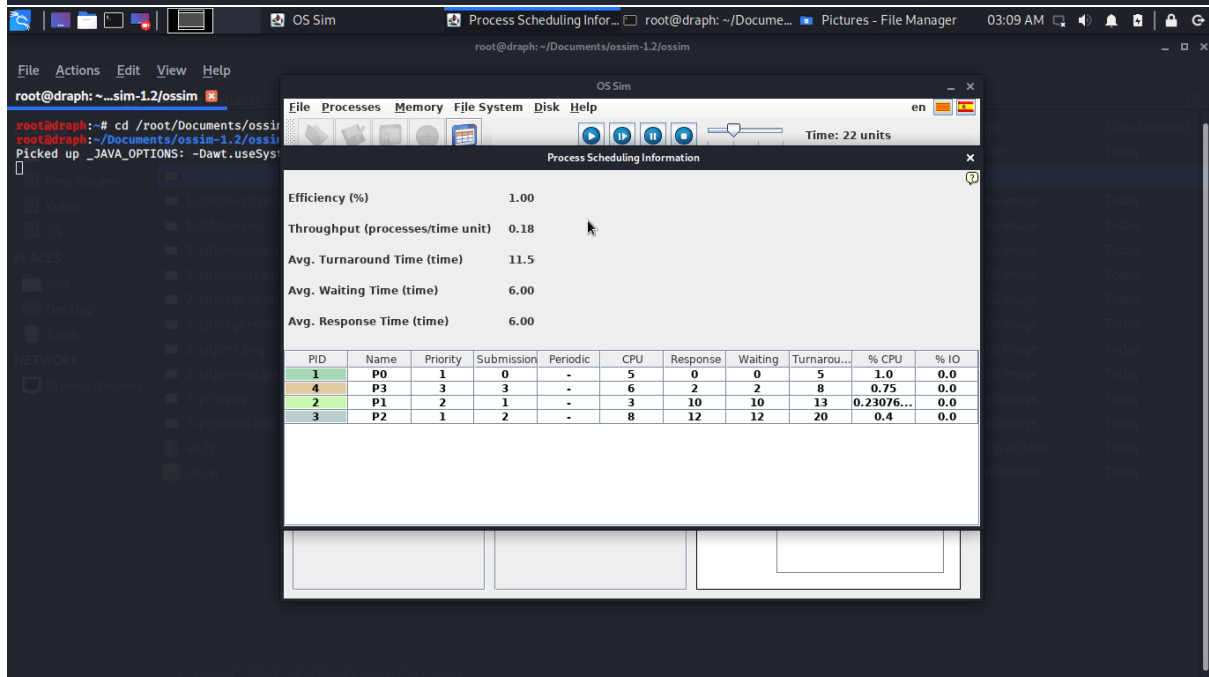
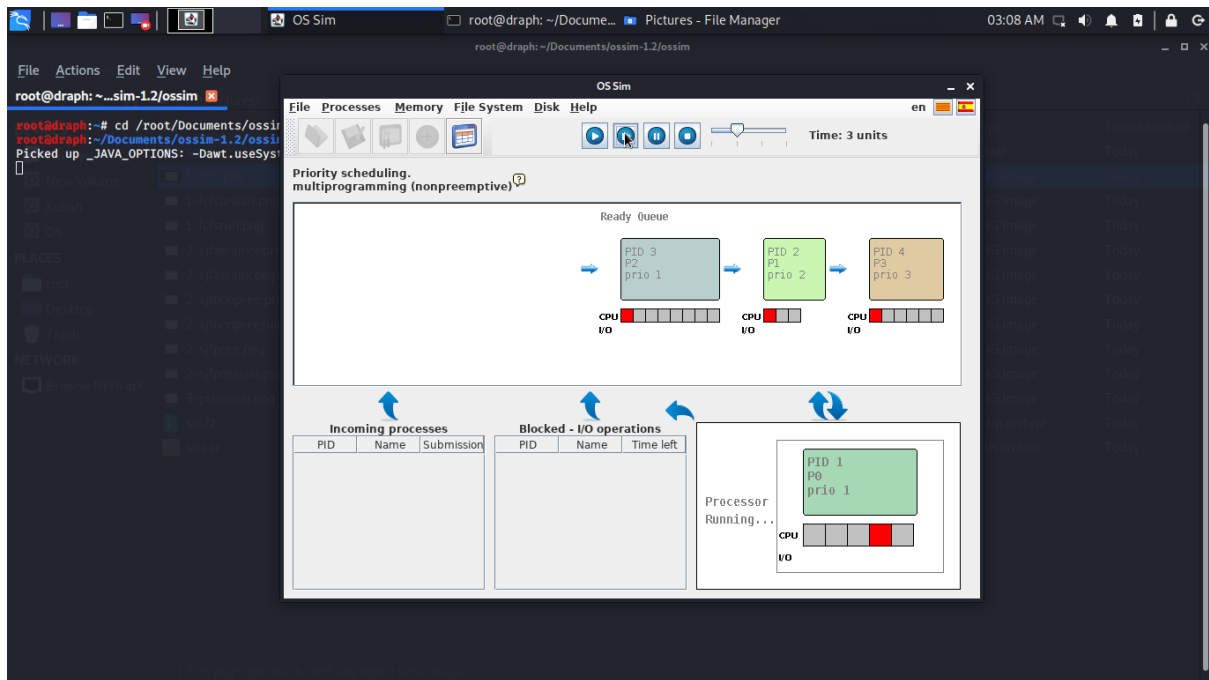
Incoming processes

PID	Name	Submission
2	P1	1
3	P2	2
4	P3	3

Blocked - I/O operations

PID	Name	Time left
-----	------	-----------

Processor Idle



Proses	Wait time
P0	0
P1	10
P2	12
P3	2
AV Wait time	6.00
AV Turnarround Time	11.5
AV Responses Time	6.00

4 Round Robin Quantum = 3

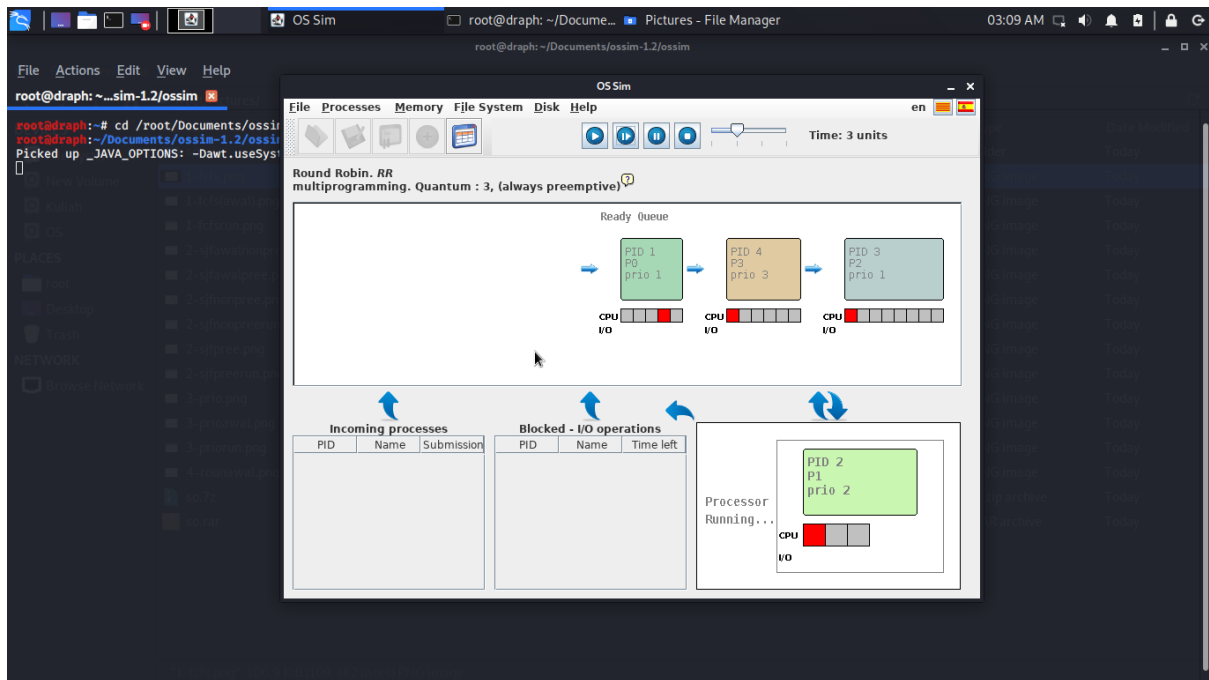
The screenshot shows the OS Sim application window. The title bar indicates the user is root@draph: ~/Documents/ossim-1.2/ossim. The main window has a menu bar (File, Processes, Memory, File System, Disk, Help) and a toolbar with icons for file operations and a play button. The status bar shows 'Time: 0 units'.

The main display area is titled 'Round Robin, RR multiprogramming. Quantum : 3, (always preemptive)'. It features a 'Ready Queue' at the top, which currently contains a single process box labeled 'PID 1, P0, prio 1'. Below the queue is a 'CPU I/O' indicator with a red bar and a green bar.

At the bottom, there are three panels:

- Incoming processes:** A table with columns PID, Name, and Submission. It lists three processes: PID 2 (P1, Submission 1), PID 3 (P2, Submission 2), and PID 4 (P3, Submission 3).
- Blocked - I/O operations:** A table with columns PID, Name, and Time left. It is currently empty.
- Processor:** A box labeled 'Idle'.

Blue arrows indicate the flow of processes: from the Incoming processes table to the Ready Queue, from the Ready Queue to the Processor, and from the Processor back to the Ready Queue.



OS Sim interface showing Process Scheduling Information. The time is 22 units.

PID	Name	Priority	Submission	Periodic	CPU	Response	Waiting	Turnarou...	% CPU	% IO
2	P1	2	1	-	3	2	2	5	0.6	0.0
1	P0	1	0	-	5	0	9	14	0.35714...	0.0
4	P3	3	3	-	6	6	11	17	0.35294...	0.0
3	P2	1	2	-	8	4	12	20	0.4	0.0

Proses	Wait time
P0	9
P1	2
P2	12
P3	11
AV Wait time	8.50
AV Turnarround Time	14.0
AV Responses Time	3.00