PRAKTIKUM SISTEM OPERASI

MODUL 11

PENJADWALAN PROSES DAN MANAJEMEN MEMORI (OSSim)

DISUSUN OLEH :

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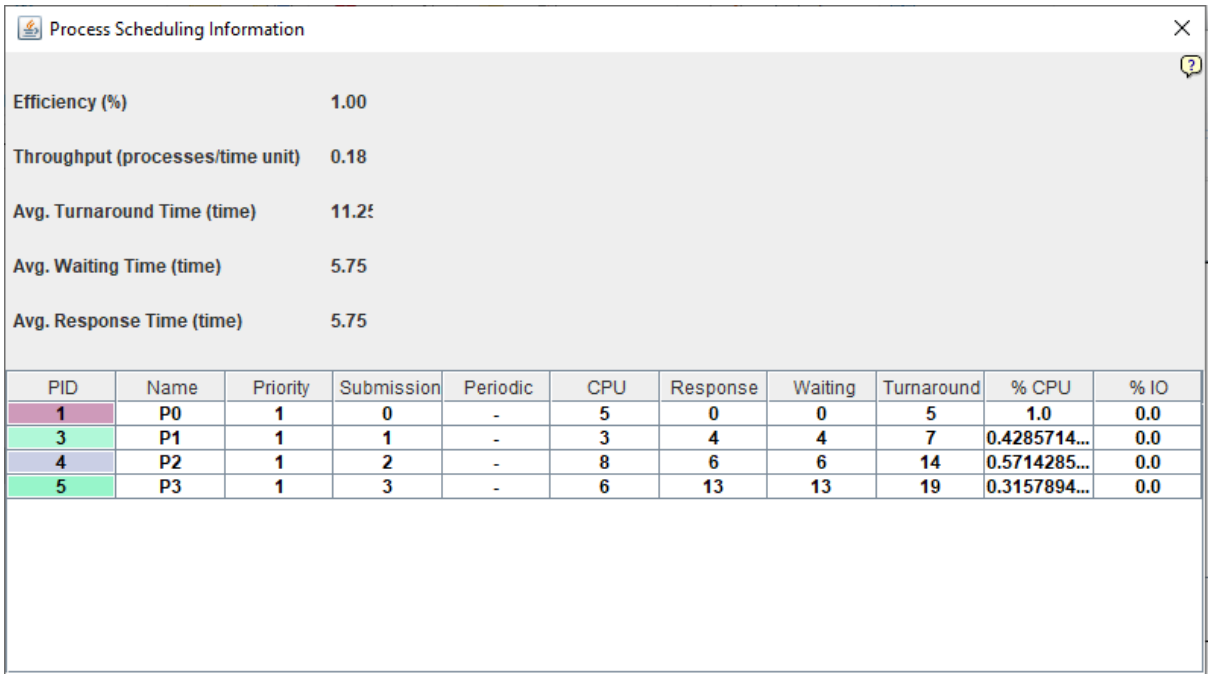
Kegiatan 1. Penjadwalan Proses

1. First-Come, First-Served (FCFS)

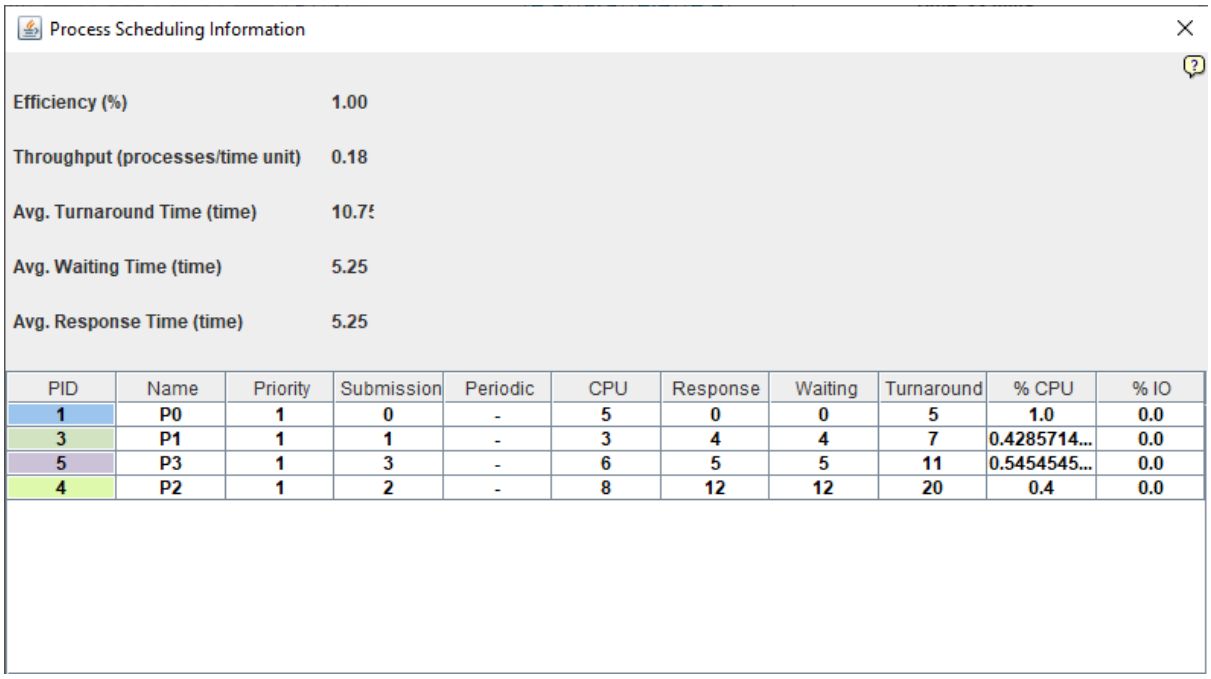
FCFS



Process	Wait time = Service Time – Arrival Time
P0	0
P1	4
P2	6
P3	13
Av wait time	5.75

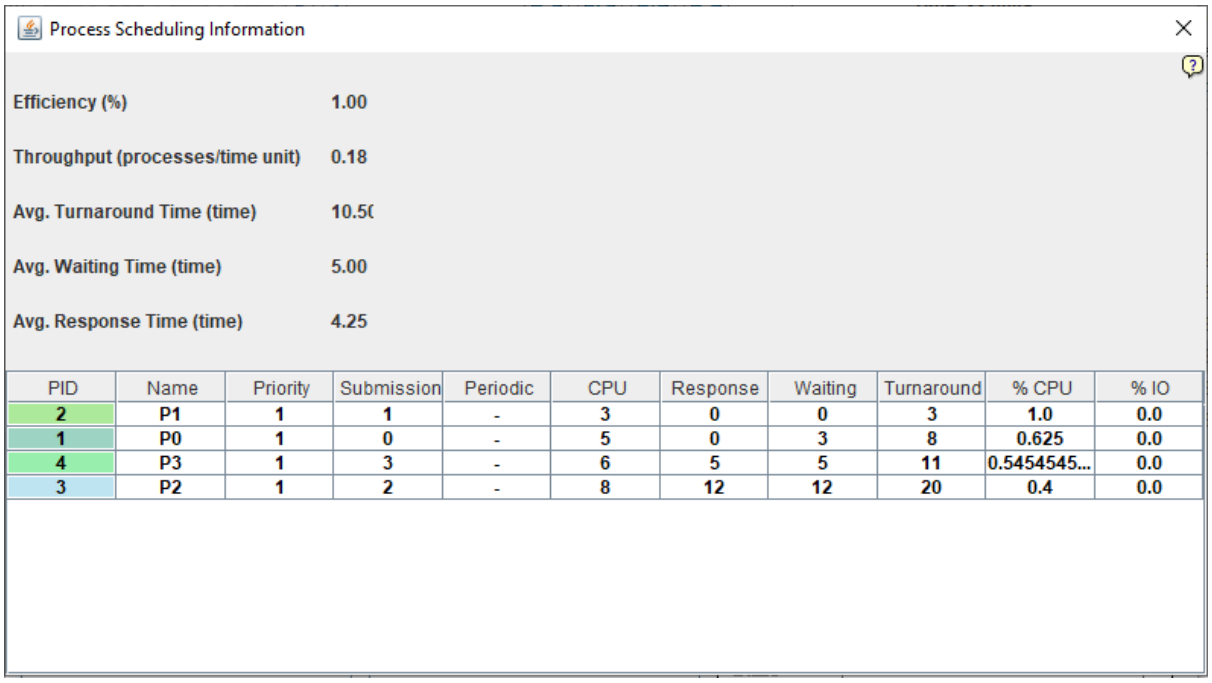
2. Shortest Job Firs (SJF)

SJF Non-Preemtive



Process	Wait time = Service Time – Arrival Time
P0	0
P1	4
P2	5
P3	12
Av wait time	5.25

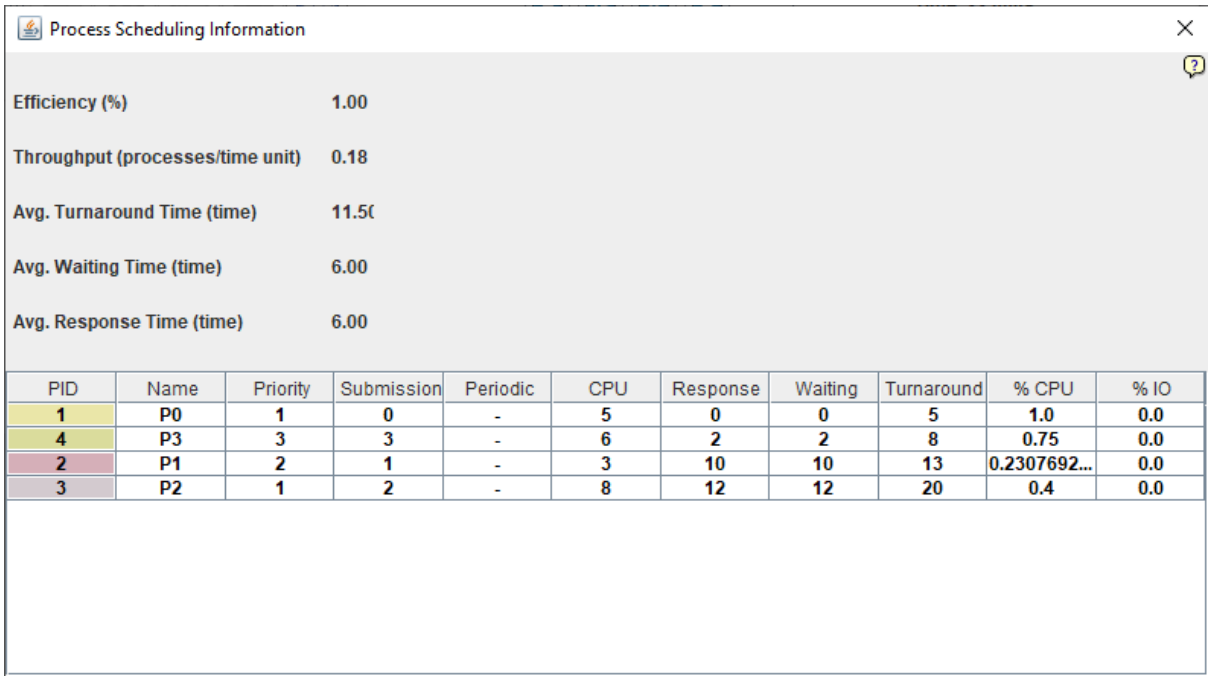
SJF Preemtive



Process	Wait time = Service Time – Arrival Time
P0	0
P1	3
P2	5
P3	12
Av wait time	5.00

3. Priority

Priority

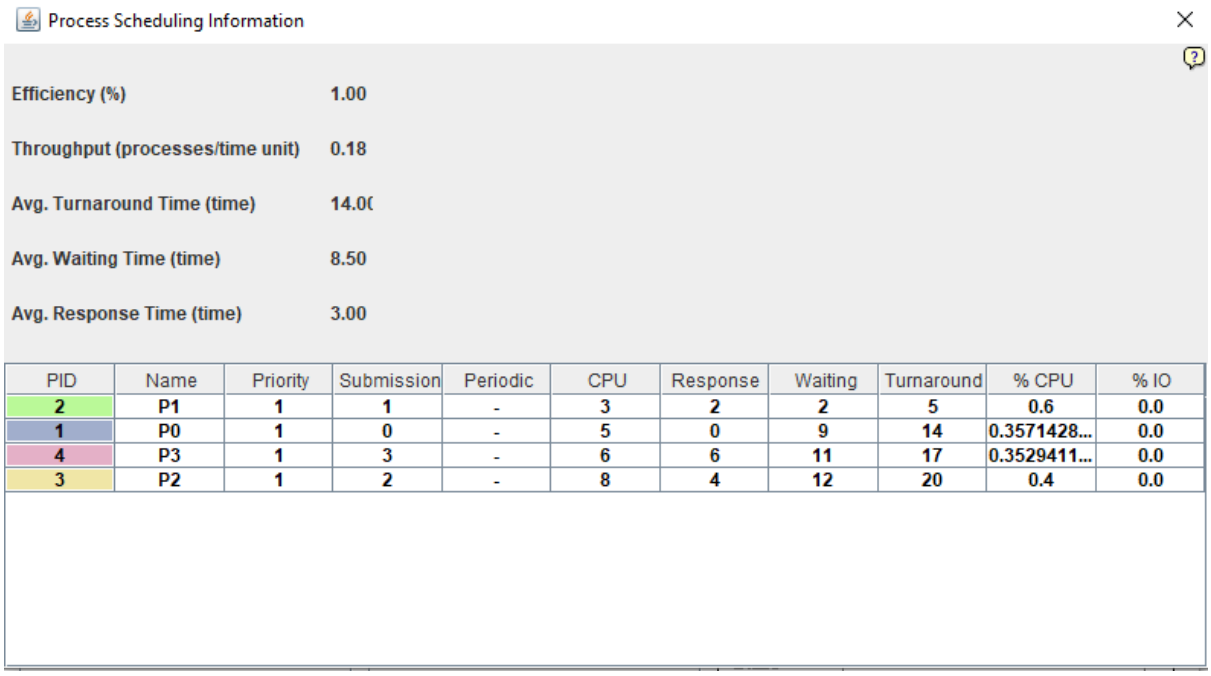


PID	Name	Priority	Submission	Periodic	CPU	Response	Waiting	Turnaround	% CPU	% IO
1	P0	1	0	-	5	0	0	5	1.0	0.0
4	P3	3	3	-	6	2	2	8	0.75	0.0
2	P1	2	1	-	3	10	10	13	0.2307692...	0.0
3	P2	1	2	-	8	12	12	20	0.4	0.0

Process	Wait time = Service Time – Arrival Time
P0	0
P1	10
P2	12
P3	2
Av wait time	6.00

4. Round Robin

Round Robin

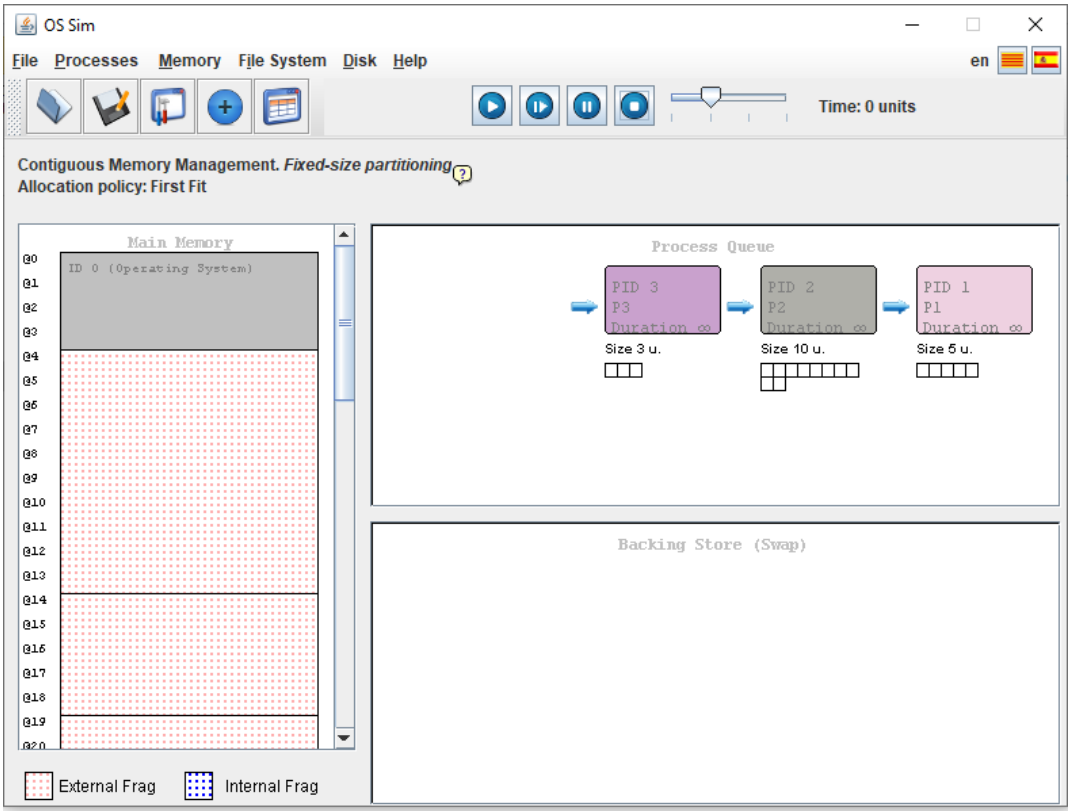


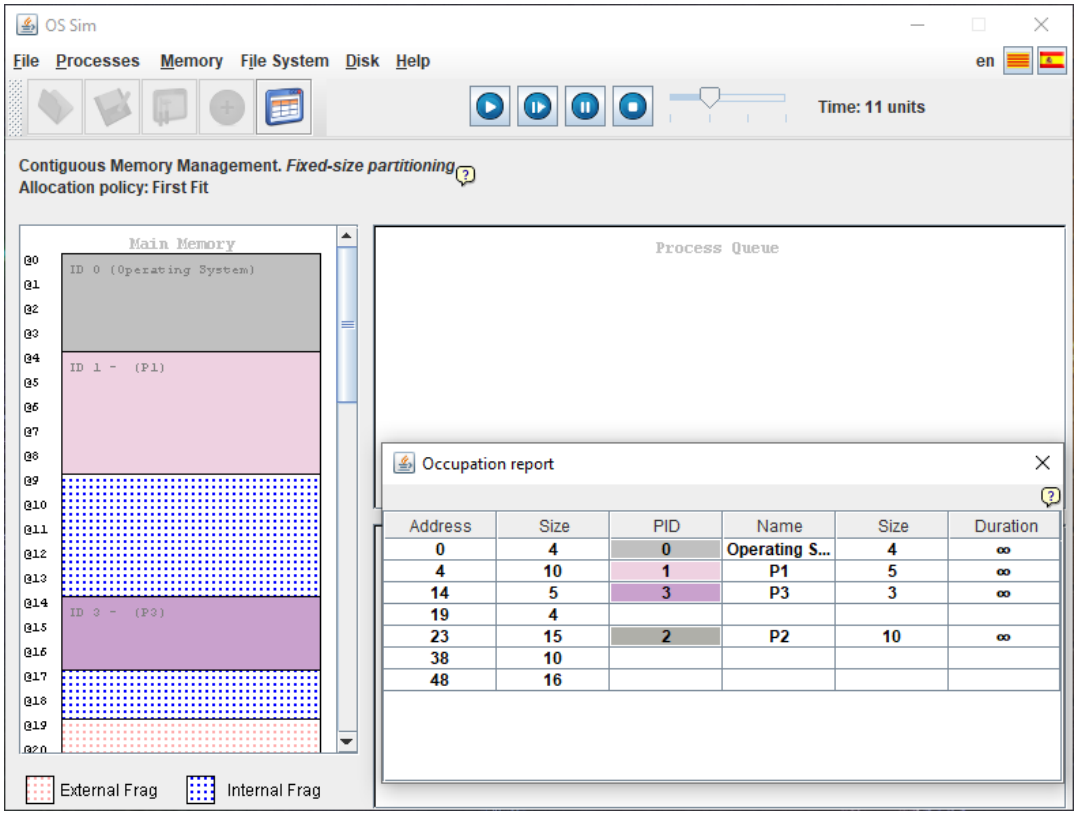
PID	Name	Priority	Submission	Periodic	CPU	Response	Waiting	Turnaround	% CPU	% IO
2	P1	1	1	-	3	2	2	5	0.6	0.0
1	P0	1	0	-	5	0	9	14	0.3571428...	0.0
4	P3	1	3	-	6	6	11	17	0.3529411...	0.0
3	P2	1	2	-	8	4	12	20	0.4	0.0

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

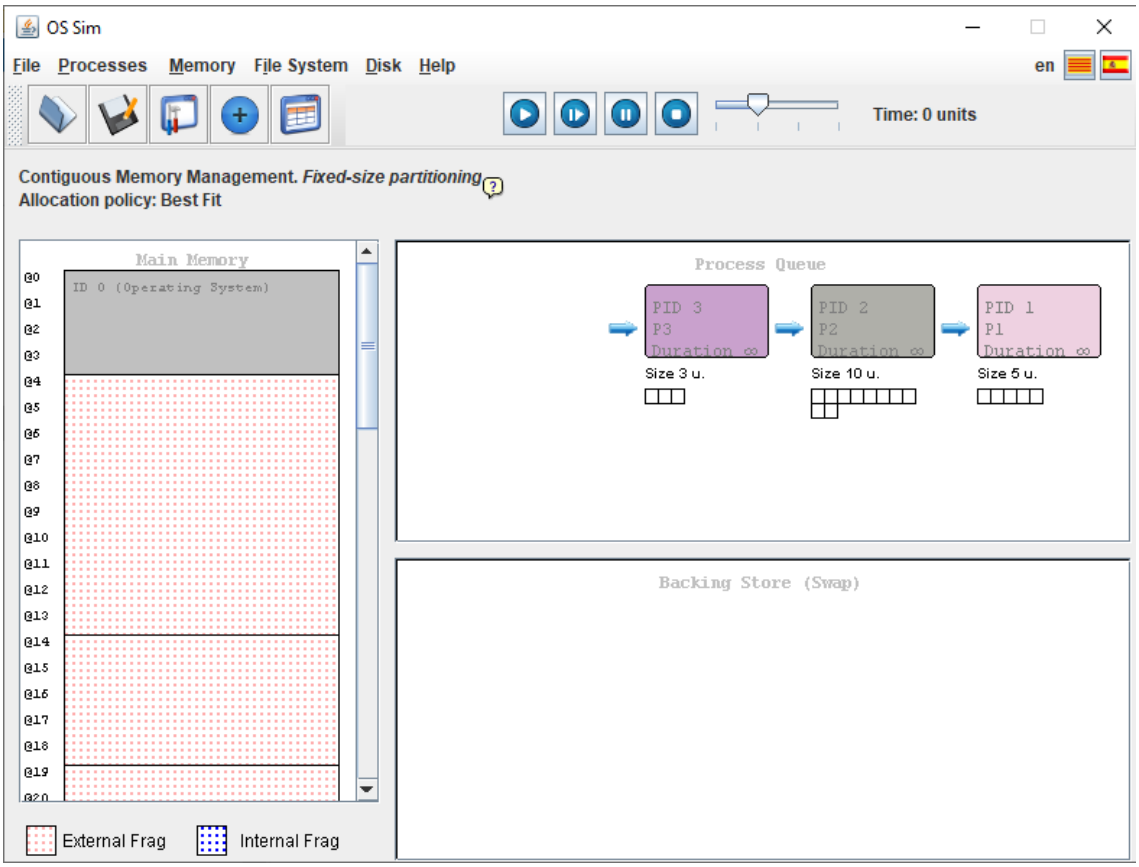
Kegiatan 2. Manajemen Memori

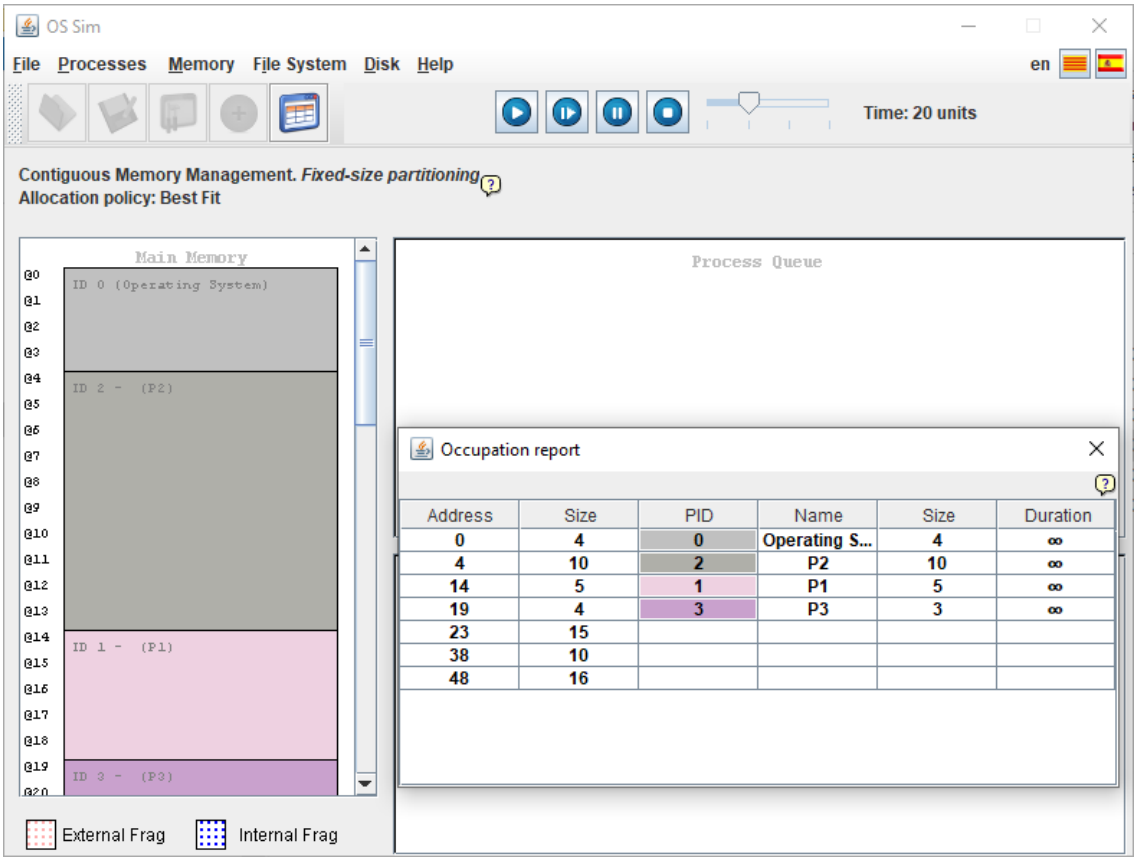
1. **Continguos memory management dengan menggunakan partisi berukuran tetap (fixed-size partition) dan aturan first-fit**



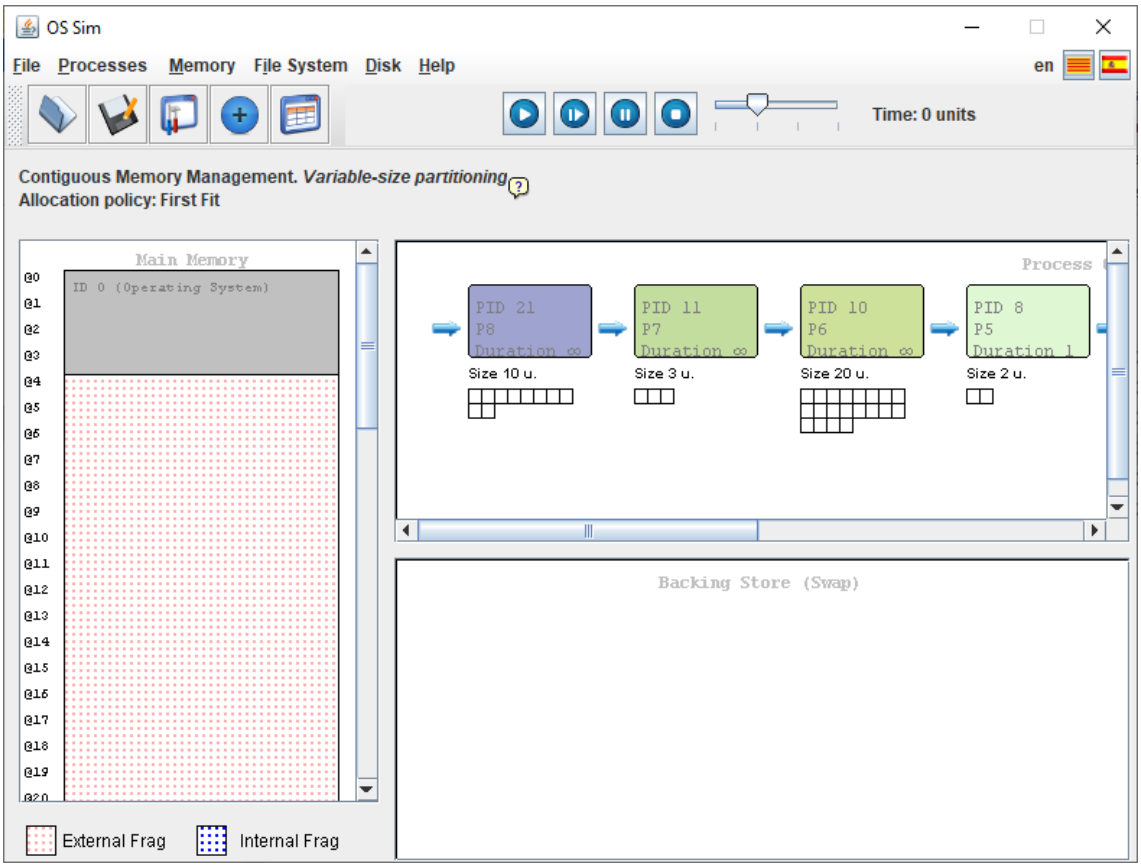


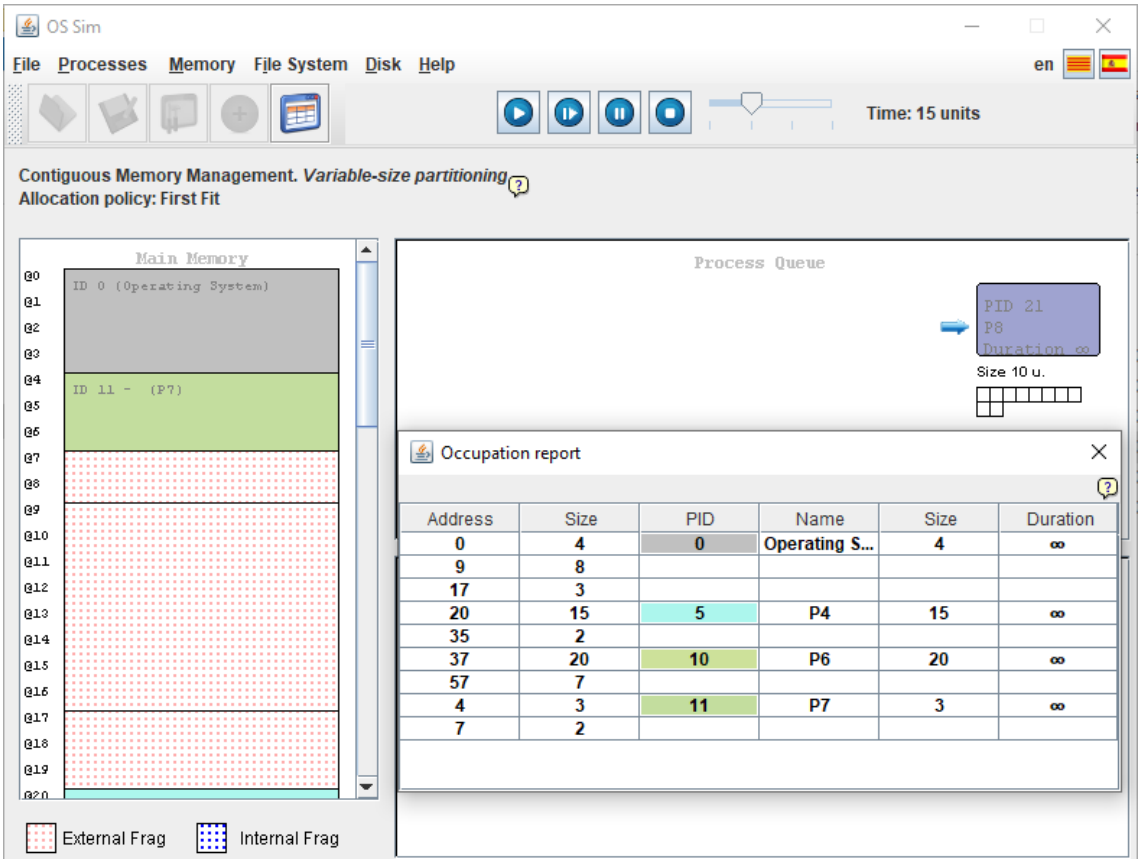
2. **Continguos memory management dengan menggunakan partisi berukuran tetap (fixed-size partition) dan aturan best fit**



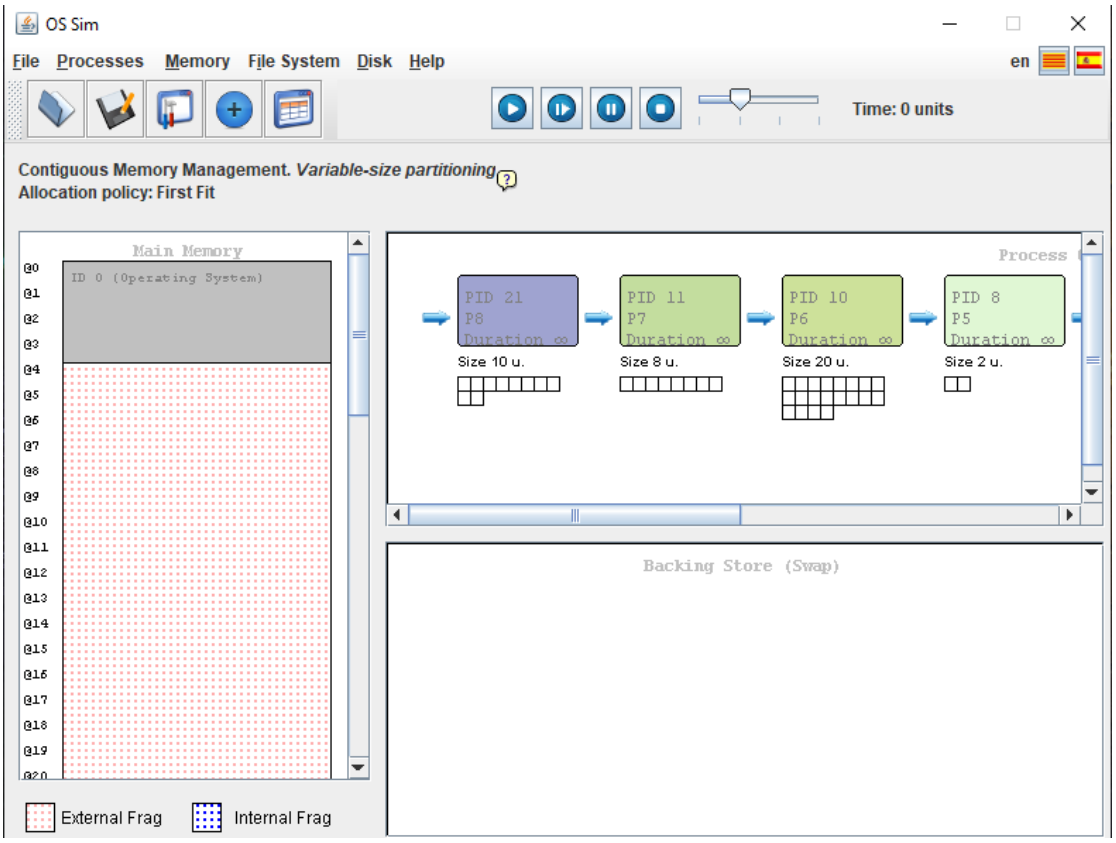


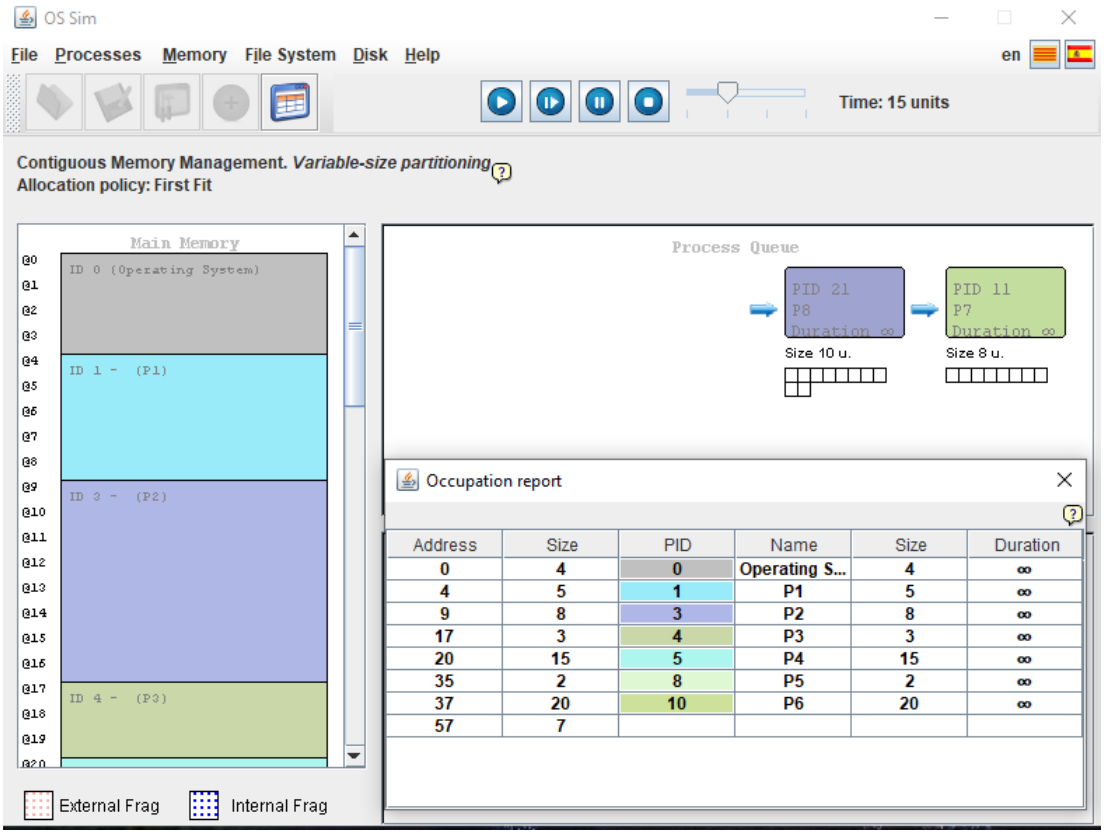
3. **Continguos memory management dengan menggunakan partisi berukuran tidak tetap (variable-size partition) >> defragmentasi**





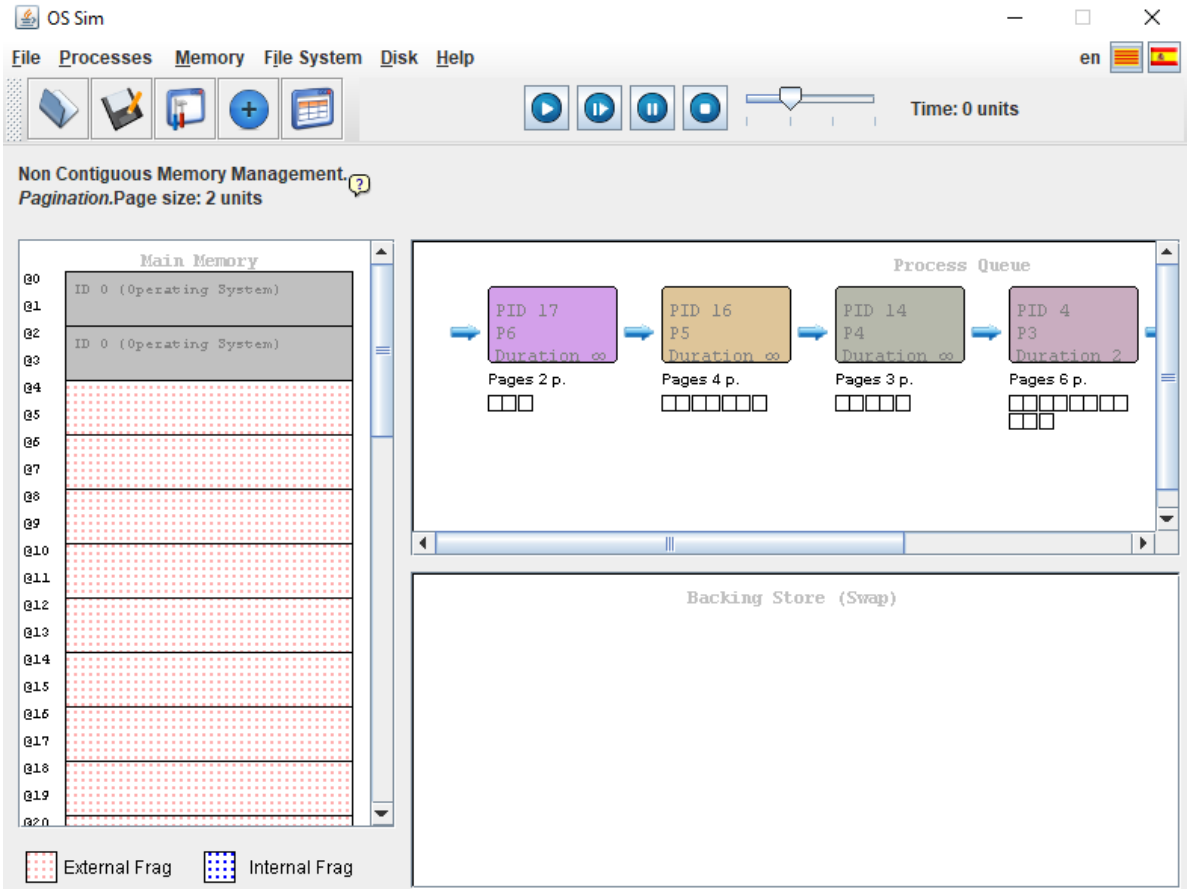
4. **Continguos memory management dengan menggunakan partisi berukuran tidak tetap (variable-size partition) >> swap**

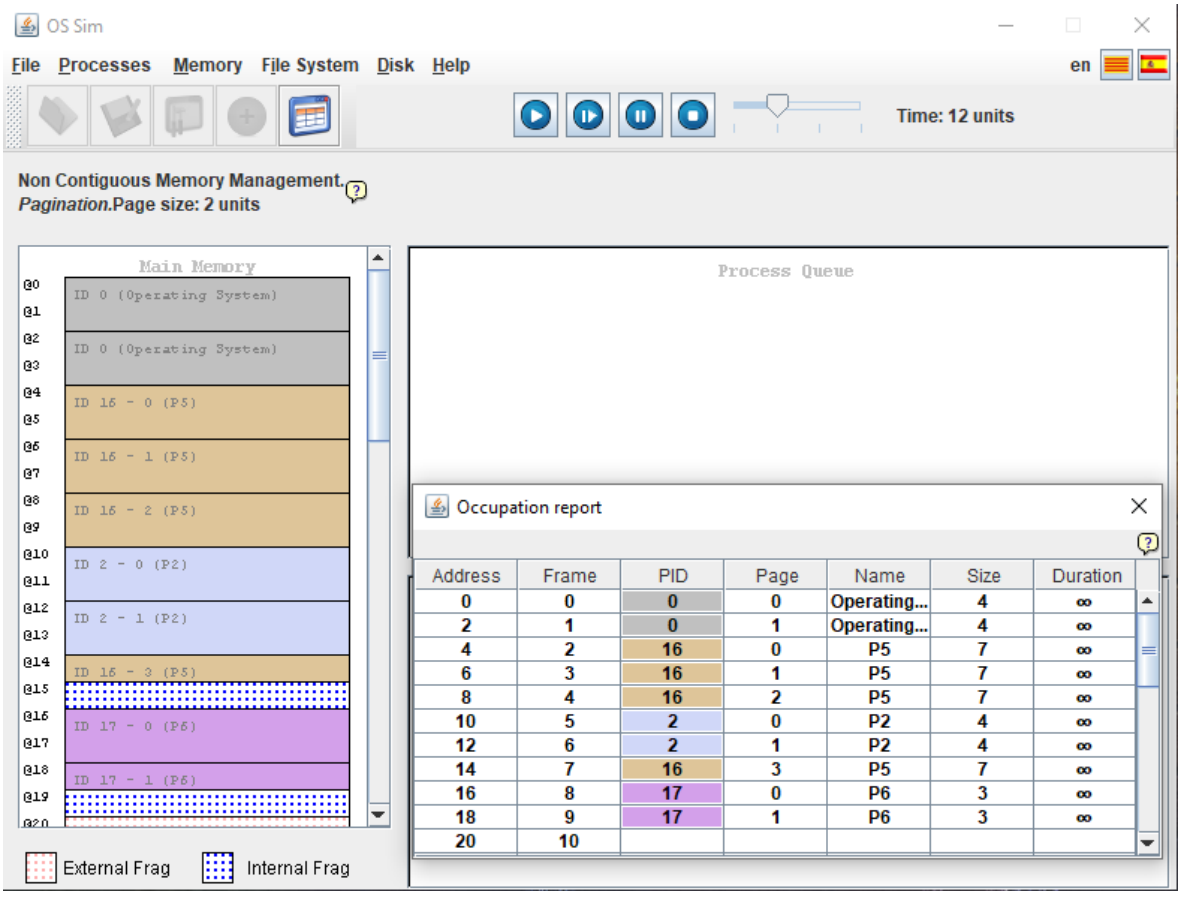




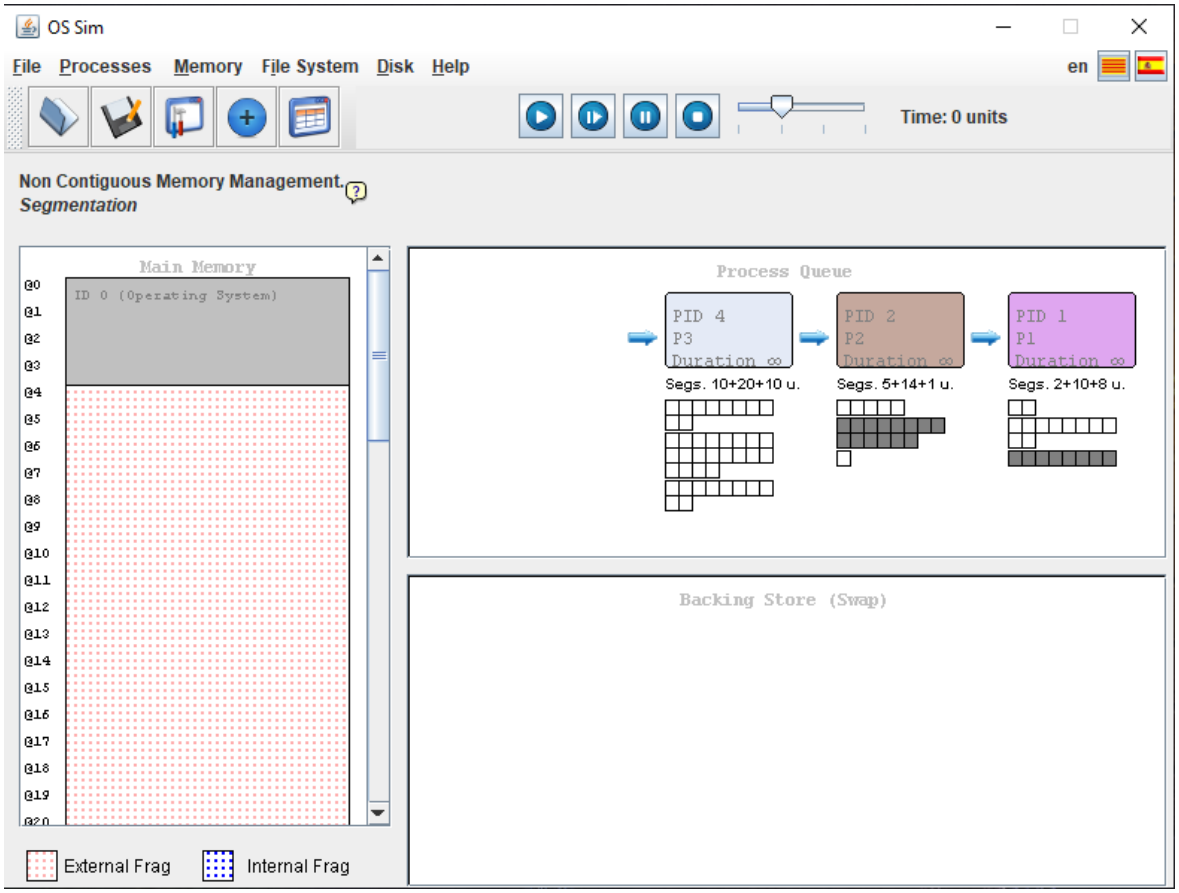
Address	Size	PID	Name	Size	Duration
0	4	0	Operating S...	4	∞
4	5	1	P1	5	∞
9	8	3	P2	8	∞
17	3	4	P3	3	∞
20	15	5	P4	15	∞
35	2	8	P5	2	∞
37	20	10	P6	20	∞
57	7				

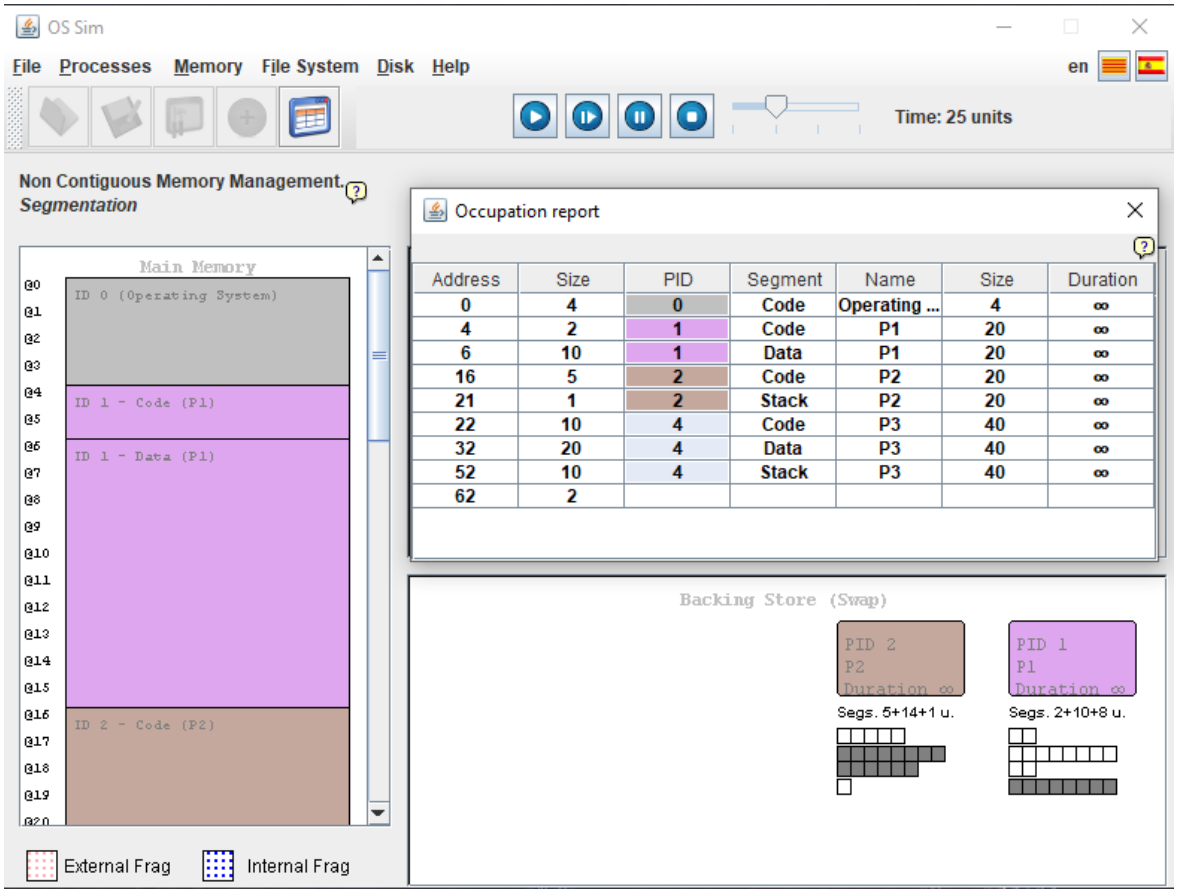
5. Pagination (ukuran page 2 unit)





6. Segmentation (alokasi parsial)





Address	Size	PID	Segment	Name	Size	Duration
0	4	0	Code	Operating ...	4	∞
4	2	1	Code	P1	20	∞
6	10	1	Data	P1	20	∞
16	5	2	Code	P2	20	∞
21	1	2	Stack	P2	20	∞
22	10	4	Code	P3	40	∞
32	20	4	Data	P3	40	∞
52	10	4	Stack	P3	40	∞
62	2					