

\_\_\_\_\_ Dynamic Partitioning Memory Management Simulation \_\_\_\_\_

Enter the input filename (e.g., processes.txt): processes.txt

--- Time: 0 ---

Process 1 arrived.

----- Memory State -----

Total Memory: 1024 units

Memory Used : 300 units

Memory Free : 724 units

Allocated Processes:

PID	Size	Start Address
1	300	0

--- Time: 1 ---

Process 4 arrived.

----- Memory State -----

Total Memory: 1024 units

Memory Used : 650 units

Memory Free : 374 units

Allocated Processes:

PID	Size	Start Address
1	300	0
4	350	300

--- Time: 2 ---

Process 5 arrived.

Process 1 finished execution.

----- Memory State -----

Total Memory: 1024 units

Memory Used : 530 units

Memory Free : 494 units

Allocated Processes:

PID	Size	Start Address
4	350	300
5	180	650

Free Holes:

Start	Size
0	300

--- Time: 3 ---

Process 10 arrived.

----- Memory State -----

Total Memory: 1024 units

Memory Used : 710 units

Memory Free : 314 units

Allocated Processes:

PID	Size	Start Address
4	350	300
5	180	650
10	180	0

Free Holes:

Start	Size
180	120

--- Time: 4 ---

Process 3 arrived.  
Process 5 finished execution.

----- Memory State -----  
Total Memory: 1024 units  
Memory Used : 680 units  
Memory Free : 344 units

Allocated Processes:

PID	Size	Start Address
3	150	830
4	350	300
10	180	0

Free Holes:

Start	Size
180	120
650	180

--- Time: 5 ---

Process 2 arrived.  
Memory full! Process 2 is suspended.  
Process 10 finished execution.

Memory full! Process 2 is suspended.  
Process 10 finished execution.  
Process 2 moved from queue to memory.

----- Memory State -----  
Total Memory: 1024 units  
Memory Used : 700 units  
Memory Free : 324 units

Allocated Processes:

PID	Size	Start Address
2	200	0
3	150	830
4	350	300

Free Holes:

Start	Size
200	100
650	180

--- Time: 6 ---

Process 8 arrived.  
Process 4 finished execution.

----- Memory State -----  
Total Memory: 1024 units  
Memory Used : 500 units  
Memory Free : 524 units

Allocated Processes:

PID	Size	Start Address
2	200	0
3	150	830
8	150	650

Free Holes:  
Start            Size  
200            450  
800            30

--- Time: 7 ---

Process 9 arrived.

----- Memory State -----  
Total Memory: 1024 units  
Memory Used : 850 units  
Memory Free : 174 units

Allocated Processes:  
PID            Size            Start Address  
2            200            0  
3            150            830  
8            150            650  
9            350            200

Free Holes:  
Start            Size  
550            100  
800            30

--- Time: 8 ---

Process 6 arrived.  
Memory full! Process 6 is suspended.  
Process 3 finished execution.  
Memory full! Process 6 is suspended.

----- Memory State -----  
Total Memory: 1024 units  
Memory Used : 700 units  
Memory Free : 324 units

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Allocated Processes:  
PID            Size            Start Address  
2            200            0  
8            150            650  
9            350            200

Free Holes:  
Start            Size  
550            100  
800            180

Suspended Processes : 6

--- Time: 9 ---

Process 7 arrived.  
Process 2 finished execution.  
Memory full! Process 6 is suspended.

----- Memory State -----  
Total Memory: 1024 units  
Memory Used : 700 units  
Memory Free : 324 units

Allocated Processes:  
PID            Size            Start Address  
7            200            800  
8            150            650  
9            350            200

Free Holes:  
Start            Size  
0            200  
550            100  
800            180

Suspended Processes : 6

--- Time: 10 ---

Process 8 finished execution.

Process 6 moved from queue to memory.

----- Memory State -----

Total Memory: 1024 units

Memory Used : 850 units

Memory Free : 174 units

Allocated Processes:

PID	Size	Start Address
6	300	550
7	200	800
9	350	200

Free Holes:

Start	Size
0	200
850	130

--- Time: 11 ---

----- Memory State -----

Total Memory: 1024 units

Memory Used : 850 units

Memory Free : 174 units

Allocated Processes:

PID	Size	Start Address
6	300	550
7	200	800
9	350	200

Free Holes:

Start	Size
0	200
850	130

--- Time: 12 ---

Process 7 finished execution.

Process 9 finished execution.

----- Memory State -----

Total Memory: 1024 units

Memory Used : 300 units

Memory Free : 724 units

Allocated Processes:

PID	Size	Start Address
6	300	550

Free Holes:

Start	Size
0	550
800	200
850	130

--- Time: 13 ---

Process 6 finished execution.

----- Memory State -----

Total Memory: 1024 units

Memory Used : 0 units

Memory Free : 1024 units

Memory Free : 1024 units

Allocated Processes:

PID	Size	Start Address
-----	------	---------------

Free Holes:

Start	Size
-------	------

0	850
---	-----

800	200
-----	-----

850	130
-----	-----

--- Process Turnaround Times ---

Process	Arrival Time	Service Time	Turnaround Time
1	0	2	2
2	5	3	4
3	4	4	4
4	1	5	5
5	2	2	2
6	8	2	5
7	9	3	3
8	6	4	4
9	7	5	5
10	3	2	2

The Average Turnaround Time: 3.60 units

Simulation Complete

PS C:\Users\HP\Desktop\OS\_OEL\OS-OEL>