

heroname@VILLAIN: ~/Desktop/school/351/proj 2/project 2 files

File Edit View Search Terminal Help

```
heroname@VILLAIN:~/Desktop/school/351/proj 2/project 2 files$ g++ -o mm MemoryManager.cpp
```

```
heroname@VILLAIN:~/Desktop/school/351/proj 2/project 2 files$ ./mm
```

Memory size (KB): 2000

Page Size (1:100, 2:200, 3:400): 1

Name of workload file: in1.txt

t = 0: Process 1 arrives

Input Queue: [1]

Process 2 arrives

Input Queue: [1 2]

MM moves Process 1 to memory

Input Queue: [2]

Memory Map:

0-99: Free Frame

100-199: Free Frame

200-299: Free Frame

300-399: Free Frame

400-499: Free Frame

500-599: Free Frame

600-699: Free Frame

700-799: Free Frame

800-899: Free Frame

900-999: Free Frame

1000-1099: Free Frame

1100-1199: Free Frame

1200-1299: Free Frame

1300-1399: Free Frame

1400-1499: Free Frame

1500-1599: Free Frame

1600-1699: Free Frame

1700-1799: Free Frame

1800-1899: Free Frame

1900-1999: Free Frame

MM moves Process 2 to memory

Input Queue: []

Memory Map:

```
0-99: Free Frame
100-199: Free Frame
200-299: Free Frame
300-399: Free Frame
400-499: Free Frame
500-599: Free Frame
600-699: Free Frame
700-799: Free Frame
800-899: Free Frame
900-999: Free Frame
1000-1099: Free Frame
1100-1199: Free Frame
1200-1299: Free Frame
1300-1399: Free Frame
1400-1499: Free Frame
1500-1599: Free Frame
1600-1699: Free Frame
1700-1799: Free Frame
1800-1899: Free Frame
1900-1999: Free Frame
```

t = 100: Process 3 arrives

Input Queue: [3]

Process 4 arrives

Input Queue: [3 4]

MM moves Process 3 to memory

Input Queue: [4]

Memory Map:

```
0-99: Free Frame
100-199: Free Frame
200-299: Free Frame
300-399: Free Frame
400-499: Free Frame
500-599: Free Frame
600-699: Free Frame
700-799: Free Frame
800-899: Free Frame
```

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```
900-999: Free Frame
1000-1099: Free Frame
1100-1199: Free Frame
1200-1299: Free Frame
1300-1399: Free Frame
1400-1499: Free Frame
1500-1599: Free Frame
1600-1699: Free Frame
1700-1799: Free Frame
1800-1899: Free Frame
1900-1999: Free Frame
```

MM moves Process 4 to memory

Input Queue: []

Memory Map:

```
0-99: Free Frame
100-199: Free Frame
200-299: Free Frame
300-399: Free Frame
400-499: Free Frame
500-599: Free Frame
600-699: Free Frame
700-799: Free Frame
800-899: Free Frame
900-999: Free Frame
1000-1099: Free Frame
1100-1199: Free Frame
1200-1299: Free Frame
1300-1399: Free Frame
1400-1499: Free Frame
1500-1599: Free Frame
1600-1699: Free Frame
1700-1799: Free Frame
1800-1899: Free Frame
1900-1999: Free Frame
```

t = 200: Process 5 arrives

Input Queue: [5]

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MM moves Process 5 to memory

Input Queue: []

Memory Map:

0-99: Free Frame
100-199: Free Frame
200-299: Free Frame
300-399: Free Frame
400-499: Free Frame
500-599: Free Frame
600-699: Free Frame
700-799: Free Frame
800-899: Free Frame
900-999: Free Frame
1000-1099: Free Frame
1100-1199: Free Frame
1200-1299: Free Frame
1300-1399: Free Frame
1400-1499: Free Frame
1500-1599: Free Frame
1600-1699: Free Frame
1700-1799: Free Frame
1800-1899: Free Frame
1900-1999: Free Frame

t = 1000: Process 1 completes

Memory Map:

0-99: Free Frame
100-199: Free Frame
200-299: Free Frame
300-399: Free Frame
400-499: Free Frame
500-599: Free Frame
600-699: Free Frame
700-799: Free Frame
800-899: Free Frame
900-999: Free Frame
1000-1099: Free Frame

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```
1100-1199: Free Frame
1200-1299: Free Frame
1300-1399: Free Frame
1400-1499: Free Frame
1500-1599: Free Frame
1600-1699: Free Frame
1700-1799: Free Frame
1800-1899: Free Frame
1900-1999: Free Frame
```

Process 3 completes

Memory Map:

```
0-99: Free Frame
100-199: Free Frame
200-299: Free Frame
300-399: Free Frame
400-499: Free Frame
500-599: Free Frame
600-699: Free Frame
700-799: Free Frame
800-899: Free Frame
900-999: Free Frame
1000-1099: Free Frame
1100-1199: Free Frame
1200-1299: Free Frame
1300-1399: Free Frame
1400-1499: Free Frame
1500-1599: Free Frame
1600-1699: Free Frame
1700-1799: Free Frame
1800-1899: Free Frame
1900-1999: Free Frame
```

Process 5 completes

Memory Map:

```
0-99: Free Frame
100-199: Free Frame
200-299: Free Frame
```

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```
300-399: Free Frame
400-499: Free Frame
500-599: Free Frame
600-699: Free Frame
700-799: Free Frame
800-899: Free Frame
900-999: Free Frame
1000-1099: Free Frame
1100-1199: Free Frame
1200-1299: Free Frame
1300-1399: Free Frame
1400-1499: Free Frame
1500-1599: Free Frame
1600-1699: Free Frame
1700-1799: Free Frame
1800-1899: Free Frame
1900-1999: Free Frame
```

t = 1200: Process 6 arrives

Input Queue: [6]

MM moves Process 6 to memory

Input Queue: []

Memory Map:

```
0-99: Free Frame
100-199: Free Frame
200-299: Free Frame
300-399: Free Frame
400-499: Free Frame
500-599: Free Frame
600-699: Free Frame
700-799: Free Frame
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900-999: Free Frame
1000-1099: Free Frame
1100-1199: Free Frame
1200-1299: Free Frame
1300-1399: Free Frame
```

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```
1400-1499: Free Frame
1500-1599: Free Frame
1600-1699: Free Frame
1700-1799: Free Frame
1800-1899: Free Frame
1900-1999: Free Frame
```

t = 1500: Process 7 arrives

Input Queue: [7]

MM moves Process 7 to memory

Input Queue: []

Memory Map:

```
0-99: Free Frame
100-199: Free Frame
200-299: Free Frame
300-399: Free Frame
400-499: Free Frame
500-599: Free Frame
600-699: Free Frame
700-799: Free Frame
800-899: Free Frame
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1300-1399: Free Frame
1400-1499: Free Frame
1500-1599: Free Frame
1600-1699: Free Frame
1700-1799: Free Frame
1800-1899: Free Frame
1900-1999: Free Frame
```

t = 1600: Process 8 arrives

Input Queue: [8]

MM moves Process 8 to memory

Input Queue: []

Memory Map:

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```
0-99: Free Frame
100-199: Free Frame
200-299: Free Frame
300-399: Free Frame
400-499: Free Frame
500-599: Free Frame
600-699: Free Frame
700-799: Free Frame
800-899: Free Frame
900-999: Free Frame
1000-1099: Free Frame
1100-1199: Free Frame
1200-1299: Free Frame
1300-1399: Free Frame
1400-1499: Free Frame
1500-1599: Free Frame
1600-1699: Free Frame
1700-1799: Free Frame
1800-1899: Free Frame
1900-1999: Free Frame
```

t = 2000: Process 2 completes

Memory Map:

```
0-99: Free Frame
100-199: Free Frame
200-299: Free Frame
300-399: Free Frame
400-499: Free Frame
500-599: Free Frame
600-699: Free Frame
700-799: Free Frame
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1000-1099: Free Frame
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1200-1299: Free Frame
1300-1399: Free Frame
```


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```
1400-1499: Free Frame
1500-1599: Free Frame
1600-1699: Free Frame
1700-1799: Free Frame
1800-1899: Free Frame
1900-1999: Free Frame
```

Process 4 completes

Memory Map:

```
0-99: Free Frame
100-199: Free Frame
200-299: Free Frame
300-399: Free Frame
400-499: Free Frame
500-599: Free Frame
600-699: Free Frame
700-799: Free Frame
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1300-1399: Free Frame
1400-1499: Free Frame
1500-1599: Free Frame
1600-1699: Free Frame
1700-1799: Free Frame
1800-1899: Free Frame
1900-1999: Free Frame
```

Process 7 completes

Memory Map:

```
0-99: Free Frame
100-199: Free Frame
200-299: Free Frame
300-399: Free Frame
400-499: Free Frame
500-599: Free Frame
```

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600-699: Free Frame
700-799: Free Frame
800-899: Free Frame
900-999: Free Frame
1000-1099: Free Frame
1100-1199: Free Frame
1200-1299: Free Frame
1300-1399: Free Frame
1400-1499: Free Frame
1500-1599: Free Frame
1600-1699: Free Frame
1700-1799: Free Frame
1800-1899: Free Frame
1900-1999: Free Frame
```

t = 2100: Process 8 completes

Memory Map:

```
0-99: Free Frame
100-199: Free Frame
200-299: Free Frame
300-399: Free Frame
400-499: Free Frame
500-599: Free Frame
600-699: Free Frame
700-799: Free Frame
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1400-1499: Free Frame
1500-1599: Free Frame
1600-1699: Free Frame
1700-1799: Free Frame
1800-1899: Free Frame
1900-1999: Free Frame
```

t = 3000: Process 6 completes

Memory Map:

```
0-99: Free Frame
100-199: Free Frame
200-299: Free Frame
300-399: Free Frame
400-499: Free Frame
500-599: Free Frame
600-699: Free Frame
700-799: Free Frame
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1400-1499: Free Frame
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1600-1699: Free Frame
1700-1799: Free Frame
1800-1899: Free Frame
1900-1999: Free Frame
```

Average Turn Around Time: 1175

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