

COSC 4740 Operating System Design

Lab Section 11

Program 2

github repo: [cosc4740fa24/os_program2-cojoda](https://github.com/cosc4740fa24/os_program2-cojoda)

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Statement of Help

I worked alone, asked Jim Ward a few questions, but did everything by myself.

Time 0 Output

```
*****
The current system state is as follows:
*****
```

CURRENT TIME: 0

RUNNING PROCESS:

PID	Priority	Value	Start Time	Total CPU time
1	0	0	0	0

BLOCKED PROCESS:

Queue of processes Blocked for resource 0 is empty
Queue of processes Blocked for resource 1 is empty
Queue of processes Blocked for resource 2 is empty

PROCESSES READY TO EXECUTE:

Queue of processes with priority 0 is empty
Queue of processes with priority 1 is empty
Queue of processes with priority 2 is empty
Queue of processes with priority 3 is empty

```
*****
```

Time 6 Output

```
*****
The current system state is as follows:
*****
```

CURRENT TIME: 6

RUNNING PROCESS:

PID	Priority	Value	Start Time	Total CPU time
2	0	10	5	0

BLOCKED PROCESS:

Queue of processes Blocked for resource 0 is empty
Queue of processes Blocked for resource 1 is empty
Queue of processes Blocked for resource 2 is empty

PROCESSES READY TO EXECUTE:

Queue of processes with priority 0 is empty
Queue of processes with priority 1 is empty
Queue of processes with priority 2 is empty
Queue of processes with priority 3 is empty

```
*****
```

Time 11 Output

```
*****
The current system state is as follows:
*****
```

CURRENT TIME: 11

RUNNING PROCESS:

PID	Priority	Value	Start Time	Total CPU time
3	1	7	6	1

BLOCKED PROCESS:

Queue of processes Blocked for resource 0 is empty
 Queue of processes Blocked for resource 1 is empty
 Queue of processes Blocked for resource 2 is empty

PROCESSES READY TO EXECUTE:

Queue of processes with priority 0 is empty
 Queue of processes with priority 1 :

PID	Priority	Value	Start Time	Total CPU time
4	1	1	6	1

Queue of processes with priority 2 :

PID	Priority	Value	Start Time	Total CPU time
2	2	42	5	3

Queue of processes with priority 3 is empty

```
*****
The current system state is as follows:
*****
```

CURRENT TIME: 11

RUNNING PROCESS:

PID	Priority	Value	Start Time	Total CPU time
3	1	7	6	1

BLOCKED PROCESS:

Queue of processes Blocked for resource 0 is empty
 Queue of processes Blocked for resource 1 is empty
 Queue of processes Blocked for resource 2 is empty

PROCESSES READY TO EXECUTE:

Queue of processes with priority 0 :

PID	Priority	Value	Start Time	Total CPU time
5	0	6	11	0
6	0	6	11	0

Queue of processes with priority 1 :

PID	Priority	Value	Start Time	Total CPU time
4	1	1	6	1

Queue of processes with priority 2 :

PID	Priority	Value	Start Time	Total CPU time
2	2	42	5	3

Queue of processes with priority 3 is empty

```
*****
The current system state is as follows:
*****
```

CURRENT TIME: 11

RUNNING PROCESS:

PID	Priority	Value	Start Time	Total CPU time
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5 0 6 11 0

BLOCKED PROCESS:

Queue of processes Blocked for resource 0 is empty

Queue of processes Blocked for resource 1 is empty

Queue of processes Blocked for resource 2:

PID	Priority	Value	Start Time	Total CPU time
3	0	7	6	1

PROCESSES READY TO EXECUTE:

Queue of processes with priority 0 :

PID	Priority	Value	Start Time	Total CPU time
6	0	6	11	0

Queue of processes with priority 1 :

PID	Priority	Value	Start Time	Total CPU time
4	1	1	6	1

Queue of processes with priority 2 :

PID	Priority	Value	Start Time	Total CPU time
2	2	42	5	3

Queue of processes with priority 3 is empty

The current system state is as follows:

CURRENT TIME: 11

RUNNING PROCESS:

PID	Priority	Value	Start Time	Total CPU time
6	0	6	11	0

BLOCKED PROCESS:

Queue of processes Blocked for resource 0 is empty

Queue of processes Blocked for resource 1:

PID	Priority	Value	Start Time	Total CPU time
5	0	6	11	0

Queue of processes Blocked for resource 2:

PID	Priority	Value	Start Time	Total CPU time
3	0	7	6	1

PROCESSES READY TO EXECUTE:

Queue of processes with priority 0 is empty

Queue of processes with priority 1 :

PID	Priority	Value	Start Time	Total CPU time
4	1	1	6	1

Queue of processes with priority 2 :

PID	Priority	Value	Start Time	Total CPU time
2	2	42	5	3

Queue of processes with priority 3 is empty

Time 15 Output

```
*****
The current system state is as follows:
*****

CURRENT TIME: 15

RUNNING PROCESS:
PID  Priority Value  Start Time  Total CPU time
10   0           20      11           0

BLOCKED PROCESS:
Queue of processes Blocked for resource 0 is empty
Queue of processes Blocked for resource 1:
PID  Priority Value  Start Time  Total CPU time
5    0           6      11           0
Queue of processes Blocked for resource 2:
PID  Priority Value  Start Time  Total CPU time
3    0           7      6            1

PROCESSES READY TO EXECUTE:
Queue of processes with priority 0 is empty
Queue of processes with priority 1 :
PID  Priority Value  Start Time  Total CPU time
4    1           1      6            1
6    1           6      11           1
8    1           9      11           1
9    1           8      11           1
Queue of processes with priority 2 :
PID  Priority Value  Start Time  Total CPU time
2    2          42      5            3
Queue of processes with priority 3 is empty
*****
```

Time 118 Output

 The current system state is as follows:

CURRENT TIME: 118

RUNNING PROCESS:

PID	Priority	Value	Start Time	Total CPU time
31	1	250	115	1

BLOCKED PROCESS:

Queue of processes Blocked for resource 0:

PID	Priority	Value	Start Time	Total CPU time
19	0	1	77	0
21	0	8	77	0
8	1	9	11	4

Queue of processes Blocked for resource 1:

PID	Priority	Value	Start Time	Total CPU time
3	1	3	6	4

Queue of processes Blocked for resource 2:

PID	Priority	Value	Start Time	Total CPU time
5	0	6	11	2
25	0	70	88	1

PROCESSES READY TO EXECUTE:

Queue of processes with priority 0 :

PID	Priority	Value	Start Time	Total CPU time
32	0	125	118	0

Queue of processes with priority 1 is empty

Queue of processes with priority 2 :

PID	Priority	Value	Start Time	Total CPU time
20	2	25	77	3
22	2	15	82	3
23	2	135	83	3
10	2	20	11	5
24	2	105	84	3
26	2	15	90	3
27	2	1350	93	3
28	2	135	96	3
29	2	112	106	3
30	2	125	110	3

Queue of processes with priority 3 :

PID	Priority	Value	Start Time	Total CPU time
13	3	299	31	7
17	3	10	51	7
9	3	10	11	15

Time 125 Output

 The current system state is as follows:

CURRENT TIME: 125

RUNNING PROCESS:

PID	Priority	Value	Start Time	Total CPU time
33	1	62	121	2

BLOCKED PROCESS:

Queue of processes Blocked for resource 0:

PID	Priority	Value	Start Time	Total CPU time
19	0	1	77	0
21	0	8	77	0
8	1	9	11	4

Queue of processes Blocked for resource 1:

PID	Priority	Value	Start Time	Total CPU time
3	1	3	6	4

Queue of processes Blocked for resource 2:

PID	Priority	Value	Start Time	Total CPU time
25	0	70	88	1

PROCESSES READY TO EXECUTE:

Queue of processes with priority 0 :

PID	Priority	Value	Start Time	Total CPU time
5	0	6	11	2

Queue of processes with priority 1 is empty

Queue of processes with priority 2 :

PID	Priority	Value	Start Time	Total CPU time
20	2	25	77	3
22	2	15	82	3
23	2	135	83	3
10	2	20	11	5
24	2	105	84	3
26	2	15	90	3
27	2	1350	93	3
28	2	135	96	3
29	2	112	106	3
30	2	125	110	3
31	2	250	115	3
32	2	125	118	3

Queue of processes with priority 3 :

PID	Priority	Value	Start Time	Total CPU time
13	3	299	31	7
17	3	10	51	7
9	3	10	11	15

The average Turnaround Time: 23.5455

Extra information you might want to know:

11 Processes finished in a total of 259 seconds

Counting everything:

33 Processes with a total of 1460 seconds

Turn around time: 44.2424