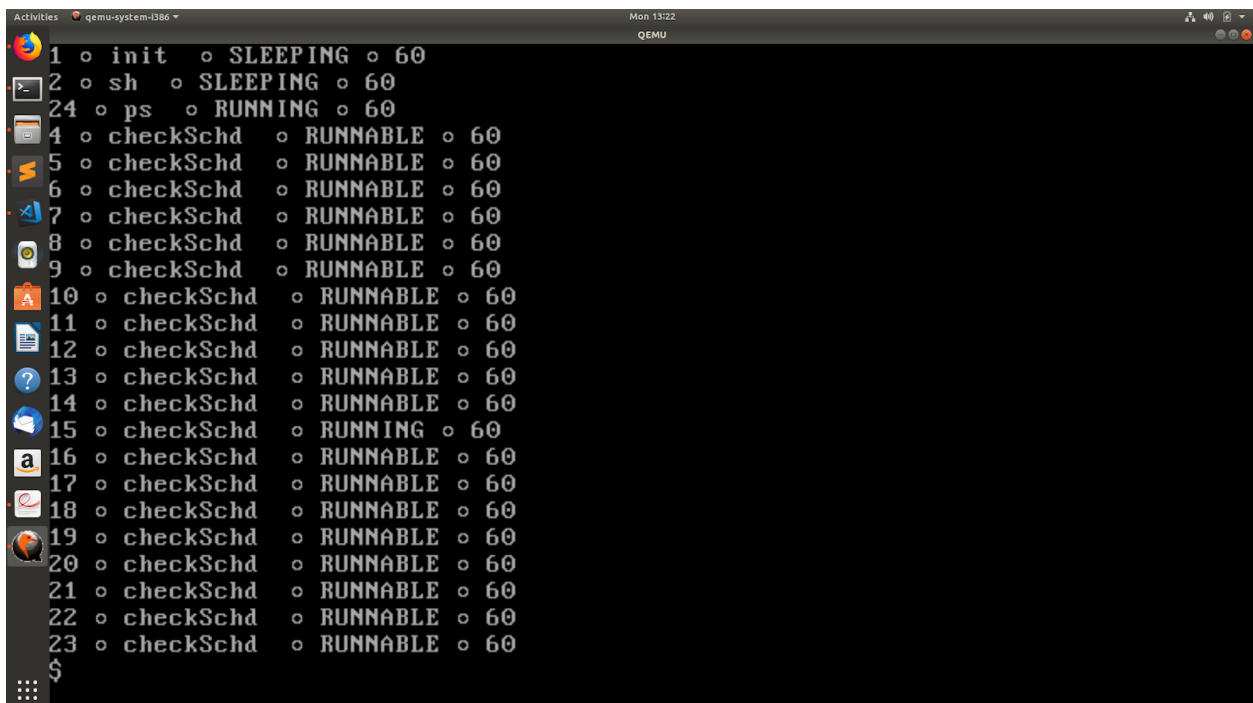


Report Assignment 5

Priority Based Scheduler

- It ensures the process having high priority is selected first , instead of process which comes first as in case of round robin approach
- Test Program create 20 different Processes with same priority. Now on changing priority of the process with pid=23 from 60 to 12 , it becomes the process with highest priority and is selected to run .

A screenshot of a terminal window titled 'qemu-system-i386'. The terminal displays a list of processes with their IDs, names, states, and priorities. The processes are as follows:

Process ID	Process Name	State	Priority
1	init	SLEEPING	60
2	sh	SLEEPING	60
24	ps	RUNNING	60
4	checkSchd	RUNNABLE	60
5	checkSchd	RUNNABLE	60
6	checkSchd	RUNNABLE	60
7	checkSchd	RUNNABLE	60
8	checkSchd	RUNNABLE	60
9	checkSchd	RUNNABLE	60
10	checkSchd	RUNNABLE	60
11	checkSchd	RUNNABLE	60
12	checkSchd	RUNNABLE	60
13	checkSchd	RUNNABLE	60
14	checkSchd	RUNNABLE	60
15	checkSchd	RUNNING	60
16	checkSchd	RUNNABLE	60
17	checkSchd	RUNNABLE	60
18	checkSchd	RUNNABLE	60
19	checkSchd	RUNNABLE	60
20	checkSchd	RUNNABLE	60
21	checkSchd	RUNNABLE	60
22	checkSchd	RUNNABLE	60
23	checkSchd	RUNNABLE	60

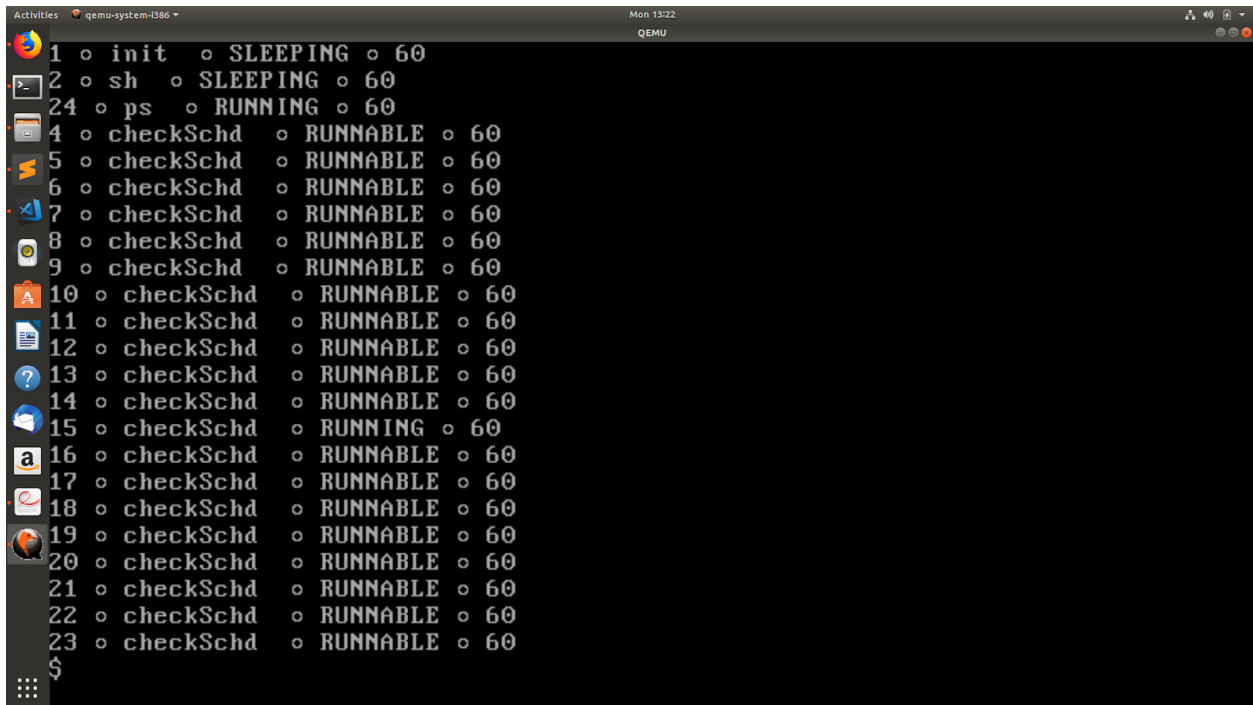
The terminal prompt is '\$'. The window title bar shows 'Mon 13:22' and 'QEMU'.

```
Activities qemu-system-i386 Mon 13:20 QEMU
4 o checkSchd o RUNNABLE o 60
5 o checkSchd o RUNNABLE o 60
6 o checkSchd o RUNNABLE o 60
7 o checkSchd o RUNNABLE o 60
8 o checkSchd o RUNNABLE o 60
9 o checkSchd o RUNNABLE o 60
10 o checkSchd o RUNNABLE o 60
11 o checkSchd o RUNNABLE o 60
12 o checkSchd o RUNNABLE o 60
13 o checkSchd o RUNNABLE o 60
14 o checkSchd o RUNNING o 60
15 o checkSchd o RUNNABLE o 60
16 o checkSchd o RUNNABLE o 60
17 o checkSchd o RUNNABLE o 60
18 o checkSchd o RUNNABLE o 60
19 o checkSchd o RUNNABLE o 60
20 o checkSchd o RUNNABLE o 60
21 o checkSchd o RUNNABLE o 60
22 o checkSchd o RUNNABLE o 60
23 o checkSchd o RUNNABLE o 60
$ set_priority 23 12
priority of PID 23 changed from 60 to 12
$ ps
```

```
Activities qemu-system-i386 Mon 13:20 QEMU
1 o init o SLEEPING o 60
2 o sh o SLEEPING o 60
27 o ps o RUNNING o 60
4 o checkSchd o RUNNABLE o 60
5 o checkSchd o RUNNABLE o 60
6 o checkSchd o RUNNABLE o 60
7 o checkSchd o RUNNABLE o 60
8 o checkSchd o RUNNABLE o 60
9 o checkSchd o RUNNABLE o 60
10 o checkSchd o RUNNABLE o 60
11 o checkSchd o RUNNABLE o 60
12 o checkSchd o RUNNABLE o 60
13 o checkSchd o RUNNABLE o 60
14 o checkSchd o RUNNABLE o 60
15 o checkSchd o RUNNABLE o 60
16 o checkSchd o RUNNABLE o 60
17 o checkSchd o RUNNABLE o 60
18 o checkSchd o RUNNABLE o 60
19 o checkSchd o RUNNABLE o 60
20 o checkSchd o RUNNABLE o 60
21 o checkSchd o RUNNABLE o 60
22 o checkSchd o RUNNABLE o 60
23 o checkSchd o RUNNING o 12
$
```

Round Robin Scheduler

- The processes are scheduled on FCFS basis with each process assigned a time quantum to run . This sometimes causes higher priority process to wait for the lower ones to complete themselves.
- Test Program create 20 different Processes with same priority.Now on changing priority of the process with pid=23 from 60 to 12 ,it becomes the process with highest priority . Even then it is still in RUNNABLE state as scheduler uses round robin approach.



The screenshot shows a terminal window titled 'qemu-system-i386' with a dark background. It displays the output of a 'ps' command, listing 24 processes. The processes are numbered 1 through 24. Processes 1 and 2 are 'init' and 'sh' respectively, both in 'SLEEPING' state with priority 60. Process 24 is 'ps' in 'RUNNING' state with priority 60. Processes 4 through 23 are 'checkSchd' processes, all in 'RUNNABLE' state with priority 60. Process 15 is 'checkSchd' in 'RUNNING' state with priority 60. The terminal prompt is '\$'.

```
1 o init o SLEEPING o 60
2 o sh o SLEEPING o 60
24 o ps o RUNNING o 60
4 o checkSchd o RUNNABLE o 60
5 o checkSchd o RUNNABLE o 60
6 o checkSchd o RUNNABLE o 60
7 o checkSchd o RUNNABLE o 60
8 o checkSchd o RUNNABLE o 60
9 o checkSchd o RUNNABLE o 60
10 o checkSchd o RUNNABLE o 60
11 o checkSchd o RUNNABLE o 60
12 o checkSchd o RUNNABLE o 60
13 o checkSchd o RUNNABLE o 60
14 o checkSchd o RUNNABLE o 60
15 o checkSchd o RUNNING o 60
16 o checkSchd o RUNNABLE o 60
17 o checkSchd o RUNNABLE o 60
18 o checkSchd o RUNNABLE o 60
19 o checkSchd o RUNNABLE o 60
20 o checkSchd o RUNNABLE o 60
21 o checkSchd o RUNNABLE o 60
22 o checkSchd o RUNNABLE o 60
23 o checkSchd o RUNNABLE o 60
$
```

```
Activities qemu-system-i386 Mon 13:20 QEMU
4 o checkSchd o RUNNABLE o 60
5 o checkSchd o RUNNABLE o 60
6 o checkSchd o RUNNABLE o 60
7 o checkSchd o RUNNABLE o 60
8 o checkSchd o RUNNABLE o 60
9 o checkSchd o RUNNABLE o 60
10 o checkSchd o RUNNABLE o 60
11 o checkSchd o RUNNABLE o 60
12 o checkSchd o RUNNABLE o 60
13 o checkSchd o RUNNABLE o 60
14 o checkSchd o RUNNING o 60
15 o checkSchd o RUNNABLE o 60
16 o checkSchd o RUNNABLE o 60
17 o checkSchd o RUNNABLE o 60
18 o checkSchd o RUNNABLE o 60
19 o checkSchd o RUNNABLE o 60
20 o checkSchd o RUNNABLE o 60
21 o checkSchd o RUNNABLE o 60
22 o checkSchd o RUNNABLE o 60
23 o checkSchd o RUNNABLE o 60
$ set_priority 23 12
priority of PID 23 changed from 60 to 12
$ ps
```

```
Activities qemu-system-i386 Mon 13:22 QEMU
1 o init o SLEEPING o 60
2 o sh o SLEEPING o 60
26 o ps o RUNNING o 60
4 o checkSchd o RUNNABLE o 60
5 o checkSchd o RUNNABLE o 60
6 o checkSchd o RUNNABLE o 60
7 o checkSchd o RUNNABLE o 60
8 o checkSchd o RUNNING o 60
9 o checkSchd o RUNNABLE o 60
10 o checkSchd o RUNNABLE o 60
11 o checkSchd o RUNNABLE o 60
12 o checkSchd o RUNNABLE o 60
13 o checkSchd o RUNNABLE o 60
14 o checkSchd o RUNNABLE o 60
15 o checkSchd o RUNNABLE o 60
16 o checkSchd o RUNNABLE o 60
17 o checkSchd o RUNNABLE o 60
18 o checkSchd o RUNNABLE o 60
19 o checkSchd o RUNNABLE o 60
20 o checkSchd o RUNNABLE o 60
21 o checkSchd o RUNNABLE o 60
22 o checkSchd o RUNNABLE o 60
23 o checkSchd o RUNNABLE o 12
$ -
```