

**Course:** CSE 401: Operating Systems  
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### Lab 06

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Consider the following set of processes, with the length of the CPU burst given in milliseconds:

Process	Burst Time	Priority	Arrival
P1	20	40	0
P2	25	30	25
P3	25	30	30
P4	15	35	60
P5	10	5	100
P6	10	10	105

Write two separate programs that implement the preemptive versions of the following scheduling algorithms. Each process is assigned a numerical priority, with a higher number indicating a higher relative priority. If a process is preempted by a higher-priority process, the preempted process is placed at the end of the queue.

1. Shortest-Job-First (SJF)
2. Priority Scheduling

Your program should demonstrate the following output using given input:

- Gantt charts that illustrate the execution of the processes
- Turnaround time for each process
- Waiting time for each process
- Average turnaround time
- Average waiting time