
**King Saud University**

**College of Computer and Information Sciences**

**Information Technology Department**

# **CSC227:** Operating Systems

**Project Report: Operating System**

## Preemtive Condition:

```
run:
Enter number of processes:
4
Enter process 1 arrival time:
0
Enter process 1 burst time:
8
Enter process 2 arrival time:
1
Enter process 2 burst time:
4
Enter process 3 arrival time:
2
Enter process 3 burst time:
3
Enter process 4 arrival time:
5
Enter process 4 burst time:
2
```

```
Number of processes = 4
Arrival times and burst times as follows:

P1: Arrival time = 0, Burst time = 8 ms
P2: Arrival time = 1, Burst time = 4 ms
P3: Arrival time = 2, Burst time = 3 ms
P4: Arrival time = 5, Burst time = 2 ms

Scheduling Algorithm: Shortest remaining time first
Context Switch: 1ms

Time     Process/CS
0-1        P1
1-2        CS
2-6        P2
6-7        CS
7-9        P4
9-10       CS
10-13      P3
13-14      CS
14-21      P1

Average Turnaround Time: 10.25
Average Waiting Time: 6.00
CPU Utilization: 80.95%
```

## First Come First Serve Condition:

```
run:
Enter number of processes:
4
Enter process 1 arrival time:
0
Enter process 1 burst time:
8
Enter process 2 arrival time:
1
Enter process 2 burst time:
4
Enter process 3 arrival time:
2
Enter process 3 burst time:
5
Enter process 4 arrival time:
3
Enter process 4 burst time:
5
```

```
Number of processes = 4
Arrival times and burst times as follows:

P1: Arrival time = 0, Burst time = 8 ms
P2: Arrival time = 1, Burst time = 4 ms
P3: Arrival time = 2, Burst time = 5 ms
P4: Arrival time = 3, Burst time = 5 ms

Scheduling Algorithm: Shortest remaining time first
Context Switch: 1ms

Time      Process/CS
0-1         P1
1-2         CS
2-6         P2
6-7         CS
7-12        P3
12-13       CS
13-18       P4
18-19       CS
19-26       P1

Average Turnaround Time: 14.00
Average Waiting Time: 8.50
CPU Utilization: 84.62%
```