

Name: Noman Ahmed.

Roll no. 32

Operating System (CT-353)

Lab no 02

Name: Noman Ahmed.

Roll no. 32

1) FCFS CPU Scheduling Algorithm

```
C:\Users\admin\Downloads\101.exe

Enter the number of processes -- 2
Enter Burst Time for Process 0 -- 3
Enter Burst Time for Process 1 -- 5

```

PROCESS	BURST TIME	WAITING TIME	TURNAROUND TIME
P0	3	0	3
P1	5	3	8

```

Average Waiting Time -- 1.500000
Average Turnaround Time --5.500000
-----
Process exited after 38.9 seconds with return value 0
Press any key to continue . . . █

```

Name: Noman Ahmed.

Roll no. 32

2) SJF CPU Scheduling Algorithm

```
C:\Users\admin\Downloads\102.exe

Enter the number of processes -- 3
Enter Burst Time for Process 0 -- 2
Enter Burst Time for Process 1 -- 2
Enter Burst Time for Process 2 -- 6

      PROCESS      BURST TIME      WAITING TIME      TURNAROUND TIME
      P0           2             0               2
      P1           2             2               4
      P2           6             4              10

Average Waiting Time --2.000000
Average Turnaround Time -- 5.333333
-----
Process exited after 36.69 seconds with return value 0
Press any key to continue . . .
```

Name: Noman Ahmed.

Roll no. 32

3) ROUND ROBIN CPU Scheduling Algorithm

```
C:\Users\admin\Downloads\103.exe
PN      BT      WT      TAT
1        1        0        1
2        8        3       11
3        2        4        6
Average waiting time = 2.33333
Average turn around time = 6
-----
Process exited after 1.715 seconds with return value 0
Press any key to continue . . .
```

Name: Noman Ahmed.

Roll no. 32

4) PRIORITY CPU Scheduling Algorithm

```
C:\Users\admin\Downloads\104.exe
Process_no    Start_time    Complete_time    Turn_Around_Time    Waiting_Time
1             1             4               3                   0
2             4             9               7                   2
3             9             10              7                   6
4             10            17              13                  6
5             17            21              16                  12
Average waiting time is : 5.2
average turnaround time : 9.2
-----
Process exited after 1.568 seconds with return value 0
Press any key to continue . . .
```

5) Execute all scheduling algorithms on following data and find out the Average Waiting Time and Average Turnaround Time of all

Name: Noman Ahmed.

Roll no. 32

scheduling algorithms and discuss your results. (Quantum Value is 3)

FCFS CPU SCHEDULING ALGORITHM

```
C:\Users\admin\Downloads\105.exe
FCFS Scheduling
Process Burst Time      Waiting Time      Turnaround Time
P0      2              0              2
P1      6              2              8
P2      4              8              12
Average Waiting Time: 3.33333
Average Turnaround Time: 7.33333

-----
Process exited after 0.09211 seconds with return value 0
Press any key to continue . . .
```

SJF CPU SCHEDULING ALGORITHM

Name: Noman Ahmed.

Roll no. 32

```
C:\Users\admin\Downloads\105.exe
SJF Scheduling
Process Burst Time      Waiting Time      Turnaround Time
P0      2              0              2
P2      4              2              6
P1      6              6              12
Average Waiting Time: 2.66667
Average Turnaround Time: 6.66667

-----
Process exited after 1.969 seconds with return value 0
Press any key to continue . . .
```

PRIORITY CPU SCHEDULING ALGORITHM

```
C:\Users\admin\Downloads\105.exe
Priority Scheduling
Process Burst Time      Priority      Waiting Time      Turnaround Time
P1      6              1              0              6
P2      4              2              6              10
P0      2              3              10              12
Average Waiting Time: 5.33333
Average Turnaround Time: 9.33333

-----
Process exited after 2.005 seconds with return value 0
Press any key to continue . . .
```

ROUND ROBIN CPU SCHEDULING ALGORITHM

Name: Noman Ahmed.

Roll no. 32

```
C:\Users\admin\Downloads\105.exe
Round Robin Scheduling
Process Burst Time      Waiting Time      Turnaround Time
P0      2              0              2
P1      6              5              11
P2      4              8              12
Average Waiting Time: 4.33333
Average Turnaround Time: 8.33333

-----
Process exited after 2.121 seconds with return value 0
Press any key to continue . . .
```

Conclusion

Name: Noman Ahmed.

Roll no. 32

CPU scheduling algorithms prioritize processes in distinct ways. **First-Come, First-Served (FCFS)** executes tasks based on arrival order, potentially delaying lengthy ones. **Shortest Job First (SJF)** minimizes average waiting and turnaround times by prioritizing shorter tasks. **Priority Scheduling** focuses on tasks with higher importance, postponing those with lower priority. **Round Robin** ensures fairness via time slicing but may increase waiting time for short processes. Each method balances fairness, efficiency, and responsiveness differently.