NAME:IQRA NAWAZ
ROLL NUMBER:DT-22005

LAB NO: 2
PROCESS SCHEDULING ALGORITHMS

Objective: Write a C program to simulate the following CPU scheduling algorithms to find turnaround

time and waiting time for the above problem.

c) Round Robin d) Priority

EXERCISE:

QUESTION 3 OUTPUT:

```
Round Robin Scheduling:
Process Burst Time  Waiting Time    Turnaround Time
P1  10      13      23
P2  5       10      15
P3  8       13      21

Average Waiting Time: 12.00
Average Turnaround Time: 19.67


=== Code Execution Successful ===
```

QUESTION 4 OUTPUT:

```
Priority Scheduling:
Process Burst Time  Priority    Waiting Time    Turnaround Time
P2  1       1       0       1
P5  5       2       1       6
P1  10      3       6       16
P3  2       4       16      18
P4  1       5       18      19

Average Waiting Time: 8.20
Average Turnaround Time: 12.00


=== Code Execution Successful ===
```

QUESTION 5:

```
Round Robin Scheduling:
    PROCESS BURST TIME  WAITING TIME    TURNAROUND TIME
    P0      2       0       2
    P1      4       5       9
    P2      6       6       12

Average Waiting Time: 3.67
Average Turnaround Time: 7.67

Priority Scheduling:
    PROCESS PRIORITY    BURST TIME  WAITING TIME    TURNAROUND TIME
    P1      1       4       0       4
    P2      2       6       4       10
    P0      3       2       10      12

Average Waiting Time: 4.67
Average Turnaround Time: 8.67


=== Code Execution Successful ===
```

OBSERVATION:.

Round Robin (RR) (Quantum = 3):

- Processes are executed cyclically with equal CPU time slices.
- **Result:**
    - Balanced waiting times for all processes, ensuring fairness.
    - Higher average turnaround time compared to SJF due to context switching.

Priority Scheduling:

- Executes based on priority, with lower numerical values indicating higher priority.
- **Result:**
    - P1 (highest priority) completed first, minimizing its waiting time.
    - Starvation risk for lower-priority processes if longer.