

Instructions:

I made sure the input.txt file is labeled "input.txt"

The contents of input.txt are:

```
1 2 10
2 1 7
3 3 15
4 2 22
5 4 12
```

The first column is the task number as an integer

The second column is the priority

The third column is the burst time

I ran: gcc project.c -o project -lpthread on the console to compile to file

Then I ran ./project to execute the .exe file that was generated

CONSOLE OUTPUT:

```
--- FCFS Scheduling ---
Gantt Chart: [T1][T2][T3][T4][T5]
Task 1: Waiting = 0, Turnaround = 10
Task 2: Waiting = 10, Turnaround = 17
Task 3: Waiting = 17, Turnaround = 32
Task 4: Waiting = 32, Turnaround = 54
Task 5: Waiting = 54, Turnaround = 66
Average Waiting Time: 22.60
Average Turnaround Time: 35.80
```

```
--- SJF Scheduling ---
Gantt Chart: [T2][T1][T5][T3][T4]
Task 2: Waiting = 0, Turnaround = 7
Task 1: Waiting = 7, Turnaround = 17
Task 5: Waiting = 17, Turnaround = 29
Task 3: Waiting = 29, Turnaround = 44
Task 4: Waiting = 44, Turnaround = 66
Average Waiting Time: 19.40
Average Turnaround Time: 32.60
```

```
Generated Arrival Times:
Task 1: Arrival Time = 0 ms, Priority: 2, Burst: 10
Task 2: Arrival Time = 61 ms, Priority: 1, Burst: 7
Task 3: Arrival Time = 9 ms, Priority: 3, Burst: 15
Task 4: Arrival Time = 33 ms, Priority: 2, Burst: 22
Task 5: Arrival Time = 14 ms, Priority: 4, Burst: 12

--- Priority Scheduling ---
Gantt Chart: [T1][T1][T1][T1][T1][T1][T1][T1][T1][T1][T3][T3][T3][T3][T3][T3][T3][T3][T3][T3][T5][T5][T5][T5][T5][T5][T5][T5][T4][T4][T4][T4][T4][T4][T4][T4][T4][T4][T4][T4][T4][T4][T4][T4][T4][T4][T4][T4][T4][T5][T5][T5][T5][T2][T2][T2][T2][T2][T2]
Task 1: Waiting = 0, Turnaround = 10
Task 2: Waiting = 0, Turnaround = 7
Task 3: Waiting = 1, Turnaround = 16
Task 4: Waiting = 0, Turnaround = 22
Task 5: Waiting = 33, Turnaround = 45
Average Waiting Time: 6.80
Average Turnaround Time: 20.00
```