Exercise 1

- Write a program to simulate the first come, first served (FCFS) algorithm.
- The implementation should show the following metrics
  - Completion time(CT)
  - Turn around time(TAT)
  - Waiting time(WT)
  - Average Turnaround time
  - Average waiting time
- The program should accept number of processes, arrival time and burst time.

Exercise 2

- Create a new program, in which you should implement shortest job first algorithm.
- The implementation should follow the same requirements as the previous exercise.

Exercise 3

- Write a program to simulate the round robin algorithm, which should show the same metrics as the two previous programs.
- Compare the outputs and provide a description of each case.

- Note: for this algorithm, the quantum should be specified by the user.

Exercise 4 (Optional)

- Write your own implementation of any additional scheduling algorithm you like.
- It should accept number of processes and CPU burst of every process.
- It should represent results as a timeline
- Example:

$$P1 ==== P2 == P3 ==== Pk === Pn$$

where '=' represents a time quantum