1. Tutorial 1

Exercise 1.1: *Explain the difference between the following scheduling algorithms:*
- *Round Robin Scheduling.*
- *Priority Scheduling.*
- *First-Come, First-Served Scheduling.*
- *Shortest Job First Scheduling.*

Exercise 1.2: *Given the following processes, the arrival and burst times are in time units, and the* time quantum *is* 3 *units.*

Name	Arrival Time	Burst Time
P1	1	10
P2	2	4
P3	3	5
P4	4	3
P5	5	6

Question 1.2.1: *Drawing the Grantt Diagram for the execution of those processes in Round Robin algorithm.*

Question 1.2.2: *Calculate the turnaround and waiting time for each of the processes.*

Question 1.2.3: *Calculate the average waiting time for the processes.*

Exercise 1.3: *Given the following processes, the arrival and burst times are in time units.*

Name	Arrival Time	Burst Time
P1	1	6
P2	1	2
P3	1	8
P4	1	3

Question 1.3.1: *Draw the Grantt diagram for the non-preemtive SJF algorithm.*

Question 1.3.2: *Calculate the turnaround time and the waiting time for each process.*

Question 1.3.3: *Compare the results with those obtained using FCFS algorithm.*

Exercise 1.4: *Given the following processes, the arrival and burst times are in time units.*

Name	Arrival Time	Burst Time	Priority
P1	1	7	2
P2	1	5	3
P3	1	3	1
P4	1	2	4
P5	1	4	2

where 1 *is the highest priority and* 4 *is the lowest priority.*

Question 1.4.1: *Simulate a static priority-based scheduling.*

Question 1.4.2: *Describe an implementation of a dynamic priority-based scheduling, where the more time a process is waiting, the more its priority increases.*