I. Implementation of Pre-emption and Context Switches in Processes

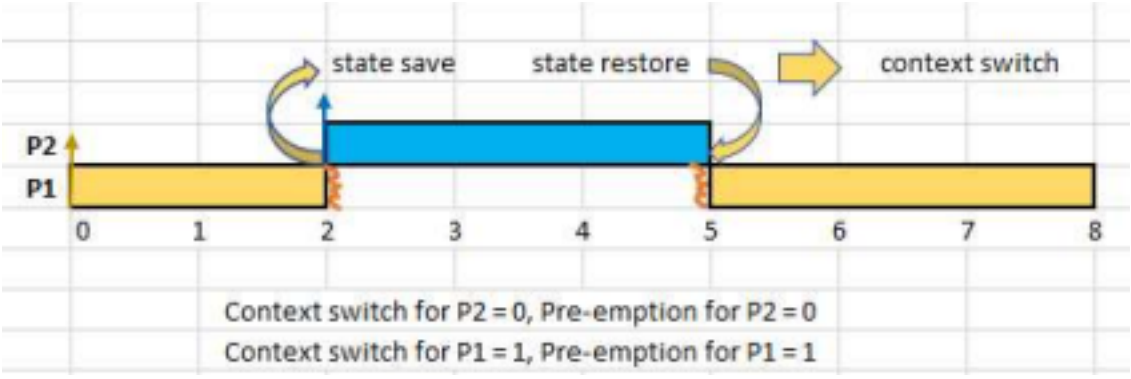
1. a) Write a code to implement pre-emption and context switches for the processes shown in Table 1:

Table 1: Process Parameters

Process	CPU burst time (Execution time)	Arrival time	Priority
P1	5	0	2
P2	3	2	1

Print the number of pre-emptions and context switches for process P1 and P2. Priority 1 is greater than priority 2.

Solution:



1. b) Write a code to implement pre-emption and context switches for the processes shown in Table 2:

Table 2: Process Parameters

Process	CPU burst time (Execution time)	Arrival time	Priority
P1	5	0	3
P2	3	2	2
P3	2	5	1

Print the number of pre-emptions and context switches for process P1, P2 and P3. Priority 1 is greater than priority 2 and 3.

Solution:

II. Implementation of Priority based Preemptive and Non-preemptive Scheduling

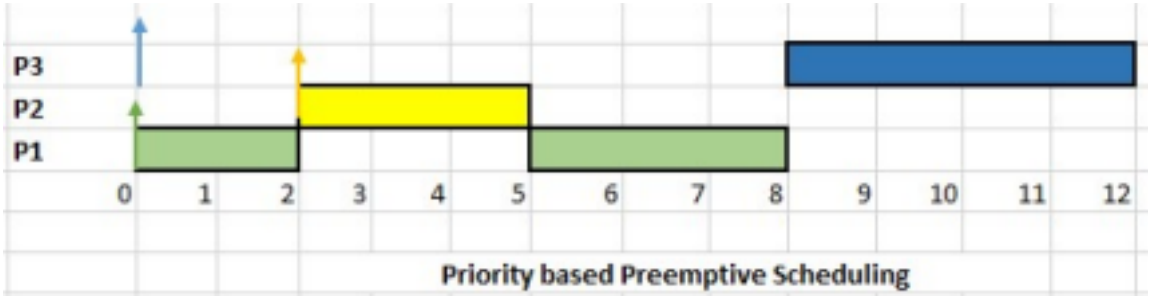
2. Write a code to implement priority based preemptive and non-preemptive scheduling of the processes shown in Table 1:

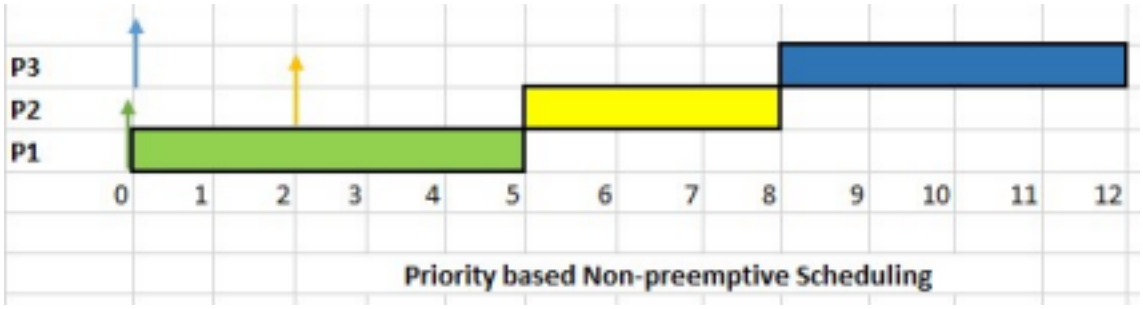
Table 1: Process Parameters

Process	CPU burst time (Execution time)	Arrival time	Priority
P1	5	0	2
P2	3	2	1
P3	4	0	3

Priority 1 is greater than priority 2 and 3.

Solution:





III. Implementation of Scheduling Algorithm

3. Implement First Come First Served (FCFS) scheduling algorithm.

IV. Implementation of Scheduling Algorithm

4. Implement Shortest Job First (SJF) scheduling algorithm.

V. Implementation of Scheduling Algorithm

5. Implement Round Robin (RR) scheduling algorithm.