Student name: Anuj saini

Student ID: 11810306

Email address: anujsaini0049@gmail.com

Githublink: <https://github.com/Anuj-Saini/Anuj-Saini/blob/master/operatingSystemCA2>

Q.19. The following processes are being scheduled using a preemptive, round robin scheduling algorithm. Each process is assigned a numerical priority, with a higher number indicating a higher relative priority. In addition to the processes listed below, the system also has an *idle task* (which consumes no CPU resources and is identified as *P\_idle* ). This task has priority 0 and is scheduled whenever the system has no other available processes to run. The length of a time quantum is 10 units. If a process is preempted by a higher-priority process, the preempted process is placed at the end of the queue.

Thread Priority Burst Arrival

*P*1 40 20 0

*P*2 30 25 25

*P*3 30 25 30

*P*4 35 15 60

*P*5 5 10 100

*P*6 10 10 105

Write a C code to

a. Show the scheduling order of the processes using a Gantt chart.

b. What is the turnaround time for each process?

c. What is the waiting time for each process?

d. What is the CPU utilization rate?

Description:

In the given problem priority are given to each process, and the premption should be done in order of priority only. If the process gets prempted by higher priority process then we will place that process at the end of queue. The round robin scheduling

Algorithm:

For sorting Bubble sort is used.

Complexity:- O(n^2).

Code:





