OS LAB4
Readme file

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1. Compile the given code file and create an executable file for the same for running using the command: g++ Process.cpp -o Process
2. Then for the running type ./Q1 <number_of_prcoesses>
3. For executing files for 10 processes write: ./Q1 10
4. Firstly, we have taken in N, the number of processes as input from the user, and after that generated inter-arrival time as a random variable[0,10] following exponential distribution with some given mean mu =1/5. The CPU bursts of the processes are generated as uniform random variables [1,20]. The priorities of the processes are also generated as uniform random variables[1,10] (where a lower number signifies higher priority).

Following this we have written code for 2 scheduling algorithms, namely:
- Round Robin with time quantum δ = 2-time units
- Priority-based scheduling

5. And using them found out the average turnaround time (ATT), average waiting time (AWT), and average response time (ART) for the processes. Using this code the output was written in another text file:
6. os.system(f'./Q1{n} > temp.txt')
   metric = {n:{algorithm_name:[values of metric]}}, where n belongs to [10,20,30,40,50]. Basically this is the overall structure that we use for storing the answers of min, max, and average values for turnaround time, waiting time, and response time. We then traverse each value in the N list and run the loop 10 times to run the code for a particular value of N, 10 times and generate 10 answers. We stored the answers obtained for all the processes in their designated lists by ignoring spaces and line change characters.