## EXPERIMENT 6

## Construct a C program to simulate Round Robin scheduling algorithm with C.

**Aim:-** Construct a C program to simulate Round Robin scheduling algorithm with C.

## Algorithm:-

* 1. Initialize the necessary data structures to store process information, including process ID, burst time, and remaining time.
  2. Read the number of processes (N) from the user.
  3. Read the time quantum (slice time) from the user.
  4. For each process, read the following information:
  5. Process ID (PID)
  6. Burst Time (time required for execution)
  7. Create a queue data structure to store the processes.
  8. Enqueue all processes into the queue.
  9. Initialize a variable current\_time to 0 (representing the current time in the simulation).
  10. Initialize a variable total\_waiting\_time to 0. 11.While the queue is not empty, repeat the following:
      1. Dequeue a process from the front of the queue.
      2. Calculate the execution time for the process, which is the minimum of the time quantum and the remaining time for the process.
      3. Update the process's remaining time.
      4. Update current\_time by adding the execution time.
      5. If the process still has remaining time, enqueue it back into the queue.
      6. Calculate the waiting time for the process as current\_time - arrival time, where arrival time is the time when the process was first enqueued.
      7. Add the waiting time to total\_waiting\_time. 12.Calculate the average waiting time as total\_waiting\_time / N. 13.Print the average waiting time.

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