PRACTICAL 7

AIM: **Write a program that implements FCFS scheduling algorithm.**

CODE:

```
public class GFG {

   static void findWaitingTime(int processes[], int n, int bt[], int wt[], int at[]) {
      int service_time[] = new int[n];
      service_time[0] = at[0];
      wt[0] = 0;
      for (int i = 1; i < n; i++) {
         int wasted = 0;
         service_time[i] = service_time[i - 1] + bt[i - 1];
         wt[i] = service_time[i] - at[i];
         if (wt[i] < 0) {
            wasted = Math.abs(wt[i]);
            wt[i] = 0;
         }
         service_time[i] = service_time[i] + wasted;
      }
   }


   static void findTurnAroundTime(int processes[], int n, int bt[], int wt[], int
tat[]) {
      for (int i = 0; i < n; i++)
         tat[i] = bt[i] + wt[i];
```

```
    }

    static void findavgTime(int processes[], int n, int bt[], int at[]) {
        int wt[] = new int[n], tat[] = new int[n];
        findWaitingTime(processes, n, bt, wt, at);
        findTurnAroundTime(processes, n, bt, wt, tat);
        System.out.println("Processes " + "Burst Time " + "Arrival Time " +
"Waiting Time " + "Turn around time "
                + "Completion Time \n");
        int total_wt = 0, total_tat = 0;
        for (int i = 0; i < n; i++) {
            total_wt = total_wt + wt[i];
            total_tat = total_tat + tat[i];
            int compl_time = tat[i] + at[i];
            System.out.println(
                    i + 1 + "\t\t" + bt[i] + "\t\t" + at[i] + "\t\t" + wt[i] + "\t\t" + tat[i] +
"\t\t" + compl_time);
        }
        System.out.println("Average waiting time=" + (float) total_wt / (float) n);
        System.out.println("\nAverage turn around time=" + (float) n);
    }

    public static void main(String args[]) {
        int processes[] = { 1, 2, 3 };
        int n = processes.length;
        int burst_time[] = { 5, 9, 6 };
        int arrival_time[] = { 0, 3, 6 };
```

```
        findavgTime(processes, n, burst_time, arrival_time);
    }
}
```

OUTPUT:

Processes Burst Time Arrival Time Waiting Time Turn around time Completion Time

1	5	0	0	5	5
2	9	3	2	11	14
3	6	6	8	14	20

Average waiting time=3.3333333

Average turn around time=3.0