

**Ex. No.: 6A**

**Roll no:231901004**

**Date:04/03/2025**

### **FIRST COME FIRST SERVE (FCFS)**

**Aim:**

To implement First-Come First-Serve (FCFS) scheduling technique.

**Algorithm:**

1. Start the program.
2. Input the number of processes.
3. Read the burst time for each process.
4. Calculate the waiting time for each process:
  - Waiting time of process 0 is 0.
  - For others:  
 $WaitingTime[i] = WaitingTime[i-1] + BurstTime[i-1]$
5. Calculate the turnaround time for each process:  
 $TurnAroundTime[i] = WaitingTime[i] + BurstTime[i]$
6. Calculate the total and average waiting time and turnaround time.
7. Display process details, total and average times.
8. End.

**Program Code (in C):**

```
#include <stdio.h>
```

```
int main() {
```

```
    int n, i;
```

```
    int burst_time[20], waiting_time[20], turn_around_time[20];
```

```
    int total_wt = 0, total_tat = 0;
```

```

printf("Enter the number of process:\n");
scanf("%d", &n);

printf("Enter the burst time of the processes:\n");
for (i = 0; i < n; i++) {
    scanf("%d", &burst_time[i]);
}

waiting_time[0] = 0;

for (i = 1; i < n; i++) {
    waiting_time[i] = waiting_time[i - 1] + burst_time[i - 1];
}

for (i = 0; i < n; i++) {
    turn_around_time[i] = waiting_time[i] + burst_time[i];
total_wt += waiting_time[i];    total_tat +=
turn_around_time[i];
}

printf("Process\tBurst Time\tWaiting Time\tTurn Around Time\n");
for (i = 0; i < n; i++) {
    printf("%d\t%d\t%d\t%d\n", i, burst_time[i], waiting_time[i], turn_around_time[i]);
}

printf("Average Waiting Time is: %.1f\n", (float)total_wt / n);
printf("Average Turn Around Time is: %.1f\n", (float)total_tat / n);

return 0;

```

}

---

**Sample Output:**

Enter the number of process:

3

Enter the burst time of the processes:

24 3 3

Process Burst Time Waiting Time Turn Around Time

0    24        0        24

1    3        24        27

2    3        27        30

Average Waiting Time is: 17.0

Average Turn Around Time is: 27.0

---

**Result:**

The FCFS Scheduling algorithm was successfully implemented. The program calculated the waiting time and turnaround time for each process and displayed the average times.