Ex. No.: 6a **Date:** ***4-3-2025***

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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\t%d\t\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.