Ex. No.: 6a)

FIRST COME FIRST SERVE

Aim:

To implement First-come First- serve (FCFS) scheduling technique

Algorithm:

1. Get the number of processes from the user.

2. Read the process name and burst time.

3. Calculate the total process time.

4. Calculate the total waiting time and total turnaround time for each process 5.

Display the process name & burst time for each process. 6. Display the total

waiting time, average waiting time, turnaround time

Program Code:

```
#include <stdio.h>

int main() { int n, i; float total_wt = 0, total_tat = 0;

// Step 1: Get the number of processes
printf("Enter the number of processes: ");
scanf("%d", &n);

// Arrays to store the process names, burst times, waiting times, and turnaround times
char process_names[n][10];
int burst_time[n], waiting_time[n], turnaround_time[n];

// Step 2: Read the process names and burst times
for(i = 0; i < n; i++) {
    printf("\nEnter process name (e.g., P1, P2, etc.): ");
    scanf("%s", process_names[i]);
    printf("Enter burst time for %s: ", process_names[i]);
    scanf("%d", &burst_time[i]);
}

// Step 3: Calculate waiting time for each process
waiting_time[0] = 0;  // First process always has 0 waiting time
for(i = 1; i < n; i++) {
```

```
    waiting_time[i] = waiting_time[i-1] + burst_time[i-1];
}

// Step 4: Calculate turnaround time for each process
for(i = 0; i < n; i++) {
    turnaround_time[i] = waiting_time[i] + burst_time[i];
}

// Step 5: Calculate total waiting time and total turnaround time
for(i = 0; i < n; i++) {
    total_wt += waiting_time[i];
    total_tat += turnaround_time[i];
}

// Step 6: Display the process names, burst times, waiting times, and turnaround times
printf("\nProcess\tBurst Time\tWaiting Time\tTurnaround Time\n");
for(i = 0; i < n; i++) {
    printf("%s\t\t%d\t\t%d\t\t%d\n", process_names[i], burst_time[i], waiting_time[i],
turnaround_time[i]);
}

// Step 7: Display the total and average times
printf("\nTotal Waiting Time: %.2f", total_wt);
printf("\nAverage Waiting Time: %.2f", total_wt / n);
printf("\nTotal Turnaround Time: %.2f", total_tat);
printf("\nAverage Turnaround Time: %.2f", 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: 19.0

Result:

Program to implement First-come First- serve (FCFS) scheduling technique is executed successfully.