**Expr 6 a: First Come First Serve**

**Code:**

#include <stdio.h>

#include <string.h>

#define MAX 10

int main() {

    int n, burst[MAX], waiting[MAX], turnaround[MAX];

    char pname[MAX][10];

    int totalWaiting = 0, totalTurnaround = 0;

    // Step 1: Input number of processes

    printf("Enter the number of processes: ");

    scanf("%d", &n);

    // Step 2: Input process name and burst time

    for (int i = 0; i < n; i++) {

        printf("\nEnter process name (no spaces): ");

        scanf("%s", pname[i]);

        printf("Enter burst time for %s: ", pname[i]);

        scanf("%d", &burst[i]);

    }

    // Step 3 & 4: Calculate waiting time and turnaround time

    waiting[0] = 0;

    for (int i = 1; i < n; i++) {

        waiting[i] = waiting[i - 1] + burst[i - 1];

    }

    for (int i = 0; i < n; i++) {

        turnaround[i] = waiting[i] + burst[i];

        totalWaiting += waiting[i];

        totalTurnaround += turnaround[i];

    }

    // Step 5: Display process info

    printf("\nProcess\tBurst\tWaiting\tTurnaround\n");

    for (int i = 0; i < n; i++) {

        printf("%s\t%d\t%d\t%d\n", pname[i], burst[i], waiting[i], turnaround[i]);

    }

    // Step 6: Display totals and averages

    float avgWaiting = (float)totalWaiting / n;

    float avgTurnaround = (float)totalTurnaround / n;

    printf("\nTotal Waiting Time: %d", totalWaiting);

    printf("\nAverage Waiting Time: %.2f", avgWaiting);

    printf("\nTotal Turnaround Time: %d", totalTurnaround);

    printf("\nAverage Turnaround Time: %.2f\n", avgTurnaround);

    return 0;

}

**Output:**

Enter the number of processes: 3

Enter process name (no spaces): P1

Enter burst time for P1: 5

Enter process name (no spaces): P2

Enter burst time for P2: 3

Enter process name (no spaces): P3

Enter burst time for P3: 8

Process Burst Waiting Turnaround

P1 5 0 5

P2 3 5 8

P3 8 8 16

Total Waiting Time: 13

Average Waiting Time: 4.33

Total Turnaround Time: 29

Average Turnaround Time: 9.67

**Result:**

Thus the First Come First Serve Code is implemented in fedora using the C language