Expr 6 a: First Come First Serve

Code:

```c
#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