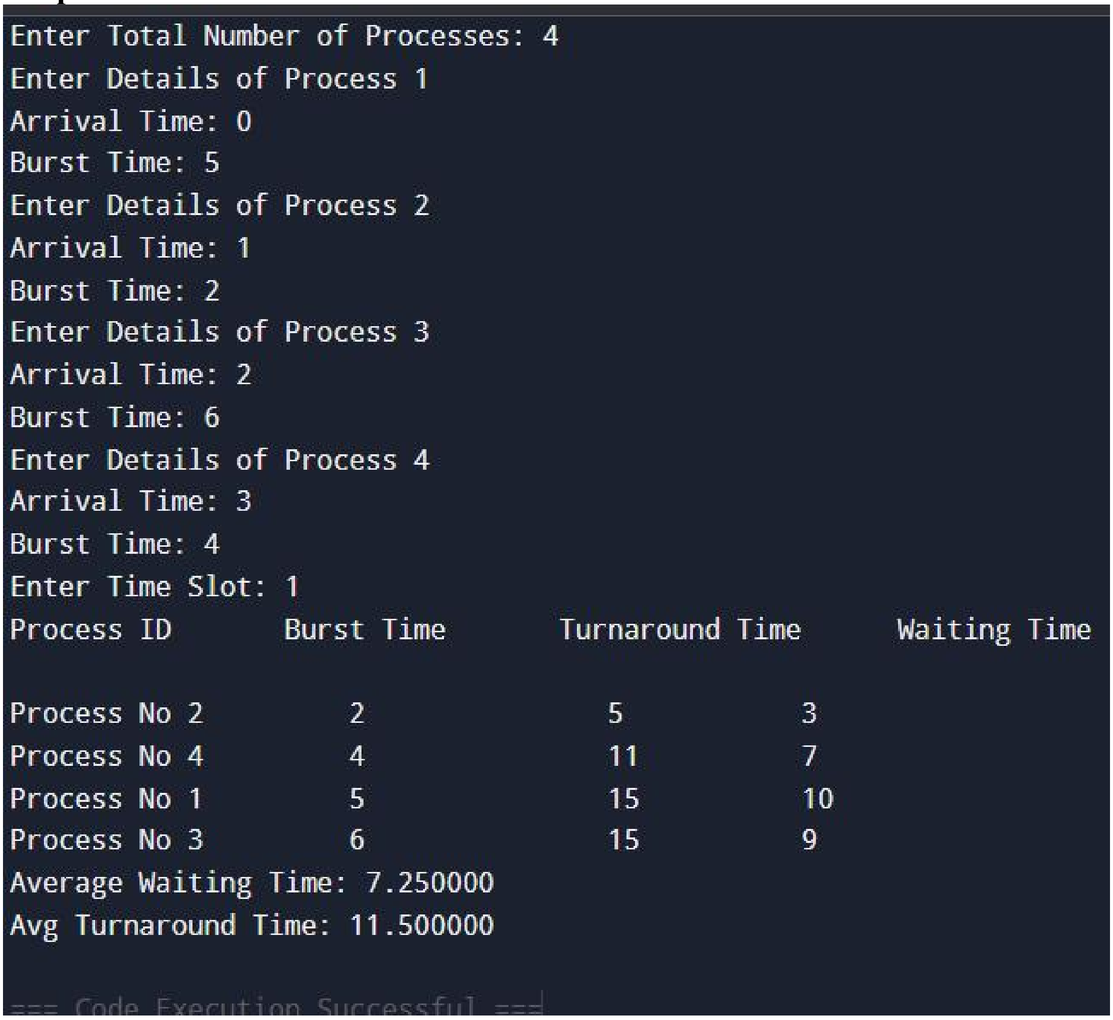
8. Construct a C program to simulate Round Robin scheduling algorithm with C.
Program:

```
#include<stdio.h>

int main() {
    int n;
    printf("Enter Total Number of Processes: ");
    scanf("%d", &n);

    int wait_time = 0, ta_time = 0, arr_time[n], burst_time[n], temp_burst_time[n];
    int x = n;

    for(int i = 0; i < n; i++) {
        printf("Enter Details of Process %d \n", i + 1);
        printf("Arrival Time: ");
        scanf("%d", &arr_time[i]);
        printf("Burst Time: ");
        scanf("%d", &burst_time[i]);
        temp_burst_time[i] = burst_time[i];
    }

    int time_slot;
    printf("Enter Time Slot: ");
    scanf("%d", &time_slot);

    int total = 0, counter = 0, i;
    printf("Process ID       Burst Time       Turnaround Time       Waiting Time\n");
    for(total = 0, i = 0; x != 0;) {
        if(temp_burst_time[i] <= time_slot && temp_burst_time[i] > 0) {
            total = total + temp_burst_time[i];
            temp_burst_time[i] = 0;
            counter = 1;
        } else if(temp_burst_time[i] > 0) {
            temp_burst_time[i] = temp_burst_time[i] - time_slot;
            total += time_slot;
        }

        if(temp_burst_time[i] == 0 && counter == 1) {
            x--;
            printf("\nProcess No %d  \t\t %d\t\t\t\t %d\t\t\t %d", i + 1, burst_time[i],
                   total - arr_time[i], total - arr_time[i] - burst_time[i]);
            wait_time = wait_time + total - arr_time[i] - burst_time[i];
            ta_time += total - arr_time[i];
            counter = 0;
        }

        if(i == n - 1) {
            i = 0;
        } else if(arr_time[i + 1] <= total) {
            i++;
        } else {
            i = 0;
        }
    }

    float average_wait_time = wait_time * 1.0 / n;
    float average_turnaround_time = ta_time * 1.0 / n;
    printf("\nAverage Waiting Time: %f", average_wait_time);
    printf("\nAvg Turnaround Time: %f", average_turnaround_time);
    return 0;
}
```

Output:



```
Enter Total Number of Processes: 4
Enter Details of Process 1
Arrival Time: 0
Burst Time: 5
Enter Details of Process 2
Arrival Time: 1
Burst Time: 2
Enter Details of Process 3
Arrival Time: 2
Burst Time: 6
Enter Details of Process 4
Arrival Time: 3
Burst Time: 4
Enter Time Slot: 1
Process ID       Burst Time       Turnaround Time      Waiting Time

Process No 2         2               5           3
Process No 4         4               11          7
Process No 1         5               15          10
Process No 3         6               15          9
Average Waiting Time: 7.250000
Avg Turnaround Time: 11.500000


=== Code Execution Successful ===
```