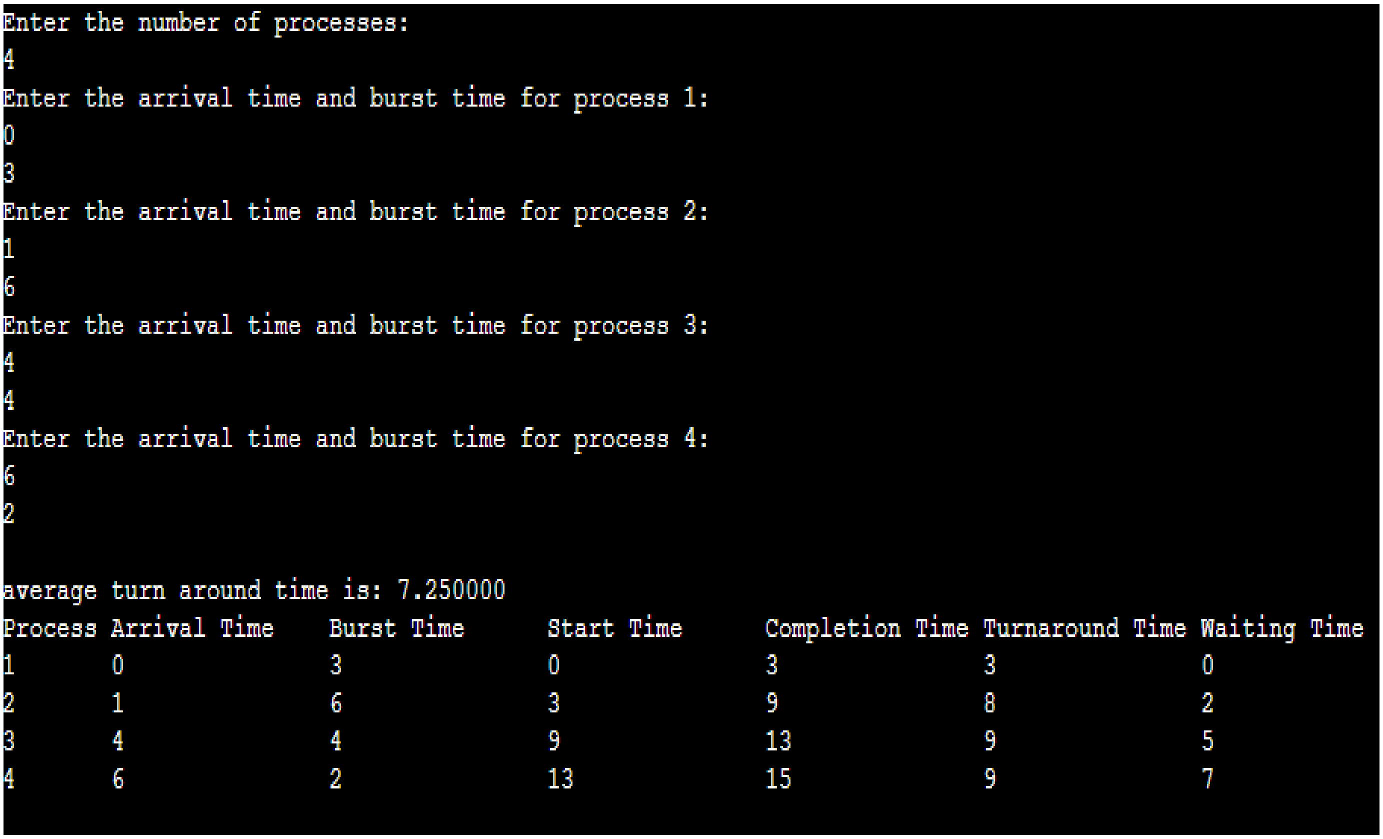
WEEK - 2

```
#include<stdio.h>
#include<stdlib.h>
typedef struct {
    int pID,aT,bT,sT,cT,taT,wT;
} Process;
void calculateTimes(Process p[], int n){
    int currT = 0;
    int sum=0;
    double avg;
    for (int i = 0; i < n; i++){
        p[i].sT = currT;
        p[i].cT = currT + p[i].bT;
        p[i].taT = p[i].cT - p[i].aT;
        p[i].wT = p[i].taT - p[i].bT;
        currT = p[i].cT;
        sum=sum+p[i].taT;
    }
    avg=(double)sum/n;
    printf("\naverage turn around time is: %f\n",avg);
}
void display(Process p[], int n){
    printf("Process\tArrival Time\tBurst Time\tStart Time\tCompletion Time\tTurnaround
Time\tWaiting Time\n");

    for (int i = 0; i < n; i++) {
        printf("%d\t%d\t\t%d\t\t%d\t\t%d\t\t%d\t\t%d\n", p[i].pID, p[i].aT,
               p[i].bT, p[i].sT, p[i].cT,
               p[i].taT, p[i].wT);
    }
}
int main(){
    int n;
    printf("Enter the number of processes:\n");
    scanf("%d", &n);
    Process p[n];
    for (int i = 0; i < n; i++){
        printf("Enter the arrival time and burst time for process %d:\n", i + 1);
        scanf("%d %d", &p[i].aT, &p[i].bT);
        p[i].pID = i + 1;
    }
    for (int i = 0; i < n - 1; i++){
        for (int j = 0; j < n - i - 1; j++){
            if (p[j].aT > p[j + 1].aT){
                Process temp = p[j];
                p[j] = p[j + 1];
                p[j + 1] = temp;
            }
        }
    }
    calculateTimes(p, n);
    display(p, n);
    return 0;
}
```

Output:



```
Enter the number of processes:
4
Enter the arrival time and burst time for process 1:
0
3
Enter the arrival time and burst time for process 2:
1
6
Enter the arrival time and burst time for process 3:
4
4
Enter the arrival time and burst time for process 4:
6
2

average turn around time is: 7.250000
Process Arrival Time    Burst Time      Start Time      Completion Time Turnaround Time Waiting Time
1       0               3               0               3               3               0
2       1               6               3               9               8               2
3       4               4               9               13              9               5
4       6               2               13              15              9               7
```