

# OPERATING SYSTEM LAB TASK – 04

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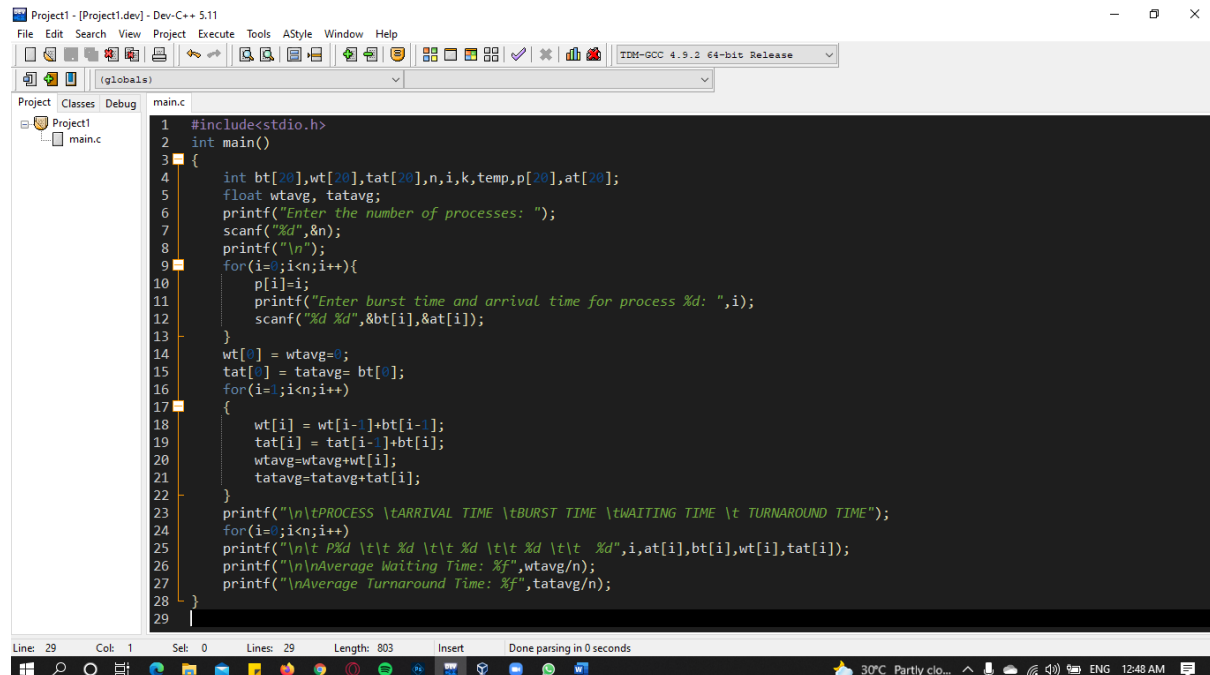
S.ID: 11070

## QUESTION – 1

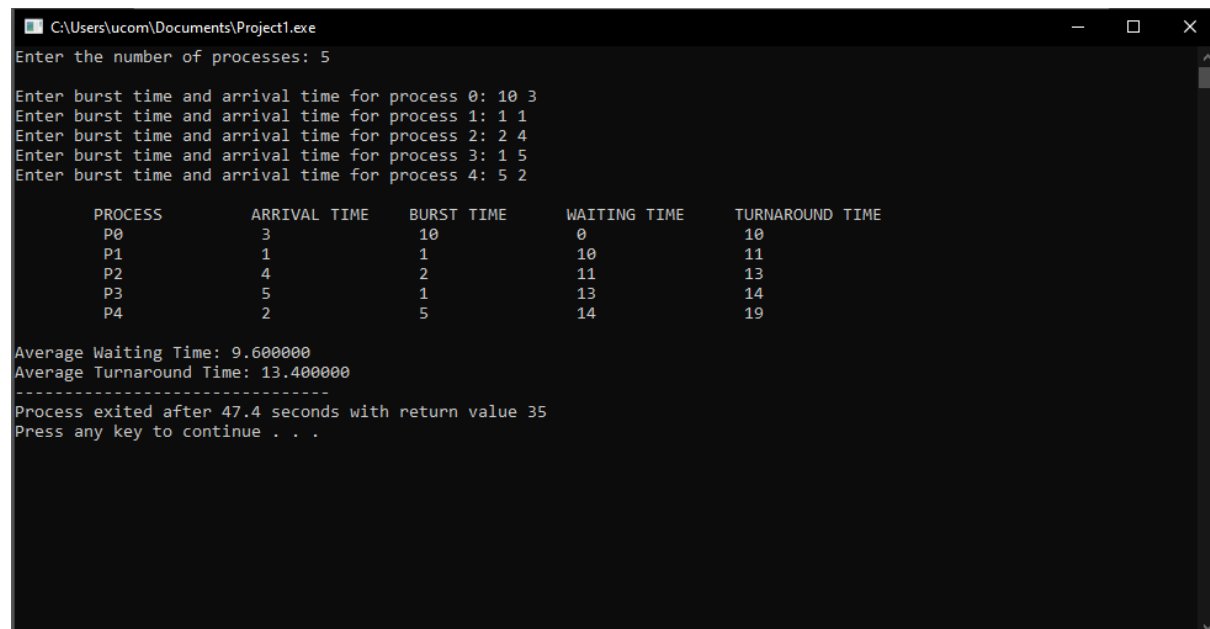
### CODE:

```
#include<stdio.h>
Int main()
{
    int bt[20],wt[20],tat[20],n,i,k,temp,p[20],at[20];
    float wtavg, tatavg;
    printf("Enter the number of processes: ");
    scanf("%d",&n);
    printf("\n");
    for(i=0;i<n;i++){
        p[i]=i;
        printf("Enter burst time and arrival time for process %d: ",i);
        scanf("%d %d",&bt[i],&at[i]);
    }
    wt[0] = wtavg=0;
    tat[0] = tatavg= bt[0];
    for(i=1;i<n;i++)
    {
        wt[i] = wt[i-1]+bt[i-1];
        tat[i] = tat[i-1]+bt[i];
        wtavg=wtavg+wt[i];
        tatavg=tatavg+tat[i];
    }
    printf("\n\tPROCESS \tARRIVAL TIME \tBURST TIME \tWAITING TIME \t
TURNAROUND TIME");
    for(i=0;i<n;i++)
    printf("\n\t P%d \t\t %d \t\t %d \t\t %d \t\t %d",i,at[i],bt[i],wt[i],tat[i]);
    printf("\n\nAverage Waiting Time: %f",wtavg/n);
    printf("\n\nAverage Turnaround Time: %f",tatavg/n);
}
```

## OUTPUT:



```
1 #include<stdio.h>
2 int main()
3 {
4     int bt[20],wt[20],tat[20],n,i,k,temp,p[20],at[20];
5     float wtavg, tatavg;
6     printf("Enter the number of processes: ");
7     scanf("%d",&n);
8     printf("\n");
9     for(i=0;i<n;i++){
10         p[i]=i;
11         printf("Enter burst time and arrival time for process %d: ",i);
12         scanf("%d %d",&bt[i],&at[i]);
13     }
14     wt[0] = wtavg=0;
15     tat[0] = tatavg= bt[0];
16     for(i=1;i<n;i++){
17         {
18             wt[i] = wt[i-1]+bt[i-1];
19             tat[i] = tat[i-1]+bt[i];
20             wtavg=wtavg+wt[i];
21             tatavg=tatavg+tat[i];
22         }
23     }
24     printf("\n\tPROCESS \tARRIVAL TIME \tBURST TIME \tWAITING TIME \tTURNAROUND TIME");
25     for(i=0;i<n;i++)
26         printf("\n\t P%d \t\t %d \t\t %d \t\t %d \t\t %d",i,at[i],bt[i],wt[i],tat[i]);
27     printf("\n\nAverage Waiting Time: %f",wtavg/n);
28     printf("\n\nAverage Turnaround Time: %f",tatavg/n);
29 }
```



```
C:\Users\ucom\Documents\Project1.exe
Enter the number of processes: 5

Enter burst time and arrival time for process 0: 10 3
Enter burst time and arrival time for process 1: 1 1
Enter burst time and arrival time for process 2: 2 4
Enter burst time and arrival time for process 3: 1 5
Enter burst time and arrival time for process 4: 5 2

    PROCESS      ARRIVAL TIME    BURST TIME    WAITING TIME    TURNAROUND TIME
    P0           3             10           0              10
    P1           1              1          10             11
    P2           4              2          11             13
    P3           5              1          13             14
    P4           2              5          14             19

Average Waiting Time: 9.600000
Average Turnaround Time: 13.400000
-----
Process exited after 47.4 seconds with return value 35
Press any key to continue . . .
```

QUESTION – 2

ANSWER: b) 2