4. **Construct a scheduling program with C that selects the waiting process with the smallest execution time to execute next.**

**PROGRAM**

**#include<stdio.h>**

**int main()**

**{**

**int bt[20],p[20],wt[20],tat[20],i,j,n,total=0,pos,temp,floatavg\_wt,avg\_tat,avg\_wt;**

**printf("Enter number of process:");**

**scanf("%d",&n);**

**printf("\n Enter Burst Time:\n");for(i=0;i<n; i++)**

**{printf("p%d:",i+1);scanf("%d",&bt[i]);p[i]=i+1; }**

**for(i=0;i<n;i++)**

**{ pos=i;**

**for(j=i+1;j<n;j++)**

**{if(bt[j]<bt[pos]) pos=j; } temp=bt[i]; bt[i]=bt[pos]; bt[pos]=temp; temp=p[i]; p[i]=p[pos]; p[pos]=temp;**

**}wt[0]=0;for(i=1;i<n;i++)**

**{ wt[i]=0;for(j=0;j<i;j++) wt[i]+=bt[j]; total+=wt[i];**

**}avg\_wt=(float)total/n;**

**total=0;printf("\nProcess\t Burst Time \tWaiting Time\tTurnaround Time");for(i=0;i<n;i++)**

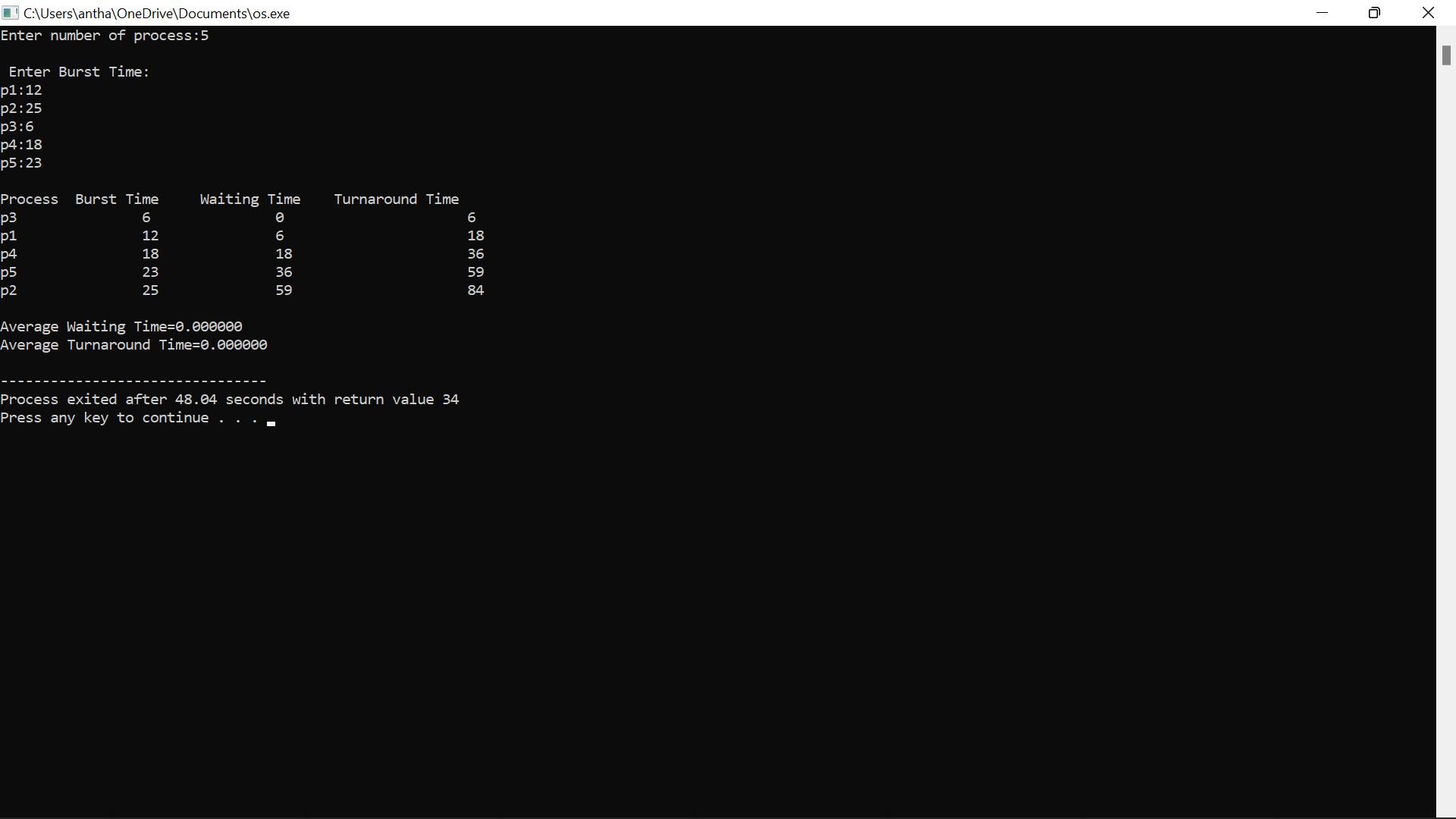
**{**

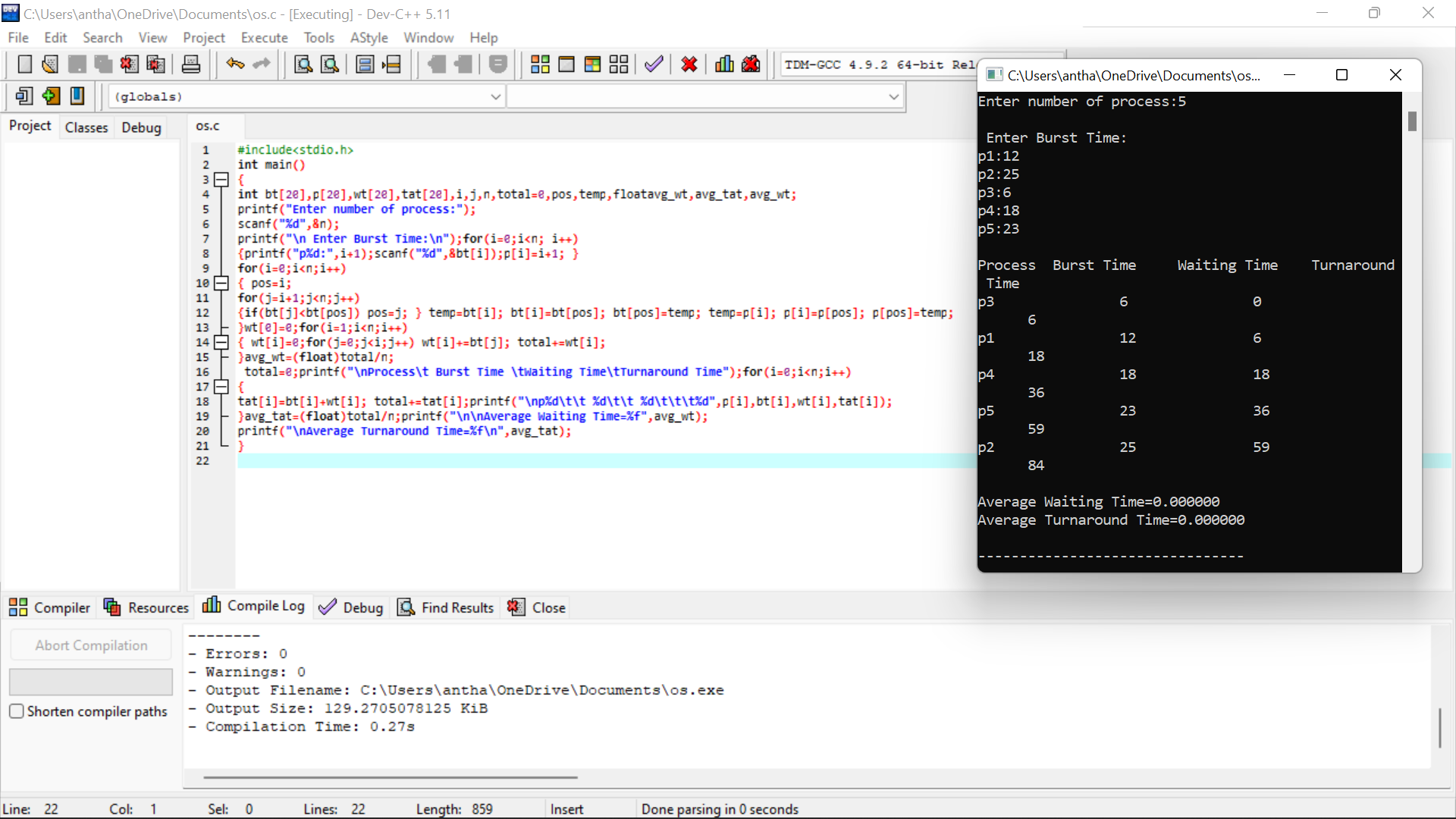
**tat[i]=bt[i]+wt[i]; total+=tat[i];printf("\np%d\t\t %d\t\t %d\t\t\t%d",p[i],bt[i],wt[i],tat[i]);**

**}avg\_tat=(float)total/n;printf("\n\nAverage Waiting Time=%f",avg\_wt);**

**printf("\nAverage Turnaround Time=%f\n",avg\_tat);**

**}**

**Input And Output**

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