SJFS

```
#include<stdio.h>
void main()
{
int bt[20],p[20],wt[20],tat[20],i,j,n,total=0,pos,temp;
float avg_wt,avg_tat;
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;           //contains process number
}
//sorting burst time in ascending order using selection sort
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;
}
wt[0]=0;            //waiting time for first process will be zero
//calculate waiting time
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;              //average waiting time
total=0;
printf("\n Process\t  Burst Time  \tWaiting time\tTurnaround Time");
for(i=0;i<n;i++)
{
tat[i]=bt[i]+wt[i];                 //calculate turnaround time
total+=tat[i];
printf("\n p%d\t\t %d\t\t  %d\t\t\t%d",p[i],bt[i],wt[i],tat[i]);
}
avg_tat=(float)total/n;  //average turnaround time
printf("\n\n Average Waiting Time=%f",avg_wt);
printf("\n Average Turnaround Time=%f\n",avg_tat);
}
```

```
PS C:\Users\dgs> cd "c:\Users\dgs\Desktop\OS OTT\os 1 vivek\OS 4 TO 10\" ; if ($?)
Enter number of process:5

 Enter Burst Time:
p1:10
p2:5
p3:6
p4:4
p5:12

 Process          Burst Time    Waiting time    Turnaround Time
 p1              4               0                4
 p2              5               4                9
 p3              6               9                15
 p4              10              15               25
 p5              12              25               37

 Average Waiting Time=10.600000
 Average Turnaround Time=18.000000
PS C:\Users\dgs\Desktop\OS OTT\os 1 vivek\OS 4 TO 10>
```