5.program to implement CPU scheduling for shortest job first

```
#include<stdio.h>
int 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("\nEnter 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-1;i++)
   {

       for(j=1;j<=n-i-1;j++)
       {
           if(bt[j-1]>bt[j])
            {
                int t=bt[j-1];
                bt[j-1]=bt[j];
                bt[j]=t;
            }
       }
   }
   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  Burst time  waiting time  turnaround time");
   for(int i=0;i<n;i++)
   {
```

```
      tat[i]=bt[i]+wt[i];
      total+=tat[i];
      printf("\n  p%d        %d          %d
%d",p[i],bt[i],wt[i],tat[i]);

   }
   avg_tat=(float)total/n;
   printf("\n\nAverage waiting time=%f",avg_wt);
   printf("\nAverage Turnaroun time=%f\n",avg_tat);
   return(0);

}
```

```
ENTER number of process:3

Enter Burst time:
p1:10
p2:6
p3:8
/nProcess  Burst time  waiting time  turnaround time
  p1        6           0                    6
  p2        8           6                    14
  p3        10           14                    24

Average waiting time=6.666667
Average Turnaroun time=14.666667
```