PRACTICAL-8

AIM:WRITE A PROGRAM TO IMPLEMENT SJF SCHEDULING ALGORITHM.

SOL:

```
#include<iostream>
#include<stdio.h>
using namespace std;
int main()
{
int bt[20],p[20],wt[20],tat[20],i,j,n,total=0,pos,temp;
float avg_wt,avg_tat;
cout<<"\nEnter number of process: ";
cin>>n;
cout<<"\nEnter Burst Time: ";
for(i=0;i<n;i++)
{
cout<<"\nProcess "<<i+1<<": ";
cin>>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;
cout<<"\nProcess    |\tBurst Time|Waiting Time|Turn Around Time";
for(i=0;i<n;i++)
{
tat[i]=bt[i]+wt[i];
total+=tat[i];
```

```
cout<<"\nProcess: "<<p[i]<<"| \t"<<bt[i]<<"     | \t"<<wt[i]<<"      | \t"<<tat[i];
}
avg_tat=(float)total/n;
cout<<"\n\nAverage Waiting Time: "<<avg_wt;
cout<<"\nAverage Turnaround Time: "<<avg_tat<<endl;
return 0;
}
```

OUTPUT:

```
piyush@Piyush: /mnt/c/Users/hp/Desktop
piyush@Piyush:/mnt/c/Users/hp/Desktop$ g++ 8.cpp -o 8
./piyush@Piyush:/mnt/c/Users/hp/Desktop$ ./8

Enter number of process: 5

Enter Burst Time:
Process 1: 3

Process 2: 5

Process 3: 4

Process 4: 5

Process 5: 7

Process    |     Burst Time|Waiting Time|Turn Around Time
Process: 1|     3     |         0      |        3
Process: 3|     4     |         3      |        7
Process: 2|     5     |         7      |        12
Process: 4|     5     |         12      |       17
Process: 5|     7     |         17      |       24

Average Waiting Time: 7.8
Average Turnaround Time: 12.6
piyush@Piyush:/mnt/c/Users/hp/Desktop$
```