***//Assignment-8 Operating Systems Lab***

***//A program to implement SJF scheduling algorithm***

#include <stdio.h>

int main()

{

int bt[10],wt[10],tat[10],p[10],n,i,j,total=0,pos,temp;

float awt,atat;

printf("\n Enter the number of process: ");

scanf("%d",&n);

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

{

printf("\n Enter the burst time of process %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];

}

awt=(float)total/n;

total=0;

printf("\n Process ID \t Burst Time \t Waiting Time \t Turnaround Time");

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

{

tat[i]=wt[i]+bt[i];

total+=tat[i];

printf("\n %d \t\t %d \t\t %d \t\t %d",p[i],bt[i],wt[i],tat[i]);

}

printf("\n Average waiting time= %f",awt);

atat=(float)total/n;

printf("\n Average turnaround time= %f",atat);

return(0);

}

**OUTPUT:**

Enter the number of process: 4

Enter the burst time of process 1: 6

Enter the burst time of process 2: 8

Enter the burst time of process 3: 7

Enter the burst time of process 4: 3

Process ID Burst Time Waiting Time Turnaround Time

4 3 0 3

1 6 3 9

3 7 9 16

2 8 16 24

Average waiting time= 7.000000

Average turnaround time= 13.000000