

EXP : 7

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<br />#include<stdio.h>
int main()
{
int i,n,p[10]={1,2,3,4,5,6,7,8,9,10},min,k=1,btime=0;
int bt[10],temp,j,at[10],wt[10],tt[10],ta=0,sum=0;
float wavg=0,tavg=0,tsum=0,wsum=0;
printf(" -----Shortest Job First Scheduling ( NP )-----\n");
printf("\nEnter the No. of processes :");
scanf("%d",&n);

for(i=0;i<n;i++)
{
printf("\nEnter the burst time of %d process :",i+1);
scanf(" %d",&bt[i]);
printf("\nEnter the arrival time of %d process :",i+1);
scanf(" %d",&at[i]);
}

/*Sorting According to Arrival Time*/

for(i=0;i<n;i++)
{
for(j=0;j<n;j++)
{
if(at[i]<at[j])
{
temp=p[j];
p[j]=p[i];
p[i]=temp;
temp=at[j];
at[j]=at[i];
at[i]=temp;
temp=bt[j];
bt[j]=bt[i];
bt[i]=temp;
}
}
}

/*Arranging the table according to Burst time,
Execution time and Arrival Time
Arrival time <= Execution time
*/

for(j=0;j<n;j++)
{
btime=btime+bt[j];
min=bt[k];
for(i=k;i<n;i++)
{
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if (btime>=at[i] && bt[i]<min)
{
temp=p[k];
p[k]=p[i];
p[i]=temp;
temp=at[k];
at[k]=at[i];
at[i]=temp;
temp=bt[k];
bt[k]=bt[i];
bt[i]=temp;
}
}
k++;
}
wt[0]=0;
for(i=1;i<n;i++)
{
sum=sum+bt[i-1];
wt[i]=sum-at[i];
wsum=wsum+wt[i];
}

wavg=(wsum/n);
for(i=0;i<n;i++)
{
ta=ta+bt[i];
tt[i]=ta-at[i];
tsum=tsum+tt[i];
}

tavg=(tsum/n);

printf("*****");
printf("\n RESULT:-");
printf("\nProcess\t Burst\t Arrival\t Waiting\t Turn-around" );
for(i=0;i<n;i++)
{
printf("\n p%d\t %d\t %d\t\t %d\t\t\t\t\t",p[i],bt[i],at[i],wt[i],tt[i]);
}

printf("\n\nAVERAGE WAITING TIME : %f",wavg);
printf("\n\nAVERAGE TURN AROUND TIME : %f",tavg);
return 0;
}

```

Enter total number of processes(maximum 20):3

Enter Process Burst TimeP[1]:5

P[2]:2

P[3]:

3

Process	Burst Time	Waiting Time	Turnaround Time
P[1]	5	0	5
P[2]	2	5	7
P[3]	3	7	10

Average Waiting Time:4

Average Turnaround Time:7

Process exited after 4.561 seconds with return value 0

Press any key to continue . . .