OPERATING SYSTEM LAB TASK 5

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QUESTION 1:

CODE:

#include<stdio.h>

int main()

{

int bt[20],p[20],at[10],wt[20],tat[20],pr[20],st,i,j,n,time,total=0,pos,ct,temp,avg\_wt,avg\_tat;

printf("Enter Total Number of Process:");

scanf("%d",&n);

printf("\nEnter Burst Time & Priority: \n");

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

{

printf("\n%d\n",i+1);

printf("Burst Time: ");

scanf("%d",&bt[i]);

printf("Priority: ");

scanf("%d",&pr[i]);

printf("Arrival Time: ");

scanf("%d", &at[i]);

p[i]=i+1;

}

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

{

pos=i;

for(j=i+1;j<n;j++)

{

if(pr[j]<pr[pos])

pos=j;

}

temp=pr[i];

pr[i]=pr[pos];

pr[pos]=temp;

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=total/n;

printf("\nProcess \tBurst Time \tArrival Time \tWaiting Time \tTurnaround Time \tStarting time \tCompletion Time");

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

{

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

total+=tat[i];

st=wt[i]+at[i];

ct=st+bt[i];

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

}

avg\_tat=total/n;

printf("\n\nAverage Waiting Time=%d",avg\_wt);

printf("\nAverage Turnaround Time=%d\n",avg\_tat);

return 0;

}

Text

Description automatically generated

A screenshot of a computer

Description automatically generated with medium confidence