#include<stdio.h>

#include<string.h>

#include<conio.h>

void main()

{

char p[10][5],temp[5];

int i,j,pt[10],wt[10],totwt=0,pr[10],temp1,n;

float avgwt;

printf("enter no of processes:");

scanf("%d",&n);

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

{

printf("enter process%d name:",i+1);

scanf("%s",&p[i]);

printf("enter process time:");

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

printf("enter priority:");

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

}

for(i=0;i<n-1;i++)

{

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

{

if(pr[i]>pr[j])

{

temp1=pr[i];

pr[i]=pr[j];

pr[j]=temp1;

temp1=pt[i];

pt[i]=pt[j];

pt[j]=temp1;

strcpy(temp,p[i]);

strcpy(p[i],p[j]);

strcpy(p[j],temp);

}

}

}

wt[0]=0;

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

{

wt[i]=wt[i-1]+wt[i-1];

totwt=totwt+wt[i];

}

avgwt=(float)totwt/n;

printf("p\_name\t p\_time\t priority\t w\_time\n");

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

{

printf(" %s\t %d\t %d\t %d\n" ,p[i],pt[i],pr[i],wt[i]);

}

printf("total waiting time=%d\n avg waiting time=%f",totwt,avgwt);

int ts,pid[10],need[10],wt1[10],tat[10],i1,j1,n2,n1;

int bt[10],flag[10],ttat=0,twt=0;

float awt,atat;

printf("\nEnter the number of Processors \n");

scanf("%d",&n);

n1=n;

printf("\n Enter the Timeslice \n");

scanf("%d",&ts);

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

{

printf("\n Enter the process ID %d",i);

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

printf("\n Enter the Burst Time for the process");

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

need[i]=bt[i];

}

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

{

flag[i]=1;

wt[i]=0;

}

while(n!=0)

{

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

{

if(need[i]>=ts)

{

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

{

if((i!=j)&&(flag[i]==1)&&(need[j]!=0))

wt[j]+=ts;

}

need[i]-=ts;

if(need[i]==0)

{

flag[i]=0;

n--;

}

}

else

{

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

{

if((i!=j)&&(flag[i]==1)&&(need[j]!=0))

wt[j]+=need[i];

}

need[i]=0;

n--;

flag[i]=0;

}

}

}

for(i=1;i<=n1;i++)

{

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

twt=twt+wt[i];

ttat=ttat+tat[i];

}

awt=(float)twt/n1;

atat=(float)ttat/n1;

printf("\n\n Process \t Process ID \t BurstTime \t Waiting Time \t TurnaroundTime \n ");

for(i=1;i<=n1;i++)

{

printf("\n %5d \t %5d \t\t %5d \t\t %5d \t\t %5d \n", i,pid[i],bt[i],wt[i],tat[i]);

}

printf("\n The average Waiting Time=4.2f",awt);

printf("\n The average Turn around Time=4.2f",atat);

}