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#include<stdio.h>
#include<string.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;
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            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);
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    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);
}
```