PRIORITY SCHEDULING

#include<stdio.h>

#include<string.h>

int main(void)

{ char pn[20][20], c[20][20]; //PN-PROGRAM NAMES C-A TEMPORARY ARRAY

int n,i,j,at[20], bt[20], pt[20], wt[20],ct[20],tat[20];

//bt-BURST TIME ;pt-PRIORITY;wt-WAITING TIME; tat-TURN AROUND TIME

int temp1, temp2, temp3, count=0,twt=0;//,tat=0;

printf("Enter number of processes:");

scanf("%d", &n);

printf("Enter <ProcessName> <ArrivalTime> <BurstTime> <Priority> :\n");

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

scanf("%s%d%d%d",&pn[i],&at[i],&bt[i],&pt[i]);

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

{

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

if ( ( (i==0||count<1)&&(at[i]>at[j]||(at[i]==at[j]&&pt[i]>pt[j])) ) || (count == 1 && ct[i-1]>=at[j]) || ((ct[i-1]>=at[j]&&pt[i]>pt[j]))// || (ct[i-1]<at[i]&&ct[i-1]>=at[j])) ) {

temp1 = bt[i];

bt[i] = bt[j];

bt[j] = temp1;

temp2 = at[i];

at[i] = at[j];

at[j] = temp2;

temp3 = pt[i];

pt[i] = pt[j];

pt[j] = temp3;

strcpy(c[i],pn[i]);

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

strcpy(pn[j],c[i]); }

if(i==0 || count<1)

ct[i] = at[i] + bt[i];

else

ct[i] = ct[i-1] + bt[i];

wt[i] = ct[i] - (at[i] + bt[i]);

tat[i] = ct[i] - at[i];

count = 0 ;

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

if(ct[i]>=at[j])

count++; }

printf("S.N.\tPN\tAT\tBT\tPri\tCT\tWT\tTAT\n");

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

printf("%d\t%s\t%d\t%d\t%d\t%d\t%d\t%d\n",(i+1),pn[i],at[i],bt[i],pt[i],ct[i],wt[i],tat[i]);

}