#include <stdio.h>

int main()

{

int AT[10], BT[10], WT[10], TT[10], ST[10], TempBT[10], Order[10], n, location=0, loc, small, i, j, Start,

TWT, TTT;

float Avg\_WT,Avg\_TT,Total=0;

printf("Enter number of the process\n");

scanf("%d",&n);

printf("Enter Arrival time and Burst time of the process\n");

printf("\tAT\tBT\n");

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

{

printf("\nP%d: ",i);

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

}

// Logic for calculating Order of Execution

//Calculate TempBT=BT

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

TempBT[i]=AT[i];

//Calculate order of Execution

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

{

small=TempBT[0];

loc=0;

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

{

if(small>TempBT[j])

{

small=TempBT[j];

loc=j;

}

}

Order[location++]=loc;

TempBT[loc]=1000;

}

printf("Order of Execution is: \n");

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

{

printf("%d\t",Order[i]);

}

//Calculate Start Time of Execution for Each Job

Start=BT[Order[0]];

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

{

ST[Order[i]]=Start;

Start=Start+BT[Order[i]];

}

printf("\nStart to End Time of Each Process is: \n");

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

{

printf("P%d :%d\tto\t%d\n",i,ST[i],ST[i]+BT[i]);

}

//Calculate Waiting Time and Turnaround Time for Each Job

TWT=0;

TTT=0;

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

{

WT[i]=ST[i]-AT[i];

TWT=TWT+WT[i];

TT[i]=ST[i]+BT[i]-AT[i];

TTT=TTT+TT[i];

}

Avg\_WT=TWT/n;

Avg\_TT=TTT/n;

printf("Process ,Waiting\_time ,TurnA\_time\n");

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

{

printf("P%d\t\t%d\t\t%d\n",i,WT[i],TT[i]);

}

printf("Average waiting time is : %f\n",Avg\_WT);

printf("Average turn around time is : %f\n",Avg\_TT);

return 0;

}