#include<iostream>

using namespace std;

void findWaitingTime(int processes[], int n, int bt[],int wt[], int at[])

{

int service\_time[n];

service\_time[0] = 0;

wt[0] = 0;

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

{

service\_time[i] = service\_time[i-1] + bt[i-1];

wt[i] = service\_time[i] - at[i];

if (wt[i] < 0)

wt[i] = 0;

}

}

void findTurnAroundTime(int processes[], int n, int bt[],

int wt[], int tat[])

{

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

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

}

void findavgTime(int processes[], int n, int bt[], int at[])

{

int wt[n], tat[n];

findWaitingTime(processes, n, bt, wt, at);

findTurnAroundTime(processes, n, bt, wt, tat);

cout << "Processes " << " Burst Time " << " Arrival Time "

<< " Waiting Time " << " Turn-Around Time "

<< " Completion Time \n";

int total\_wt = 0, total\_tat = 0;

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

{

total\_wt = total\_wt + wt[i];

total\_tat = total\_tat + tat[i];

int compl\_time = tat[i] + at[i];

cout << " " << i+1 << "\t\t" << bt[i] << "\t\t"

<< at[i] << "\t\t" << wt[i] << "\t\t "

<< tat[i] << "\t\t " << compl\_time << endl;

}

cout << "Average waiting time = "

<< (float)total\_wt / (float)n;

cout << "\nAverage turn around time = "

<< (float)total\_tat / (float)n;

}

int main()

{

int n,i;

cout<<"Enter the no.of Processes"<<endl;

cin>>n;

int processes[n],burst\_time[n],arrival\_time[n];

cout<<"Enter the processes numbers"<<endl;

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

cin>>processes[i];

}

cout<<"Enter the Burst time"<<endl;

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

cin>>burst\_time[i];

}

cout<<"Enter the Arrival time"<<endl;

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

cin>>arrival\_time[i];

}

findavgTime(processes, n, burst\_time, arrival\_time);

return 0;

}