#include <stdio.h>

int main() {

int n, tq, t = 0, remain, flag = 0;

int at[10], bt[10], rt[10], wt = 0, tat = 0;

printf("Enter number of processes: ");

scanf("%d", &n);

remain = n;

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

printf("Enter Arrival Time and Burst Time for Process %d: ", i + 1);

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

rt[i] = bt[i];

}

printf("Enter Time Quantum: ");

scanf("%d", &tq);

printf("\nProcess | Turnaround Time | Waiting Time\n");

for (int i = 0; remain != 0;) {

if (rt[i] > 0) {

int exec = (rt[i] > tq) ? tq : rt[i];

t += exec;

rt[i] -= exec;

if (rt[i] == 0) { // Process finished

remain--;

printf("P[%d] | %d | %d\n", i + 1, t - at[i], t - at[i] - bt[i]);

wt += t - at[i] - bt[i];

tat += t - at[i];

}

}

i = (i + 1) % n;

}

printf("\nAverage Waiting Time = %.2f\n", wt \* 1.0 / n);

printf("Average Turnaround Time = %.2f\n", tat \* 1.0 / n);

return 0;

}

2nd:

#include<stdio.h>

int main()

{

int n, tat, wt, t = 0, remain, tq;

int at[10], bt[10], rt[10];

float avgwait = 0.0, avgtat = 0.0;

printf("Enter the time quantum: ");

scanf("%d", &tq);

printf("Enter the total number of processes: ");

scanf("%d", &n);

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

{

printf("Enter the Arrival and Burst time of process %d: ", i + 1);

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

rt[i] = bt[i];

}

remain = n;

printf("Process\tTurnaround Time\tWait Time\n");

for(int i = 0; remain != 0;)

{

if(rt[i] > 0)

{

int exce = (rt[i] > tq) ? tq : rt[i];

t += exce;

rt[i] -= exce;

if(rt[i] == 0)

{

remain--;

tat = t - at[i];

wt = tat - bt[i];

printf("p[%d]\t%d\t\t%d\n", i + 1, tat, wt);

avgwait += wt;

avgtat += tat;

}

}

i = (i + 1) % n;

}

printf("\nAverage Turnaround Time: %.2f\n", avgtat / n);

printf("Average Wait Time: %.2f\n", avgwait / n);

return 0;

}