#include<stdio.h>

int main()

{

  int count,j,n,time,remain,flag=0,time\_quantum;

  int wait\_time=0,turnaround\_time=0,at[10],bt[10],rt[10];

  printf("Enter Total Process:\t ");

  scanf("%d",&n);

  remain=n;

  for(count=0;count<n;count++)

  {

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

    scanf("%d",&at[count]);

    scanf("%d",&bt[count]);

    rt[count]=bt[count];

  }

  printf("Enter Time Quantum:\t");

  scanf("%d",&time\_quantum);

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

  for(time=0,count=0;remain!=0;)

  {

    if(rt[count]<=time\_quantum && rt[count]>0)

    {

      time+=rt[count];

      rt[count]=0;

      flag=1;

    }

    else if(rt[count]>0)

    {

      rt[count]-=time\_quantum;

      time+=time\_quantum;

    }

    if(rt[count]==0 && flag==1)

    {

      remain--;

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

      wait\_time+=time-at[count]-bt[count];

      turnaround\_time+=time-at[count];

      flag=0;

    }

    if(count==n-1)

      count=0;

    else if(at[count+1]<=time)

      count++;

    else

      count=0;

  }

  printf("\nAverage Waiting Time= %f\n",wait\_time\*1.0/n);

  printf("Avg Turnaround Time = %f",turnaround\_time\*1.0/n);

  return 0;

}