#include<stdio.h>

typedef struct nonpresjf

{

int at,bt,ft,tat,wt;

}

nonpresjf;

nonpresjf p[20],p1[20];

int main()

{

int i,limit,nextval,m,min,n;

p[0].wt=p[0].tat=0;

printf("\n Enter the no of process: ");

scanf("%d",&n);

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

{

printf("Enter the arrival time: ");

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

}

limit=p[1].at;

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

{

printf("Enter the burst time: ");

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

}

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

limit+=p[i].bt;

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

p1[i]=p[i];

printf("\n\nGantt chart is as follows: ");

printf("%d",p[1].at);

nextval=p[1].at;

m=1;

do

{

min = 9999;

for(i=1;p[i].at<=nextval && i<=n ;i++)

if(p[i].bt<min && p[i].bt>0)

{

m=i;

min=p[i].bt;

}

nextval+=p[m].bt;

p[m].bt=0;

printf("->P%d->%d",m,nextval);

if(p[m].bt==0)

{

p[m].ft=nextval;

p[m].tat=p[m].ft-p[m].at;

p[m].wt=p[m].tat-p1[m].bt;

p[0].tat+=p[m].tat;

p[0].wt+=p[m].wt;

}

}while(nextval<limit);

p[0].tat=p[0].tat/n;

p[0].wt=p[0].wt/n;

char a[7][100]={"","S.no","AT","BT","FT","TAT","WT"};

printf("\n%3s %3s %3s %3s %3s %3s\n",a[1],a[2],a[3],a[4],a[5],a[6]);

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

printf("\n%4d%4d%4d%4d%4d%4d\n",i,p[i].at,p1[i].bt,p[i].ft,p[i].tat,p[i].wt);

return 0;

}