#include<stdio.h>

main()

{

int p[10],np,b[10],nb,ch,c[10],d[10],alloc[10],flag[10],i,j;

printf("\nEnter the no of process:");

scanf("%d",&np);

printf("\nEnter the no of blocks:");

scanf("%d",&nb);

printf("\nEnter the size of each process:");

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

{

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

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

}

printf("\nEnter the block sizes:");

for(j=0;j<nb;j++)

{

printf("\nBlock %d:",j);

scanf("%d",&b[j]);c[j]=b[j];d[j]=b[j];

}

if(np<=nb)

{

printf("\n1.First fit 2.Best fit 3.Worst fit");

do

{

printf("\nEnter your choice:");

scanf("%d",&ch);

switch(ch)

{

case 1:

printf("\nFirst Fit\n");

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

{

for(j=0;j<nb;j++)

{

if(p[i]<=b[j])

{

alloc[j]=p[i];printf("\n\nAlloc[%d]",alloc[j]);

printf("\n\nProcess %d of size %d is allocated in block:%d of size:%d",i,p[i],j,b[j]);

flag[i]=0,b[j]=0;

break;

}else flag[i]=1;

}

}

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

{

if(flag[i]!=0)

printf("\n\nProcess %d of size %d is not allocated",i,p[i]);

}

break;

case 2: printf("\nBest Fit\n");

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

{

for(j=i+1;j<nb;j++)

{

if(c[i]>c[j])

{

int temp=c[i];c[i]=c[j];

c[j]=temp;

}

}

}

printf("\nAfter sorting block sizes:");

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

printf("\nBlock %d:%d",i,c[i]);

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

{

for(j=0;j<nb;j++)

{

if(p[i]<=c[j])

{

alloc[j]=p[i];printf("\n\nAlloc[%d]",alloc[j]);

printf("\n\nProcess %d of size %d is allocated in block %d of size %d",i,p[i],j,c[j]

);

flag[i]=0,c[j]=0;

break;

}

else flag[i]=1;

}

}

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

{

if(flag[i]!=0)

printf("\n\nProcess %d of size %d is not allocated",i,p[i]);

}

break;

case 3:

printf("\nWorst Fit\n");

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

{

for(j=i+1;j<nb;j++)

{

if(d[i]<d[j])

{

int temp=d[i];d[i]=d[j];

d[j]=temp;

}

}

}

printf("\nAfter sorting block sizes:");

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

printf("\nBlock %d:%d",i,d[i]);

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

{

for(j=0;j<nb;j++)

{

if(p[i]<=d[j])

{

alloc[j]=p[i];printf("\n\nAlloc[%d]",alloc[j]);

printf("\n\nProcess %d of size %d is allocated in block %d of size %d",i,p[i],j,d[j]);

flag[i]=0,d[j]=0;

break;

}

else flag[i]=1;

}

}

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

{

if(flag[i]!=0)

printf("\n\nProcess %d of size %d is not allocated",i,p[i]);

}

break;

default:

printf("Invalid Choice…!");

break;

}

}while(ch<=3);

}

}