# Program:

import java.util.Scanner;

public class BestFit {

static void bestFit(int blockSize[], int m, int processSize[],int n,int remblockSize[])

{

int allocation[] = new int[n];

for (int i = 0; i < allocation.length; i++) {

allocation[i] = -1; }

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

{

int bestIdx = -1;

for (int j=0; j<m; j++)

{

if (blockSize[j] >= processSize[i])

{

if (bestIdx == -1)

bestIdx = j;

else if (blockSize[bestIdx] > blockSize[j])

bestIdx = j;

}}

if (bestIdx != -1)

{

allocation[i] = bestIdx;

blockSize[bestIdx] -= processSize[i];

remblockSize[i]=blockSize[bestIdx];

}}

System.out.println("\nProcess No.\tProcess Size\tBlock no.\tRemaninig Block Size");

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

{

System.out.print(" " + (i+1) + "\t\t" + processSize[i] + "\t\t");

if (allocation[i] != -1) {

System.out.print((allocation[i] + 1)+"\t\t"+remblockSize[i]); }

else {

System.out.print("Not Allocated"+"\t"+remblockSize[i]); }

System.out.println();}}

public static void main(String[] args) {

int m,n,num;

Scanner in=new Scanner(System.in);

System.out.print("Enter how many number of blocks you want to enter:");

m=in.nextInt();

int remblockSize[]=new int[m];

int blockSize[]=new int[m];

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

System.out.print("Enter Data "+(i+1)+":");

num=in.nextInt();

blockSize[i]=num;

}

System.out.print("Enter how many number of process you want to enter:");

n=in.nextInt();

int processSize[]=new int[n];

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

System.out.print("Enter Data "+(i+1)+":");

num=in.nextInt();

processSize[i]=num;

}

bestFit(blockSize, m, processSize, n,remblockSize); }}

## Output:

Enter how many number of blocks you want to enter:4

Enter Data 1:10

Enter Data 2:15

Enter Data 3:15

Enter Data 4:15

Enter how many number of process you want to enter:4

Enter Data 1:10

Enter Data 2:15

Enter Data 3:14

Enter Data 4:16

Process No. Process Size Block no. Remaninig Block Size

1 10 1 0

2 15 2 0

3 14 3 1

4 16 Not Allocated 0