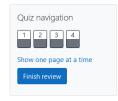
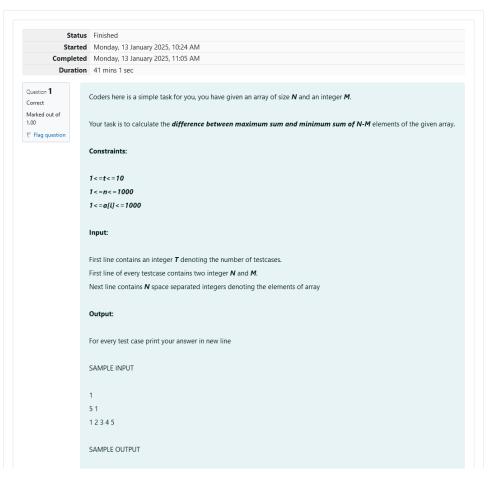
# Week-08-Sorting Algorithms-Bubble and Selection

GE23131-Programming Using C-2024





REC-CIS

Explanation

M is 1 and N is 5 so you have to calculate maximum and minimum sum using (5-1 =) 4 elements.

Maximum sum using the 4 elements would be (2+3+4+5=)14.

Minimum sum using the 4 elements would be (1+2+3+4=)10.

Difference will be 14-10=4.

```
Answer: (penalty regime: 0 %)
      #include <stdio.h>
   2 - int main(){
           int t;
scanf("%d",&t);
   3
   4
            while(t--){
   5
   6
                int n,m,d,min,temp;
                 scanf("%d %d",&n,&m);
                d=n-m;
   8
                int arr[n];
   9
                for(int i=0;i<n;i++)
scanf("%d",&arr[i]);</pre>
   10
  11
                 for(int j=0;j<n;j++){</pre>
  12 -
   13
                     min=j;
  14
                     for(int k=j;k<n;k++){</pre>
  15
                     if(arr[k]<arr[min])
```

```
19
                  arr[min]=arr[j];
20
                  arr[j]=temp;
21
             int maxsum=0,minsum=0;
22
23
             for(int a=0;a<d;a++)</pre>
24
             minsum+=arr[a];
             for(int b=n-1;b>m-1;b--)
25
             maxsum+=arr[b];
printf("%d\n",maxsum-minsum);
26
27
28
29
30
```

	Input	Expected	Got	
~	1	4	4	~
	5 1			
	1 2 3 4 5			

Passed all tests! 🗸

Question **2**Correct
Marked out of 1.00

F Flag question

A new deadly virus has infected large population of a planet. A brilliant scientist has discovered a new strain of virus which can cure this disease. Vaccine produced from this virus has various strength depending on midichlorians count. A person is cured only if midichlorians count in vaccine batch is more than midichlorians count of person. A doctor receives a new set of report which contains midichlorians count of each infected patient, Practo stores all vaccine doctor has and their midichlorians count. You need to determine if doctor can save all patients with the vaccines he has. The number of vaccines and patients are equal.

# Input Format

First line contains the number of vaccines - N. Second line contains N integers, which are strength of vaccines. Third line contains N integers, which are midichlorians count of patients.

# **Output Format**

Print a single line containing 'Yes' or 'No'.

# **Input Constraint**

1 < N < 10

Strength of vaccines and midichlorians count of patients fit in integer.

# SAMPLE INPUT

5

123 146 454 542 456

100 328 248 689 200

Answer: (penalty regime: 0 %)

```
Answer: (penalty regime: 0 %)
       #include <stdio.h>
        int main(){
             int n,min1,min2,temp,flag=1;
scanf("%d",&n);
    3
    4
    5
             int vac[n],pat[n];
             for(int i=0;i<n;i++)
scanf("%d",&vac[i]);</pre>
    6
    7
             for(int i=0;i<n;i++)
scanf("%d",&pat[i]);</pre>
    8
    9
             for(int j=0;j<n;j++){</pre>
   10 -
   11
                  min1=j,min2=j;
   12
                  for(int k=j;k< n;k++){
                      if(vac[k]<vac[min1])</pre>
   13
   14
                      min1=k;
   15
                      if(pat[k]<pat[min2])</pre>
                      min2=k;
   16
   17
   18
                  temp=vac[min1];
                  vac[min1]=vac[j];
   19
   20
                  vac[j]=temp;
   21
                  temp=vac[min2];
   22
                  vac[min2]=vac[j];
                  vac[j]=temp;
   23
   24
   25 +
             for(int i=0;i<n;i++){</pre>
                  if(vac[i]<=pat[i]){
   26 -
```

✓ 5 No No ✓ 123 146 454 542 456				
			No	~
100 328 248 689 200				
Passed all tests! ✓	cod	all tosts!		

Question **3**Correct
Marked out of 1.00

Flag question

You are given an array of n integer numbers  $a_1, a_2, \ldots, a_n$ . Calculate the number of pair of indices (i, j) such that  $1 \le i < j \le n$  and  $a_i \times a_j = 0$ .

# Input format

- First line:  ${\it n}$  denoting the number of array elements
- Second line: n space separated integers  ${\it a_1, a_2, \ldots, a_n}$ .

# **Output format**

Output the required number of pairs.

#### Constraints

 $1 \le n \le 10^6$  $1 \le a_i \le 10^9$ 

# SAMPLE INPUT

5

13143

# SAMPLE OUTPUT

2

Explanation

The 2 pair of indices are (1, 3) and (2,5).

Answer: (penalty regime: 0 %)



	Input	Expected	Got	
~	5 1 3 1 4 3	2	2	~

Passed all tests! 🗸

Question 4
Correct
Marked out of 1.00
F Flag question

You are given an array  $\bf A$  of non-negative integers of size  $\bf m$ . Your task is to sort the array in non-decreasing order and print out the original indices of the new sorted array.

# Example:

A={4,5,3,7,1}

After sorting the new array becomes  $A=\{1,3,4,5,7\}$ .

The required output should be "4 2 0 1 3"

#### INPUT:

The first line of input consists of the size of the array

The next line consists of the array of size m

# OUTPUT:

Output consists of a single line of integers

# CONSTRAINTS:

1<=m<=106

0<=A[i]<=106

NOTE: The indexing of the array starts with 0.

5

45371

# SAMPLE OUTPUT

42013

Answer: (penalty regime: 0 %)

```
max=arr[1];
12
13
         }
14
         max++;
15
         int min=0;
         for(int a=0;a<n;a++){</pre>
16 +
             for(int b=0;b<n;b++){
   if(arr[b]<arr[min])</pre>
17 -
18
19
                  min=b;
20
             printf("%d ",min);
21
              arr[min]=max;
22
23
24 }
```

	Input	Expected	Got	
~	5 4 5 3 7 1	4 2 0 1 3	4 2 0 1 3	~

Passed all tests! 🗸