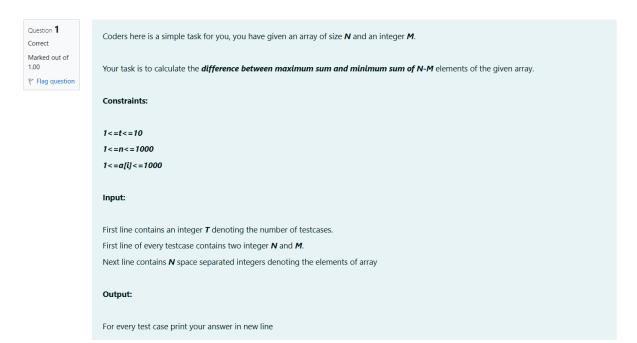
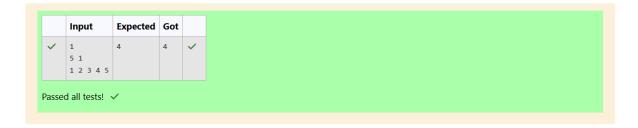
Week-08-Sorting Algorithms-Bubble and Selection





Source code:

Result:



Question **2**Correct
Marked out of 1.00

Friag 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.

Source code:

```
#include<stdio.h>
     int main()
2 ir
3 ▼ {
         int N,num1,num2,temp,flag=1;
 4
 5
         scanf("%d",&N);
 6
         int vac[N],pat[N];
         for(int i=0;i<N;i++)</pre>
 8
         {
 9
             scanf("%d",&vac[i]);
10
         for(int j=0;j<N-1;j++)</pre>
11
12 🔻
         {
             scanf("%d",&pat[j]);
13
14
         for(int k=0;k<N-1;k++)</pre>
15
16
             num1=k;
17
18
             num2=k;
19
             for(int a=k;a<N;a++)</pre>
20
21
                  if(vac[a]<vac[num1])</pre>
22 1
23
                      num1=a;
24
25
                  if(pat[a]<pat[num2])</pre>
26
27
                      num2=a;
28
29
30
             temp=vac[num1];
31
             vac[num1]=vac[k];
32
             vac[k]=temp;
33
             temp=pat[num2];
             pat[num2]=pat[k];
pat[k]=temp;
34
35
36
         for(int i=0;i<N;i++)
37
38 ▼
             if(vac[i]<=pat[i])</pre>
39
40 •
41
                 flag=0;
42
                 break;
43
44
45
         if(flag==1)
46
             printf("Yes");
47
48
49
         else
50
        {
51
             printf("No");
52
53
        return 0;
54 }
```

Result:

```
Question 3
Correct
Marked out of 1.00
P 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 xor a_j = 0.

Input format

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

Output format

Output the required number of pairs.

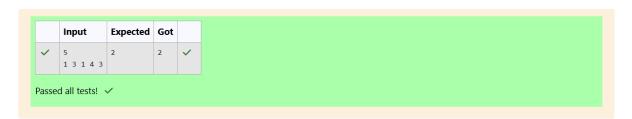
Constraints

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

Source code:

```
#include<stdio.h>
    int main()
 2
3 ₹ {
         int n,count=0;
scanf("%d",&n);
4
5
6
         int arr[n];
         for(int i=0;i<n;i++)</pre>
8 •
9
             scanf("%d",&arr[i]);
10
11
         for(int i=0;i<n-1;i++)</pre>
12 •
              for(int j=i+1;j<n;j++)</pre>
13
14 🔻
                  if((arr[i]^arr[j])==0)
15
16 1
17
                      count++;
18
19
20
21
         printf("%d",count);
22
         return 0;
23 }
```

Result:



```
Correct
Marked out of 1.00

**P Flag question**

**Correct
Marked out of 1.00

**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 array of size m

OUTPUT:

Cutput consists of a single line of integers
```

Source code:

```
1 #include<stdio.h>
   2 int main()
3 * {
           int m;
scanf("%d",&m);
   4
   5
   6
           int A[m];
           for(int i=0;i<m;i++)</pre>
   8 •
           {
   9
              scanf("%d",&A[i]);
  10
           int max=A[0],min=0;
  11
           for(int j=1;j<m;j++)</pre>
  12
  13 🔻
  14
               if(A[j]>max)
  15 🔻
               {
  16
                   max=A[j];
  17
  18
  19
           max++;
  20
          for(int a=0;a<m;a++)</pre>
  21 🔻
              for(int b=0;b<m;b++)</pre>
  22
  23 🔻
  24
                  if(A[b]<A[min])</pre>
  25 🔻
  26
                  min=b;
  27
                  }
  28
  29
              printf("%d ",min);
              A[min]=max;
  30
  31
  32 }
```

Result: