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ECE D

Questiontext1
Codershereisasimpletaskforyou,youhavegivenanarrayofsize ***N***andaninteger***M***.
Yourtaskistocalculatethe***differencebetweenmaximumsumand minimum sum of N-M*** elements of the given
array.
Constraints:
1<=t<=10
1<=n<=1000
1<=a[i]<=1000
Input:
Firstlinecontainsaninteger***T***denotingthenumberoftestcases. First line of every testcase contains two integer***N*** and ***M***.
Nextlinecontains***N***spaceseparatedintegersdenotingtheelements of array
Output:
Foreverytestcaseprintyouranswerinnewline SAMPLE
INPUT
1
51
12345
SAMPLEOUTPUT
764
Explanation
Mis1andNis5soyouhavetocalculatemaximumandminimum sum using (5-1 =) 4 elements.
Maximumsumusingthe4elementswouldbe(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 %)

```c
#include<stdio.h>
int main()
{
    int t,n,k,arr[1000],i,j,temp,sum;
    scanf("%d",&t);
    while(t--)
    {
        scanf("%d %d",&n,&k);
        sum=0;
        for(i=0;i<n;i++)
            scanf("%d",&arr[i]);
        for(i=0;i<n-1;i++)
        {
            for(j=0;j<n-i-1;j++)
            {
                if(arr[j]>arr[j+1])
                {
                    temp=arr[j];
                    arr[j]=arr[j+1];
                    arr[j+1]=temp;
                }
            }
        }
        for(i=n-1;i>n-1-k;i--)
            sum=sum+arr[i];
        for(i=0;i<k;i++)
            sum=sum-arr[i];
        printf("%d\n",sum);
    }
}
```

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

Passed all tests! ✓

Questiontext2

Anewdeadlyvirushasinfectedlargepopulationofaplanet.A brilliant scientist has discovered a new strain of virus whichcancurethisdisease.Vaccineproducedfromthisvirushas various strength depending on midichlorians count. A personiscuredonlyifmidichlorianscountinvaccinebatchismore than midichlorians count of person. A doctor receivesanewsetofreportwhichcontainsmidichlorianscountof each infected patient, Practo stores all vaccine doctorhasandtheirmidichlorianscount.Youneedtodetermineif doctor can save all patients with the vaccines he has. Thenumberofvaccinesandpatientsareequal.

InputFormat

Firstlinecontainsthenumberofvaccines-N.SecondlinecontainsN integers, which are strength of vaccines. Third linecontainsNintegers,whicharemidichlorianscountofpatients.

OutputFormat

Printasinglelinecontaining*'Yes'*or*'No'*.

InputConstraint

1<N<10

Strengthofvaccinesandmidichlorianscountofpatientsfitininteger.

SAMPLEINPUT

5

123146454542456

100328248689200

SAMPLEOUTPUT

No

```c
#include<stdio.h>
int main()
{
    int n,i;
    int canCure=1;
    scanf("%d",&n);
    int vaccines[n],patients[n];
    for(int i=0;i<n;i++)
        scanf("%d",&vaccines[i]);
    for(i=0;i<n;i++)
        scanf("%d",&patients[i]);
    for(i=0;i<n-1;i++)
    {
        for(int j=0;j<n-i-1;j++)
        {
            if(vaccines[j]>vaccines[j+1])
            {
                int temp=vaccines[j];
                vaccines[j]=vaccines[j+1];
                vaccines[j+1]=temp;
            }
            if(patients[j]>patients[j+1])
            {
                int temp=patients[j];
                patients[j]=patients[j+1];
                patients[j+1]=temp;
            }
        }
    }
    for(i=0;i<n;i++)
    {
        if(vaccines[i]<=patients[i])
        {
            canCure=0;
            break;
        }
    }
    if (canCure){
        printf("Yes\n");
    }else{
        printf("No\n");

    }
```

	Input	Expected	Got	
✓	5 123 146 454 542 456 100 328 248 689 200	No	No	✓

Passed all tests! ✓

Questiontext3

Youaregivenanarrayofnintegernumbers***a1,a2,...,an***.Calculate the number of pair of indices ***(i, j)*** such that ***1*** ≤

i<j≤n and ***ai*** xor ***aj=0***.

Inputformat

- Firstline:***n*** denotingthenumberofarrayelements
- Secondline:nspaceseparatedintegers***a1,a2,...,an***.

Outputformat

Outputtherequirednumberofpairs.

Constraints

1≤n≤106

1 ≤ ai ≤ 10 9

SAMPLEINPUT

5

13143

SAMPLEOUTPUT

2

Explanation

The2pairofindicesare***(1,3)*** and ***(2,5)***

```c
#include<stdio.h>
int main()
{
    int n,arr[10000],i,j,count;
    scanf("%d",&n);
    for(i=0;i<n;i++)
        scanf("%d",&arr[i]);
    count=0;
    for(i=0;i<n-1;i++)
    {
        for(j=i+1;j<n;j++)
        {
            if(arr[i]==arr[j])
                count++;
        }
    }
    printf("%d",count);
}
```

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

Passed all tests! ✓

Questiontext4

Youaregivenanarray***A***ofnon-negativeintegersofsize***m***.Yourtask is to sort the array in non-decreasing order and printouttheoriginalindicesofthenewsortedarray.

Example:

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

AftersortingthenewarraybecomesA={1,3,4,5,7}. The required output should be "4 2 0 1 3"

INPUT:

Thefirstlineofinputconsistsofthesizeofthearray The next line consists of the array of size m **OUTPUT :**

Outputconsistsofasinglelineofintegers

CONSTRAINTS:

1<=m<=106

0<=A[i]<=106

NOTE:Theindexingofthearraystartswith0.

SAMPLEINPUT

5

45371

SAMPLEOUTPUT

42013

```c
#include<stdio.h>
int main()
{
    int m,a[100000],b[100000],i,j,temp;
    scanf("%d",&m);
    for(int i=0;i<m;i++)
    {
        scanf("%d",&a[i]);
        b[i]=i;
    }
    for(i=0;i<m-1;i++)
    {
        for(j=0;j<m-i-1;j++)
        {
            if(a[j]>a[j+1])
            {
                temp=a[j];
                a[j]=a[j+1];
                a[j+1]=temp;
                temp=b[j];
                b[j]=b[j+1];
                b[j+1]=temp;
            }
        }
    }
    for(i=0;i<m;i++)
        printf("%d ",b[i]);
}
```

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

Passed all tests! ✓