



Week-08-Sorting Algorithms-Bubble and Selection


Dashboard / My courses / GE23131-PUC-2024 / Week-08-Sorting Algorithms-Bubble and Selection

Navigation


- ▼ Dashboard
- 

Site home
- 


Site pages
- ▼ My courses
- ▼ GE23131-PUC-2024




Participants




Competencies




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General




Skill Test-01-MCQ & Coding




Lecture Notes



Week-01-Overview of C, Constants, Variables and Da...



Assessment-01-Overview of C, Constants, Variables ...



Week-02-Operators and Expressions, Managing Input ...

◀ Assessment-07-Searching Algorithms-Linear and Binary

▶ Assessment-08-Sorting Algorithms-Bubble and Selection

 Coding

✓ Done

◀ Assessment-07-Searching Algorithms-Linear and Binary

Jump to...

▶ Assessment-08-Sorting Algorithms-Bubble and Selection

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GE23131-Programming Using C-2024

Navigation

▼ Dashboard

🏠 Site home

➤ Site pages

▼ My courses

▼ GE23131-PUC-2024

➤ Participants

☑ Competencies

📅 Grades

➤ General

➤ Skill Test-01-MCQ & Coding

➤ Lecture Notes

➤ Week-01-Overview of C, Constants, Variables and Da...

➤ Assessment-01-Overview of C, Constants, Variables ...

➤ Week-02-Operators and Expressions, Managing Input ...

➤ Assessment-02-Operators and Expressions, Managing

Attempts allowed: 3

This quiz has been configured so that students may only attempt it using the Safe Exam Browser.

Time limit: 1 hour 30 mins

Grading method: Highest grade

Your attempts

Attempt 1

Status	Finished
Started	Tuesday, 24 December 2024, 10:18 AM
Completed	Tuesday, 24 December 2024, 10:53 AM
Duration	35 mins 36 secs

Review

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Quiz navigation

[Show one page at a time](#)[Finish review](#)

Status	Finished
Started	Tuesday, 24 December 2024, 10:18 AM
Completed	Tuesday, 24 December 2024, 10:53 AM
Duration	35 mins 36 secs

Question **1**

Correct

Marked out of
1.00[Flag question](#)

Coders here is a simple task for you, you have given an array of size ***N*** and an integer ***M***.

Your task is to calculate the ***difference between maximum sum and minimum sum of N-M*** elements of the given array.

Constraints:

$$1 \leq t \leq 10$$

$$1 \leq n \leq 1000$$

$$1 \leq a[i] \leq 1000$$

Input:

First line contains an integer ***T*** denoting the number of testcases.

First line of every testcase contains two integer ***N*** and ***M***.

Next line contains ***M*** space separated integers denoting the elements of array.



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ENG

08:51

12-01-2025



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Next line contains N space separated integers denoting the elements of array

Output:

For every test case print your answer in new line

SAMPLE INPUT

1
5 1
1 2 3 4 5

SAMPLE OUTPUT

4

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.

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Answer: (penalty regime: 0 %)

```
1 #include<stdio.h>
2 int main()
3 {
4     int t;
5     scanf("%d",&t);
6     while(t--)
7     {
8         int n,m,d,min,temp;
9         scanf("%d%d",&n,&m);
10        d=n-m;
11        int arr[n];
12        for(int i=0;i<n;i++)
13            scanf("%d",&arr[i]);
14        for(int j=0;j<n;j++)
15        {
16            min=j;
17            for(int k=j;k<n;k++)
18            {
19                if(arr[k]<arr[min])
20                    min=k;
21            }
22            temp=arr[min];
23            arr[min]=arr[j];
24            arr[j]=temp;
25        }
26        int maxsum=0,minsum=0;
27        for(int a=0;a<d;a++)
28            minsum+=arr[a];
29        for(int b=n-1;b>m-1;b--)
30            maxsum+=arr[b];
31        printf("%d\n",maxsum -minsum);
32    }
33 }
```

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

Passed all tests! ✓

Question 2

Correct

Marked out of 1.00

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

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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

SAMPLE OUTPUT

No

REC-CIS

Answer: (penalty regime: 0 %)

```
1 #include<stdio.h>
2 int main()
3 {
4     int n,min1,min2,temp,flag=1;
5     scanf("%d",&n);
6     int vac[n],pat[n];
7     for(int i=0;i<n;i++)
8         scanf("%d",&vac[i]);
9     for(int i=0;i<n;i++)
10         scanf("%d",&pat[i]);
11     for(int j=0;j<n-1;j++)
12     {
13         min1=j,min2=j;
14         for(int k=j;k<n;k++)
15         {
16             if(vac[k]<vac[min1])
17                 min1=k;
18             if(pat[k]<pat[min2])
19                 min2=k;
20         }
21         temp=vac[min1];
22         vac[min1]=vac[j];
23         vac[j]=temp;
24         temp=pat[min2];
25         pat[min2]=pat[j];
26         pat[j]=temp;
27     }
28     for(int i=0;i<n;i++)
29     {
30         if(vac[i]<pat[i])
31         {
32             flag=0;
```



REC-CIS

```
33         break;
34     }
35 }
36 if(flag==1)
37     printf("Yes");
38 else
39     printf("No");
40
41
42
43 }
```

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

Passed all tests! ✓

Question **3**

Correct

Marked out of 1.00

Flag question

You are given an array of n integer numbers a_1, a_2, \dots, a_n . Calculate the number of pair of indices (i, j) such that $1 \leq i < j \leq n$ and $a_i \text{ xor } a_j = 0$.

Input format

- First line: n denoting the number of array elements

REC-CIS

🚩 Flag question

Input format

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

Output format

Output the required number of pairs.

Constraints

$$1 \leq n \leq 10^6$$

$$1 \leq a_i \leq 10^9$$

SAMPLE INPUT

5
1 3 1 4 3

SAMPLE OUTPUT

2

REC-CIS

1 3 1 4 3

SAMPLE OUTPUT

2

Explanation

The 2 pair of indices are **(1, 3)** and **(2,5)**.**Answer:** (penalty regime: 0 %)

```
1 #include<stdio.h>
2 int main()
3 {
4     int n,count=0;
5     scanf("%d",&n);
6     int arr[n];
7     for(int i=0;i<n;i++)
8         scanf("%d",&arr[i]);
9     for(int i=0;i<n-1;i++)
10    {
11        for(int j=i+1;j<n;j++)
12        {
13            if((arr[i]^arr[j])==0)
14                count++;
15    }
```



REC-CIS

```
4  int n,count=0;
5  scanf("%d",&n);
6  int arr[n];
7  for(int i=0;i<n;i++)
8  scanf("%d",&arr[i]);
9  for(int i=0;i<n-1;i++)
10 {
11     for(int j=i+1;j<n;j++)
12     {
13         if((arr[i]^arr[j])==0)
14             count++;
15     }
16 }
17 printf("%d",count);
18 }
```

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

Passed all tests! ✓

Question **4**


Correct

Marked out of
1.00

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



REC-CIS

 Flag question**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: $1 \leq m \leq 106$ $0 \leq A[i] \leq 106$

NOTE: The indexing of the array starts with 0.

REC-CIS

4 5 3 7 1

SAMPLE OUTPUT

4 2 0 1 3

Answer: (penalty regime: 0 %)

```
1 #include<stdio.h>
2 int main()
3 {
4     int n;
5     scanf("%d",&n);
6     int arr[n];
7     for(int i=0;i<n;i++)
8         scanf("%d",&arr[i]);
9     int max=arr[0];
10    for(int i=1;i<n;i++)
11    {
12        if(arr[i]>max)
13            max=arr[i];
14    }
15    max++;
16    int min=0;
17    for(int a=0;a<n;a++)
18    {
19        for(int b=0;b<n;b++)
20        {
21            if(arr[b]<arr[min])
22                min=b;
23        }
24        printf("%d ",min);
25        arr[min]=max;
26    }
```



REC-CIS

```
8 scanf("%d",&arr[1]);
9 int max=arr[0];
10 for(int i=1;i<n;i++)
11 {
12     if(arr[i]>max)
13         max=arr[i];
14 }
15 max++;
16 int min=0;
17 for(int a=0;a<n;a++)
18 {
19     for(int b=0;b<n;b++)
20     {
21         if(arr[b]<arr[min])
22             min=b;
23     }
24     printf("%d ",min);
25     arr[min]=max;
26 }
27 }
```

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

Passed all tests! ✓

Finish review



Assessment-08-Sorting Algorithms-Bubble and Selection

[Dashboard](#) / [My courses](#) / [GE23131-PUC-2024](#) / [Assessment-08-Sorting Algorithms-Bubble and Selection](#)

Navigation

- Dashboard
 - Site home
 - Site pages
 - My courses
 - GE23131-PUC-2024
 - Participants
 - ☒ Competencies
 - ☒ Grades
 - General
 - Skill Test-01-MCQ & Coding
 - Lecture Notes
 - Week-01-Overview of C, Constants, Variables and Da...
 - Assessment-01-Overview of C, Constants, Variables ...
 - Week-02-Operators and Expressions, Managing Input ...

[◀ Week-08-Sorting Algorithms-Bubble and Selection](#)

[▶ Week-09-Two-Dimensional and Multi-dimensional Arrays](#)

[◀ Week-08-Sorting Algorithms-Bubble and Selection](#)

[▶ Week-09-Two-Dimensional and Multi-dimensional Arrays](#)