RAJALAKSHMI ENGINEERING COLLEGE

MONISHA S 2024-CSE

M2

Started on	Friday, 24 October 2025, 9:16 AM
State	Finished
Completed on	Friday, 24 October 2025, 9:24 AM
Time taken	7 mins 26 secs
Marks	1.00/1.00
Grade	**4.00** out of 4.00 (**100**%)

Question 1 | Correct Mark 1.00 out of 1.00

Find Duplicate in Array.

Given a read only array of n integers between 1 and n, find one number that repeats.

Input Format:

First Line - Number of elements

n Lines - n Elements

Output Format:

Element x - That is repeated

For example:

Input	Result
5 1 1 2 3 4	1

Answer: (penalty regime: 0 %)

```c
#include<stdio.h>
int main()
{
    int n;
    scanf("%d",&n);
    int a[n];
    for(int i=0;i<n;i++)
    {
        scanf("%d",&a[i]);
    }
    for(int i=0;i<n;i++)
    {
        int isDuplicate=0;
        for(int k=0;k<i;k++)
        {
            if(a[k]==a[i])
            {
                isDuplicate=1;
                break;
            }
        }
        if(isDuplicate)
        {
            continue;
        }
        for(int j=i+1;j<n;j++)
        {
            if(a[i]==a[j])
            {
                printf("%d ",a[j]);
            }
        }
    }
}
```

	Input	Expected	Got	
✔	11 10 9 7 6 5 1 2 3 8 4 7	7	7	✔
✔	5 1 2 3 4 4	4	4	✔
✔	5 1 1 2 3 4	1	1	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

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RAJALAKSHMI ENGINEERING COLLEGE

MONISHA S 2024-CSE

M2

Started on	Friday, 24 October 2025, 1:18 PM
State	Finished
Completed on	Friday, 24 October 2025, 1:30 PM
Time taken	12 mins 36 secs
Marks	1.00/1.00
Grade	**4.00** out of 4.00 (**100**%)

Question 1 | Correct Mark 1.00 out of 1.00

Find Duplicate in Array.

Given a read only array of n integers between 1 and n, find one number that repeats.

Input Format:

First Line - Number of elements

n Lines - n Elements

Output Format:

Element x - That is repeated

For example:

Input	Result
5 1 1 2 3 4	1

Answer: (penalty regime: 0 %)

```
#include<stdio.h>
#include<stdlib.h>
int main()
{
    int n;
    scanf("%d",&n);
    int a[n];
    for(int i=0;i<n;i++)
    {
        scanf("%d",&a[i]);
    }

    for(int i=0;i<n;i++)
    {
        int index=abs(a[i]);
        if(a[index]>=0)
        {
            a[index]=-a[index];

        }
        else
        {
            printf("%d",index);
            a[index]=0;

        }
    }

}
```

	Input	Expected	Got	
✔	11 10 9 7 6 5 1 2 3 8 4 7	7	7	✔
✔	5 1 2 3 4 4	4	4	✔
✔	5 1 1 2 3 4	1	1	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

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RAJALAKSHMI ENGINEERING COLLEGE

MONISHA S 2024-CSE

M2

Started on	Friday, 24 October 2025, 1:34 PM
State	Finished
Completed on	Friday, 24 October 2025, 2:00 PM
Time taken	25 mins 19 secs
Marks	1.00/1.00
Grade	**30.00** out of 30.00 (**100**%)

Question 1 | Correct Mark 1.00 out of 1.00

Find the intersection of two sorted arrays.

OR in other words,

Given 2 sorted arrays, find all the elements which occur in both the arrays.

Input Format

· The first line contains T, the number of test cases. Following T lines contain:

1. Line 1 contains N1, followed by N1 integers of the first array

2. Line 2 contains N2, followed by N2 integers of the second array

Output Format

The intersection of the arrays in a single line

Example

Input:

1

3 10 17 57

6 2 7 10 15 57 246

Output:

10 57

Input:

1

6 1 2 3 4 5 6

2 1 6

Output:

1 6

For example:

Input	Result
1 3 10 17 57 6 2 7 10 15 57 246	10 57

Answer: (penalty regime: 0 %)

```
#include<stdio.h>
int main()
{
    int t;
    scanf("%d",&t);
    int n1,n2;
    scanf("%d",&n1);
    int a[n1];
    for(int i=0;i<n1;i++)
    {
        scanf("%d",&a[i]);
    }
    scanf("%d",&n2);
    int b[n2];
    for(int i=0;i<n2;i++)
    {
        scanf("%d",&b[i]);
    }
    int temp=t;
    while(temp!=0)
    {
    for(int i=0;i<n1;i++)
```

```
    {
        for(int j=0;j<n2;j++)
        {
            if(a[i]==b[j])
            {
                printf("%d ",b[j]);
            }
            if(b[j]>a[i])
            {
                break;
            }
        }
    }
    temp--;
    }

}
```

	Input	Expected	Got	
✔	1 3 10 17 57 6 2 7 10 15 57 246	10 57	10 57	✔
✔	1 6 1 2 3 4 5 6 2 1 6	1 6	1 6	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

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RAJALAKSHMI ENGINEERING COLLEGE

MONISHA S 2024-CSE

M2

Started on	Friday, 24 October 2025, 2:04 PM
State	Finished
Completed on	Friday, 24 October 2025, 2:08 PM
Time taken	4 mins 26 secs
Marks	1.00/1.00
Grade	**30.00** out of 30.00 (**100**%)

Question 1 | Correct Mark 1.00 out of 1.00

Find the intersection of two sorted arrays.

OR in other words,

Given 2 sorted arrays, find all the elements which occur in both the arrays.

Input Format

· The first line contains T, the number of test cases. Following T lines contain:

1. Line 1 contains N1, followed by N1 integers of the first array
2. Line 2 contains N2, followed by N2 integers of the second array

Output Format

The intersection of the arrays in a single line

Example

Input:

1

3 10 17 57

6 2 7 10 15 57 246

Output:

10 57

Input:

1

6 1 2 3 4 5 6

2 1 6

Output:

1 6

For example:

Input	Result
1 3 10 17 57 6 2 7 10 15 57 246	10 57

Answer: (penalty regime: 0 %)

```
#include<stdio.h>
int main()
{
    int t;
    scanf("%d",&t);
    int n1,n2;
    scanf("%d",&n1);
    int a[n1];
    for(int i=0;i<n1;i++)
    {
        scanf("%d",&a[i]);
    }
    scanf("%d",&n2);
    int b[n2];
    for(int i=0;i<n2;i++)
    {
        scanf("%d",&b[i]);
    }
    int i=0,j=0;
    while(i<n1 && j<n2)
    {
        if(a[i]<b[i])
```

```
        {
            i++;
        }
        else if(b[j]<a[i])
        {
            j++;
        }
        else
        {
            printf("%d ",a[i]);
            i++;
            j++;
        }
    }
}
```

	Input	Expected	Got	
✔	1 3 10 17 57 6 2 7 10 15 57 246	10 57	10 57	✔
✔	1 6 1 2 3 4 5 6 2 1 6	1 6	1 6	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

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RAJALAKSHMI ENGINEERING COLLEGE

MONISHA S 2024-CSE

M2

Started on	Friday, 24 October 2025, 2:11 PM
State	Finished
Completed on	Friday, 24 October 2025, 2:15 PM
Time taken	3 mins 36 secs
Marks	1.00/1.00
Grade	**4.00** out of 4.00 (**100**%)

Question 1 | Correct Mark 1.00 out of 1.00

Given an array A of sorted integers and another non negative integer k, find if there exists 2 indices i and j such that A[j] - A[i] = k, i != j.

Input Format:

First Line n - Number of elements in an array

Next n Lines - N elements in the array

k - Non - Negative Integer

Output Format:

1 - If pair exists

0 - If no pair exists

Explanation for the given Sample Testcase:

YES as 5 - 1 = 4

So Return 1.

For example:

Input	Result
3 1 3 5 4	1

Answer: (penalty regime: 0 %)

```
#include<stdio.h>
#include<stdlib.h>
int main()
{
    int n;
    scanf("%d",&n);
    int a[n];
    for(int i=0;i<n;i++)
    {
        scanf("%d",&a[i]);
    }
    int k;
    scanf("%d",&k);
    int f=0;
    for(int i=0;i<n;i++)
    {
        for(int j=0;j<n;j++)
        {
            if(i!=j && abs(a[i]-a[j])==k)
               {
                   f=1;
                   break;
               }
        }
        if(f==1)
        {
            break;
        }

    }
    printf("%d",f);
}
```

	Input	Expected	Got	
✔	3 1 3 5 4	1	1	✔
✔	10 1 4 6 8 12 14 15 20 21 25 1	1	1	✔
✔	10 1 2 3 5 11 14 16 24 28 29 0	0	0	✔
✔	10 0 2 3 7 13 14 15 20 24 25 10	1	1	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

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RAJALAKSHMI ENGINEERING COLLEGE

MONISHA S 2024-CSE

M2

Started on	Friday, 24 October 2025, 2:18 PM
State	Finished
Completed on	Friday, 24 October 2025, 2:29 PM
Time taken	10 mins 31 secs
Marks	1.00/1.00
Grade	**4.00** out of 4.00 (**100**%)

Question 1 | Correct Mark 1.00 out of 1.00

Given an array A of sorted integers and another non negative integer k, find if there exists 2 indices i and j such that A[j] - A[i] = k, i != j.

Input Format:

First Line n - Number of elements in an array

Next n Lines - N elements in the array

k - Non - Negative Integer

Output Format:

1 - If pair exists

0 - If no pair exists

Explanation for the given Sample Testcase:

YES as 5 - 1 = 4

So Return 1.

For example:

Input	Result
3 1 3 5 4	1

Answer: (penalty regime: 0 %)

```
#include<stdio.h>
#include<stdlib.h>
int main()
{
    int n;
    scanf("%d",&n);
    int a[n];
    for(int i=0;i<n;i++)
    {
        scanf("%d",&a[i]);
    }
    int k;
    scanf("%d",&k);
    int i=0,j=0;
    int f=0;
    while(i<n && j<n)
    {
        int d=a[j]-a[i];
        if(i!=j && d==k)
        {
            f=1;
            break;

        }
        else if(d<k)
        {
           j++;
        }
        else if(d>k)
        {
            i++;
        }
        else
        {
            i++;
            j++;
        }
    }
    printf("%d",f);
```

```
40 }
```

	Input	Expected	Got	
✔	3 1 3 5 4	1	1	✔
✔	10 1 4 6 8 12 14 15 20 21 25 1	1	1	✔
✔	10 1 2 3 5 11 14 16 24 28 29 0	0	0	✔
✔	10 0 2 3 7 13 14 15 20 24 25 10	1	1	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

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