Started on	Thursday, 23 October 2025, 8:18 AM
State	Finished
Completed on	Thursday, 23 October 2025, 9:30 AM
Time taken	1 hour 12 mins
Marks	1.00/1.00
Grade	**10.00** out of 10.00 (**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>
int main(){
    int n;
    int arr[100];
    scanf("%d",&n);
    for(int i=0;i<=n;i++){
        scanf("%d",&arr[i]);
    }
       for(int i=0;i<n;i++){
           for(int j=i+1;j<n;j++){
               if(arr[i]==arr[j])
               printf("%d",arr[i]);
           }
       }

    return 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.

Started on	Thursday, 23 October 2025, 9:31 AM
State	Finished
Completed on	Thursday, 23 October 2025, 9:41 AM
Time taken	9 mins 58 secs
Marks	1.00/1.00
Grade	**10.00** out of 10.00 (**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>
int main()
{
    int n;
    int arr[100];
    scanf("%d",&n);
    for(int i=0;i<=n;i++){
        scanf("%d",&arr[i]);
    }
    for(int i=0;i<n;i++){
        for(int j=i+1;j<n;j++){
            if(arr[i]==arr[j])
            printf("%d",arr[i]);
        }
    }
    return 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.

Started on	Friday, 24 October 2025, 10:09 PM
State	Finished
Completed on	Friday, 24 October 2025, 10:19 PM
Time taken	10 mins 17 secs
Marks	1.00/1.00
Grade	**10.00** out of 10.00 (**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);
    while(t--)
    {
        int n1,n2;
        scanf("%d",&n1);
        int a[n1];
        for(int i=0;i<n1;i++)
        {
            scanf("%d",&a[i]);
        }
```

```
15          scanf("%d",&n2);
16          int b[n2];
17          for(int j=0;j<n2;j++)
18          {
19              scanf("%d",&b[j]);
20          }
21          int i=0,j=0;
22          int first=1;
23          while(i<n1 && j<n2){
24              if(a[i]==b[j]){
25                  if(!first)printf(" ");
26                  printf("%d",a[i]);
27                  first=0;
28                  i++;
29                  j++;
30
31              }
32              else if(a[i]<b[j]){
33                  i++;}
34              else{
35                  j++;
36              } }printf("\n");
37          }return 0;}
38
```

	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.

Started on	Thursday, 30 October 2025, 12:49 AM
State	Finished
Completed on	Thursday, 30 October 2025, 12:57 AM
Time taken	8 mins 12 secs
Marks	1.00/1.00
Grade	**10.00** out of 10.00 (**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);
    while(T--){
        int N1,N2;
        scanf("%d", &N1);
        int arr1[N1];
        for(int i=0; i < N1; i++)
            scanf("%d", &arr1[i]);
        scanf("%d", &N2);
        int arr2[N2];
        for(int i=0;i<N2;i++)
            scanf("%d", &arr2[i]);
```

```
        int i=0,j=0;
        int found=0;
        while(i<N1 && j<N2){
            if (arr1[i] < arr2[j])
            i++;
            else if(arr1[i] > arr2[j])
            j++;
            else{
                printf("%d ", arr1[i]);
                found=1;
                i++;
                j++;
            }
        }
        if (!found)
            printf("No common elements");
        printf("\n");

    }
    return 0;
}
```

	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.

Started on	Thursday, 30 October 2025, 8:10 AM
State	Finished
Completed on	Thursday, 30 October 2025, 9:26 AM
Time taken	1 hour 15 mins
Marks	1.00/1.00
Grade	**10.00** out of 10.00 (**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>
int main(){
    int n,k;
    int flag=0;
    scanf("%d",&n);
    int arr[n];
    for(int i=0;i<n;i++)
    scanf("%d",&arr[i]);

    scanf("%d",&k);
    for(int i=0;i<n-1;i++){
        for(int j=i+1;j<n;j++){
            if(arr[j]-arr[i]==k)
            flag=1;
        }
    }
    printf("%d",flag);
}
```

	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.

Started on	Thursday, 30 October 2025, 9:27 AM
State	Finished
Completed on	Monday, 3 November 2025, 8:35 PM
Time taken	4 days 11 hours
Marks	1.00/1.00
Grade	**10.00** out of 10.00 (**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 %)

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

```
34 }
35
```

	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.