RAJALAKSHMI ENGINEERING COLLEGE

Started on	Wednesday, 8 October 2025, 8:44 AM
State	Finished
Completed on	Wednesday, 8 October 2025, 9:03 AM
Time taken	19 mins 18 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]);
    }
    f o r    ( i n t    i    =    0 ;    i    <    n ;    i + + )    {
        int val = abs(a[i]);
        if (a[val - 1] < 0) {
            printf("%d\n", val);
            break;
        }
        a [ v a l    -    1 ]    =    - a [ v a l    -    1 ] ;
    }
    r e t u r n    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.

Back to Course

RAJALAKSHMI ENGINEERING COLLEGE

Started on	Wednesday, 8 October 2025, 8:46 AM
State	Finished
Completed on	Wednesday, 8 October 2025, 9:03 AM
Time taken	16 mins 51 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>
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++) {
        for (int j = i + 1; j < n; j++) {
            if (a[i] == a[j]) {
                printf("%d\n", a[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.

Back to Course

RAJALAKSHMI ENGINEERING COLLEGE

Started on	Wednesday, 8 October 2025, 8:50 AM
State	Finished
Completed on	Wednesday, 8 October 2025, 9:03 AM
Time taken	13 mins 31 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);
    while (T--) {
        int N1;
        scanf("%d", &N1);
        int A[N1];
        for (int i = 0; i < N1; i++) {
            scanf("%d", &A[i]);
        }
        i n t   N 2 ;
        s c a n f ( " % d " ,   & N 2 ) ;
        i n t   B [ N 2 ] ;
        f o r   ( i n t   i   =   0 ;   i   <   N 2 ;   i + + )   {
            scanf("%d", &B[i]);
        }
        i n t   i   =   0 ,   j   =   0 ;
        w h i l e   ( i   <   N 1   & &   j   <   N 2 )   {
        i f   ( A [ i ]   <   B [ j ] )   {
                i++;
```

```
            } else if (A[i] > B[j]) {
                j++;
            } else {
                printf("%d ", A[i]);
                i++;
                j++;
            }
        }
        printf("\n");
    }
}
```

	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.

Back to Course

RAJALAKSHMI ENGINEERING COLLEGE

Started on	Wednesday, 8 October 2025, 8:53 AM
State	Finished
Completed on	Wednesday, 8 October 2025, 9:04 AM
Time taken	10 mins 47 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);
    while (T--) {
        int N1;
        scanf("%d", &N1);
        int A[N1];
        for (int i = 0; i < N1; i++) {
            scanf("%d", &A[i]);
        }

        int N2;
        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[j]) {
                i++;
            } else if (A[i] > B[j]) {
                j++;
            } else {
                printf("%d ", A[i]);
                i++;
                j++;
            }
        }
        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.

Back to Course

RAJALAKSHMI ENGINEERING COLLEGE

Started on	Wednesday, 8 October 2025, 9:09 AM
State	Finished
Completed on	Wednesday, 8 October 2025, 9:18 AM
Time taken	9 mins 10 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>
int main() {
    int n;
    scanf("%d", &n);
    int A[n];
    for (int i = 0; i < n; i++) {
        scanf("%d", &A[i]);
    }
    i n t    k ;
    s c a n f ( " % d " ,    & k ) ;
    i n t    i    =    0 ,    j    =    1 ;
    w h i l e    ( i    <    n    & &    j    <    n )    {
        int diff = A[j] - A[i];
        if (diff == k && i != j) {
            printf("1\n");
            return 0;
        } else if (diff < k) {
                        j++;
                    } else {
                        i++;
            if (i == j) j++;
        }
    }
    p r i n t f ( " 0 \ n " ) ;
    r e t u r n    0 ;
}
```

	Input	Expected	Got	
	3 1 3 5 4	1	1	

	Input	Expected	Got	
✓	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.

Back to Course

RAJALAKSHMI ENGINEERING COLLEGE

Started on	Wednesday, 8 October 2025, 8:57 AM
State	Finished
Completed on	Wednesday, 8 October 2025, 9:04 AM
Time taken	7 mins 24 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>

int main() {
    int n;
    scanf("%d", &n);
    int A[n];
    for (int i = 0; i < n; i++) {
        scanf("%d", &A[i]);
    }
    i n t    k ;
    s c a n f ( " % d " ,    & k ) ;

    int i = 0, j = 1;
    while (i < n && j < n) {
        int diff = A[j] - A[i];
        if (diff == k && i != j) {
            printf("1\n");
            return 0;
        } else if (diff < k) {
                        j++;
                    } else {
                        i++;
             if (i == j) j++;
        }
    }
    p r i n t f ( " 0 \ n " ) ;
    r e t u r n    0 ;
}
```

	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.

Back to Course