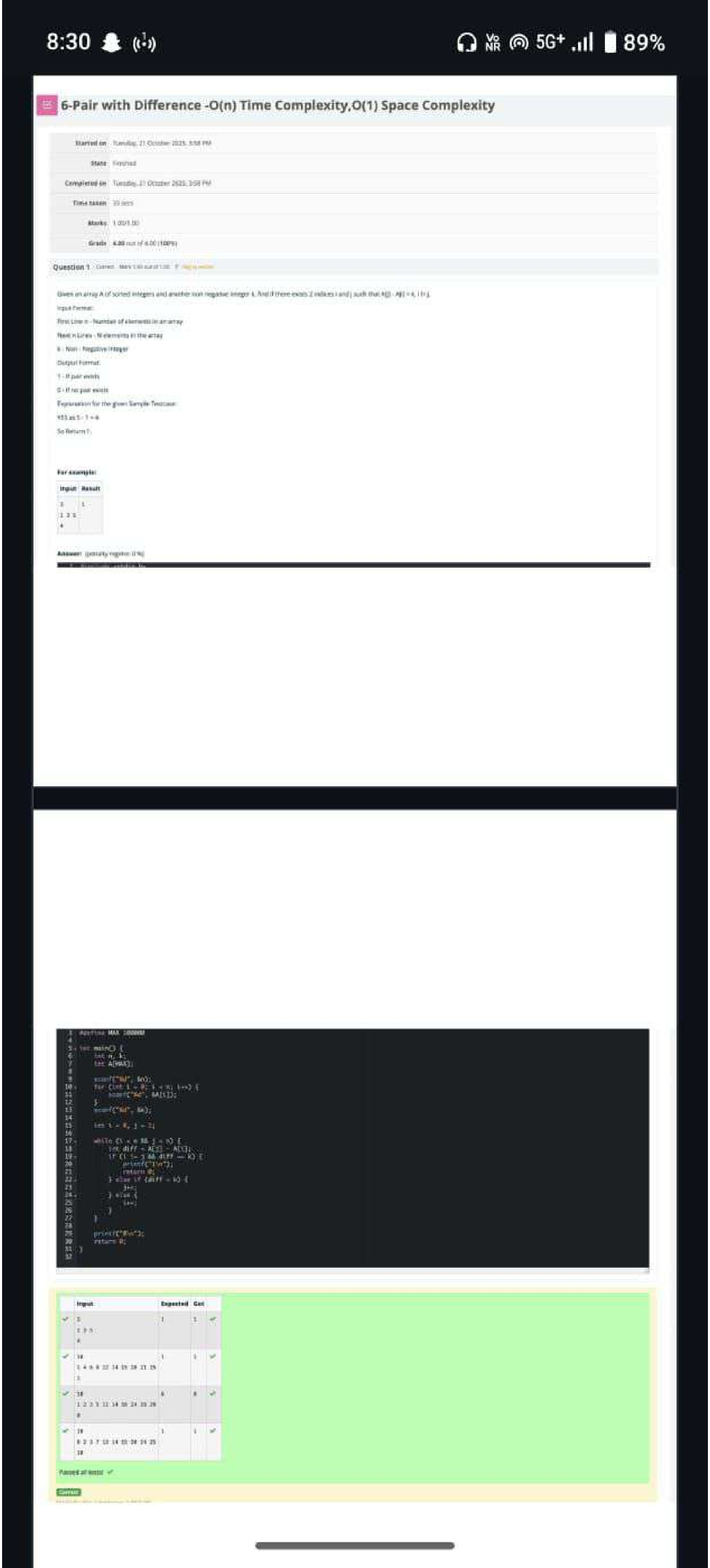


6-Pair with Difference -O(n) Time Complexity,O(1) Space Complexity

Started on	Tuesday, 21 October 2025, 3:58 PM
State	Finished
Completed on	Tuesday, 21 October 2025, 3:58 PM
Time taken	33 secs
Marks	1.00/1.00
Grade	**4.00** out of 4.00 (**100%**)

Question 1 Correct Mark 1.00 out of 1.00 Flag question

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 %)

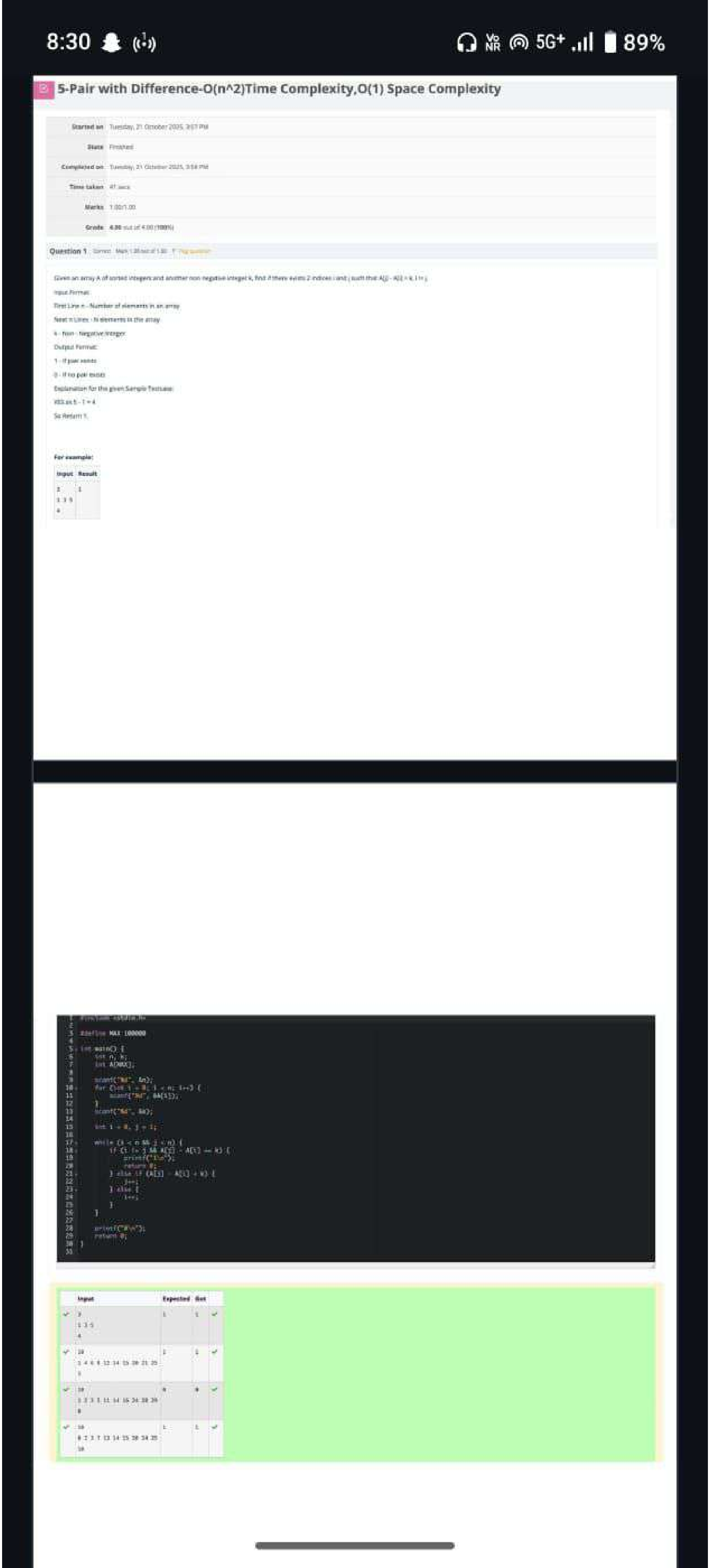
```c
#include <stdio.h>

#define MAX 100000

int main() {
    int n, k;
    int A[MAX];

    scanf("%d", &n);
    for (int i = 0; i < n; i++) {
        scanf("%d", &A[i]);
    }
    scanf("%d", &k);

    int i = 0, j = 1;

    while (i < n && j < n) {
        int diff = A[j] - A[i];
        if (i != j && diff == k) {
            printf("1\n");
            return 0;
        } else if (diff < k) {
            j++;
        } else {
            i++;
        }
    }

    printf("0\n");
    return 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.



8:30 5G+ 89%

5-Pair with Difference-O(n^2)Time Complexity,O(1) Space Complexity

Started on	Tuesday, 21 October 2025, 3:57 PM
State	Finished
Completed on	Tuesday, 21 October 2025, 3:58 PM
Time taken	41 secs
Marks	1.00/1.00
Grade	**4.00** out of 4.00 (**100%**)

Question 1 Correct Mark 1.00 out of 1.00 Flag question

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.

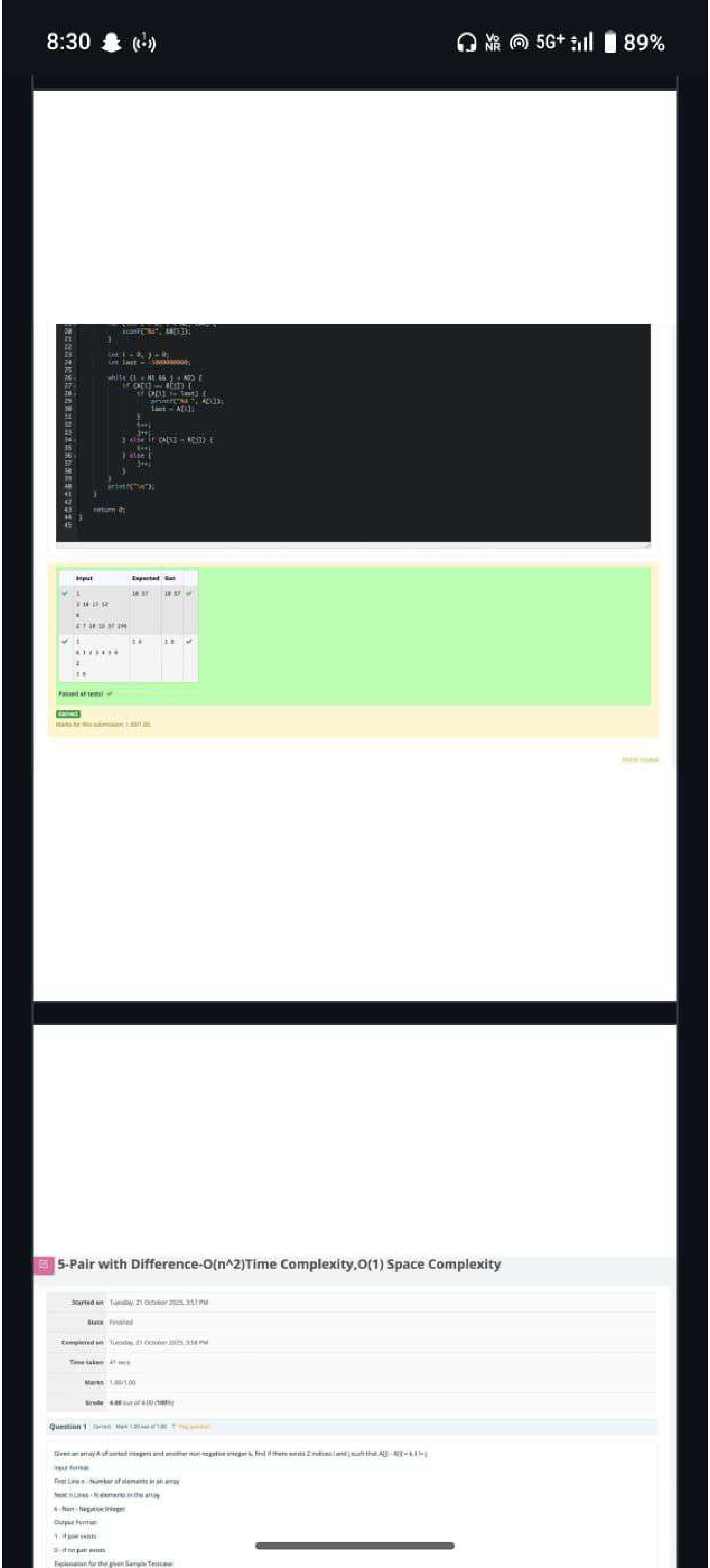
For example:

Input	Result

3
1 3 5
4
	1

```
#include <stdio.h>

#define MAX 100000

int main() {
    int n, k;
    int A[MAX];

    scanf("%d", &n);
    for (int i = 0; i < n; i++) {
        scanf("%d", &A[i]);
    }
    scanf("%d", &k);

    int i = 0, j = 1;

    while (i < n && j < n) {
        if (i != j && A[j] - A[i] == k) {
            printf("1\n");
            return 0;
        } else if (A[j] - A[i] < k) {
            j++;
        } else {
            i++;
        }
    }

    printf("0\n");
    return 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	✓



```
            scanf("%d", &B[i]);
        }

        int i = 0, j = 0;
        int last = -1000000000;

        while (i < N1 && j < N2) {
            if (A[i] == B[j]) {
                if (A[i] != last) {
                    printf("%d ", A[i]);
                    last = A[i];
                }
                i++;
                j++;
            } else if (A[i] < B[j]) {
                i++;
            } else {
                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.

Finish review

5-Pair with Difference-O(n^2)Time Complexity,O(1) Space Complexity

Started on	Tuesday, 21 October 2025, 3:57 PM
State	Finished
Completed on	Tuesday, 21 October 2025, 3:58 PM
Time taken	41 secs
Marks	1.00/1.00
Grade	**4.00** out of 4.00 (**100**%)

Question 1 Correct Mark 1.00 out of 1.00 Flag question

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

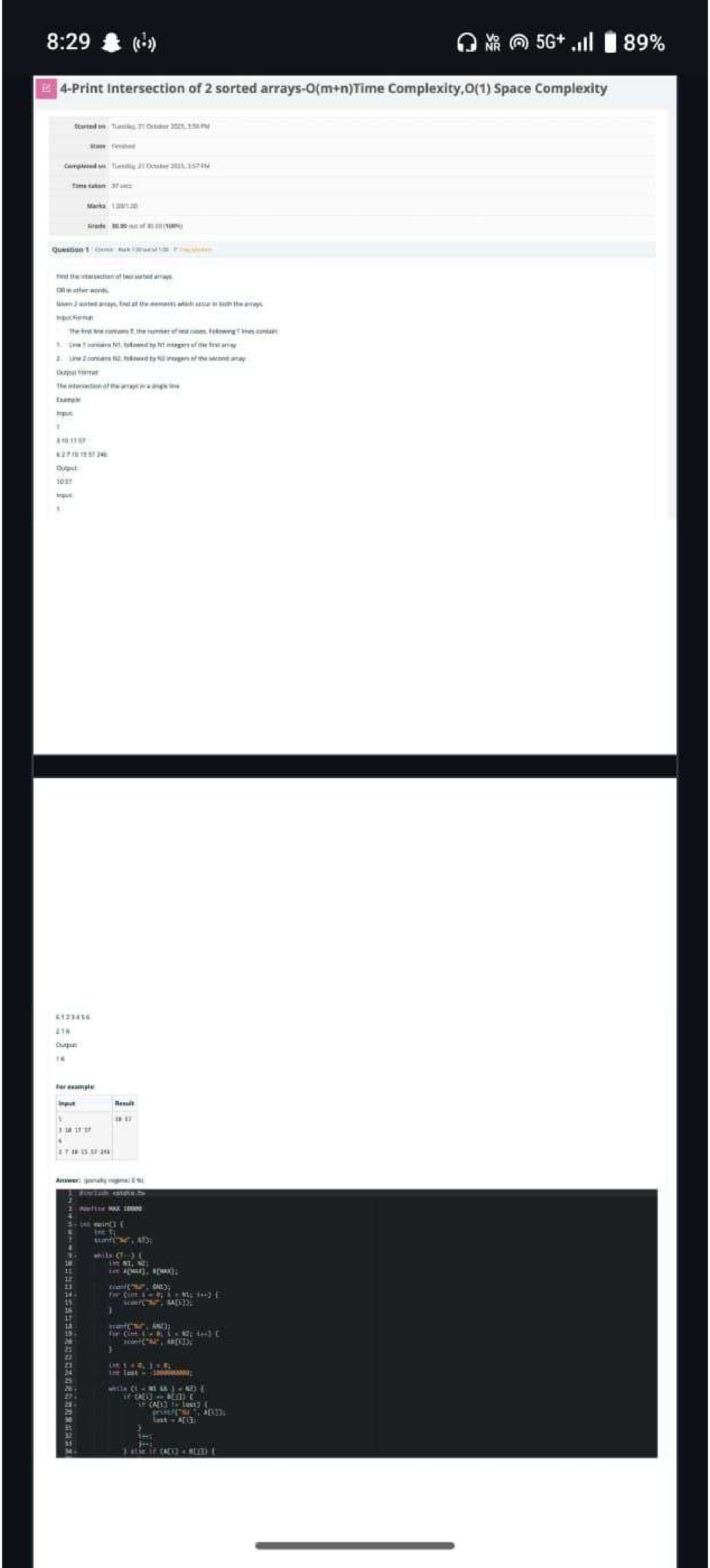
k - Non - Negative Integer

Output Format:

1 - If pair exists

0 - If no pair exists

Explanation for the given Sample Testcase:



8:29 5G⁺ 89%

4-Print Intersection of 2 sorted arrays-O(m+n)Time Complexity,O(1) Space Complexity

Started on	Tuesday, 21 October 2025, 3:56 PM
State	Finished
Completed on	Tuesday, 21 October 2025, 3:57 PM
Time taken	37 secs
Marks	1.00/1.00
Grade	**30.00** out of 30.00 (**100%**)

Question 1 Correct Mark 1.00 out of 1.00 Flag question

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

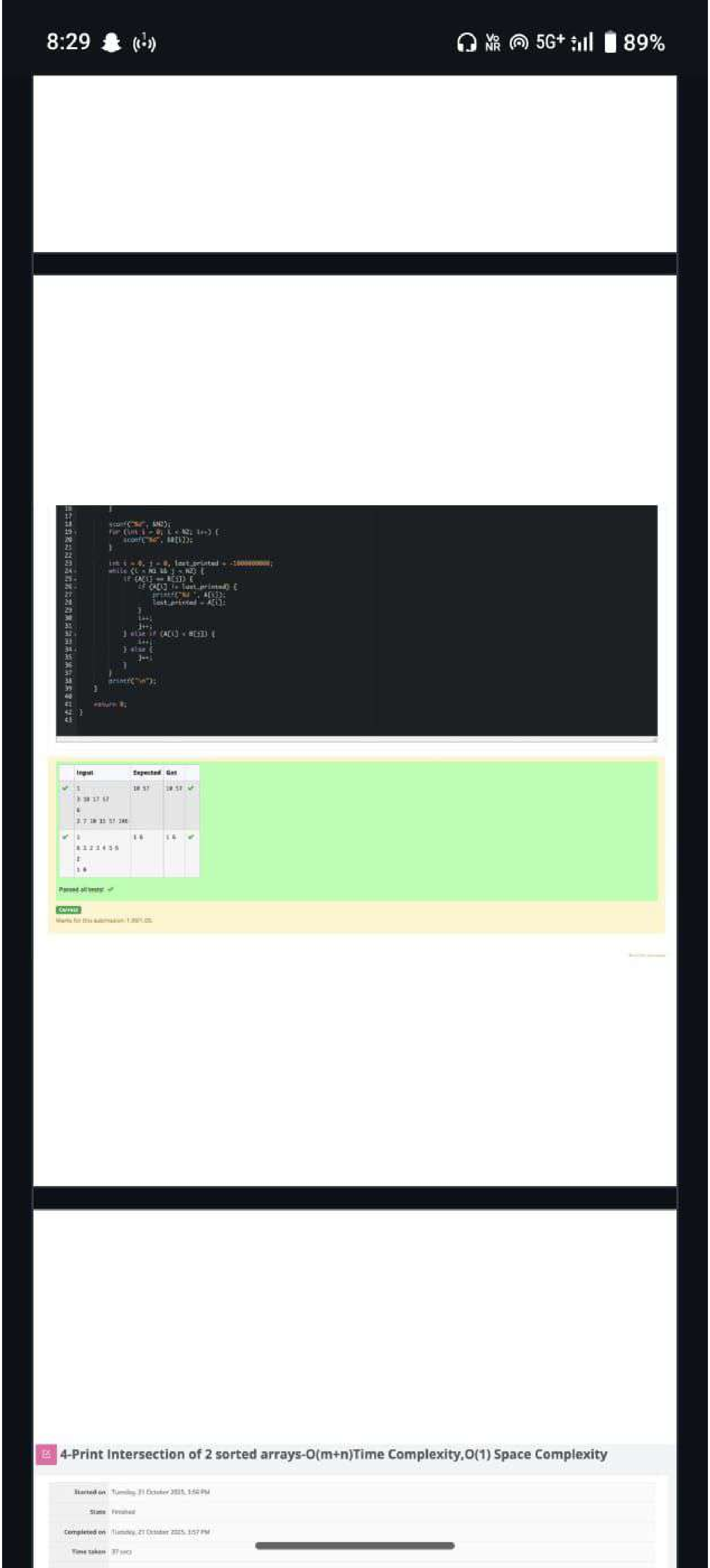
For example:

Input	Result

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

Answer: (penalty regime: 0 %)

```
#include <stdio.h>

#define MAX 10000

int main() {
    int T;
    scanf("%d", &T);

    while (T--) {
        int N1, N2;
        int A[MAX], B[MAX];

        scanf("%d", &N1);
        for (int i = 0; i < N1; i++) {
            scanf("%d", &A[i]);
        }

        scanf("%d", &N2);
        for (int i = 0; i < N2; i++) {
            scanf("%d", &B[i]);
        }

        int i = 0, j = 0;
        int last = -1000000000;

        while (i < N1 && j < N2) {
            if (A[i] == B[j]) {
                if (A[i] != last) {
                    printf("%d ", A[i]);
                    last = A[i];
                }
                i++;
                j++;
            } else if (A[i] < B[j]) {
```



```c
        }

        scanf("%d", &N2);
        for (int i = 0; i < N2; i++) {
            scanf("%d", &B[i]);
        }

        int i = 0, j = 0, last_printed = -1000000000;
        while (i < N1 && j < N2) {
            if (A[i] == B[j]) {
                if (A[i] != last_printed) {
                    printf("%d ", A[i]);
                    last_printed = A[i];
                }
                i++;
                j++;
            } else if (A[i] < B[j]) {
                i++;
            } else {
                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 2 3 4 5 6 2 1 6	1 6	1 6	✓

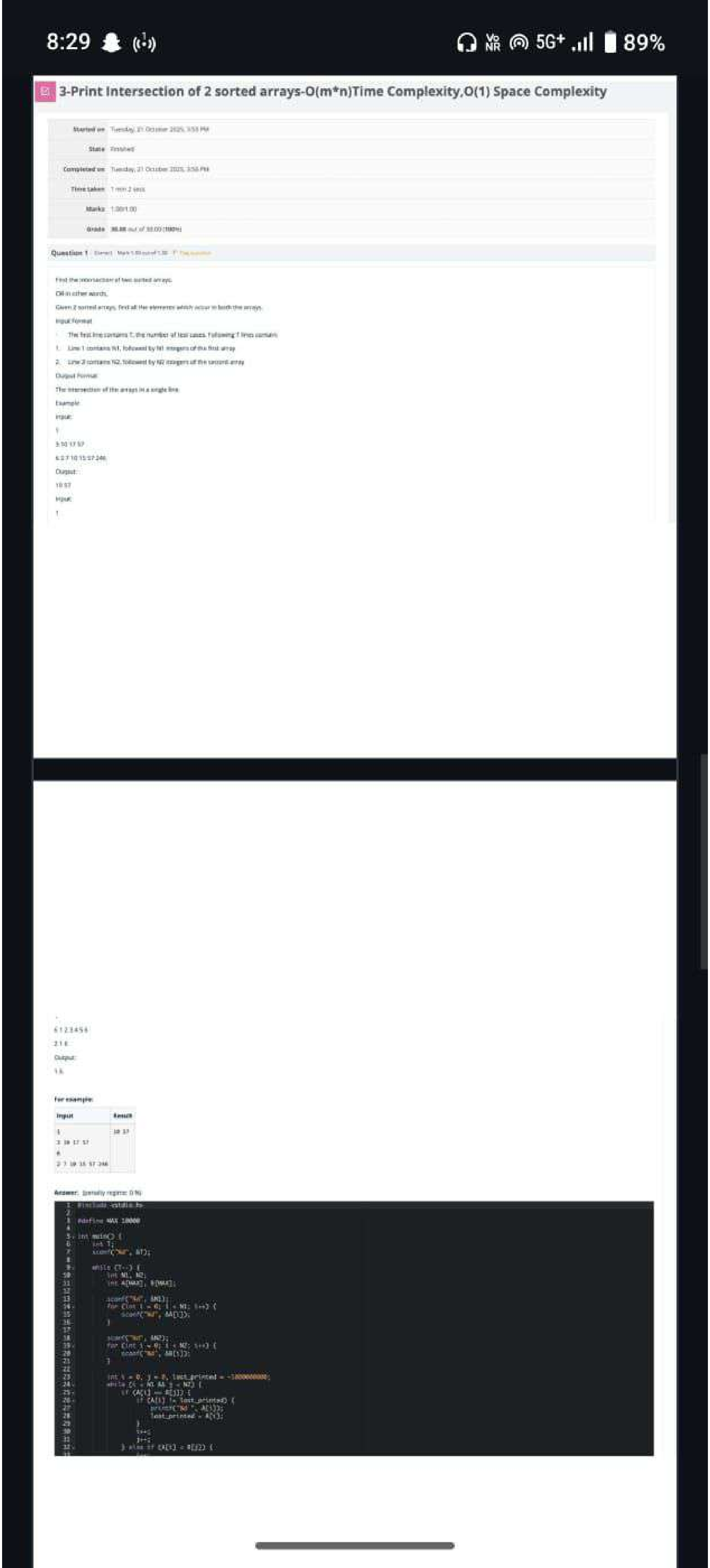
Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

4-Print Intersection of 2 sorted arrays-O(m+n)Time Complexity,O(1) Space Complexity

Started on	Tuesday, 21 October 2025, 3:56 PM
State	Finished
Completed on	Tuesday, 21 October 2025, 3:57 PM
Time taken	37 secs



3-Print Intersection of 2 sorted arrays-O(m*n)Time Complexity,O(1) Space Complexity

Started on	Tuesday, 21 October 2025, 3:55 PM
State	Finished
Completed on	Tuesday, 21 October 2025, 3:56 PM
Time taken	1 min 2 secs
Marks	1.00/1.00
Grade	**30.00** out of 30.00 (**100**%)

Question 1 Correct Mark 1.00 out of 1.00 Flag question

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

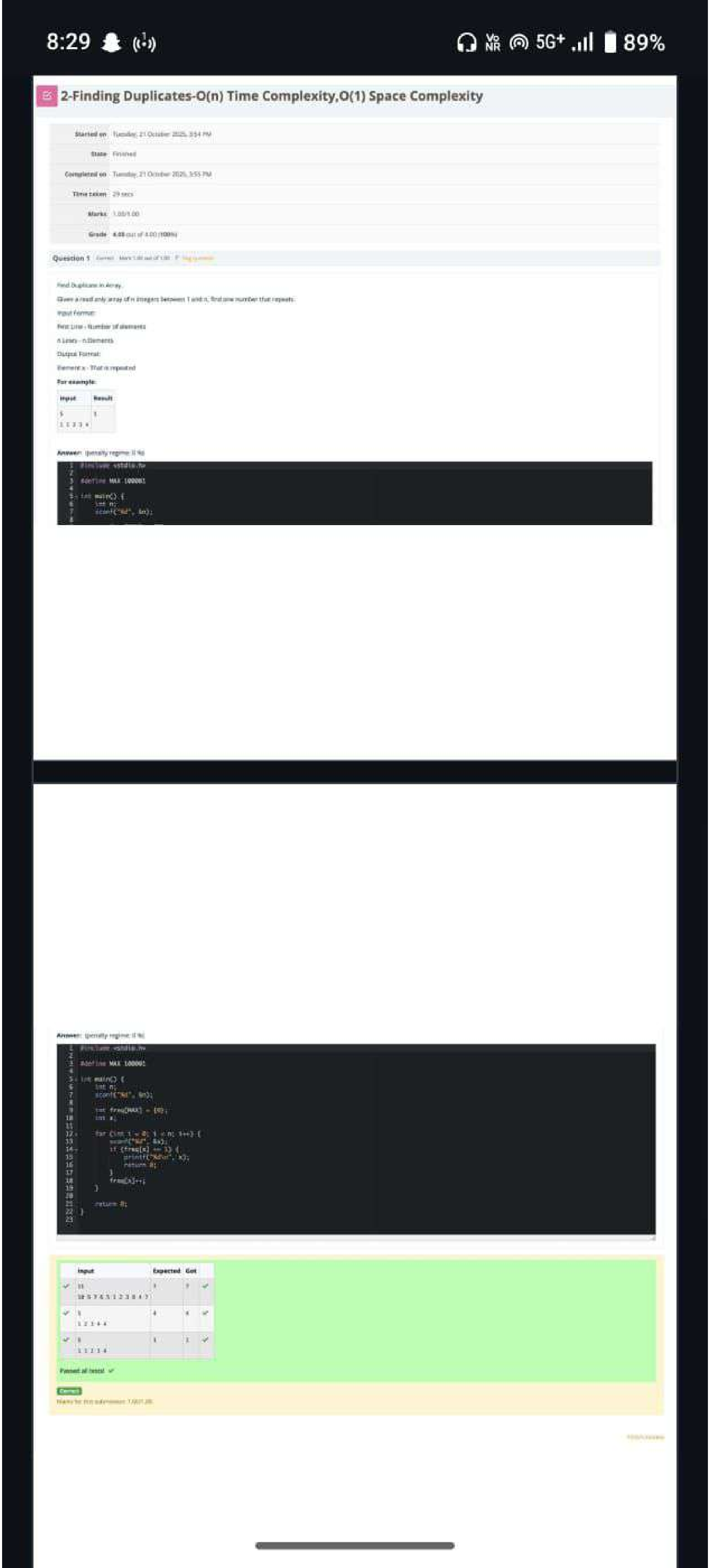
For example:

Input	Result

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

Answer: (penalty regime: 0 %)

```
#include <stdio.h>

#define MAX 10000

int main() {
    int T;
    scanf("%d", &T);

    while (T--) {
        int N1, N2;
        int A[MAX], B[MAX];

        scanf("%d", &N1);
        for (int i = 0; i < N1; i++) {
            scanf("%d", &A[i]);
        }

        scanf("%d", &N2);
        for (int i = 0; i < N2; i++) {
            scanf("%d", &B[i]);
        }

        int i = 0, j = 0, last_printed = -1000000000;
        while (i < N1 && j < N2) {
            if (A[i] == B[j]) {
                if (A[i] != last_printed) {
                    printf("%d ", A[i]);
                    last_printed = A[i];
                }
                i++;
                j++;
            } else if (A[i] < B[j]) {
```



2-Finding Duplicates-O(n) Time Complexity,O(1) Space Complexity

Started on	Tuesday, 21 October 2025, 3:54 PM
State	Finished
Completed on	Tuesday, 21 October 2025, 3:55 PM
Time taken	29 secs
Marks	1.00/1.00
Grade	**4.00** out of 4.00 (**100**%)

Question 1 Correct Mark 1.00 out of 1.00 Flag question

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>

#define MAX 100001

int main() {
    int n;
    scanf("%d", &n);
```

Answer: (penalty regime: 0 %)

```c
#include <stdio.h>

#define MAX 100001

int main() {
    int n;
    scanf("%d", &n);

    int freq[MAX] = {0};
    int x;

    for (int i = 0; i < n; i++) {
        scanf("%d", &x);
        if (freq[x] == 1) {
            printf("%d\n", x);
            return 0;
        }
        freq[x]++;
    }

    return 0;
}

```

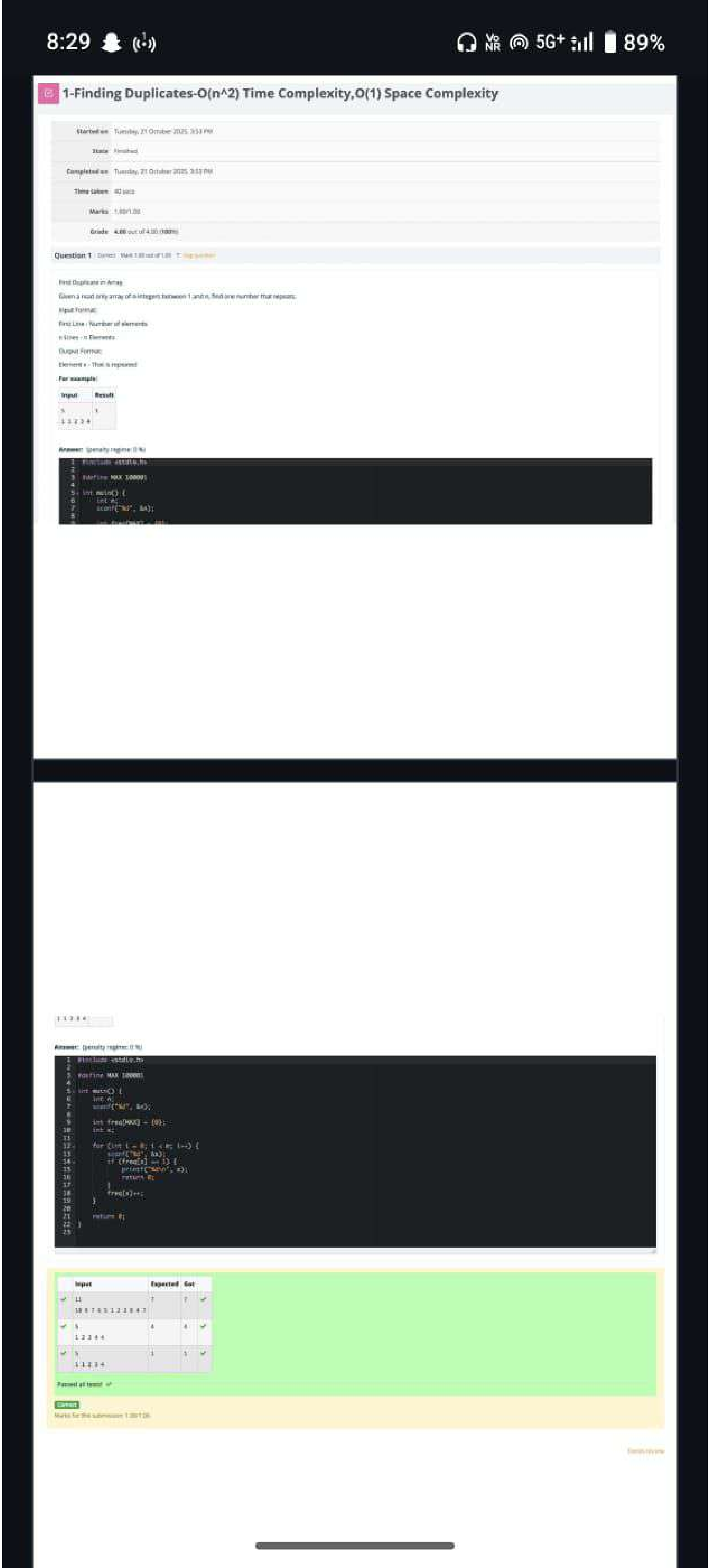
	Input	Expected	Got	
✓	11 10 9 7 6 5 1 2 3 8 4 7	7	7	✓
✓	5 1 2 3 4 4	4	4	✓
✓	5 1 1 2 3 4	1	1	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Finish review



1-Finding Duplicates-O(n^2) Time Complexity,O(1) Space Complexity

Started on	Tuesday, 21 October 2025, 3:53 PM
State	Finished
Completed on	Tuesday, 21 October 2025, 3:53 PM
Time taken	40 secs
Marks	1.00/1.00
Grade	**4.00** out of 4.00 (**100**%)

Question 1 Correct Mark 1.00 out of 1.00 Flag question

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>

#define MAX 100001

int main() {
    int n;
    scanf("%d", &n);

    int freq[MAX] = {0};
```

1 1 2 3 4

Answer: (penalty regime: 0 %)

```
#include <stdio.h>

#define MAX 100001

int main() {
    int n;
    scanf("%d", &n);

    int freq[MAX] = {0};
    int x;

    for (int i = 0; i < n; i++) {
        scanf("%d", &x);
        if (freq[x] == 1) {
            printf("%d\n", x);
            return 0;
        }
        freq[x]++;
    }

    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.

Finish review