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Started on	Wednesday, 20 November 2024, 7:43 PM
State	Finished
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Time taken	59 secs
Marks	1.00/1.00
Grade	**30.00** out of 30.00 (**100**%)

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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 %)

```c
#include <stdio.h>

void findIntersection(int arr1[], int n1, int arr2[], int n2) {
    int i = 0, j = 0;
    int found = 0; // To check if we found any intersection

    while (i < n1 && j < n2) {
        if (arr1[i] == arr2[j]) {
            if (!found) {
                printf("%d", arr1[i]);
                found = 1;
            } else {
                printf(" %d", arr1[i]);
            }
            i++;
            j++;
        } else if (arr1[i] < arr2[j]) {
            i++;
        } else {
            j++;
        }
    }

    if (!found) {
        printf("\n"); // If no intersection was found
    } else {
        printf("\n"); // Move to the next line after printing results
    }
}
```

```
30
31 ▾ int main() {
32       int T;
33       scanf("%d", &T); // Read number of test cases
34
35 ▾    while (T--) {
36           int n1;
37           scanf("%d", &n1); // Read size of the first array
38           int arr1[n1];
39 ▾        for (int i = 0; i < n1; i++) {
40               scanf("%d", &arr1[i]); // Read the first array
41           }
42
43           int n2;
44           scanf("%d", &n2); // Read size of the second array
45           int arr2[n2];
46 ▾        for (int i = 0; i < n2; i++) {
47               scanf("%d", &arr2[i]); // Read the second array
48           }
49
50           findIntersection(arr1, n1, arr2, n2); // Find and print intersection
51       }
52
```

	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.

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

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