

[Dashb...](#) / [My cou...](#) / [CS23331-DAA-202...](#) / [Competitive Progra...](#) / [4-Print Intersection of 2 sorted arrays- \$O\(m+n\)\$ Time Complexity, \$O\(1\)\$ S...](#)

Started on	Wednesday, 20 November 2024, 2:24 PM
State	Finished
Completed on	Wednesday, 20 November 2024, 2:27 PM
Time taken	3 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 %)

```
1 #include <stdio.h>
2
3 void printIntersection(int arr1[], int n1, int arr2[], int n2) {
4     int i = 0, j = 0;
5     int found = 0;
6     while (i < n1 && j < n2) {
7         if (arr1[i] == arr2[j]) {
8             if (found == 0) {
9                 found = 1;
10            }
11            printf("%d ", arr1[i]);
12            i++;
13            j++;
14        } else if (arr1[i] < arr2[j]) {
15            i++;
16        } else if (arr1[i] > arr2[j]) {
17            j++;
18        }
19    }
20 }
```

```

16     } else {
17         j++;
18     }
19 }
20 if (found) {
21     printf("\n");
22 } else {
23     printf("\n");
24 }
25 }
26 int main() {
27     int T;
28     scanf("%d", &T);
29     while (T--) {
30         int n1;
31         scanf("%d", &n1);
32         int arr1[n1];
33         for (int i = 0; i < n1; i++) {
34             scanf("%d", &arr1[i]);
35         }
36         int n2;
37         scanf("%d", &n2);
38         int arr2[n2];
39         for (int i = 0; i < n2; i++) {
40             scanf("%d", &arr2[i]);
41         }
42         printIntersection(arr1, n1, arr2, n2);
43     }
44     return 0;
45 }

```

	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.

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

Jump to...

5-Pair with Difference-O(n²)Time Complexity,O(1) Space Complexity ▶