

[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	Tuesday, 12 November 2024, 6:56 AM
State	Finished
Completed on	Tuesday, 12 November 2024, 6:57 AM
Time taken	40 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 m, in
4     int i = 0, j = 0;
5
6     while (i < m && j < n) {
7         if (arr1[i] < arr2[j]) {
8             i++;
9         } else if (arr2[j] < arr1[i]) {
10            j++;
11        } else {
12            printf("%d ", arr1[i]);
13            i++;
14            j++;
15        }
16    }
17
18    // Print a newline after the intersectio
19    printf("\n");
20 }
21
22 int main() {
23     int testCases;
```

```

23     int testCases;
24     scanf("%d", &testCases);
25
26     for (int i = 0; i < testCases; i++) {
27         int m, n;
28         scanf("%d", &m);
29
30         int arr1[m];
31         for (int j = 0; j < m; j++) {
32             scanf("%d", &arr1[j]);
33         }
34
35         scanf("%d", &n);
36
37         int arr2[n];
38         for (int j = 0; j < n; j++) {
39             scanf("%d", &arr2[j]);
40         }
41
42         printIntersection(arr1, m, arr2, n);
43     }
44
45     return 0;
46 }

```

	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- $O(n^2)$ Time Complexity, $O(1)$ Space Complexity ▶