

CS23331-DAA-2024-CSE / 4-Print Intersection of 2 sorted arrays- $O(m+n)$ Time Complexity, $O(1)$  Space Complexity


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

Started on	Wednesday, 15 October 2025, 8:56 AM
State	Finished
Completed on	Wednesday, 15 October 2025, 9:25 AM
Time taken	29 mins 9 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:

- Line 1 contains  $N_1$ , followed by  $N_1$  integers of the first array
- Line 2 contains  $N_2$ , followed by  $N_2$  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 void findIntersection(int a[],int n1,int b[],int n2){
3     int i = 0, j = 0;
4     int first = 1;
5     while (i<n1 && j<n2){
6         if(a[i] < b[j]){
7             i++;
8         }
9         else if(a[i] > b[j]){
10            j++;
11        }
12        else{
13            if(!first){
14                printf(" ");
15            }
16            printf("%d", a[i]);
17            first = 0;
18            i++;
19            j++;
20        }
21    }
22    printf("\n");
23 }
```

```

24 int main() {
25     int t;
26     scanf("%d", &t);
27     while (t-- > 0) {
28         int n1;
29         scanf("%d", &n1);
30         int a[n1];
31         for (int i = 0; i < n1; i++) {
32             scanf("%d", &a[i]);
33         }
34         int n2;
35         scanf("%d", &n2);
36         int b[n2];
37         for (int i = 0; i < n2; i++) {
38             scanf("%d", &b[i]);
39         }
40
41         findIntersection(a, n1, b, n2);
42     }
43     return 0;
44 }
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.

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