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	Sunday, 10 November 2024, 7:32 PM
State	Finished
Completed on	Sunday, 10 November 2024, 7:54 PM
Time taken	21 mins 27 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   #include <stdlib.h>
3   #define MAX_SIZE 100000
4
5 ▾ void findIntersection(int arr1[], int n1, int arr2[], int n2) {
6       int *hashTable = (int *)calloc(MAX_SIZE, sizeof(int));
7
8 ▾     for (int i = 0; i < n1; i++) {
9           hashTable[arr1[i]] = 1;
10      }
11
12      int found = 0;
13 ▾    for (int j = 0; j < n2; j++) {
14 ▾        if (hashTable[arr2[j]] == 1) {
15             printf("%d ", arr2[j]);
```

```
16                    found = 1;
17                    hashTable[arr2[j]] = 0;
18                }
19            }
20
21 ▾      if (!found) {
22                printf("No intersection");
23            }
24        printf("\n");
25
26        free(hashTable);
27    }
28 ▾ int main() {
29        int T;
30        scanf("%d", &T);
31
32 ▾      while (T--) {
33            int n1;
34            scanf("%d", &n1);
35            int arr1[n1];
36 ▾          for (int i = 0; i < n1; i++) {
37                scanf("%d", &arr1[i]);
38            }
39
40            int n2;
41            scanf("%d", &n2);
42            int arr2[n2];
43 ▾          for (int i = 0; i < n2; i++) {
44                scanf("%d", &arr2[i]);
45            }
46
47            findIntersection(arr1, n1, arr2, n2);
48        }
49
50        return 0;
51    }
```

	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 ►