CS23331-Design and Analysis of Algorithms-2023 Batch-CSE

Quiz navigation

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Finish review

Started on	Monday, 28 October 2024, 1:41 PM
State	Finished
Completed on	Monday, 28 October 2024, 2:44 PM
Time taken	1 hour 2 mins
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:

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>
int main() {
    int t, n, m;
    scanf("%d", &t);

    while (t--) {
        scanf("%d", &n);
        int arr[n];
        for (int i = 0; i < n; i++) {
            scanf("%d", &arr[i]);
        }

        scanf("%d", &m);
        int brr[m];
        for (int i = 0; i < m; i++) {
            scanf("%d", &brr[i]);
        }

        int result[n < m ? n : m];
        int c = 0;

        for (int i = 0; i < n; i++) {
            for (int j = 0; j < m; j++) {
                if (arr[i] == brr[j]) {
```

```
                int alreadyExists = 0;
                for (int k = 0; k < c; k++) {
                    if (result[k] == arr[i]) {
                        alreadyExists = 1;
                        break;
                    }
                }
                if (!alreadyExists) {
                    result[c++] = arr[i];
                }
            }
        }
    }


    for (int i = 0; i < c; i++) {
        printf("%d ", result[i]);
    }
    printf("\n");
}

return 0;
}

```

	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.

Finish review

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

Jump to...

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