AROR UNIVERSITY OF ART, ARCHITECTURE, DESIGN & HERITAGE SUKKUR

COURSE: Data Structure
BS-Artificial Intelligence (Section B)
LAB # 6

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TASK 01: Merge Sorted Array

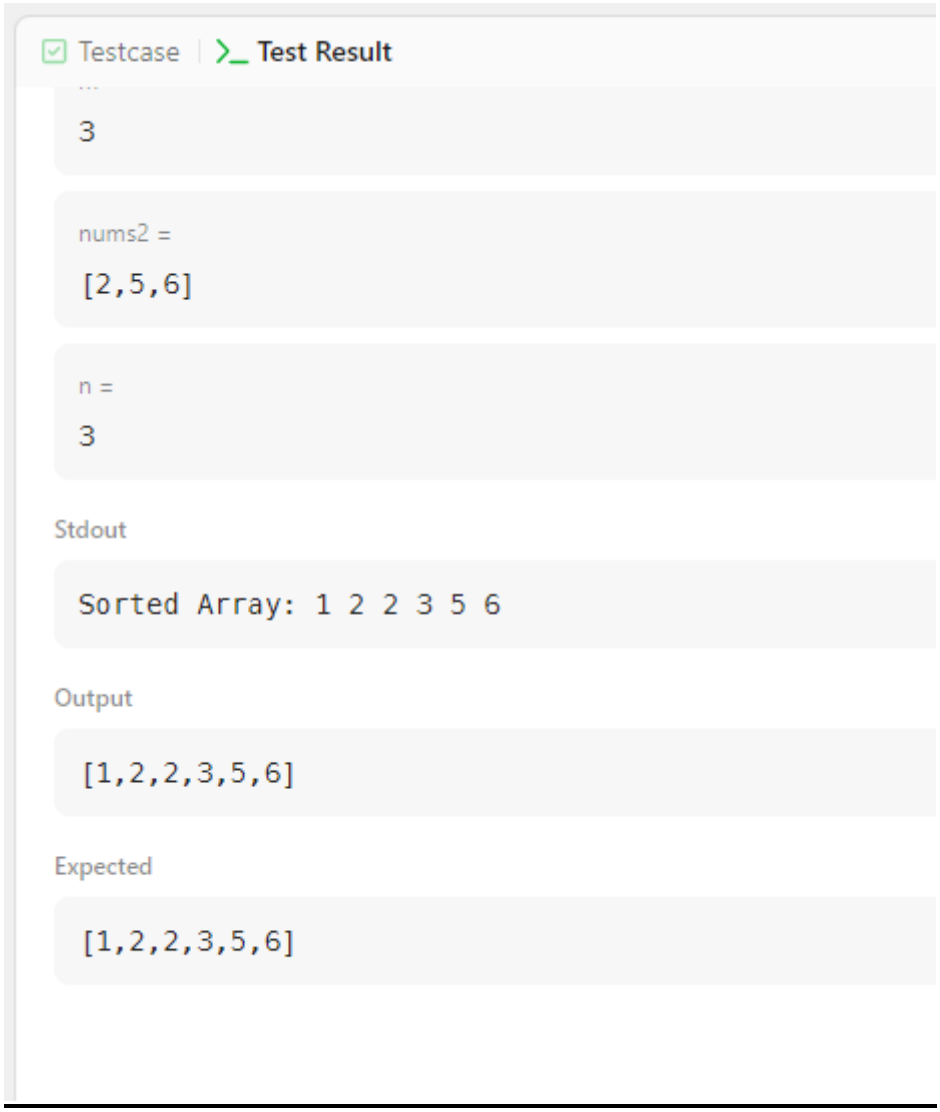
Coding:

Code

Java Auto

```java
class Solution {
    public void merge(int[] nums1, int m, int[] nums2, int n) {

        for(int i=m, j=0; i<m+n; i++,j++){

            nums1[i] = nums2[j];
        }

        for(int i=0; i<(m+n)-1; i++){
           boolean swap = false;
                for(int j=0; j<(m+n)-1-i; j++){
                    if(nums1[j] > nums1[j+1]){
                        int temp= nums1[j];
                        nums1[j]=nums1[j+1];
                        nums1[j+1] = temp;
                        swap = true;

                    }
                }
                if(!swap){
                    break;
                }
            }
            System.out.print("Sorted Array: ");
            for(int i=0; i<m+n; i++){
                System.out.print(nums1[i] + " ");
            }
        }
}
```

OUTPUT:


Testcase
Test Result
3
nums2 =
[2,5,6]
n =
3
Stdout
Sorted Array: 1 2 2 3 5 6
Output
[1,2,2,3,5,6]
Expected
[1,2,2,3,5,6]

TASK 02: Intersection of Two Arrays II

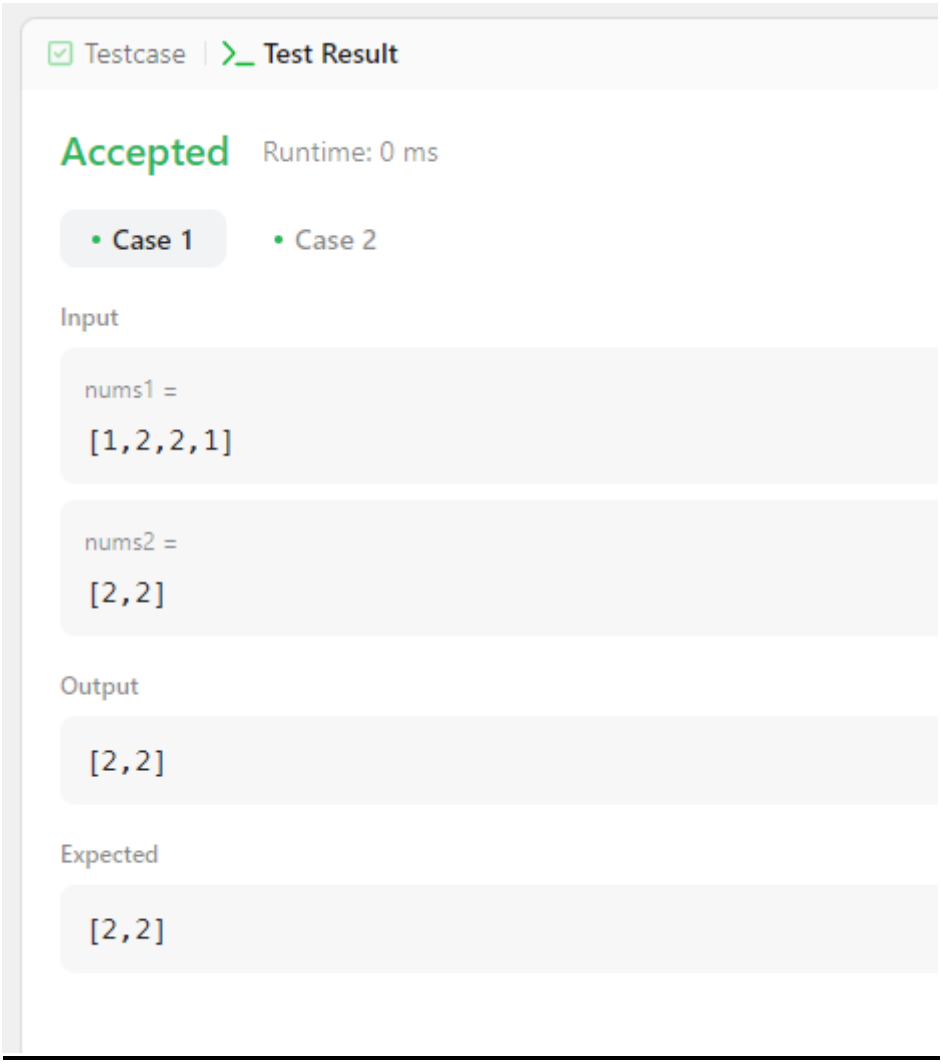
Coding:

Code

Java Auto

```java
class Solution {
public int[] intersect(int[] nums1, int[] nums2) {
    Arrays.sort(nums1);
    Arrays.sort(nums2);

    List<Integer> resultList = new ArrayList<>();
    int i = 0, j = 0;

    while (i < nums1.length && j < nums2.length) {
        if (nums1[i] < nums2[j]) {
            i++;
        } else if (nums1[i] > nums2[j]) {
            j++;
        } else {
            resultList.add(nums1[i]);
            i++;
            j++;
        }
    }

    int[] result = new int[resultList.size()];
    for (int k = 0; k < resultList.size(); k++) {
        result[k] = resultList.get(k);
    }

    return result;
}
}
```

OUTPUT:


Testcase
Test Result
Accepted
Runtime: 0 ms
Case 1
Case 2
Input
nums1 =
[1,2,2,1]
nums2 =
[2,2]
Output
[2,2]
Expected
[2,2]

TASK 03: Find the Difference

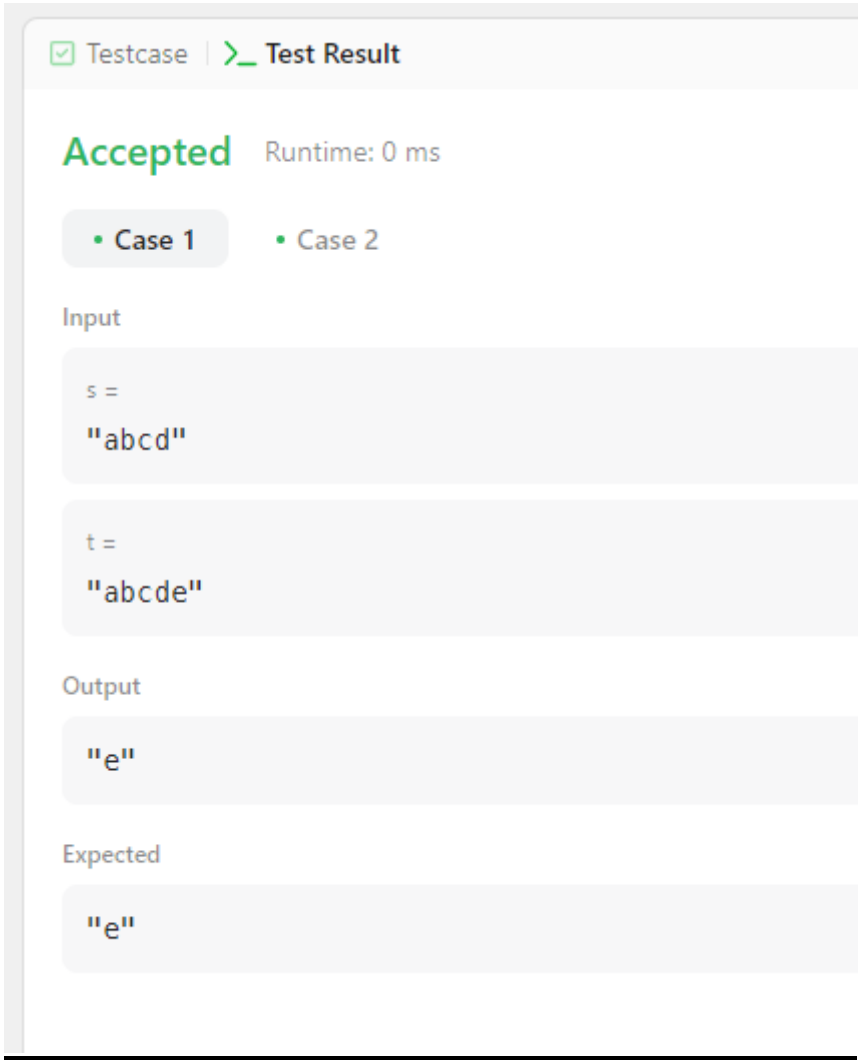
Coding:

Code

Java Auto

```java
class Solution {
public char findTheDifference(String s, String t) {
    int sumS = 0, sumT = 0;

    for (char c : s.toCharArray()) {
        sumS += c;
    }

    for (char c : t.toCharArray()) {
        sumT += c;
    }

    return (char) (sumT - sumS);
}
}
```

OUTPUT:



THE END