Day 2

Code 1: Two Sum

Company: Google, Meta, Amazon, Microsoft, Paypal+76 more companies
Platform : Leetcode - 1
Fraz’s & striver’s SDE sheet.

Description

Given an array of integers nums and an integer target, return indices of the two numbers such that they add up to target.
You may assume that each input would have exactly one solution, and you may not use the same element twice.
You can return the answer in any order.

Example 1:

Input: nums = [2,7,11,15], target = 9
Output: [0,1]
Explanation: Because nums[0] + nums[1] == 9, we return [0, 1].

Example 2:

Input: nums = [3,2,4], target = 6
Output: [1,2]
Example 3:
Input: nums = [3,3], target = 6
Output: [0,1]

Constraints:

2 <= nums.length <= 104
-109 <= nums[i] <= 109
-109 <= target <= 109
Only one valid answer exists.

Code2: Remove Element

Platform : Leetcode - 27

Description:

Given an integer array nums and an integer val, remove all occurrences of val in nums in-place. The order of the elements may be changed. Then return the number of elements in nums which are not equal to val.

Consider the number of elements in nums which are not equal to val be k, to get accepted, you need to do the following things:

Change the array nums such that the first k elements of nums contain the elements which are not equal to val. The remaining elements of nums are not important as well as the size of nums.
Return k.
Custom Judge:

The judge will test your solution with the following code:

```
int[] nums = [...]; // Input array
int val = ...; // Value to remove
int[] expectedNums = [...]; // The expected answer with correct length.
                            // It is sorted with no values equaling val.

int k = removeElement(nums, val); // Calls your implementation

assert k == expectedNums.length;
sort(nums, 0, k); // Sort the first k elements of nums
for (int i = 0; i < actualLength; i++) {
    assert nums[i] == expectedNums[i];
}
```

If all assertions pass, then your solution will be accepted.

Example 1:

Input: nums = [3,2,2,3], val = 3
Output: 2, nums = [2,2,_,_]
Explanation: Your function should return k = 2, with the first two elements of nums being 2.
It does not matter what you leave beyond the returned k (hence they are underscores).

Example 2:

Input: nums = [0,1,2,2,3,0,4,2], val = 2
Output: 5, nums = [0,1,4,0,3,_,_,_]
Explanation: Your function should return k = 5, with the first five elements of nums containing 0, 0, 1, 3, and 4.

*Note that the five elements can be returned in any order.
It does not matter what you leave beyond the returned k (hence they are underscores).

Constraints:

0 <= nums.length <= 100
0 <= nums[i] <= 50
0 <= val <= 100

Code3 : **Find the smallest and second smallest element in an array**

Company: Amazon, Goldman Sachs
Platform: GFG

Description:

Given an array of integers, your task is to find the smallest and second smallest element in the array. If smallest and second smallest do not exist, print -1.

Example 1:

Input :

5
2 4 3 5 6

Output :

2 3

Explanation:

2 and 3 are respectively the smallest
and second smallest elements in the array.

Example 2:

Input :

6
1 2 1 3 6 7

Output :

1 2

Explanation:

1 and 2 are respectively the smallest
and second smallest elements in the array.

Expected Time Complexity: O(N)
Expected Auxiliary Space: O(1)

Constraints:

1<=N<=105
1<=A[i]<=105

Solutions Will Be Provided Within 24 Hrs