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C++ ▼   Autocomplete

80. Remove Duplicates from Sorted Array II

Medium   👍 4627   👎 974   ♡ Add to List   ⇪ Share

Given an integer array `nums` sorted in **non-decreasing order**, remove some duplicates **in-place** such that each unique element appears **at most twice**. The **relative order** of the elements should be kept the **same**.

Since it is impossible to change the length of the array in some languages, you must instead have the result be placed in the **first part** of the array `nums`. More formally, if there are `k` elements after removing the duplicates, then the first `k` elements of `nums` should hold the final result. It does not matter what you leave beyond the first `k` elements.

Return `k` *after placing the final result in the first* `k` *slots of* `nums`.

Do **not** allocate extra space for another array. You must do this by **modifying the input array in-place** with O(1) extra memory.

Custom Judge:

The judge will test your solution with the following code:

```
int[] nums = [...]; // Input array
int[] expectedNums = [...]; // The expected answer with correct length

int k = removeDuplicates(nums); // Calls your implementation

assert k == expectedNums.length;
for (int i = 0; i < k; i++) {
    assert nums[i] == expectedNums[i];
}
```

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

Example 1:

```
Input: nums = [1,1,1,2,2,3]
Output: 5, nums = [1,1,2,2,3,_]
Explanation: Your function should return k = 5, with the first five elements of nums being 1, 1,
2, 2 and 3 respectively.
It does not matter what you leave beyond the returned k (hence they are underscores).
```

Example 2:

```
Input: nums = [0,0,1,1,1,1,2,3,3]
Output: 7, nums = [0,0,1,1,2,3,3,_,_]
Explanation: Your function should return k = 7, with the first seven elements of nums being 0,
0, 1, 1, 2, 3 and 3 respectively.
It does not matter what you leave beyond the returned k (hence they are underscores).
```

Constraints:

- $1 <= nums.length <= 3 * 10^4$
- $-10^4 <= nums[i] <= 10^4$
- `nums` is sorted in **non-decreasing** order.

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```cpp
class Solution {
public:
    int removeDuplicates(vector<int>& nums) {

    }
};
```

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