26. Remove Duplicates from Sorted Array

Easy

Given a sorted array *nums*, remove the duplicates [**in-place**](https://en.wikipedia.org/wiki/In-place_algorithm) such that each element appear only *once* and return the new length.

Do not allocate extra space for another array, you must do this by **modifying the input array** [**in-place**](https://en.wikipedia.org/wiki/In-place_algorithm) with O(1) extra memory.

**Example 1:**

Given *nums* = **[1,1,2]**,  
  
Your function should return length = **2**, with the first two elements of *nums* being **1** and **2** respectively.  
  
It doesn't matter what you leave beyond the returned length.

**Example 2:**

Given *nums* = **[0,0,1,1,1,2,2,3,3,4]**,  
  
Your function should return length = **5**, with the first five elements of *nums* being modified to **0**, **1**, **2**, **3**, and **4** respectively.  
  
It doesn't matter what values are set beyond the returned length.

**Clarification:**

Confused why the returned value is an integer but your answer is an array?

Note that the input array is passed in by **reference**, which means modification to the input array will be known to the caller as well.

Internally you can think of this:

// **nums** is passed in by reference. (i.e., without making a copy)  
int len = removeDuplicates(nums);  
  
// any modification to **nums** in your function would be known by the caller.  
// using the length returned by your function, it prints the first **len** elements.  
for (int i = 0; i < len; i++) {  
 print(nums[i]);  
}

class Solution {

public:

int removeDuplicates(vector<int>& nums) {

int len=nums.size();

if(len==0) return 0;

int i=0;

for(int j=1;j<len;j++){

if(nums[i]!=nums[j]){

i++;

nums[i]=nums[j];

}

}

return i+1;

}

};

Success

[Details](https://leetcode.com/submissions/detail/205575610/)

Runtime: 16 ms, faster than 99.07% of C++ online submissions for Remove Duplicates from Sorted Array.

Memory Usage: 1.5 MB, less than 52.16% of C++ online submissions for Remove Duplicates from Sorted Array.