

2460. Apply Operations to an Array

Solved ●

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You are given a **0-indexed** array `nums` of size `n` consisting of **non-negative** integers.

You need to apply `n - 1` operations to this array where, in the i^{th} operation (**0-indexed**), you will apply the following on the i^{th} element of `nums`:

- If `nums[i] == nums[i + 1]`, then multiply `nums[i]` by 2 and set `nums[i + 1]` to 0. Otherwise, you skip this operation.

After performing **all** the operations, **shift** all the 0's to the **end** of the array.

- For example, the array `[1,0,2,0,0,1]` after shifting all its 0's to the end, is `[1,2,1,0,0,0]`.

Return *the resulting array*.

Note that the operations are applied **sequentially**, not all at once.

Example 1:

Input: `nums = [1,2,2,1,1,0]`

Output: `[1,4,2,0,0,0]`

Explanation: We do the following operations:

- $i = 0$: `nums[0]` and `nums[1]` are not equal, so we skip this operation.
- $i = 1$: `nums[1]` and `nums[2]` are equal, we multiply `nums[1]` by 2 and change `nums[2]` to 0. The array becomes `[1,4,0,1,1,0]`.
- $i = 2$: `nums[2]` and `nums[3]` are not equal, so we skip this operation.
- $i = 3$: `nums[3]` and `nums[4]` are equal, we multiply `nums[3]` by 2 and change `nums[4]` to 0. The array becomes `[1,4,0,2,0,0]`.
- $i = 4$: `nums[4]` and `nums[5]` are equal, we multiply `nums[4]` by 2 and change `nums[5]` to 0. The array becomes `[1,4,0,2,0,0]`.

After that, we shift the 0's to the end, which gives the array `[1,4,2,0,0,0]`.

Example 2:

Input: `nums = [0,1]`

Output: `[1,0]`

Explanation: No operation can be applied, we just shift the 0 to the end.

Constraints:

- `2 <= nums.length <= 2000`
- `0 <= nums[i] <= 1000`

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Yes No

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Hint 1

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