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 ith operation (**0-indexed**), you will apply the following on the ith 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