Problem 2341: Maximum Number of Pairs in Array

Problem Information

Difficulty: Easy
Acceptance Rate: 75.86%
Paid Only: No
Tags: Array, Hash Table, Counting

Problem Description

You are given a **0-indexed** integer array `nums`. In one operation, you may do the following:

* Choose **two** integers in `nums` that are **equal**. * Remove both integers from `nums`, forming a **pair**.

The operation is done on `nums` as many times as possible.

Return _a**0-indexed** integer array _`answer` _of size_`2` _where_`answer[0]`_is the number of pairs that are formed and_`answer[1]`_is the number of leftover integers in_`nums` _after doing the operation as many times as possible_.

Example 1:

Input: nums = [1,3,2,1,3,2,2] **Output:** [3,1] **Explanation:** Form a pair with nums[0] and nums[3] and remove them from nums. Now, nums = [3,2,3,2,2]. Form a pair with nums[0] and nums[2] and remove them from nums. Now, nums = [2,2,2]. Form a pair with nums[0] and nums[1] and remove them from nums. Now, nums = [2]. No more pairs can be formed. A total of 3 pairs have been formed, and there is 1 number leftover in nums.

Example 2:

Input: nums = [1,1] **Output:** [1,0] **Explanation:** Form a pair with nums[0] and nums[1] and remove them from nums. Now, nums = []. No more pairs can be formed. A total of 1 pair has been formed, and there are 0 numbers leftover in nums.

Example 3:

Input: nums = [0] **Output:** [0,1] **Explanation:** No pairs can be formed, and there is 1 number leftover in nums.

Constraints:

* `1 <= nums.length <= 100` * `0 <= nums[i] <= 100`

Code Snippets

C++:

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

}
};
```

Java:

```
class Solution {
public int[] numberOfPairs(int[] nums) {

}
}
```

Python3:

```
class Solution:
def numberOfPairs(self, nums: List[int]) -> List[int]:
```