Problem 2784: Check if Array is Good

Problem Information

Difficulty: Easy
Acceptance Rate: 48.63%
Paid Only: No
Tags: Array, Hash Table, Sorting

Problem Description

You are given an integer array `nums`. We consider an array **good** if it is a permutation of an array `base[n]`.

`base[n] = [1, 2, ..., n - 1, n, n] `(in other words, it is an array of length `n + 1` which contains `1` to `n - 1 `exactly once, plus two occurrences of `n`). For example, `base[1] = [1, 1]` and` base[3] = [1, 2, 3, 3]`.

Return `true` _if the given array is good, otherwise return_ __`false`.

Note: A permutation of integers represents an arrangement of these numbers.

Example 1:

Input: nums = [2, 1, 3] **Output:** false **Explanation:** Since the maximum element of the array is 3, the only candidate n for which this array could be a permutation of base[n], is n = 3. However, base[3] has four elements but array nums has three. Therefore, it can not be a permutation of base[3] = [1, 2, 3, 3]. So the answer is false.

Example 2:

Input: nums = [1, 3, 3, 2] **Output:** true **Explanation:** Since the maximum element of the array is 3, the only candidate n for which this array could be a permutation of base[n], is n = 3. It can be seen that nums is a permutation of base[3] = [1, 2, 3, 3] (by swapping the second and fourth elements in nums, we reach base[3]). Therefore, the answer is true.

Example 3:

Input: nums = [1, 1] **Output:** true **Explanation:** Since the maximum element of the array is 1, the only candidate n for which this array could be a permutation of base[n], is n = 1. It can be seen that nums is a permutation of base[1] = [1, 1]. Therefore, the answer is true.

Example 4:

Input: nums = [3, 4, 4, 1, 2, 1] **Output:** false **Explanation:** Since the maximum element of the array is 4, the only candidate n for which this array could be a permutation of base[n], is n = 4. However, base[4] has five elements but array nums has six. Therefore, it can not be a permutation of base[4] = [1, 2, 3, 4, 4]. So the answer is false.

Constraints:

* `1 <= nums.length <= 100` * `1 <= num[i] <= 200`

Code Snippets

C++:

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

}
};
```

Java:

```
class Solution {
public boolean isGood(int[] nums) {

}
}
```

Python3:

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