Solve following tasks using dictionary with creating defined functions

1) Number of Good Pairs

Given an array of integers nums, return the number of good pairs.

A pair (i, j) is called good if nums[i] == nums[j] and i < j.
Example 1:

Input: nums = [1,2,3,1,1,3]
Output: 4
Explanation: There are 4 good pairs (0,3), (0,4), (3,4), (2,5) 0-indexed.
Example 2:

Input: nums = [1,1,1,1]
Output: 6
Explanation: Each pair in the array are good.
Example 3:

Input: nums = [1,2,3]
Output: 0

Constraints:

1 <= nums.length <= 100
1 <= nums[i] <= 100

2) How Many Numbers Are Smaller Than the Current Number

Given the array nums, for each nums[i] find out how many numbers in the array are smaller than it. That is, for each nums[i] you have to count the number of valid j's such that j != i and nums[j] < nums[i].

Return the answer in an array.

Example 1:

Input: nums = [8,1,2,2,3]
Output: [4,0,1,1,3]
Explanation:
For nums[0]=8 there exist four smaller numbers than it (1, 2, 2 and 3).

For nums[1]=1 does not exist any smaller number than it.
For nums[2]=2 there exist one smaller number than it (1).
For nums[3]=2 there exist one smaller number than it (1).
For nums[4]=3 there exist three smaller numbers than it (1, 2 and 2).
Example 2:

Input: nums = [6,5,4,8]
Output: [2,1,0,3]
Example 3:

Input: nums = [7,7,7,7]
Output: [0,0,0,0]

Constraints:

2 <= nums.length <= 500
0 <= nums[i] <= 100

3) **N-Repeated Element in Size 2N Array**

You are given an integer array nums with the following properties:

nums.length == 2 * n.
nums contains n + 1 unique elements.
Exactly one element of nums is repeated n times.
Return the element that is repeated n times.

Example 1:

Input: nums = [1,2,3,3]
Output: 3
Example 2:

Input: nums = [2,1,2,5,3,2]
Output: 2
Example 3:

Input: nums = [5,1,5,2,5,3,5,4]
Output: 5

Constraints:

2 <= n <= 5000
nums.length == 2 * n
0 <= nums[i] <= 104
nums contains n + 1 unique elements and one of them is repeated exactly n times.

4) Sum of Unique Elements

You are given an integer array nums. The unique elements of an array are the elements that appear exactly once in the array.

Return the sum of all the unique elements of nums.
Example 1:

Input: nums = [1,2,3,2]
Output: 4
Explanation: The unique elements are [1,3], and the sum is 4.
Example 2:

Input: nums = [1,1,1,1,1]
Output: 0
Explanation: There are no unique elements, and the sum is 0.
Example 3:

Input: nums = [1,2,3,4,5]
Output: 15
Explanation: The unique elements are [1,2,3,4,5], and the sum is 15.

Constraints:

1 <= nums.length <= 100
1 <= nums[i] <= 100

5) Unique Number of Occurrences

Given an array of integers arr, return true if the number of occurrences of each value in the array is unique, or false otherwise.

Example 1:

Input: arr = [1,2,2,1,1,3]
Output: true
Explanation: The value 1 has 3 occurrences, 2 has 2 and 3 has 1. No two values have the same number of occurrences.
Example 2:

Input: arr = [1,2]
Output: false
Example 3:

Input: arr = [-3,0,1,-3,1,1,1,-3,10,0]
Output: true

Constraints:

1 <= arr.length <= 1000
-1000 <= arr[i] <= 1000