Day-41 Q-01 Sort Colors

Given an array `nums` with `n` objects colored red, white, or blue, sort them **in-place** so that objects of the same color are adjacent, with the colors in the order red, white, and blue.

Here, we will use the integers `0`, `1`, and `2` to represent the color red, white, and blue respectively.

Follow up:

- Could you solve this problem without using the library's sort function?
- Could you come up with a one-pass algorithm using only `O(1)` constant space?

Example 1:

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

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

Example 2:

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

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

Example 3:

```
Input: nums = [0]

Output: [0]
```

Example 4:

```
Input: nums = [1]

Output: [1]
```

Constraints:

- `n == nums.length`
- `1 <= n <= 300`
- `nums[i]` is `0`, `1`, or `2`.