Coding Challenge

Problem 1:

Maximium Marks: 15

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

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

You must solve this problem without using the library's sort function.

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]
```

Follow up: Could you come up with a one-pass algorithm using only constant extra space?