

**LeetCode Bootcamp Week 1 Submission**  
**Submitted By: Raunak Choudhary (NetID: rc5553)**

*Question1: Two Sum II - Input Array Is Sorted*

Code:

```
class Solution(object):
    def twoSum(self, numbers, target):

        left = 0
        right = len(numbers) - 1

        while left < right:
            current_sum = numbers[left] + numbers[right]

            if current_sum == target:
                return [left + 1, right + 1]
            elif current_sum < target:
                left += 1
            else:
                right -= 1
        return []
```

*Question2: Product of Array Except Self*

Code:

```
class Solution(object):
    def productExceptSelf(self, nums):

        n = len(nums)
        answer = [1] * n

        left_product = 1
        for i in range(n):
            answer[i] = left_product
            left_product *= nums[i]

        right_product = 1
        for i in range(n-1, -1, -1):
            answer[i] *= right_product
            right_product *= nums[i]

        return answer
```

### *Question3: Sort Colors*

Code:

```
class Solution(object):
    def sortColors(self, nums):

        zero_pos = 0
        for i in range(len(nums)):
            if nums[i] == 0:
                nums[i], nums[zero_pos] = nums[zero_pos], nums[i]
                zero_pos += 1

        one_pos = zero_pos
        for i in range(zero_pos, len(nums)):
            if nums[i] == 1:
                nums[i], nums[one_pos] = nums[one_pos], nums[i]
                one_pos += 1
```