Mock Test

Q1.
 Move Zeroes
Given an integer array nums, move all 0's to the end of it while maintaining the relative order of the non-zero elements.

Ans =

```python
class Solution:
    def climbStairs(self, n: int) -> int:
        a, b = 0, 1
        for i in range(n):
                a, b = b, a + b
        return b
```

Q2.
First Unique Character in a String

Given a string s, find the first non-repeating character in it and return its index. If it does not exist, return -1.

Ans =

```python
# Time Complexity :  O(n)
# Space Complexity : O(1)
class Solution(object):
    def characterReplacement(self, s, k):
        maxlen, largestCount = 0, 0
        arr = collections.Counter()
        for idx in xrange(len(s)):
            arr[s[idx]] += 1
            largestCount = max(largestCount, arr[s[idx]])
            if maxlen - largestCount >= k:
                arr[s[idx - maxlen]] -= 1
            else:
                maxlen += 1
        return maxlen
```