1578. Minimum Time to Make Rope Colorful

Medium 2.2K 65

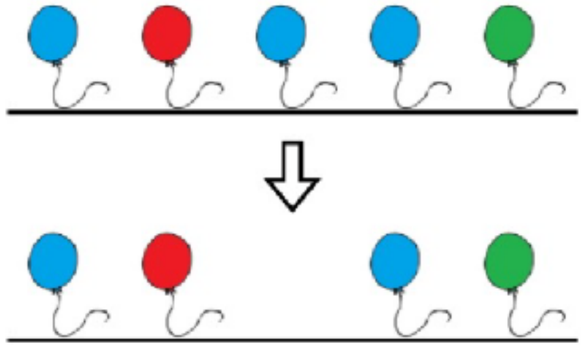
Companies

Alice has `n` balloons arranged on a rope. You are given a **0-indexed** string `colors` where `colors[i]` is the color of the i^{th} balloon.

Alice wants the rope to be **colorful**. She does not want **two consecutive balloons** to be of the same color, so she asks Bob for help. Bob can remove some balloons from the rope to make it **colorful**. You are given a **0-indexed** integer array `neededTime` where `neededTime[i]` is the time (in seconds) that Bob needs to remove the i^{th} balloon from the rope.

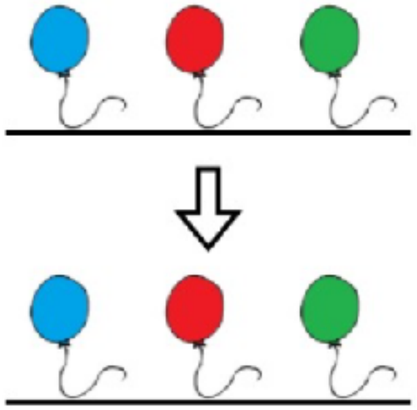
Return *the **minimum time** Bob needs to make the rope **colorful***.

Example 1:



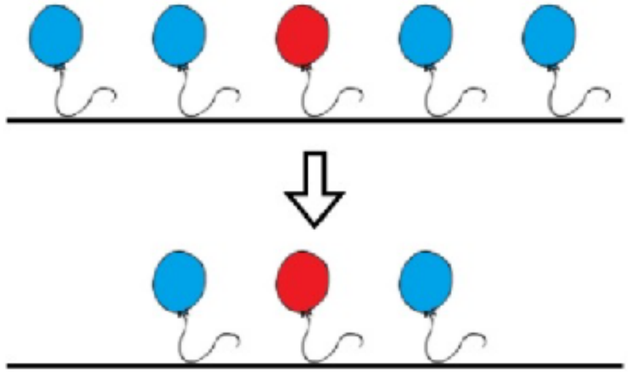
```
Input: colors = "abaac", neededTime = [1,2,3,4,5]
Output: 3
Explanation: In the above image, 'a' is blue, 'b' is red, and 'c' is green.
Bob can remove the blue balloon at index 2. This takes 3 seconds.
There are no longer two consecutive balloons of the same color. Total time = 3.
```

Example 2:



```
Input: colors = "abc", neededTime = [1,2,3]
Output: 0
Explanation: The rope is already colorful. Bob does not need to remove any balloons from the rope.
```

Example 3:



```
Input: colors = "aabaa", neededTime = [1,2,3,4,1]
Output: 2
Explanation: Bob will remove the ballons at indices 0 and 4. Each ballon takes 1 second to remove.
There are no longer two consecutive balloons of the same color. Total time = 1 + 1 = 2.
```

Constraints:

- `n == colors.length == neededTime.length`
- `1 <= n <= 10^5`
- `1 <= neededTime[i] <= 10^4`
- `colors` contains only lowercase English letters.

a a a b a b b b b

3 5 2 6 5 5 7 8 1

Take the Bollon which has maximum time

Because we need minimun time to make array colorfull

remove if bollon are same

3 + 2 + 5 + 4 + 1 = 15