Problem 2078: Two Furthest Houses With Different Colors

Problem Information

Difficulty: Easy
Acceptance Rate: 65.58%
Paid Only: No
Tags: Array, Greedy

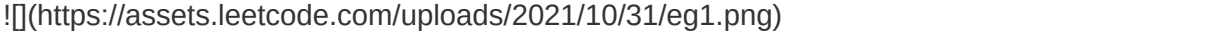
Problem Description

There are `n` houses evenly lined up on the street, and each house is beautifully painted. You are given a **0-indexed** integer array `colors` of length `n`, where `colors[i]` represents the color of the `ith` house.

Return _the**maximum** distance between **two** houses with **different** colors_.

The distance between the `ith` and `jth` houses is `abs(i - j)`, where `abs(x)` is the **absolute value** of `x`.

Example 1:



Input: colors = [_**1**_ ,1,1,**_6_** ,1,1,1] **Output:** 3 **Explanation:** In the above image, color 1 is blue, and color 6 is red. The furthest two houses with different colors are house 0 and house 3. House 0 has color 1, and house 3 has color 6. The distance between them is abs(0 - 3) = 3. Note that houses 3 and 6 can also produce the optimal answer.

Example 2:

Input: colors = [_**1**_ ,8,3,8,_**3**_] **Output:** 4 **Explanation:** In the above image, color 1 is blue, color 8 is yellow, and color 3 is green. The furthest two houses with different colors are house 0 and house 4. House 0 has color 1, and house 4 has color 3. The distance

between them is abs(0 - 4) = 4.

Example 3:

Input: colors = [_**0**_ ,**_1_**] **Output:** 1 **Explanation:** The furthest two houses with different colors are house 0 and house 1. House 0 has color 0, and house 1 has color 1. The distance between them is abs(0 - 1) = 1.

Constraints:

* `n == colors.length` * `2 <= n <= 100` * `0 <= colors[i] <= 100` * Test data are generated such that **at least** two houses have different colors.

Code Snippets

C++:

```
class Solution {
public:
int maxDistance(vector<int>& colors) {

}
};
```

Java:

```
class Solution {
public int maxDistance(int[] colors) {

}
}
```

Python3:

```
class Solution:
def maxDistance(self, colors: List[int]) -> int:
```