

1182. Shortest Distance to Target Color Premium

Medium  Topics  Companies  Hint

You are given an array `colors`, in which there are three colors: `1`, `2` and `3`.

You are also given some queries. Each query consists of two integers `i` and `c`, return the shortest distance between the given index `i` and the target color `c`. If there is no solution return `-1`.

Example 1:

Input: `colors = [1,1,2,1,3,2,2,3,3]`, `queries = [[1,3],[2,2],[6,1]]`
Output: `[3,0,3]`
Explanation:
The nearest `3` from index `1` is at index `4` (`3` steps away).
The nearest `2` from index `2` is at index `2` itself (`0` steps away).
The nearest `1` from index `6` is at index `3` (`3` steps away).

Example 2:

Input: `colors = [1,2]`, `queries = [[0,3]]`
Output: `[-1]`
Explanation: There is no `3` in the array.


Constraints:

- `1 <= colors.length <= 5*10^4`
- `1 <= colors[i] <= 3`
- `1 <= queries.length <= 5*10^4`
- `queries[i].length == 2`
- `0 <= queries[i][0] < colors.length`
- `1 <= queries[i][1] <= 3`

Seen this question in a real interview before? 1/5

Yes No


Accepted **36.4K** | Submissions **65.8K** | Acceptance Rate **55.4%**

 Topics


Array


Binary Search

Dynamic Programming


 Companies

0 - 6 months


Google 

 Hint 1


Greedy solution is too slow because of the limits.

 Hint 2

Can you solve this problem offline by doing some pre-processing?

 Hint 3

Calculate the answers for all indexes moving to their left and to their right.

 Discussion (2)