265. Paint House II

Hard 478 18 Add to List Share

There are a row of *n* houses, each house can be painted with one of the *k* colors. The cost of painting each house with a certain color is different. You have to paint all the houses such that no two adjacent houses have the same color.

The cost of painting each house with a certain color is represented by a `n x k` cost matrix. For example, `costs[0][0]` is the cost of painting house 0 with color 0; `costs[1][2]` is the cost of painting house 1 with color 2, and so on... Find the minimum cost to paint all houses.

Note:
All costs are positive integers.

Example:

```
Input: [[1,5,3],[2,9,4]]
Output: 5
Explanation: Paint house 0 into color 0, paint house 1 into color 2. Minimum cost: 1 + 4 = 5;
             Or paint house 0 into color 2, paint house 1 into color 0. Minimum cost: 3 + 2 = 5.
```

Follow up:
Could you solve it in *O*(*nk*) runtime?

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```
class Solution(object):
    def minCostII(self, costs):
        """
        :type costs:
List[List[int]]
        :rtype: int
        """

```

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