There are a row of *n* houses, each house can be painted with one of the three colors: red, blue or green. 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 *3* cost matrix. For example, costs[0][0] is the cost of painting house 0 with color red; costs[1][2] is the cost of painting house 1 with color green, and so on... Find the minimum cost to paint all houses.

**Note:**  
All costs are positive integers.

**Example:**

**Input:** [[17,2,17],[16,16,5],[14,3,19]]

**Output:** 10

**Explanation:** Paint house 0 into blue, paint house 1 into green, paint house 2 into blue.

  Minimum cost: 2 + 5 + 3 = 10.