


746. Min Cost Climbing Stairs

Solved 

Easy Topics Companies Hint

You are given an integer array `cost` where `cost[i]` is the cost of i^{th} step on a staircase. Once you pay the cost, you can either climb one or two steps.

You can either start from the step with index `0`, or the step with index `1`.

Return *the minimum cost to reach the top of the floor*.

Example 1:

Input: `cost = [10,15,20]`

Output: 15

Explanation: You will start at index 1.

- Pay 15 and climb two steps to reach the top.
- The total cost is 15.

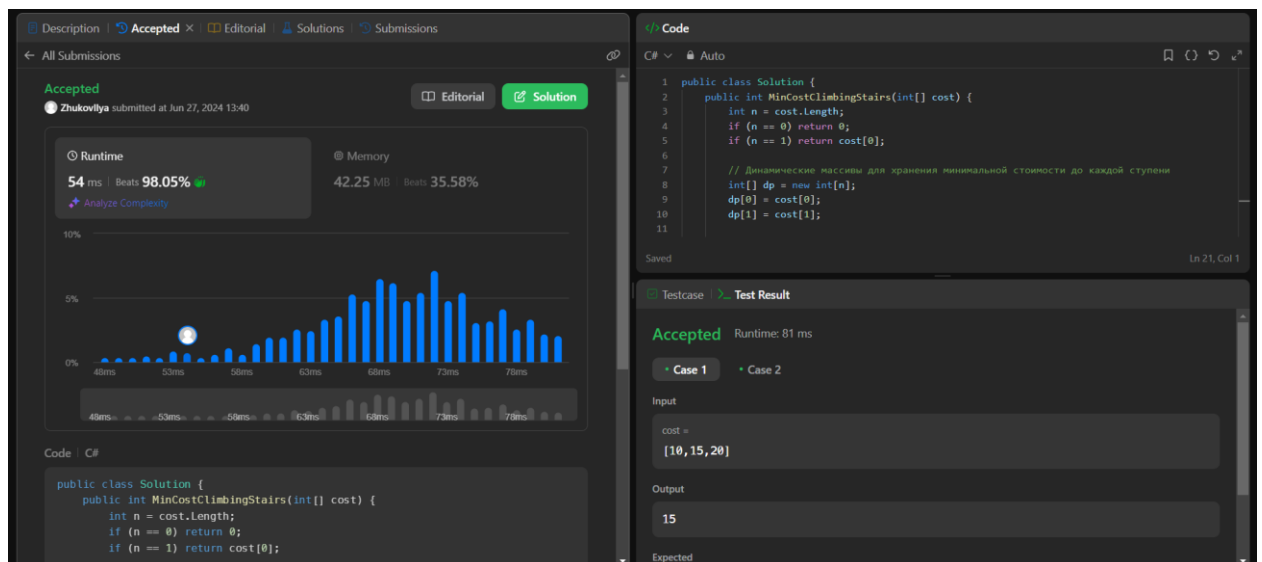
Example 2:

Input: `cost = [1,100,1,1,1,100,1,1,100,1]`

Output: 6

Explanation: You will start at index 0.

- Pay 1 and climb two steps to reach index 2.
- Pay 1 and climb two steps to reach index 4.
- Pay 1 and climb two steps to reach index 6.
- Pay 1 and climb one step to reach index 7.



The screenshot displays the LeetCode interface for the problem '746. Min Cost Climbing Stairs'. It includes the problem description, examples, and a solution in C#. The solution is marked as 'Accepted' with a runtime of 54 ms and memory usage of 42.25 MB. A bar chart shows the runtime distribution across different test cases. The code is a C# class 'Solution' with a method 'MinCostClimbingStairs' that uses dynamic programming to calculate the minimum cost.

```
public class Solution {
    public int MinCostClimbingStairs(int[] cost) {
        int n = cost.Length;
        if (n == 0) return 0;
        if (n == 1) return cost[0];

        // Динамические массивы для хранения минимальной стоимости до каждой ступени
        int[] dp = new int[n];
        dp[0] = cost[0];
        dp[1] = cost[1];
    }
}
```

Код:

```
using System;

public class Solution
{
    public int MinCostClimbingStairs(int[] cost)
    {
        int n = cost.Length;
```

```

if (n == 0) return 0;
if (n == 1) return cost[0];

// Динамические массивы для хранения минимальной стоимости до каждой ступени
int[] dp = new int[n];
dp[0] = cost[0];
dp[1] = cost[1];

// Рассчитываем минимальную стоимость для каждой ступени начиная с третьей
for (int i = 2; i < n; i++)
{
    dp[i] = cost[i] + Math.Min(dp[i - 1], dp[i - 2]);
}

// Минимальная стоимость для достижения вершины
return Math.Min(dp[n - 1], dp[n - 2]);
}
}

```