10/11/22, 9:44 PM A_Frog_1.cpp

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// There are N stones, numbered 1,2,...,N. For each i (1\leqi\leqN), the height of Stone i is h[i]
// There is a frog who is initially on Stone 1. He will repeat the following action
// some number of times to reach Stone N:
     - If the frog is currently on Stone i, jump to Stone i+1 or Stone i+2.
//
//
        Here, a cost of \mid h[i] - h[j] \mid is incurred, where j is the stone to land on.
// Find the minimum possible total cost incurred before the frog reaches Stone N.
//
//
     Time Complexity: O(N)
//
#include <bits/stdc++.h>
using namespace std;
int main() {
    int n;
    cin >> n;
    vector<int> heights(n);
    for (int i = 0; i < n; i++) {</pre>
        cin >> heights[i];
    vector < int > dp(n); // dp[i] = minimum cost of getting to i-th stone from the first
    dp[0] = 0;
    // O(n)
    for (int i = 1; i < n; i \leftrightarrow ) {
        // what is the minimum cost of getting to the previous stone + abs(diff)
        int cur_ans = dp[i-1] + abs(heights[i] - heights[i-1]);
        if (i - 2 \ge 0) {
            cur_ans = min(cur_ans, dp[i-2] + abs(heights[i] - heights[i-2]));
        dp[i] = cur_ans;
    }
    cout \ll dp[n-1] \ll endl;
    return 0;
}
```