

LeetCode

Explore

Problems

Interview

Contest

Discuss

Store

Description

Solution

Discuss (699)

Submissions

1631. Path With Minimum Effort

Medium 3004 125 Add to List Share

You are a hiker preparing for an upcoming hike. You are given `heights`, a 2D array of size `rows x columns`, where `heights[row][col]` represents the height of cell `(row, col)`. You are situated in the top-left cell, `(0, 0)`, and you hope to travel to the bottom-right cell, `(rows-1, columns-1)` (i.e., **0-indexed**). You can move **up**, **down**, **left**, or **right**, and you wish to find a route that requires the minimum **effort**.

A route's **effort** is the **maximum absolute difference** in heights between two consecutive cells of the route.

Return the minimum **effort** required to travel from the top-left cell to the bottom-right cell.

Example 1:

1	2	2
3	8	2
5	3	5

Input: `heights = [[1,2,2],[3,8,2],[5,3,5]]`
Output: 2
Explanation: The route of `[1,3,5,3,5]` has a maximum absolute difference of 2 in consecutive cells. This is better than the route of `[1,2,2,2,5]`, where the maximum absolute difference is 3.

Example 2:

1	2	3
3	8	4
5	3	5

Input: `heights = [[1,2,3],[3,8,4],[5,3,5]]`
Output: 1
Explanation: The route of `[1,2,3,4,5]` has a maximum absolute difference of 1 in consecutive cells, which is better than route `[1,3,5,3,5]`.

Example 3:

1	2	1	1	1
1	2	1	2	1
1	2	1	2	1
1	2	1	2	1
1	1	1	2	1

Input: `heights = [[1,2,1,1,1],[1,2,1,2,1],[1,2,1,2,1],[1,2,1,2,1],[1,1,1,2,1]]`
Output: 0
Explanation: This route does not require any effort.

Constraints:

- `rows == heights.length`
- `columns == heights[i].length`
- `1 <= rows, columns <= 100`
- `1 <= heights[i][j] <= 106`

Accepted 103,343 Submissions 187,704

Seen this question in a real interview before?

Yes

No

Companies

i

Related Topics

Similar Questions

Show Hint 1

Show Hint 2

Show Hint 3

Java

Autocomplete

i

{}

```
1 class Solution {
2     public int minimumEffortPath(int[][] heights) {
3     }
4 }
5
```

Console

Contribute

Problems

Pick One

< Prev

1631/2254

Next >

Run Code

Submit