

778. Swim in Rising Water

Hard Topics Companies Hint

You are given an $n \times n$ integer matrix `grid` where each value `grid[i][j]` represents the elevation at that point (i, j) .

The rain starts to fall. At time t , the depth of the water everywhere is t . You can swim from a square to another 4-directionally adjacent square if and only if the elevation of both squares individually is at most t . You cannot swim into a square that either is at the bottom right corner or that has been visited previously.

Return the least time until you can reach the bottom right square $(n - 1, n - 1)$ if you start at the top left square $(0, 0)$.

Example 1:

0	2
1	3

Input: `grid = [[0,2],[1,3]]`
Output: 3
Explanation:
At time 0, you are in grid location $(0, 0)$.
You cannot go anywhere else because 4-directionally adjacent neighbors have a higher elevation than you.
You cannot reach point $(1, 1)$ until time 3.
When the depth of water is 3, we can swim anywhere inside the grid.

Example 2:

0	1	2	3	4
24	23	22	21	5
12	13	14	15	16
11	17	18	19	20
10	9	8	7	6

Input: `grid = [[0,1,2,3,4],[24,23,22,21,5],[12,13,14,15,16],[11,17,18,19,20],[10,9,8,7,6]]`
Output: 16
Explanation: The final route is shown.
We need to wait until time 16 so that $(0, 0)$ and $(4, 4)$ are connected.

Constraints:

- $n == \text{grid.length}$
- $n == \text{grid}[i].length$
- $1 \leq n \leq 50$
- $0 \leq \text{grid}[i][j] < n^2$