

286. Walls and Gates

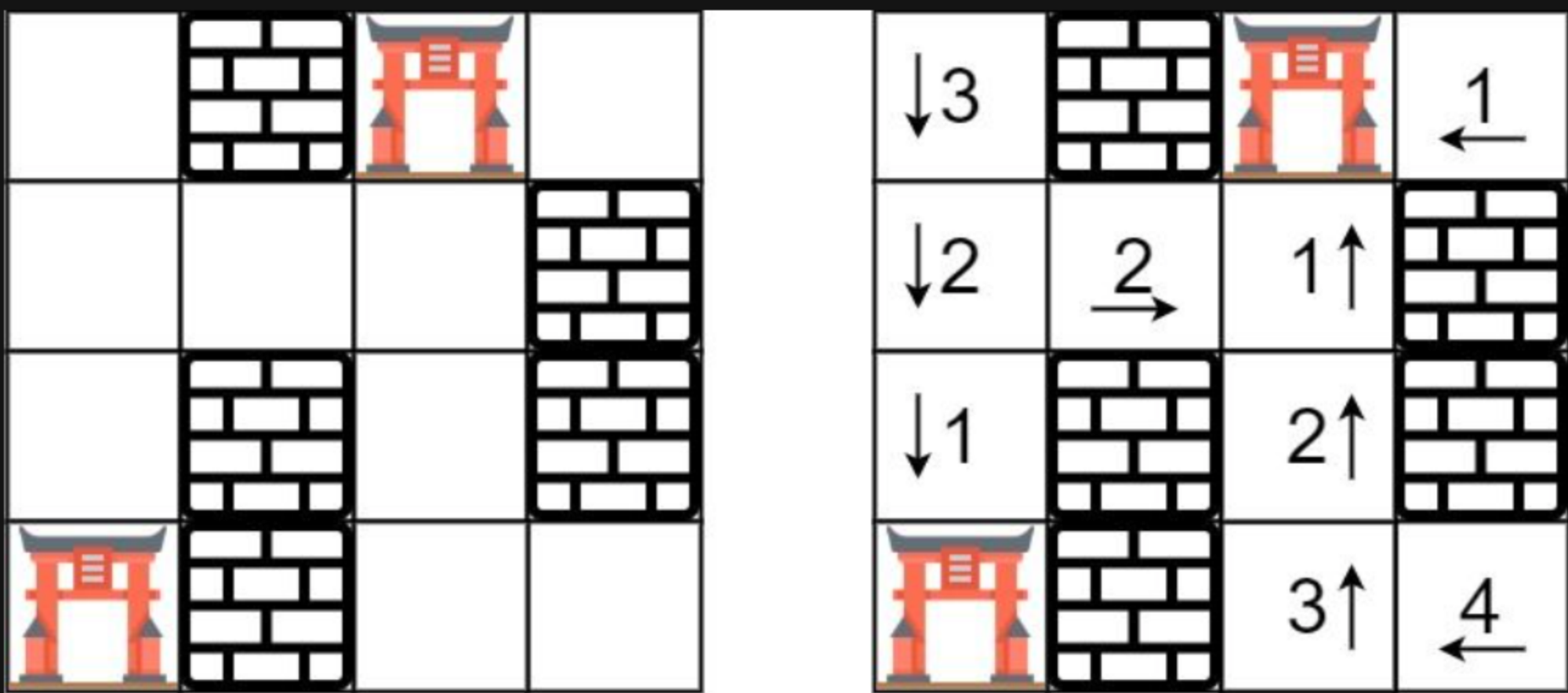
Description

You are given an `m x n` grid `rooms` initialized with these three possible values.

- `-1` A wall or an obstacle.
- `0` A gate.
- `INF` Infinity means an empty room. We use the value `231 - 1 = 2147483647` to represent `INF` as you may assume that the distance to a gate is less than `2147483647`.

Fill each empty room with the distance to *its nearest gate*. If it is impossible to reach a gate, it should be filled with `INF`.

Example 1:



Input: `rooms = [[2147483647,-1,0,2147483647],[2147483647,2147483647,2147483647,-1],[2147483647,-1,2147483647,-1],[0,-1,2147483647,2147483647]]`
Output: `[[3,-1,0,1],[2,2,1,-1],[1,-1,2,-1],[0,-1,3,4]]`

Example 2:

Input: `rooms = [[-1]]`
Output: `[[-1]]`

Constraints:

- `m == rooms.length`
- `n == rooms[i].length`
- `1 <= m, n <= 250`
- `rooms[i][j]` is `-1`, `0`, or `231 - 1`.

