

2387. Median of a Row Wise Sorted Matrix

Description

Given an `m x n` matrix `grid` containing an **odd** number of integers where each row is sorted in **non-decreasing** order, return *the median of the matrix*.

You must solve the problem in less than $O(m * n)$ time complexity.

Example 1:

Input: `grid = [[1,1,2],[2,3,3],[1,3,4]]`

Output: 2

Explanation: The elements of the matrix in sorted order are 1,1,1,2, 2,3,3,3,4. The median is 2.

Example 2:

Input: `grid = [[1,1,3,3,4]]`

Output: 3

Explanation: The elements of the matrix in sorted order are 1,1, 3,3,4. The median is 3.

Constraints:

- `m == grid.length`
- `n == grid[i].length`
- `1 <= m, n <= 500`
- `m` and `n` are both odd.
- `1 <= grid[i][j] <= 106`
- `grid[i]` is sorted in non-decreasing order.

