Problem 3417: Zigzag Grid Traversal With Skip

Problem Information

Difficulty: Easy
Acceptance Rate: 64.41%
Paid Only: No
Tags: Array, Matrix, Simulation

Problem Description

You are given an `m x n` 2D array `grid` of **positive** integers.

Your task is to traverse `grid` in a **zigzag** pattern while skipping every **alternate** cell.

Zigzag pattern traversal is defined as following the below actions:

* Start at the top-left cell `(0, 0)`. * Move _right_ within a row until the end of the row is reached. * Drop down to the next row, then traverse _left_ until the beginning of the row is reached. * Continue **alternating** between right and left traversal until every row has been traversed.

Note that you **must skip** every _alternate_ cell during the traversal.

Return an array of integers `result` containing, **in order** , the value of the cells visited during the zigzag traversal with skips.

Example 1:

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

Output: [1,4]

Explanation:

Example 2:

Input: grid = [[2,1],[2,1],[2,1]]

Output: [2,1,2]

Explanation:

Example 3:

Input: grid = [[1,2,3],[4,5,6],[7,8,9]]

Output: [1,3,5,7,9]

Explanation:

Constraints:

* `2 <= n == grid.length <= 50` * `2 <= m == grid[i].length <= 50` * `1 <= grid[i][j] <= 2500`

Code Snippets

C++:

```
class Solution {
public:
vector<int> zigzagTraversal(vector<vector<int>>& grid) {

}
};
```

Java:

```
class Solution {
public List<Integer> zigzagTraversal(int[][] grid) {
```

```
}
}
```

Python3:

```
class Solution:
def zigzagTraversal(self, grid: List[List[int]]) -> List[int]:
```