Problem 1144: Decrease Elements To Make Array Zigzag

Problem Information

Difficulty: Medium
Acceptance Rate: 48.89%
Paid Only: No
Tags: Array, Greedy

Problem Description

Given an array `nums` of integers, a _move_ consists of choosing any element and **decreasing it by 1**.

An array `A` is a _zigzag array_ if either:

* Every even-indexed element is greater than adjacent elements, ie. `A[0] > A[1] < A[2] > A[3] < A[4] > ...` * OR, every odd-indexed element is greater than adjacent elements, ie. `A[0] < A[1] > A[2] < A[3] > A[4] < ...`

Return the minimum number of moves to transform the given array `nums` into a zigzag array.

Example 1:

Input: nums = [1,2,3] **Output:** 2 **Explanation:** We can decrease 2 to 0 or 3 to 1.

Example 2:

Input: nums = [9,6,1,6,2] **Output:** 4

Constraints:

* `1 <= nums.length <= 1000` * `1 <= nums[i] <= 1000`

Code Snippets

C++:

```
class Solution {
public:
int movesToMakeZigzag(vector<int>& nums) {

}
};
```

Java:

```
class Solution {
public int movesToMakeZigzag(int[] nums) {

}
}
```

Python3:

```
class Solution:
def movesToMakeZigzag(self, nums: List[int]) -> int:
```