Problem 3667: Sort Array By Absolute Value

Problem Information

Difficulty: Easy
Acceptance Rate: 86.17%
Paid Only: Yes
Tags: Array, Math, Two Pointers, Sorting

Problem Description

You are given an integer array `nums`.

Rearrange elements of `nums` in **non-decreasing** order of their absolute value.

Return **any** rearranged array that satisfies this condition.

Note : The absolute value of an integer x is defined as:

* `x` if `x >= 0` * `-x` if `x < 0`

Example 1:

Input: nums = [3,-1,-4,1,5]

Output: [-1,1,3,-4,5]

Explanation:

* The absolute values of elements in `nums` are 3, 1, 4, 1, 5 respectively. * Rearranging them in increasing order, we get 1, 1, 3, 4, 5. * This corresponds to `[-1, 1, 3, -4, 5]`. Another possible rearrangement is `[1, -1, 3, -4, 5].`

Example 2:

Input: nums = [-100,100]

Output: [-100,100]

Explanation:

* The absolute values of elements in `nums` are 100, 100 respectively. * Rearranging them in increasing order, we get 100, 100. * This corresponds to `[-100, 100]`. Another possible rearrangement is `[100, -100]`.

Constraints:

* `1 <= nums.length <= 100` * `-100 <= nums[i] <= 100`

Code Snippets

C++:

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

}
};
```

Java:

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

}
}
```

Python3:

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