Problem 2149: Rearrange Array Elements by Sign

Problem Information

Difficulty: Medium
Acceptance Rate: 84.48%
Paid Only: No
Tags: Array, Two Pointers, Simulation

Problem Description

You are given a **0-indexed** integer array `nums` of **even** length consisting of an **equal** number of positive and negative integers.

You should return the array of nums such that the array follows the given conditions:

1. Every **consecutive pair** of integers have **opposite signs**. 2. For all integers with the same sign, the **order** in which they were present in `nums` is **preserved**. 3. The rearranged array begins with a positive integer.

Return _the modified array after rearranging the elements to satisfy the aforementioned conditions_.

Example 1:

Input: nums = [3,1,-2,-5,2,-4] **Output:** [3,-2,1,-5,2,-4] **Explanation:** The positive integers in nums are [3,1,2]. The negative integers are [-2,-5,-4]. The only possible way to rearrange them such that they satisfy all conditions is [3,-2,1,-5,2,-4]. Other ways such as [1,-2,2,-5,3,-4], [3,1,2,-2,-5,-4], [-2,3,-5,1,-4,2] are incorrect because they do not satisfy one or more conditions.

Example 2:

Input: nums = [-1,1] **Output:** [1,-1] **Explanation:** 1 is the only positive integer and -1 the only negative integer in nums. So nums is rearranged to [1,-1].

Constraints:

* `2 <= nums.length <= 2 * 105` * `nums.length` is **even** * `1 <= |nums[i]| <= 105` * `nums` consists of **equal** number of positive and negative integers.

It is not required to do the modifications in-place.

Code Snippets

C++:

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

}
};
```

Java:

```java
class Solution {
public int[] rearrangeArray(int[] nums) {

}
}
```

Python3:

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