977. Squares of a Sorted Array

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Given an integer array `nums` sorted in **non-decreasing** order, return *an array of **the squares of each number** sorted in non-decreasing order.*

Example 1:

```
Input: nums = [-4,-1,0,3,10]
Output: [0,1,9,16,100]
Explanation: After squaring, the array becomes [16,1,0,9,100].
After sorting, it becomes [0,1,9,16,100].
```

Example 2:

```
Input: nums = [-7,-3,2,3,11]
Output: [4,9,9,49,121]
```

Constraints:

- `1 <= nums.length <= 10^4`
- `-10^4 <= nums[i] <= 10^4`
- `nums` is sorted in **non-decreasing** order.

Follow up: Squaring each element and sorting the new array is very trivial, could you find an `O(n)` solution using a different approach?

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```java
class Solution {
    public int[] sortedSquares(int[] A) {

        int n = A.length;
        int[] result = new int[n];
        int i = 0, j = n - 1;

        for (int p = n - 1; p >= 0; p--) {
            if (Math.abs(A[i]) > Math.abs(A[j])) {
                result[p] = A[i] * A[i];
                i++;
            } else {
                result[p] = A[j] * A[j];
                j--;
            }
        }

        return result;
    }
}
```

Your previous code was restored from your local storage. Reset to default