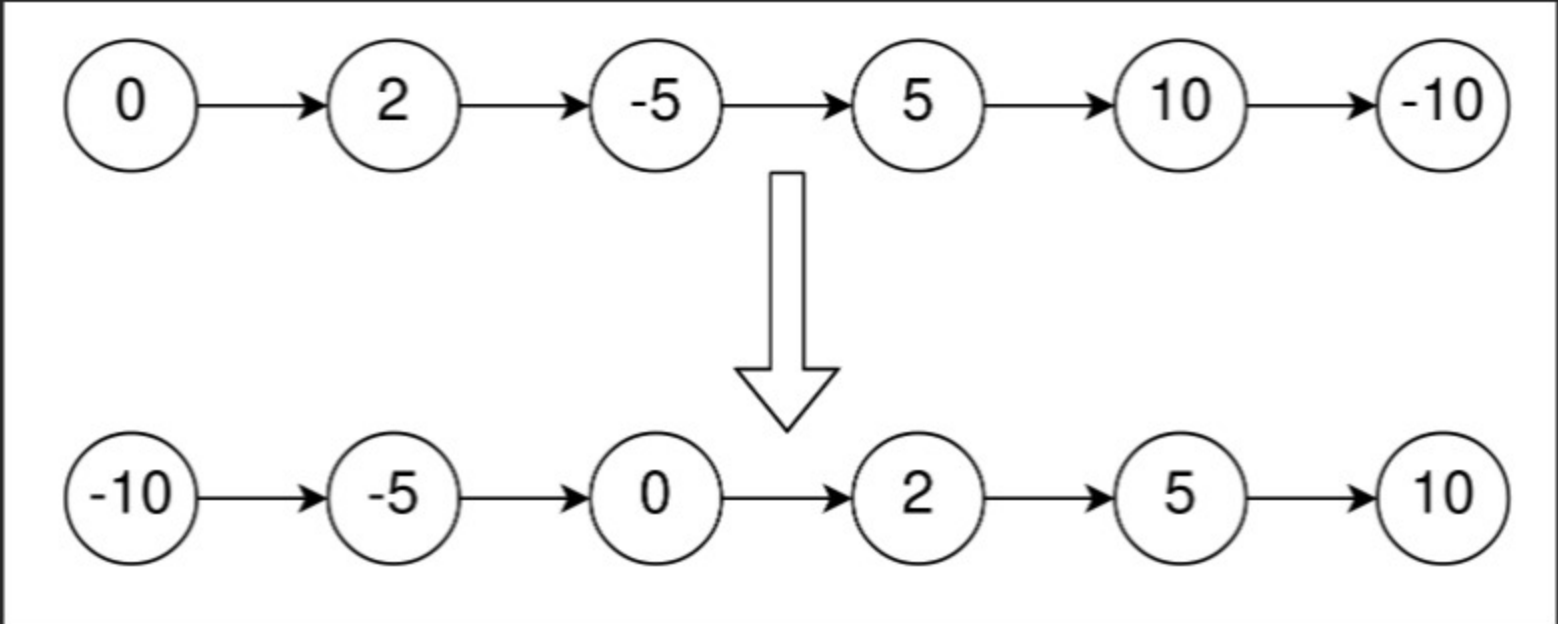


2046. Sort Linked List Already Sorted Using Absolute Values Premium

Medium Topics Hint

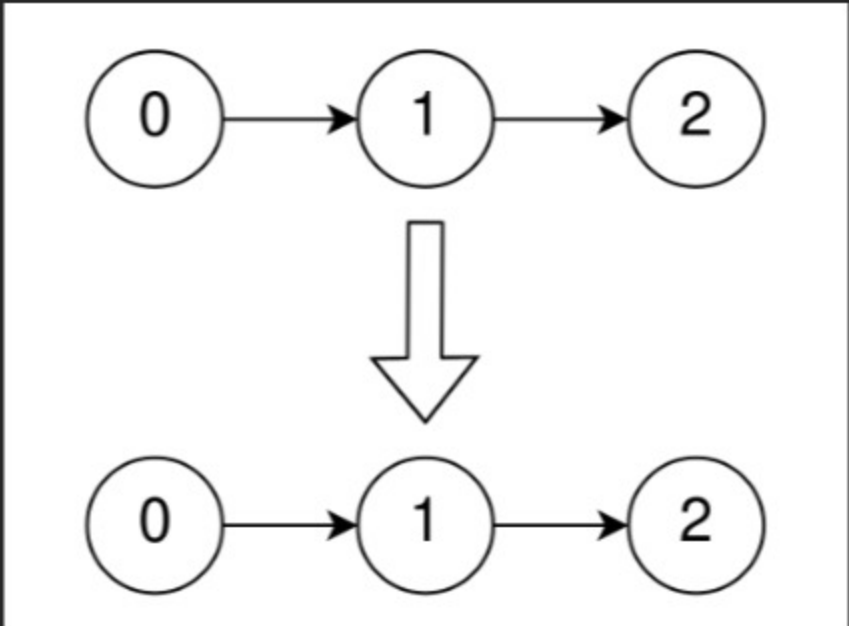
Given the `head` of a singly linked list that is sorted in **non-decreasing** order using the **absolute values** of its nodes, return *the list sorted in **non-decreasing** order using the **actual values** of its nodes*.

Example 1:



Input: `head = [0,2,-5,5,10,-10]`
Output: `[-10,-5,0,2,5,10]`
Explanation:
The list sorted in non-descending order using the absolute values of the nodes is `[0,2,-5,5,10,-10]`.
The list sorted in non-descending order using the actual values is `[-10,-5,0,2,5,10]`.

Example 2:



Input: `head = [0,1,2]`
Output: `[0,1,2]`
Explanation:
The linked list is already sorted in non-decreasing order.

Example 3:

Input: `head = [1]`
Output: `[1]`
Explanation:
The linked list is already sorted in non-decreasing order.

Constraints:

- The number of nodes in the list is the range `[1, 105]`.
- `-5000 <= Node.val <= 5000`
- `head` is sorted in non-decreasing order using the absolute value of its nodes.

Follow up:

- Can you think of a solution with `O(n)` time complexity?

Seen this question in a real interview before? 1/5

Yes No

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Topics

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Hint 1

The nodes with positive values are already in the correct order.

Hint 2

Nodes with negative values need to be moved to the front.

Hint 3

Nodes with negative values are in reversed order.

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