2074. Reverse Nodes in Even Length Groups

Description

You are given the head of a linked list.

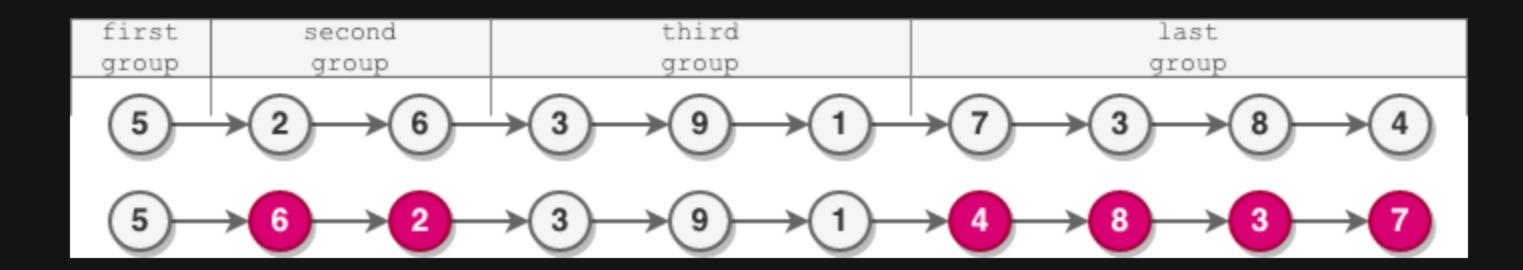
The nodes in the linked list are **sequentially** assigned to **non-empty** groups whose lengths form the sequence of the natural numbers (1, 2, 3, 4, ...). The **length** of a group is the number of nodes assigned to it. In other words,

- The 1 st node is assigned to the first group.
- The 2 nd and the 3 rd nodes are assigned to the second group.
- The 4 th , 5 th , and 6 th nodes are assigned to the third group, and so on.

Note that the length of the last group may be less than or equal to 1 + the length of the second to last group.

Reverse the nodes in each group with an even length, and return the head of the modified linked list.

Example 1:

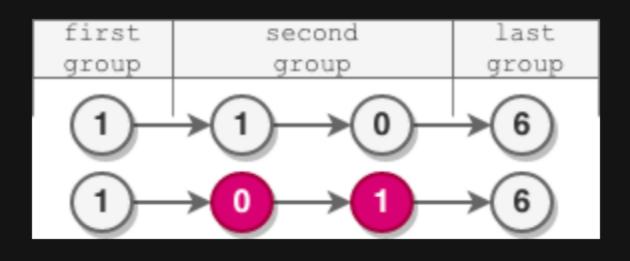


Input: head = [5,2,6,3,9,1,7,3,8,4]
Output: [5,6,2,3,9,1,4,8,3,7]

Explanation:

- The length of the first group is 1, which is odd, hence no reversal occurs.
- The length of the second group is 2, which is even, hence the nodes are reversed.
- The length of the third group is 3, which is odd, hence no reversal occurs.
- The length of the last group is 4, which is even, hence the nodes are reversed.

Example 2:



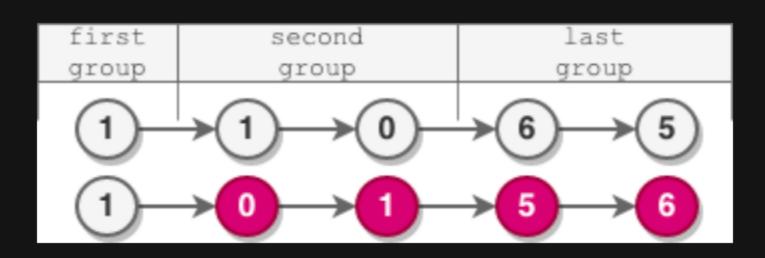
Input: head = [1,1,0,6]

Output: [1,0,1,6]

Explanation:

- The length of the first group is 1. No reversal occurs.
- The length of the second group is 2. The nodes are reversed.
- The length of the last group is 1. No reversal occurs.

Example 3:



Input: head = [1,1,0,6,5]

Output: [1,0,1,5,6]

Explanation:

- The length of the first group is 1. No reversal occurs.
- The length of the second group is 2. The nodes are reversed.
- The length of the last group is 2. The nodes are reversed.

Constraints:

- The number of nodes in the list is in the range [1, 10 5].
- 0 <= Node.val <= 10 ⁵