5927. Reverse Nodes in Even Length Groups

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User Accepted:	0
User Tried:	0
Total Accepted:	0
Total Submissions:	0
Difficulty:	Medium

You are given the `head` of a linked list.

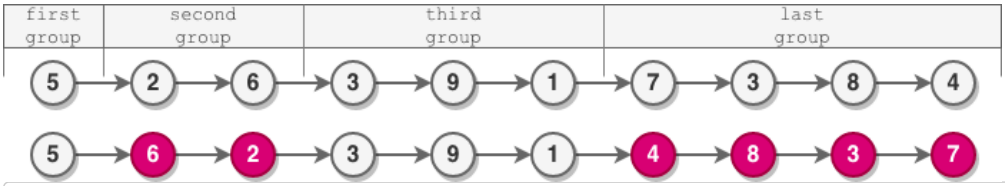
The nodes in the linked list are **sequentially** assigned to **non-empty** groups whose lengths form the sequence of the natural numbers (`1, 2, 3, 4, ...`). The **length** of a group is the number of nodes assigned to it. In other words,

- 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` .

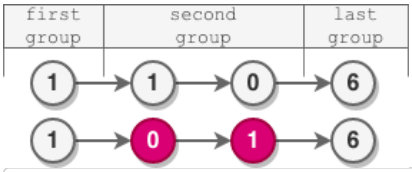
Reverse the nodes in each group with an **even** length, and return *the* `head` *of the modified linked list*.

Example 1:



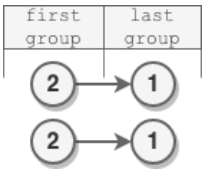

```
Input: head = [5,2,6,3,9,1,7,3,8,4]
Output: [5,6,2,3,9,1,4,8,3,7]
Explanation:
- The length of the first group is 1, which is odd, hence no reversal occurrs.
- The length of the second group is 2, which is even, hence the nodes are reversed.
- The length of the third group is 3, which is odd, hence no reversal occurrs.
- 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 occurrs.
- The length of the second group is 2. The nodes are reversed.
- The length of the last group is 1. No reversal occurrs.
```

Example 3:



```
Input: head = [2,1]
Output: [2,1]
Explanation:
- The length of the first group is 1. No reversal occurrs.
- The length of the last group is 1. No reversal occurrs.
```

Example 4:

```
Input: head = [8]
Output: [8]
Explanation: There is only one group whose length is 1. No reversal occurrs.
```

Constraints:

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

JavaScript

```
const getAllData = (list) => {
    let res = [];
    let current = list;
    while (current) {
        res.push(current.val);
        current = current.next;
    }
    return res;
};

const createL = (arr) => {
    let tmp, node = null;
    let n = arr.length;
    for (let i = n - 1; ~i; i--) {
        if (!node)
            node = new ListNode(arr[i]);
        else {
            tmp = new ListNode(arr[i]);
            tmp.next = node;
            node = tmp;
        }
    }
    return node;
};

const reverseEvenLengthGroups = (head) => {
    let a = getAllData(head);
    let group = 1, i = 0, n = a.length;
    let d = [];
    while (i + group < n) {
        let tmp = a.slice(i, i + group);
        // pr(i, group, tmp);
        i += group;
        group++;
        d.push(tmp);
    }
    let last = a.slice(i);
    d.push(last);
    // pr("d", d);
    let res = [];
    for (let i = 0; i < d.length; i++) {
        let judge = d[i].length;
        res.push(judge % 2 == 0 ? d[i].reverse() : d[i]);
    }
    // pr("res", res);
    let ans = [];
    for (const e of res) ans = ans.concat(e);
```

```
48      // pr("ans", ans);
49      return createL(ans);
50  };
```

Custom Testcase Use Example Testcases

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