

143. Reorder List

Description

You are given the head of a singly linked-list. The list can be represented as:

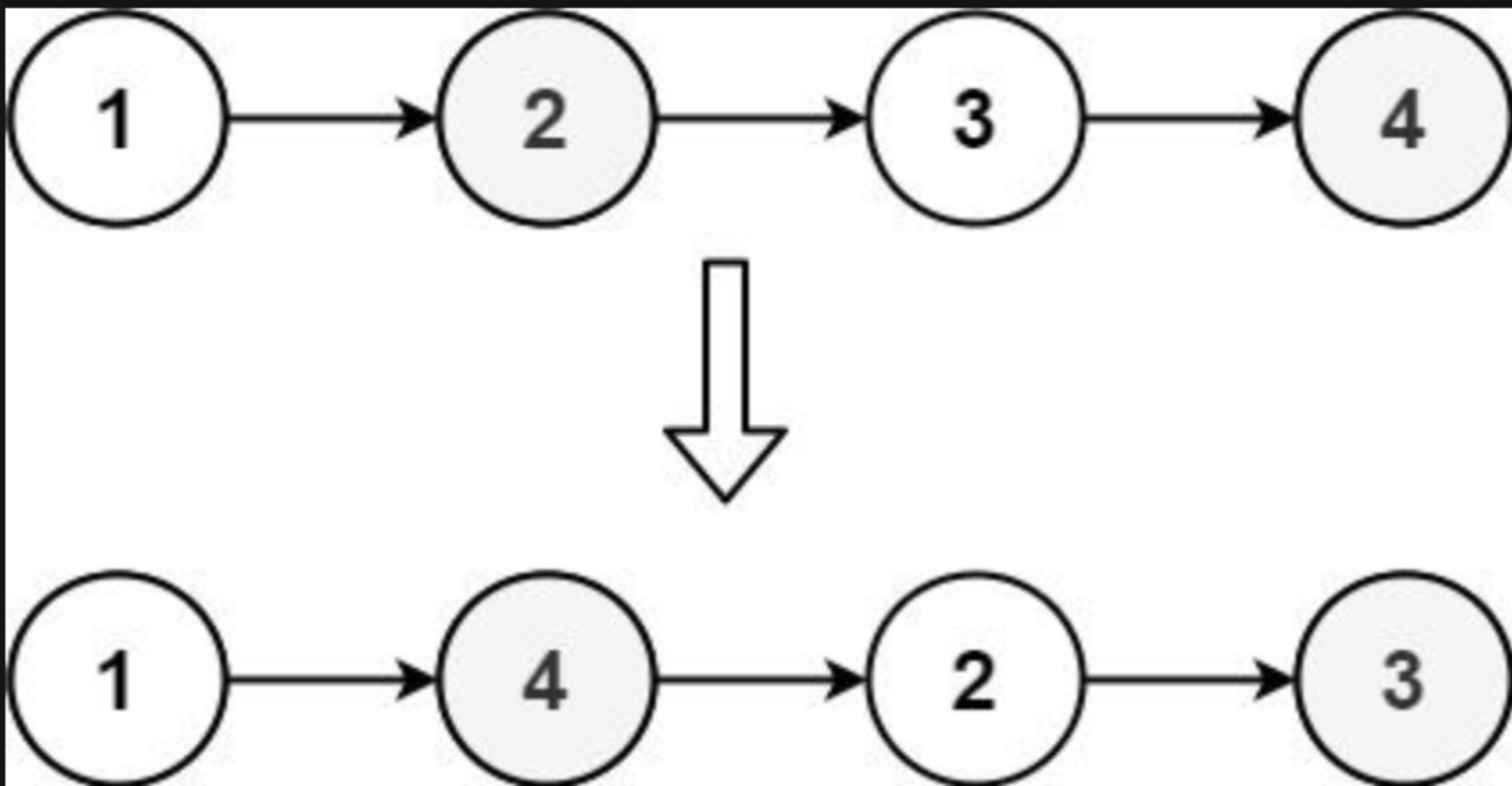
```
L0 → L1 → ... → Ln-1 → Ln
```

Reorder the list to be on the following form:

```
L0 → Ln → L1 → Ln-1 → L2 → Ln-2 → ...
```

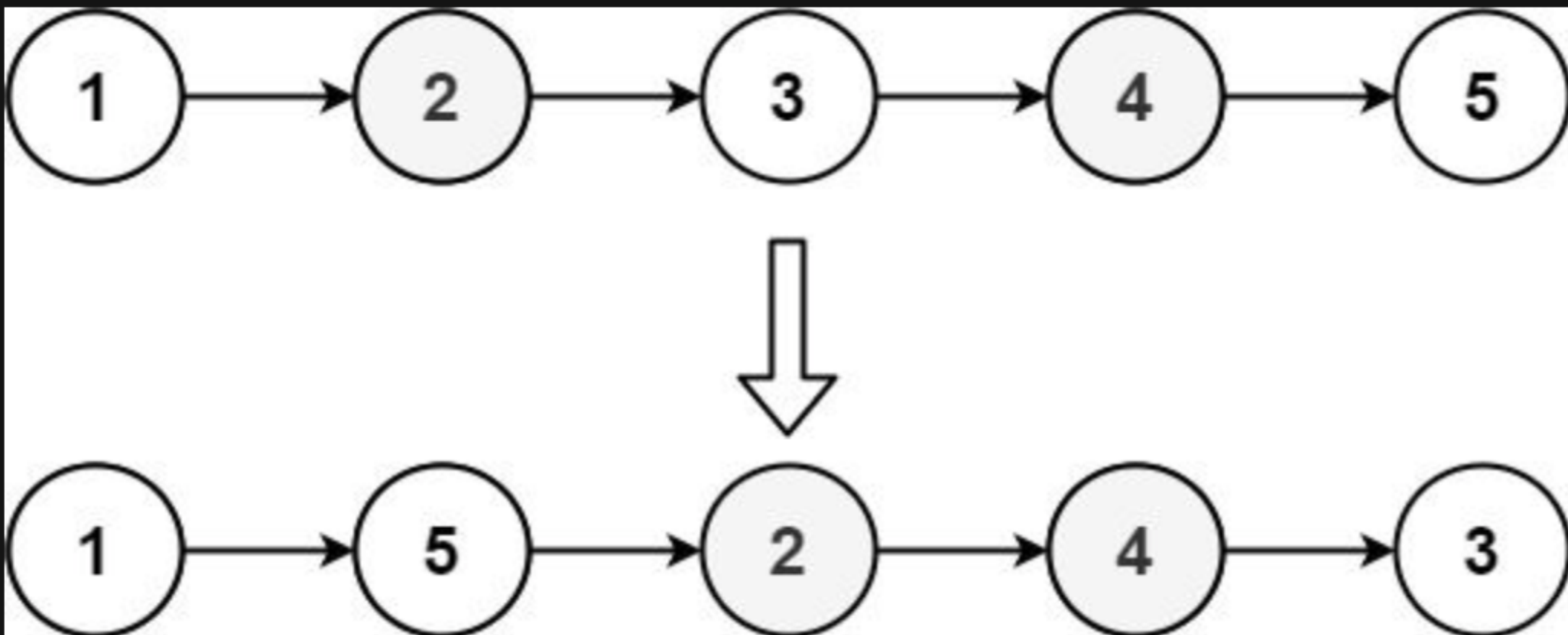
You may not modify the values in the list's nodes. Only nodes themselves may be changed.

Example 1:



```
Input: head = [1,2,3,4]
Output: [1,4,2,3]
```

Example 2:



```
Input: head = [1,2,3,4,5]
Output: [1,5,2,4,3]
```

Constraints:

- The number of nodes in the list is in the range `[1, 5 * 104]` .
- `1 <= Node.val <= 1000`

