

143. Reorder List

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

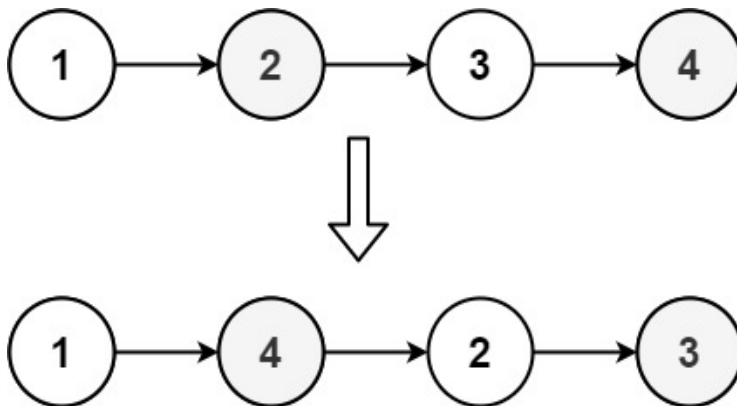
➤ $L_0 \rightarrow L_1 \rightarrow \dots \rightarrow L_{n-1} \rightarrow L_n$

- *Reorder the list to be on the following form:*

➤ $L_0 \rightarrow L_n \rightarrow L_1 \rightarrow L_{n-1} \rightarrow L_2 \rightarrow L_{n-2} \rightarrow \dots$

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

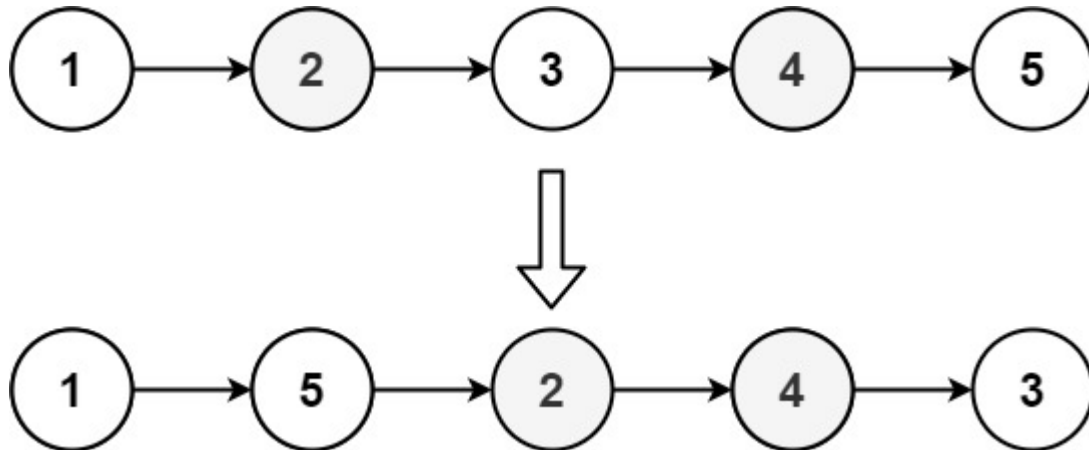
Example 1:



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 $[1, 5 * 10^4]$.
- $1 \leq \text{Node.val} \leq 1000$