Reverse Nodes in k-Group

Try to solve the Reverse Nodes in k-Group problem.

We'll cover the following

Statement

The task is to reverse the nodes in groups of k in a given linked list, where k is a positive integer, and at most the length of the linked list. If any remaining nodes are not part of a group of k, they should remain in their original order.

It is not allowed to change the values of the nodes in the linked list. Only the order of the nodes can be modified.

> **Note:** Use only $O(1)$ extra memory space.

Constraints:

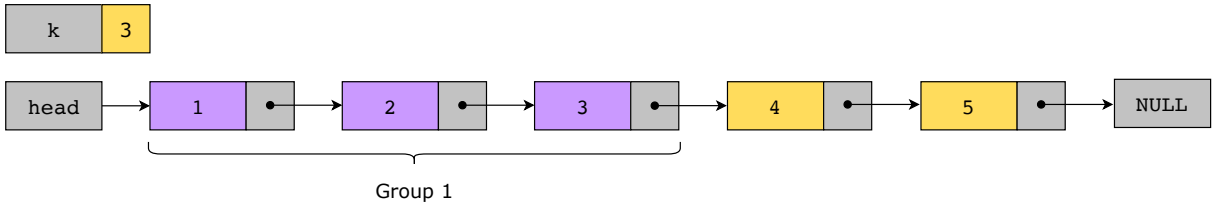
Let `n` be the number of nodes in a linked list.

- $1 \leq$ `k` $\leq$ `n` ≤ 500
- $0 \leq$ `Node.value` ≤ 1000

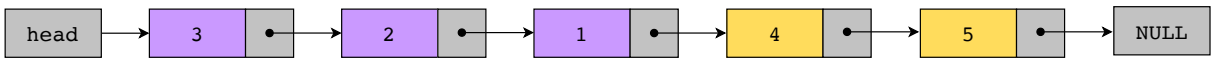
Examples

Sample example 1

Input



Output



1 of 2

Understand the problem

Let's take a moment to make sure you've correctly understood the problem. The quiz below helps you check if you're solving the correct problem:

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1 What is the output if the following head of the linked list and value of k are given as input?

head → 8 → 0 → 6 → 1 → 0 → 7 → 8 → 7 → 5 → 3 → 5 → 2 → 4 → 9 → NULL

k = 3

A) head → 1 → 0 → 7 → 8 → 0 → 6 → 3 → 5 → 2 → 8 → 7 → 5 → 4 → 9 → NULL

B) head → 7 → 0 → 1 → 6 → 0 → 8 → 2 → 5 → 3 → 5 → 7 → 8 → 4 → 9 → NULL

C) head → 6 → 0 → 8 → 7 → 0 → 1 → 5 → 7 → 8 → 2 → 5 → 3 → 4 → 9 → NULL

D) head → 8 → 0 → 0 → 1 → 6 → 7 → 8 → 7 → 5 → 3 → 5 → 9 → 4 → 2 → NULL

Submit Answer

Question 1 of 4
0 attempted

Reset Quiz

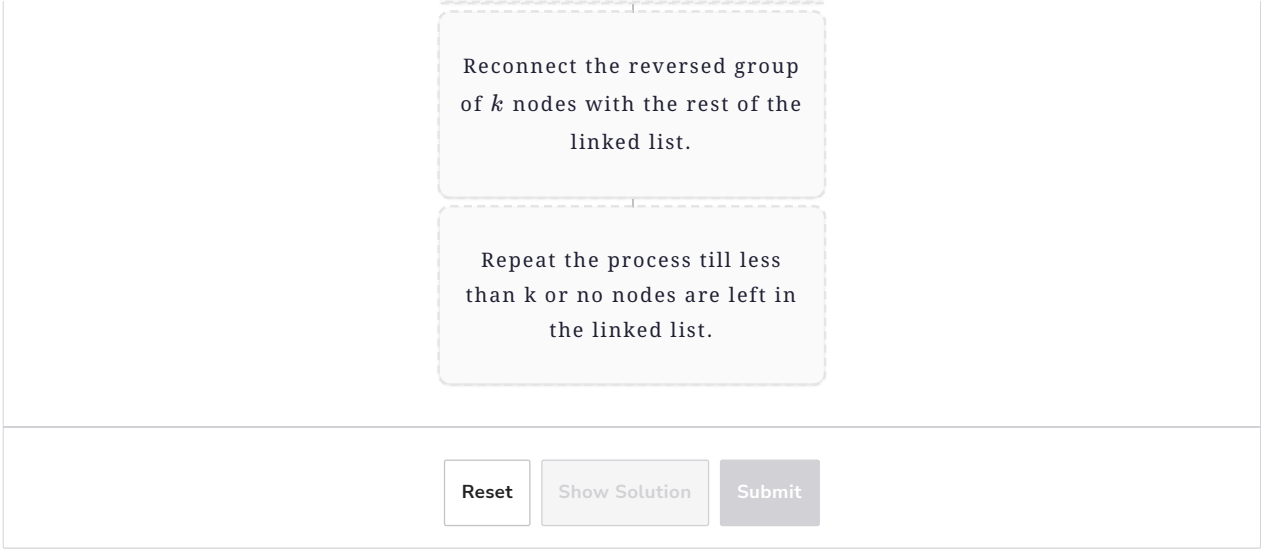
Figure it out!

We have a game for you to play. Rearrange the logical building blocks to develop a clearer understanding of how to solve this problem.

Drag and drop the cards to rearrange them in the correct sequence.

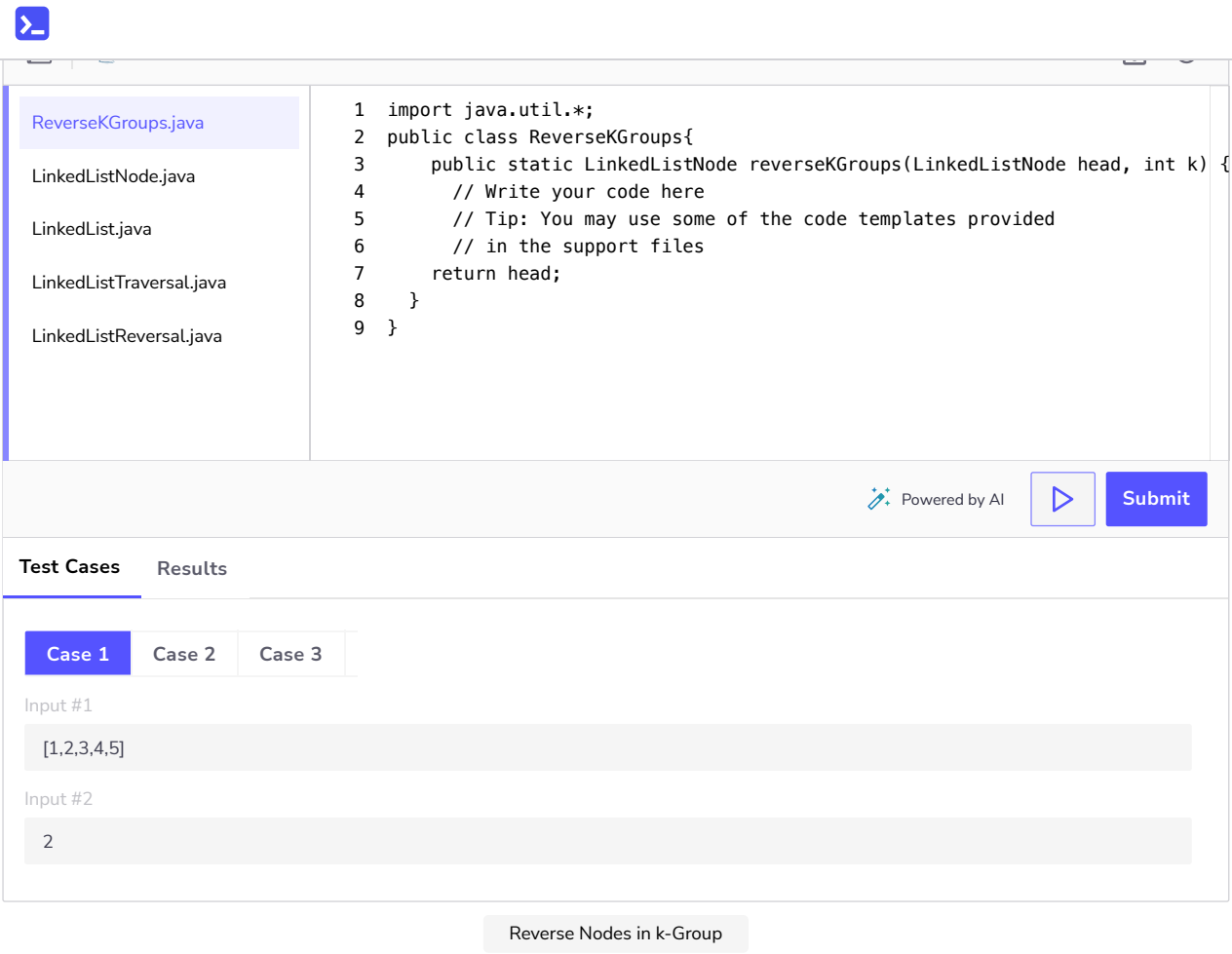
Use a pointer to try to traverse k nodes in the linked list.

If the pointer successfully traverses a group of k nodes, reverse this group.



Try it yourself

Implement your solution in `ReverseLinkedList.java` in the following coding playground. You'll need the provided supporting code to implement your solution. We've provided some useful code templates that you may build on to solve this problem.



Reverse Nodes in k-Group

Back
Solution: Reverse Link...
Next
Solution: Reverse Nod...
Mark as Completed