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Java
Linked List 3

Assignment Questions

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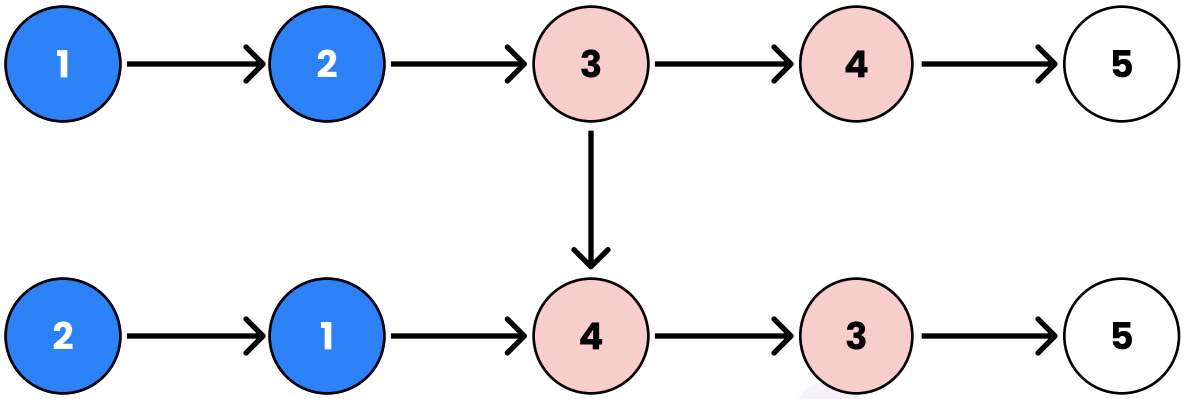
Q1. **Given the head of a linked list, reverse the nodes of the list k at a time, and return the modified list.**

k is a positive integer and is less than or equal to the length of the linked list. If the number of nodes is not a multiple of k then left-out nodes, in the end, should remain as it is.

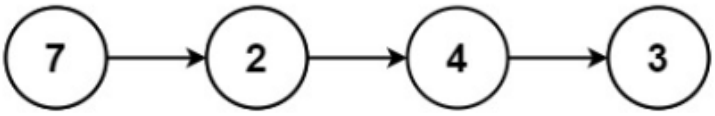
You may not alter the values in the list's nodes, only nodes themselves may be changed. [Leetcode -25]

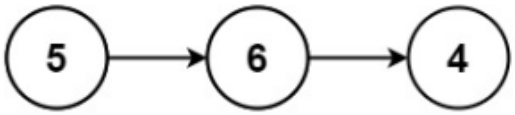


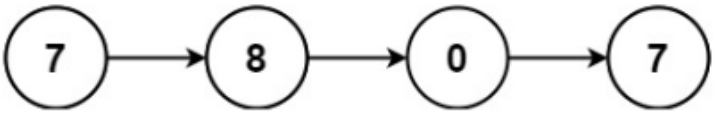
Input: head = [1,2,3,4,5], k = 2
Output: [2,1,4,3,5]

Q2. **You are given two non-empty linked lists representing two non-negative integers. The most significant digit comes first and each of their nodes contains a single digit. Add the two numbers and return the sum as a linked list.**

You may assume the two numbers do not contain any leading zero, except the number 0 itself. [Leetcode- 445]

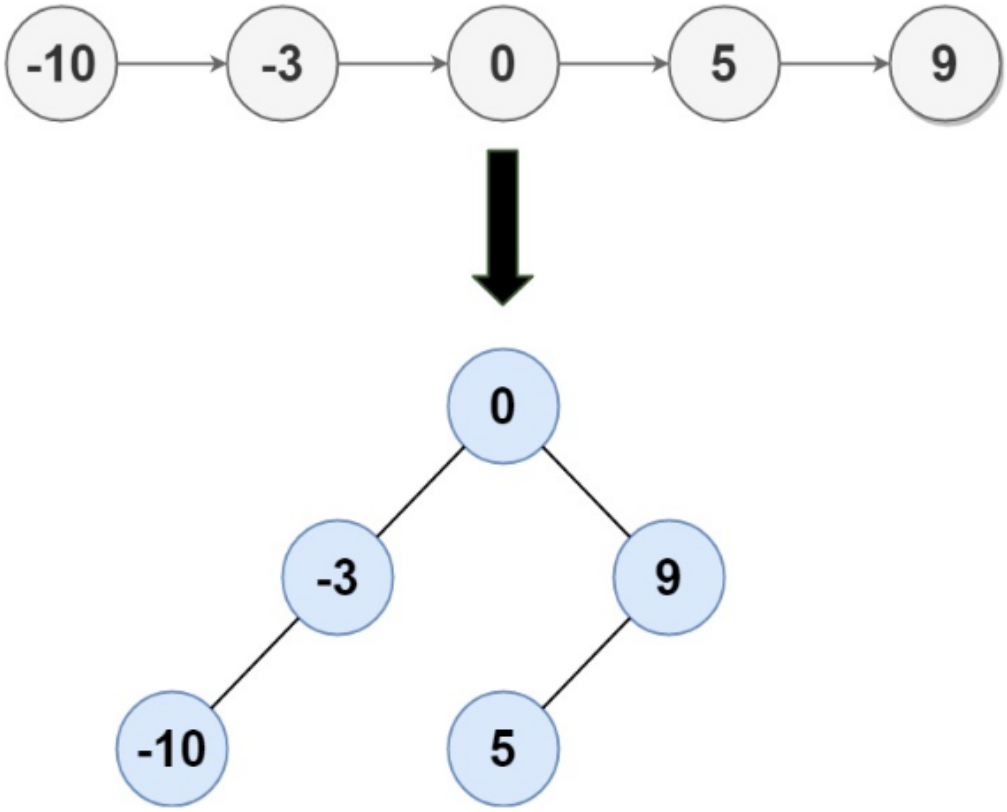






Input: l1 = [7,2,4,3], l2 = [5,6,4]
Output: [7,8,0,7]

Q3. Given the head of a singly linked list where elements are sorted in ascending order, convert it to a height-balanced binary search tree. [Leetcode- 109]



Input: head = [-10,-3,0,5,9]
Output: [0,-3,9,-10,null,5]

Explanation: One possible answer is [0,-3,9,-10,null,5], which represents the shown height balanced BST.

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THANK YOU !

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