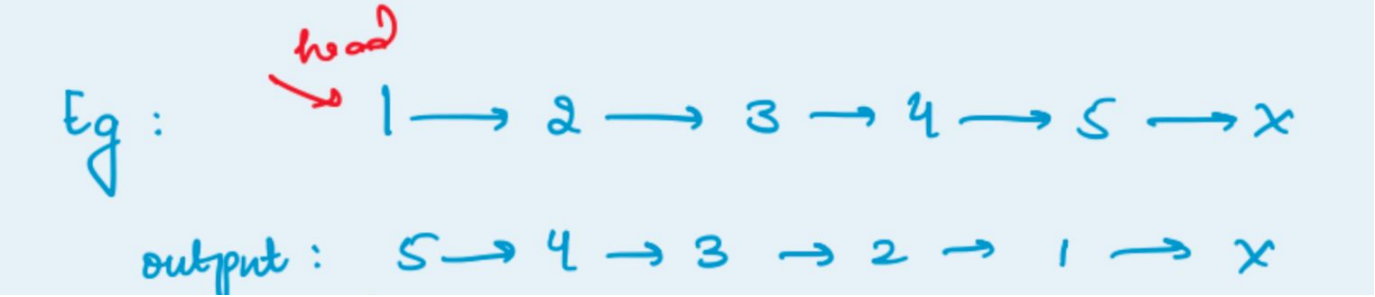
Problem Solving on LinkedList

Relevel
by Unacademy

Problem 1: Reverse a LinkedList

Given the head of a singly linked list, reverse the given linked list.



Problem 2: Folding/Reorder a LinkedList

You are given the head of a 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 → …`

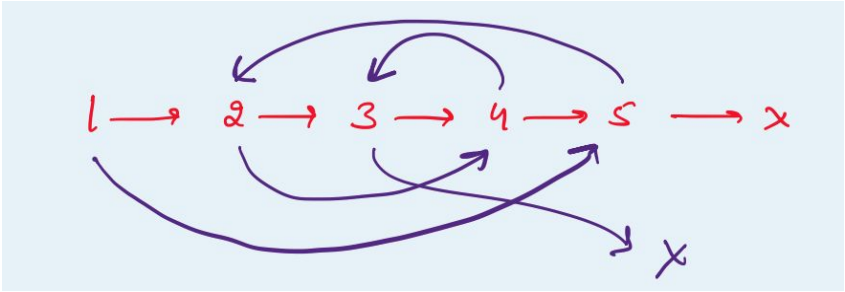
You may not modify the values in the list's nodes. Only nodes themselves may be changed.

① Eg: 1 → 2 → 3 → 4 → X

ans → 1 → 4 → 2 → 3 → X

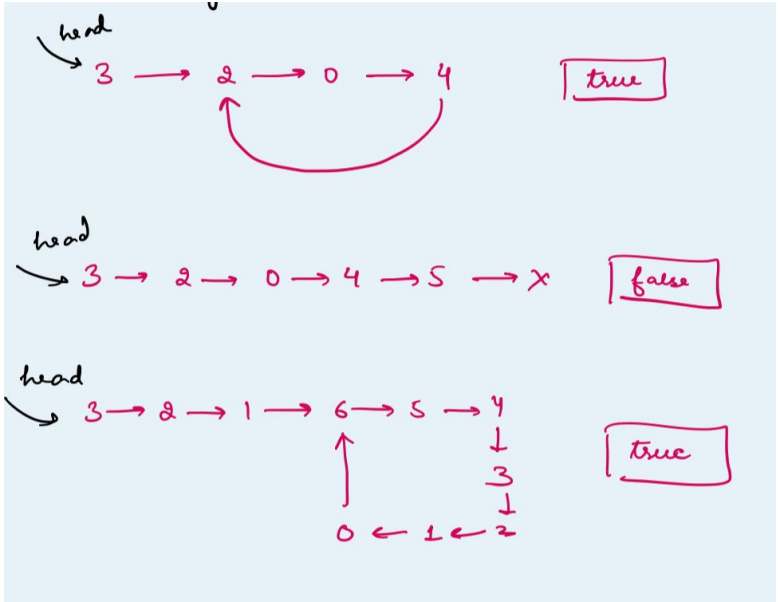
② Eg: 1 → 2 → 3 → 4 → 5 → X

ans → 1 → 5 → 2 → 4 → 3 → X



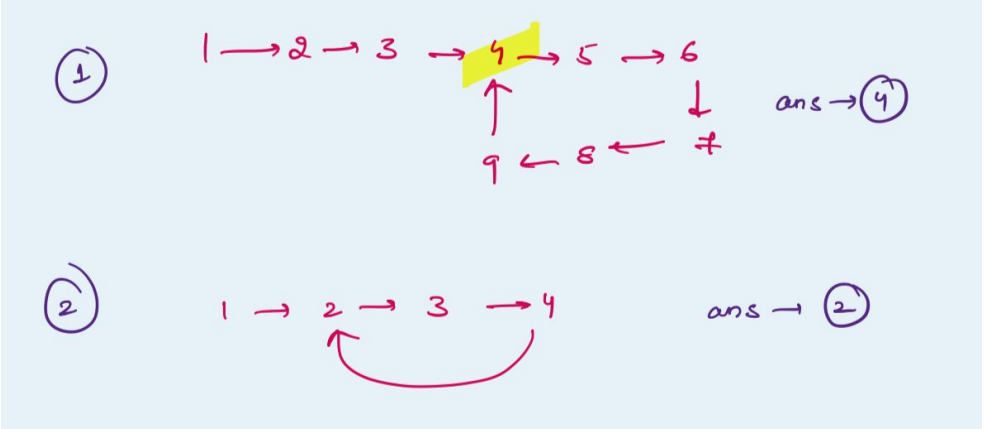
Problem 3: Find cycle in the LinkedList

Given head, the head of a linked list, determine if the linked list has a cycle in it.



Problem 4: Starting Point of a cycle in the LinkedList

Given the head of a linked list, return the node where the cycle begins.

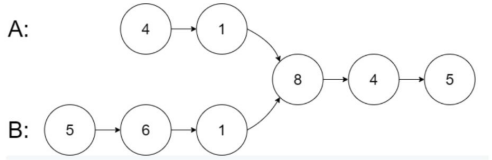


Problem 5: Find Intersection Point of LinkedList

Given the heads of two singly linked-lists headA and headB, return the node at which the two lists intersect. If the two linked lists have no intersection at all, return null.

Example 1:

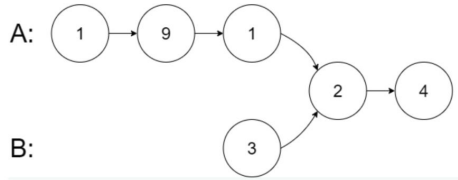
Input:



Output: 8

Example 2:

Input:



Output: 2