

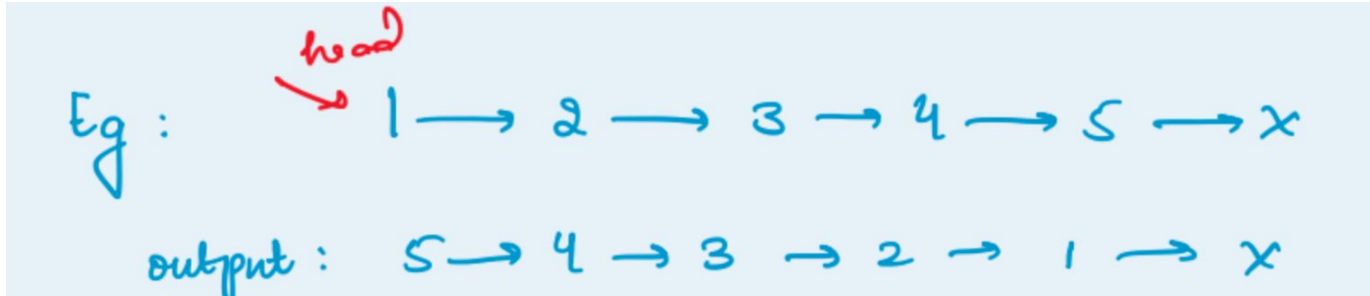
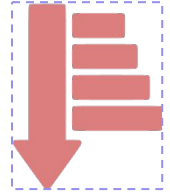
Problem Solving on LinkedList

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:

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

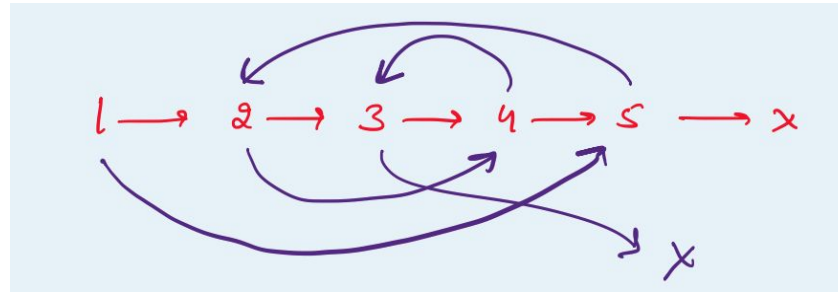
Reorder the list to be on the following form:

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

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

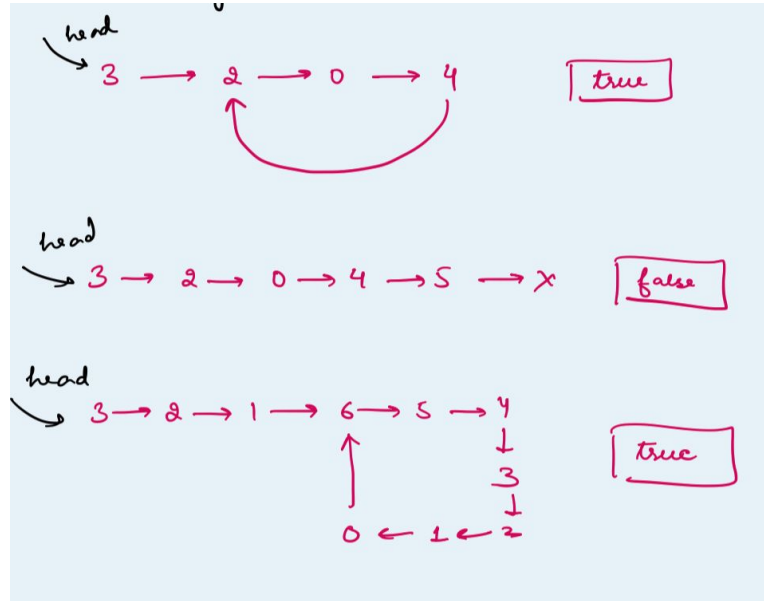
① Eg: $1 \rightarrow 2 \rightarrow 3 \rightarrow 4 \rightarrow x$
ans $\rightarrow 1 \rightarrow 4 \rightarrow 2 \rightarrow 3 \rightarrow x$

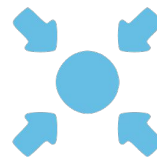
② Eg: $1 \rightarrow 2 \rightarrow 3 \rightarrow 4 \rightarrow 5 \rightarrow x$
ans $\rightarrow 1 \rightarrow 5 \rightarrow 2 \rightarrow 4 \rightarrow 3 \rightarrow x$



Problem 3: Find cycle in the LinkedList

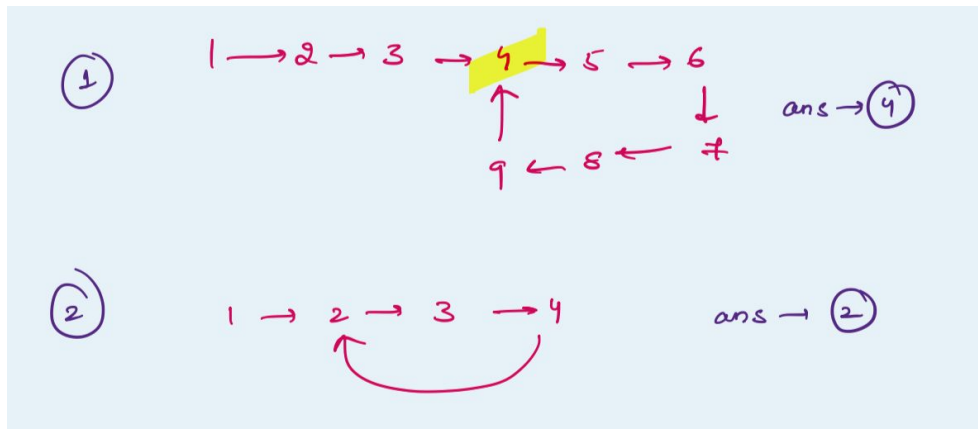
Given head, the head of a linked list, determine if the linked list has a cycle in it.





Problem 4: Starting Point of a cycle in the LinkedList

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



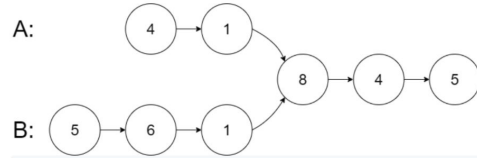
Problem 5: Find Intersection Point of LinkedList



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:

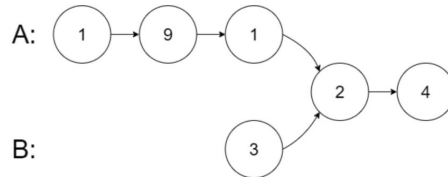
Input:



Output: 8

Example 2:

Input:



Output: 2