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Opened: Wednesday, 11 October 2023, 12:00 AM
Due: Tuesday, 17 October 2023, 12:00 AM

Problem 1:	Given head, the head of a singly linked list, find if the linked list is circular or not. A linked list is called circular if it not NULL terminated and all nodes are connected in the form of a cycle. An empty linked list is considered as circular. Example 1: Input: LinkedList: 1->2->3->4->5 (the first and last node is connected, i.e. 5 --> 1) Output: 1 Example 2: Input: LinkedList: 2->4->6->7->5->1 Output: 0 Your Task: The task is to complete the function isCircular() which checks if the given linked list is circular or not. It should return true or false accordingly. (the driver code prints 1 if the returned values is true, otherwise 0) Expected Time Complexity: O(N). Constraints: 1 <=Number of nodes<= 100
Problem 2:	Given a singly linked list of size N of integers. The task is to check if the given linked list is palindrome or not. Example 1: Input: N = 3 value[] = {1,2,1} Output: 1

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	Explanation: The given linked list is 1 2 1 , which is a palindrome and hence, the output is 1. Example 2: Input: N = 4 value[] = {1,2,3,4} Output: 0 Explanation: The given linked list is 1 2 3 4 , which is not a palindrome and hence, the output is 0. Expected Time Complexity: O(N) Constraints: 1 <= N <= 105
Problem 3:	Given a linked list of N nodes. The task is to reverse this list. Example 1: Input: LinkedList: 1->2->3->4->5->6 Output: 6 5 4 3 2 1 Explanation: After reversing the list, elements are 6->5->4->3->2->1. Example 2: Input: LinkedList: 2->7->8->9->10 Output: 10 9 8 7 2 Explanation: After reversing the list, elements are 10->9->8->7->2. Expected Time Complexity: O(N). Constraints: 1 <= N <= 104
Problem 4:	Given a singly linked list consisting of N nodes. The task is to remove duplicates (nodes with duplicate values) from the given list (if exists). Example 1: Input: LinkedList: 2->2->4->5 Output: 2 4 5 Explanation: In the given linked list 2 ->2 -> 4-> 5, only 2 occurs more than 1 time. So we need to remove it once. Example 2: Input:

	LinkedList: 2->2->2->2->2 Output: 2 Explanation: In the given linked list 2 ->2 ->2 ->2 ->2, 2 is the only element and is repeated 5 times. So we need to remove any four 2. Expected Time Complexity : O(N) Constraints: 1 <= Number of nodes <= 105
Problem 5:	Given two decimal numbers represented by two linked lists of size N and M respectively. The task is to return a linked list that represents the sum of these two numbers. For example, the number 190 will be represented by the linked list, 1->9->0->null, similarly 25 by 2->5->null. Sum of these two numbers is 190 + 25 = 215, which will be represented by 2->1->5->null. You are required to return the head of the linked list 2->1->5->null. Example 1: Input: N = 2 valueN[] = {4,5} M = 3 valueM[] = {3,4,5} Output: 3 9 0 Explanation: For the given two linked list (4 5) and (3 4 5), after adding the two linked list resultant linked list will be (3 9 0). Example 2: Input: N = 2 valueN[] = {6,3} M = 1 valueM[] = {7} Output: 7 0 Explanation: For the given two linked list (4 5) and (3 4 5), after adding the two linked list resultant linked list will be (3 9 0).two linked list resultant linked list will be (7 0). Your Task:

The task is to complete the function addTwoLists() which has node reference of both the linked lists and returns the head of the sum list.
Expected Time Complexity: O(N+M)
Constraints: 1 <= N, M <= 5000

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Submission status

Submission status	Submitted for grading
Grading status	Not graded
Time remaining	Assignment was submitted 3 days 13 hours early
Last modified	Friday, 13 October 2023, 10:25 AM
File submissions	+ 7 files
Submission comments	▸ Comments (0)