**PROBLEMS ON LINKED LIST**

1.Given the head of a singly linked list, reverse the list, and return the reversed list.

Diagram

Description automatically generated

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

**Output:** [5,4,3,2,1]

2.Given a sorted linked list which has some duplicate elements, your task is to remove all the duplicate elements from the given Linked List.

For example:

**Input:** 2->3->3->4->5->7->7->9->NULL

**Output**: 2->3->4->5->7->9->NULL

3. Write a function to check if the given two linked lists are identical.

Examples:

**Input:** a = 10->20->30->40, b = 10->20->30->40

**Output**: SAME.

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**Javascript DSA**

Problem Statement: Attempt the following questions on JavaScript.

**Question 1:** Write a program to reverse a linked list with a pointer given to the head node as given below:

Input: Head of the following linked list:

1->2->3->4->null

Output: Linked list should be changed to:

4->3->2->1->null

**(Skill mapping: JS basics)**

**Question 2:** Write a program to create a function that takes two sorted linked lists in ascending order as input and returns a single sorted linked list in ascending order.

Input:

      list1= 1->2->3

      list2=4->5->6

Output :  sortedlist = 1->2->3->4->5->6

**(Skill mapping: JS Intermediate)**

**Question 3:** You have two numbers represented by a linked list, where each node contains a single digit. The digits are stored in reverse order, such that the 1's digit is at the head of the list. Write a function that adds the two numbers and returns the sum as a linked list.

**Task 1 :**

EXAMPLE

Input: (7-> 1-> 6) + (5 -> 9 -> 2).That is,617 +

295.

Output: 2 -> 1 -> 9. That is 912.

**Task 2:** Suppose the digits are stored in a forward order.

Repeat the above problem.

EXAMPLE

Input:(6 -> 1-> 7) + (2 -> 9 -> 5).That is,617+295.

Output: 9 -> 1 -> 2. That is 912.

**(Skill mapping: JS Difficult)**

**OR**

Write a code to partition a linked list around a value x, such that all nodes less than x come before all nodes greater than or equal to x. If x is contained within the list, the values of x only need to be after the elements less than x (see below). The partition element x can appear anywhere in the “right partition"; it does not need to appear between the left and right partitions.

EXAMPLE

Input :  3 -> 6 -> 10 -> 2 -> 9 -> 2 -> 1

         x = 6

Output : 1-> 2-> 2-> 3-> 6-> 10-> 9

**(Skill mapping: JS Difficult)**

* + - * Refer to the Codecademy link shared below and Solve the quiz, also do attach the screenshot for the Completion of the Quiz as an assignment-

**QUIZ:**

Link 1:

<https://www.codecademy.com/courses/introduction-to-javascript/quizzes/loops-quiz>

Link 2:

<https://www.codecademy.com/courses/introduction-to-javascript/quizzes/arrays-quiz>

Submission Format:

* + - * The code should be pushed to GitHub and its link to be shared in a text/docx file.
      * For quiz completion, kindly attach a snapshot of quiz completion.