Linked Lists in Java

Assignment Questions

PW SKILLS

Q1. Given a linked list and a key 'X' in, the task is to check if X is present in the linked list or not.

Examples:

Input: 14->21->11->30->10, X = 14

Output: Yes

Explanation: 14 is present in the linked list.

Input: 6->21->17->30->10->8, X = 13

Output: No

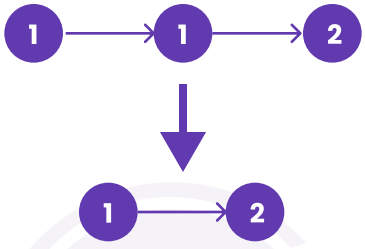
Q2. Insert a node at the given position in a linked list. We are given a pointer to a node, and the new node is inserted after the given node.

Input : LL = 1 -> 2 -> 4 -> 5 -> 6 pointer = 2 value = 3.

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

Q3. Given the head of a sorted linked list, delete all duplicates such that each element appears only once. Return the linked list sorted as well.

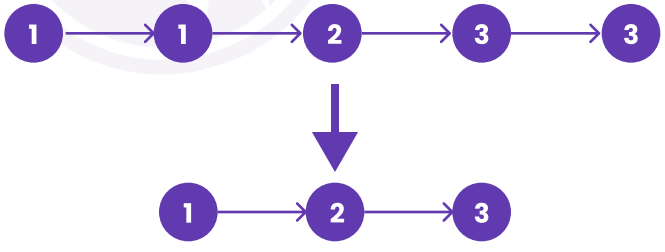
Example 1:



Input: head = [1,1,2]

Output: [1,2]

Example 2:



Input: head = [1,1,2,3,3]

Output: [1,2,3]

Q4. Given the head of a singly linked list, return true if it is a palindrome or false otherwise.

Example 1:

Input: head = [1,2,2,1]

Output: true

Example 2:

Input: head = [1,2]

Output: false

Q5. Given two numbers represented by two lists, write a function that returns the sum list. The sum list is a list representation of the addition of two input numbers.

Example:

Input:

List1: 5->6->3 // represents number 563

List2: 8->4->2 // represents number 842

Output:

Resultant list: 1->4->0->5 // represents number 1405

Explanation: 563 + 842 = 1405

Input:

List1: 7->5->9->4->6 // represents number 75946

List2: 8->4 // represents number 84

Output:

Resultant list: 7->6->0->3->0// represents number 76030

Explanation: 75946+84=76030