

# Remove Duplicates From Sorted Linked List [LeetCode](#)

Write a C++ program to remove duplicates from a sorted singly linked list.

## **Approach 1: Remove duplicates from a Sorted linked list using iterative approach**

- Traverse the linked list while comparing each node's value with the value of its next node.
- If a duplicate is found, remove the duplicate node by updating pointers and freeing memory.

**Time Complexity:  $O(n)$ , where  $n$  is the number of nodes in the linked list.**

**Space Complexity:  $O(1)$ , as no additional data structures are used.**

## **Approach 2: Recursive approach to remove duplicates from a sorted linked list**

- Check if the current node's value is the same as the value of its next node.
- If a duplicate is found, skip the duplicate node by updating pointers and freeing memory.
- Recursively call the function for the modified list.

**Time Complexity:  $O(n)$ , where  $n$  is the number of nodes in the linked list.**

**Space Complexity:  $O(n)$ , as the recursion stack may store up to  $n$  nodes in memory.**