5) [**21. Merge Two Sorted Lists**](https://leetcode.com/problems/merge-two-sorted-lists/)  
CODE  
class Solution {

public:

    ListNode\* mergeTwoLists(ListNode\* list1, ListNode\* list2) {

        ListNode dummy; // Dummy node to simplify the logic

        ListNode\* current = &dummy; // Pointer to track the merged list

        while (list1 && list2) {

            if (list1->val < list2->val) {

                current->next = list1;

                list1 = list1->next;

            } else {

                current->next = list2;

                list2 = list2->next;

            }

            current = current->next;

        }

        // Attach remaining nodes from list1 or list2

        current->next = list1 ? list1 : list2;

        return dummy.next; // Return the head of the merged list

    }

};

OUTPUT  
