

Description

Solution

Discuss (999+)

Submissions

21. Merge Two Sorted Lists

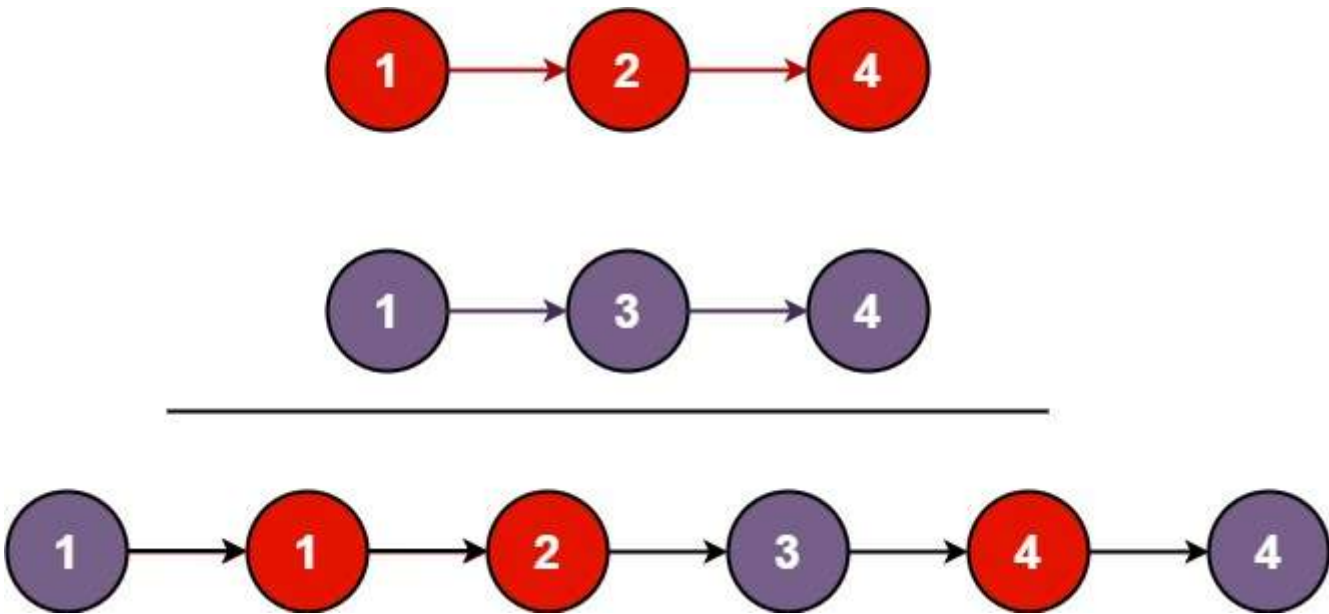
Easy 15425 1351 Add to List Share

You are given the heads of two sorted linked lists `list1` and `list2`.

Merge the two lists in a one **sorted** list. The list should be made by splicing together the nodes of the first two lists.

Return *the head of the merged linked list*.

Example 1:



Input: list1 = [1,2,4], list2 = [1,3,4]
Output: [1,1,2,3,4,4]

Example 2:

Input: list1 = [], list2 = []
Output: []

Example 3:

Input: list1 = [], list2 = [0]
Output: [0]

Java Autocomplete

```
4 * int val;
5 * ListNode next;
6 * ListNode() {}
7 * ListNode(int val) { this.val = val; }
8 * ListNode(int val, ListNode next) { this.val = val; this.next = next; }
9 * }
10 */
11 class Solution {
12     public ListNode mergeTwoLists( ListNode list1, ListNode list2 ) {
13
14         if(list1 == null)
15             return list2;
16         else if(list2 == null)
17             return list1;
18
19         ListNode tempNode1 = list1;
20         ListNode tempNode2 = list2;
21
22         ListNode newList = new ListNode(0);
23         ListNode currentNode = newList;
24
25         while(tempNode1 != null && tempNode2 != null){
26             if(tempNode1.val < tempNode2.val){
27                 currentNode.next = new ListNode(tempNode1.val);
28                 tempNode1 = tempNode1.next;
29             }else{
30                 currentNode.next = new ListNode(tempNode2.val);
31                 tempNode2 = tempNode2.next;
32             }
33             currentNode = currentNode.next;
34         }
35
36         while(tempNode1 != null){
37             currentNode.next = new ListNode(tempNode1.val);
38             tempNode1 = tempNode1.next;
39             currentNode = currentNode.next;
40         }
41
42         while(tempNode2 != null){
43             currentNode.next = new ListNode(tempNode2.val);
44             tempNode2 = tempNode2.next;
45             currentNode = currentNode.next;
46         }
47
48         return newList.next;
49     }
50 }
```