21. Merge Two Sorted Lists

Easy 19.3K 1.8K

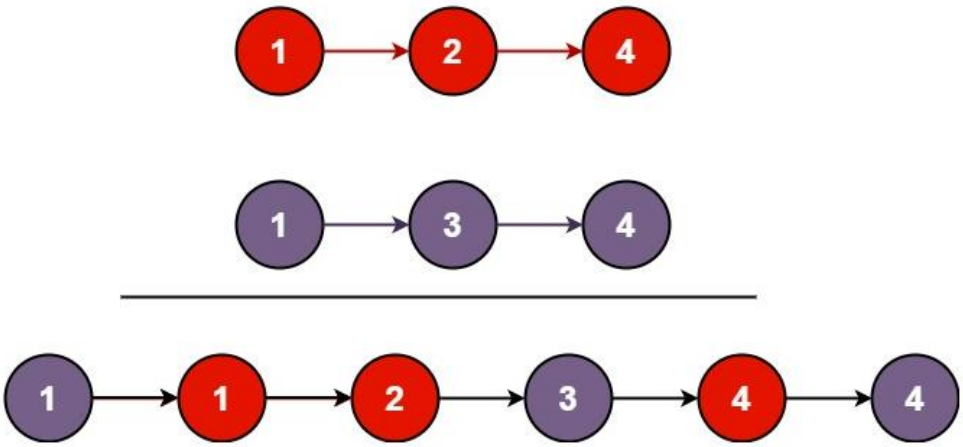
Companies

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

Merge the two lists into 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]
```

```python
# Definition for singly-linked list.
# class ListNode:
#     def __init__(self, val=0, next=None):
#         self.val = val
#         self.next = next
class Solution:
    def mergeTwoLists(self, list1: Optional[ListNode], list2: Optional[ListNode]) ->
Optional[ListNode]:
        temp1=list1
        temp2=list2
        l=ListNode()
        ans=l
        while ( temp1 != None and temp2 != None) :
            if temp1.val<=temp2.val:
                l.next=ListNode(temp1.val)
                l=l.next
                temp1=temp1.next
            else:
                l.next=ListNode(temp2.val)
```

```
            l=l.next
            temp2=temp2.next
    while temp1 !=None:
        l.next=ListNode(temp1.val)
        l=l.next
        temp1=temp1.next
    while temp2 !=None:
        l.next=ListNode(temp2.val)
        l=l.next
        temp2=temp2.next

    return ans.next
```