# 25. 合并两个排序的链表

[NowCoder](https://www.nowcoder.com/practice/d8b6b4358f774294a89de2a6ac4d9337?tpId=13&tqId=11169&tPage=1&rp=1&ru=/ta/coding-interviews&qru=/ta/coding-interviews/question-ranking&from=cyc_github)

## 题目描述

## 解题思路

### 递归

public ListNode Merge(ListNode list1, ListNode list2) {
 if (list1 == null)
 return list2;
 if (list2 == null)
 return list1;
 if (list1.val <= list2.val) {
 list1.next = Merge(list1.next, list2);
 return list1;
 } else {
 list2.next = Merge(list1, list2.next);
 return list2;
 }
}

### 迭代

public ListNode Merge(ListNode list1, ListNode list2) {
 ListNode head = new ListNode(-1);
 ListNode cur = head;
 while (list1 != null && list2 != null) {
 if (list1.val <= list2.val) {
 cur.next = list1;
 list1 = list1.next;
 } else {
 cur.next = list2;
 list2 = list2.next;
 }
 cur = cur.next;
 }
 if (list1 != null)
 cur.next = list1;
 if (list2 != null)
 cur.next = list2;
 return head.next;
}