21. Merge Two Sorted Lists

题目描述： https://leetcode.com/problems/merge-two-sorted-lists/

> 将两个有序（升序）链表merge起来，最终结果全部元素按照升序排列

解题思路：

利用递归的方法 将其拆成子问题。

代码：

```
/**
 * Definition for singly-linked list.
 * struct ListNode {
 *     int val;
 *     ListNode *next;
 *     ListNode(int x) : val(x), next(NULL) {}
 * };
 */
class Solution {
public:
    ListNode* mergeTwoLists(ListNode* l1, ListNode* l2) {
        if (l1 == NULL) return l2;
        if (l2 == NULL) return l1;
        if (l1->val <= l2->val) {
            l1->next = mergeTwoLists(l1->next, l2);
            return l1;
        }
        else {
            l2->next = mergeTwoLists(l1, l2->next);
            return l2;
        }
    }
};
```