

2. Add Two Numbers

题目描述: <https://leetcode.com/problems/add-two-numbers/>

给定两个用链表表示的数字，按照倒序排列，求两个数的和，要求也按照链表返回。
例如：

```
Input: (2 -> 4 -> 3) + (5 -> 6 -> 4)
Output: 7 -> 0 -> 8
```

解题思路：

将结果存到新的链表里。

代码：

```

/**
 * Definition for singly-linked list.
 * struct ListNode {
 *     int val;
 *     ListNode *next;
 *     ListNode(int x) : val(x), next(NULL) {}
 * };
 */
class Solution {
public:
    ListNode* addTwoNumbers(ListNode* l1, ListNode* l2) {
        ListNode* p = l1, *q = l2;
        ListNode* newList = new ListNode(0);
        ListNode* now = newList;
        int flag = 0;
        while(p || q){
            int i = 0, j = 0;
            if(p){
                i = p->val;
                p = p->next;
            }
            if(q){
                j = q->val;
                q = q->next;
            }
            int res = (i+j+flag)%10;
            flag = (i+j+flag)/10;
            ListNode* newNode = new ListNode(res);
            now->next = newNode;
            now = newNode;
        }
        if(flag){
            ListNode* newNode = new ListNode(flag);
            now->next = newNode;
            now = newNode;
        }
        return newList->next;
    }
};

```