

1. AddTwoNumbers
2. Merge k Sorted Lists
3. Reverse LinkedLists

문제 1) AddTwoNumbers

Problem

You are given two non-empty linked lists representing two non-negative integers. The digits are stored in reverse order and each of their nodes contain a single digit. Add the two numbers and return it as a linked list.

You may assume the two numbers do not contain any leading zero, except the number 0 itself.

Example:

Input: (2 -> 4 -> 3) + (5 -> 6 -> 4)

Output: 7 -> 0 -> 8

Explanation: $342 + 465 = 807$.

문제 Format

```
/**
 * Definition for singly-linked list.
 * public class ListNode {
 *     int val;
 *     ListNode next;
 *     ListNode() {}
 *     ListNode(int val) { this.val = val; }
 *     ListNode(int val, ListNode next) { this.val = val; this.next = next; }
 * }
 */
class Solution {
    public ListNode solve (ListNode l1, ListNode l2) {

    }
}
```

K개의 정렬된 리스트 병합 (Merge k Sorted Lists)

설명

K개의 소팅된 LinkedList의 배열 lists가 주어집니다.
각각의 LinkedList는 오름차순으로 정렬되어있습니다.

K개의 소팅된 LinkedList 배열 lists를, 하나의 정렬된 LinkedList로 병합하고 리턴합니다.

입출력

Input: lists = [[1,4,5],[1,3,4],[2,7]]

Output: [1,1,2,3,4,4,5,7]

Explanation:

[1->4->5, 1->3->4, 2->7]

1->1->2->3->4->4->5->7

Input: lists = [[]]

Output: []

제한사항

$k == \text{lists.length}$

$0 \leq k \leq 10^4$

$0 \leq \text{lists}[i].\text{length} \leq 500$

$-10^4 \leq \text{lists}[i][j] \leq 10^4$

lists[i] is sorted in **ascending order**.

The sum of lists[i].length won't exceed 10^4 .

K개의 정렬된 리스트 병합 (Merge k Sorted Lists)

문제 Format

```
/**
 * Definition for singly-linked list.
 * public class ListNode {
 *     int val;
 *     ListNode next;
 *     ListNode() {}
 *     ListNode(int val) { this.val = val; }
 *     ListNode(int val, ListNode next) { this.val = val; this.next = next; }
 * }
 */
class Solution {
    public ListNode solve(ListNode[] lists) {

    }
}
```

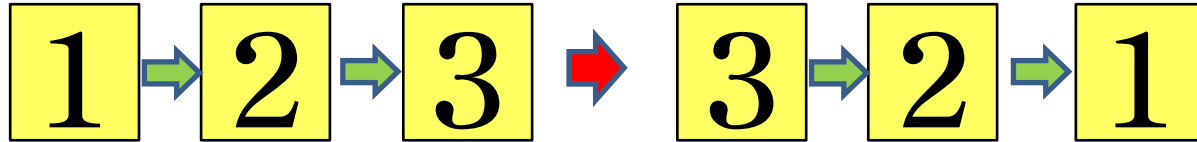
Reverse LinkedLists

설명

단일 연결 리스트가 주어집니다. 리스트를 reverse해서 reversed lists를 리턴하세요
(Reverse a singly linked list.)

입출력

Input : head = [1,2,3]
Output: [3,2,1]



Input : head = []
Output: []

문제 Format

```
class ListNode{
    int val;
    ListNode next;
    ListNode(int x){
        this.val = x;
    }
}
class Solution {
    public ListNode solve(ListNode s) {
    }
}
```

제한사항

The number of nodes in the list is the range [0, 5000].
-5000 <= Node.val <= 5000