

Always take temporary node in iterative and try to think recursive solution

1. Remove duplicates from Linked list
  - a. 2 ways iterative and recursive
  - b. <https://leetcode.com/problems/remove-duplicates-from-sorted-list/submissions/>
  - c. <https://leetcode.com/problems/remove-duplicates-from-sorted-list-ii/>
2. Reverse Linked List
  - a. <https://leetcode.com/problems/reverse-linked-list-ii/solution/>  

```
ListNode* reverseList(ListNode* head) {  
    ListNode *cur = head, *prev = NULL, *next;  
    if(!head) return head;  
    while(cur){  
        next = cur->next;  
        cur->next = prev;  
        prev = cur;  
        cur = next;  
    }  
    return prev;  
}
```
  - b. <https://leetcode.com/submissions/detail/385090306/> (recursive)
3. Merge two sorted list
  - a. <https://www.interviewbit.com/problems/merge-two-sorted-lists/>
4. Check palindrome in  $O(1)$  space
  - a. <https://leetcode.com/problems/palindrome-linked-list/submissions/>
5. Add two numbers without reversing input
  - a. <https://leetcode.com/problems/add-two-numbers-ii/submissions/>
  - b. Add both no into stack
  - c. Now get two digits from two stack and front add to list
6. Detect cycle in linked list
  - a. Fast slow pointer concept
  - b. Once they intersect put slow at head and inc both 1 step again when they intersect that is the point where cycle is generated.
  - c. <https://leetcode.com/problems/linked-list-cycle-ii/solution/>
  - d. Do see complexity analysis <https://leetcode.com/problems/linked-list-cycle/solution/>
7. Split LL into k parts
  - a. <https://leetcode.com/problems/split-linked-list-in-parts/submissions/>
8. Copy list with random pointers
  - a. <https://leetcode.com/problems/copy-list-with-random-pointer/>
    - i. Traverse a list and create a clone list and mapping of address
    - ii. Second traversal and update random pointers
  - b. [https://leetcode.com/problems/copy-list-with-random-pointer/discuss/43491/A-solution-with-constant-space-complexity-O\(1\)-and-linear-time-complexity-O\(N\)](https://leetcode.com/problems/copy-list-with-random-pointer/discuss/43491/A-solution-with-constant-space-complexity-O(1)-and-linear-time-complexity-O(N))
    - Iterate the original list and duplicate each node. The duplicate of each node follows its original immediately.
    - Iterate the new list and assign the random pointer for each duplicated node.
    - Restore the original list and extract the duplicated nodes.
9. <https://leetcode.com/problems/flatten-a-multilevel-doubly-linked-list/>
10. Sort linked list : <https://leetcode.com/problems/sort-list>
  - a. Costat space merge sort
  - b. Recursive merge sort
11. <https://www.geeksforgeeks.org/sort-linked-list-0s-1s-2s-changing-links/>