**ASSIGNMENT 3**

**LINKED LIST**

**0. Implement (Singly/Doubly/Circular) LinkedList class with CRUD operations**

1. [**Reverse a linked list**](https://www.geeksforgeeks.org/reverse-a-linked-list/) **(Recursive /Iterative) (Easy)**
2. [Palindromic Linked List](http://geeksforgeeks.org/function-to-check-if-a-singly-linked-list-is-palindrome/) (Easy)
3. [**Add two numbers in the linked list**](https://www.geeksforgeeks.org/add-two-numbers-represented-by-linked-lists/) **(Medium)**
4. [**Detect and remove a loop in the linked list**](https://www.geeksforgeeks.org/detect-and-remove-loop-in-a-linked-list/) **(Medium)**
5. [**Intersection point in the linked list**](https://www.geeksforgeeks.org/write-a-function-to-get-the-intersection-point-of-two-linked-lists/) **(Easy to Medium)**
6. [Merge k Sorted Linked Lists](https://www.geeksforgeeks.org/merge-k-sorted-linked-lists/) (Easy to Medium)
7. [**Arrangement of Odd And Even Nodes In Linked List**](https://www.geeksforgeeks.org/rearrange-a-linked-list-such-that-all-even-and-odd-positioned-nodes-are-together/) **(Medium)**
8. [Remove all occurrences of duplicates from a sorted Linked List](https://www.geeksforgeeks.org/remove-occurrences-duplicates-sorted-linked-list/) (Medium)
9. **Merge two sorted linked lists (Easy)**
10. [**Reverse Linked List in K groups**](https://www.geeksforgeeks.org/reverse-linked-list-groups-given-size-set-2/) **(Medium)**
11. [**Clone with Linked With Random Pointers**](https://www.geeksforgeeks.org/a-linked-list-with-next-and-arbit-pointer/) **(Medium to Hard)**
12. [**Reorder Linked List**](https://leetcode.com/problems/reorder-list/) **(Hard)**
13. [Swap K nodes from the end](https://www.geeksforgeeks.org/swap-kth-node-from-beginning-with-kth-node-from-end-in-a-linked-list/) (Medium to hard)
14. [Reverse Alternate K nodes](https://www.geeksforgeeks.org/reverse-alternate-k-nodes-in-a-singly-linked-list/) (Medium)
15. [Sort a linked list](https://leetcode.com/problems/sort-list/) (Hard)
16. Delete Node in linked List (Easy)
17. [Length of longest Palindrome](https://www.geeksforgeeks.org/length-longest-palindrome-list-linked-list-using-o1-extra-space/) (Hard)
18. [Function to check if a singly linked list is palindrome](https://www.geeksforgeeks.org/function-to-check-if-a-singly-linked-list-is-palindrome/)
19. [Intersection of two Sorted Linked Lists](https://www.geeksforgeeks.org/intersection-of-two-sorted-linked-lists/)
20. [C/C++ Program for Remove duplicates from a sorted linked list](https://www.geeksforgeeks.org/remove-duplicates-from-a-sorted-linked-list/)
21. [Remove duplicates from an unsorted linked list geeksforgeeks.org 196 Comments](https://www.geeksforgeeks.org/remove-duplicates-from-an-unsorted-linked-list/)
22. [C/C++ Program for Union and Intersection of two Linked Lists](https://www.geeksforgeeks.org/union-and-intersection-of-two-linked-lists/)

H/W: Subtract Two Numbers, find the middle element in the linked list.