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**Assignment 6 - Linked List**

**(100 marks)**

**09th August 2021**

# Prerequisites

Understanding of concept and implementation of linked list.

**It is mandatory to complete this assignment in C Language.**

# Problems

1. Implement a stack(operations - push, pop, is\_empty,peek).
2. Implement a queue (operations - enqueue, dequeue, is\_empty,peek).
3. Implement a double ended queue (deque). It should perform these operations - add an element at head, add an element at tail, remove element from head, remove element from tail, peek head, peek tail, check if given element is present in deque or not.
4. [Check if the given singly linked list is palindrome or not.](https://leetcode.com/problems/palindrome-linked-list/)
5. [Remove duplicates from a sorted linked list](https://leetcode.com/problems/remove-duplicates-from-sorted-list-ii/)
6. [Remove Nth Node From End of List](https://leetcode.com/problems/remove-nth-node-from-end-of-list/)
7. [Reverse the linked list](https://leetcode.com/problems/reverse-linked-list-ii/)
8. [Merge two Sorted List](https://leetcode.com/problems/merge-two-sorted-lists/)
9. [Rotate a Linked List](https://leetcode.com/problems/rotate-list/)
10. [Return the node from where cycle begins, if cycle exists, in the singly linked list.](https://leetcode.com/problems/linked-list-cycle-ii/)

# Submission

As always, please share a pdf file consisting of github links to your solutions.