CODING BLOCKS

Linked List Assignment

Batch: Crux

1. Insert a node into Linked List at ith position recursively
2. Delete node at ith position from Linked list recursively
3. Implement code to swap two elements of a Linked List. (swap nodes and not just their data)
4. Eliminate duplicates from a sorted linked list
5. Merge two sorted linked lists into one.
6. Find midpoint of a Linked List
7. Implement Bubble Sort, Selection Sort, Insertion Sort and Merge Sort using recursion.
8. Implement Bubble Sort, Selection Sort, Insertion Sort without using recursion.
9. Check if a linked list is a palindrome
10. Reverse Linked List
    a. Using recursion
    b. Without using recursion
11. Arrange elements in a Linked List such that all even numbers are placed after odd numbers.
12. Print a given linked list in reverse order. Tail first. You can’t change any pointer in the linked list.
13. Append the last n elements of a linked list to the front.
    e.g. for 1→ 2→ 3 → 4 → 5 → 6→ null and n = 2 return 5→ 6→ 1→ 2→ 3 → 4 → null
14. Implement kReverse(int k) i.e. you reverse first K elements then reverse next K elements and join the linked list and so on.
    3 → 4 → 5 → 2 → 6 → 1 → 9 for kreverse(3) becomes 5 → 4 → 3 → 1 → 6 → 2 → 9 → 1