## **Linked List**

## Intermediate Level Questions:

1. Write a program to get the "Nth" Node from the end of the Singly Linked List.

[Practice here: <a href="https://practice.geeksforgeeks.org/problems/nth-node-from-end-of-linked-list/1">https://practice.geeksforgeeks.org/problems/nth-node-from-end-of-linked-list/1</a> ]

2. Write a Program to check whether the Singly Linked list is a palindrome or not.

[Practice here: <a href="https://practice.geeksforgeeks.org/problems/check-if-linked-list-is-pallindrome/1">https://practice.geeksforgeeks.org/problems/check-if-linked-list-is-pallindrome/1</a>]

3. Write a Program to reverse the Linked List. (Both Iterative and recursive)

[Practice here: <a href="https://practice.geeksforgeeks.org/problems/reverse-a-linked-list/1">https://practice.geeksforgeeks.org/problems/reverse-a-linked-list/1</a>]

- 4. Reverse a Linked List in group of Given Size. [Very Imp]
  [Practice here: <a href="https://practice.geeksforgeeks.org/problems/reverse-a-linked-list-in-groups-of-given-size/1">https://practice.geeksforgeeks.org/problems/reverse-a-linked-list-in-groups-of-given-size/1</a>]
- 5. Write a program to Detect loop in a linked list.

  [Practice here: <a href="https://practice.geeksforgeeks.org/problems/detect-loop-in-linked-list/1">https://practice.geeksforgeeks.org/problems/detect-loop-in-linked-list/1</a>
  ]
- 6. Write a program to find the length of loop in the linked list.

  [Practice here: <a href="https://practice.geeksforgeeks.org/problems/find-length-of-loop/1">https://practice.geeksforgeeks.org/problems/find-length-of-loop/1</a>]
- 7. Write a function to delete the Linked List. [Follow: <a href="https://www.geeksforgeeks.org/write-a-function-to-delete-a-linked-list/">https://www.geeksforgeeks.org/write-a-function-to-delete-a-linked-list/</a>]
- 8. Remove Duplicates in a sorted Linked List.

  [Practice here: <a href="https://practice.geeksforgeeks.org/problems/remove-duplicate-element-from-sorted-linked-list/1">https://practice.geeksforgeeks.org/problems/remove-duplicate-element-from-sorted-linked-list/1</a>
- 9. Remove Duplicates in a Unsorted Linked List.

  [Practice here: <a href="https://practice.geeksforgeeks.org/problems/remove-duplicates-from-an-unsorted-linked-list/1">https://practice.geeksforgeeks.org/problems/remove-duplicates-from-an-unsorted-linked-list/1</a>

10. Write a Program to Move the last element to Front in a Linked List.

[Follow: <a href="https://www.geeksforgeeks.org/move-last-element-to-front-of-a-given-linked-list/">https://www.geeksforgeeks.org/move-last-element-to-front-of-a-given-linked-list/</a>]

11. Add "1" to a number represented as a Linked List.

 $[Practice\ here: \ \underline{https://practice.geeksforgeeks.org/problems/add-1-to-a-number-represented-as-linked-list/1}]$ 

12. Add two numbers represented by linked lists.

 $[Practice\ here: \ \underline{https://practice.geeksforgeeks.org/problems/add-two-numbers-represented-by-linked-lists/1}]$ 

13. Intersection of two Sorted Linked List.

 $\left[ \begin{array}{c} Practice\ here: \underline{https://practice.geeksforgeeks.org/problems/intersection-of-two-sorted-linked-lists/1} \end{array} \right]$ 

14. Intersection Point of two Linked Lists.

[Practice here: <a href="https://practice.geeksforgeeks.org/problems/intersection-point-in-y-shapped-linked-lists/1">https://practice.geeksforgeeks.org/problems/intersection-point-in-y-shapped-linked-lists/1</a>

15. Merge Sort For Linked lists. [Very Important]

[Follow: <a href="https://www.geeksforgeeks.org/merge-sort-for-linked-list/">https://www.geeksforgeeks.org/merge-sort-for-linked-list/</a>]

16. Quicksort for Linked Lists.[Very Important]

[Follow: <a href="https://www.geeksforgeeks.org/quicksort-on-singly-linked-list/">https://www.geeksforgeeks.org/quicksort-on-singly-linked-list/</a> ]

17. Find the middle Element of a linked list.

[Practice here: <a href="https://practice.geeksforgeeks.org/problems/finding-middle-element-in-a-linked-list/1">https://practice.geeksforgeeks.org/problems/finding-middle-element-in-a-linked-list/1</a>]

18. Check if a linked list is a circular linked list.

[Practice here: <a href="https://practice.geeksforgeeks.org/problems/circular-linked-list/1">https://practice.geeksforgeeks.org/problems/circular-linked-list/1</a>]

19. Split a Circular linked list into two halves.

 $[Practice\ here: \ \underline{https://practice.geeksforgeeks.org/problems/split-a-circular-linked-list-into-two-halves/1}\ ]$ 

20. Deletion from a Circular Linked List.

[Follow here: <a href="https://www.geeksforgeeks.org/deletion-circular-linked-list/">https://www.geeksforgeeks.org/deletion-circular-linked-list/</a>

21. Count Nodes in a Circular Linked List.

[Follow here: <a href="https://www.geeksforgeeks.org/count-nodes-circular-linked-list/">https://www.geeksforgeeks.org/count-nodes-circular-linked-list/</a>

22. Exchange first and last nodes in a linked list.

[Follow here: <a href="https://www.geeksforgeeks.org/exchange-first-last-node-circular-linked-list/">https://www.geeksforgeeks.org/exchange-first-last-node-circular-linked-list/</a> ]

23. Reverse a Doubly Linked list.

 $[Practice\ here: \underline{\text{https://practice.geeksforgeeks.org/problems/reverse-a-doubly-linked-list/1}}]$ 

24. Find pairs with a given sum in a DLL.

[Follow here: <a href="https://www.geeksforgeeks.org/find-pairs-given-sum-doubly-linked-list/">https://www.geeksforgeeks.org/find-pairs-given-sum-doubly-linked-list/</a> ]

25. Count triplets in a sorted DLL whose sum is equal to given value "X".

[Follow here: <a href="https://www.geeksforgeeks.org/count-triplets-sorted-doubly-linked-list-whose-sum-equal-given-value-x/">https://www.geeksforgeeks.org/count-triplets-sorted-doubly-linked-list-whose-sum-equal-given-value-x/</a>

- 26. Sort a "k" sorted Doubly Linked list.[Very IMP]
  [Follow here: https://www.geeksforgeeks.org/sort-k-sorted-doubly-linked-list/]
- 27. Rotate Doubly Linked list by N nodes.

  [Follow here: https://www.geeksforgeeks.org/rotate-doubly-linked-list-n-nodes/]
- 28. Rotate a Doubly Linked list in group of Given Size.[Very IMP] [Follow here: <a href="https://www.geeksforgeeks.org/reverse-doubly-linked-list-groups-given-size/">https://www.geeksforgeeks.org/reverse-doubly-linked-list-groups-given-size/</a>]
- 29. Can we reverse a linked list in less than O(n)? [Study: <a href="https://www.geeksforgeeks.org/can-we-reverse-a-linked-list-in-less-than-on/">https://www.geeksforgeeks.org/can-we-reverse-a-linked-list-in-less-than-on/</a>]
- 30. Why Quicksort is preferred for. Arrays and Merge Sort for Linked Lists?

 $[Study: \underline{https://www.geeksforgeeks.org/why-quick-sort-preferred-for-arrays-and-merge-sort-for-linked-lists/}]$