# LINKLIST

### SINGLY LINKED LIST:-

- 1. Linked List Insertion
- 2. Find Length of a Linked List (Iterative and Recursive)
- 3. Search an element in a Linked List (Iterative and Recursive)
- 4. Write a function that counts the number of times a given int occurs in a Linked List
- 5. Move last element to front of a given Linked List
- 6. Linked List Deletion (Deleting a given key)
- 7. Linked List Deletion (Deleting a key at given position)
- 8. Delete a given node in Linked List under given constraints (MICROSOFT)
- 9. Write a function to delete a Linked List
- 10. Delete nodes which have a greater value on right side
- 11. Write a function to get Nth node in a Linked List
- 12. Nth node from the end of a Linked List
- 13. Print the middle of a given linked list
- 14. Delete middle of linked list
- 15. Detect loop in a linked list (MICROSOFT)
- 16. Find length of loop in linked list
- 17. Function to check if a singly linked list is palindrome (MICROSOFT)
- 18. Remove duplicates from a sorted linked list
- 19. Remove duplicates from an unsorted linked list
- 20. Swap nodes in a linked list without swapping data (MICROSOFT)
- 21. Pairwise swap elements of a given linked list
- 22. Pairwise swap elements of a given linked list by changing links
- 23. Intersection of two Sorted Linked Lists
- 24. Intersection point of two Linked Lists. (MICROSOFT)
- 25. Segregate even and odd nodes in a Linked List
- 26. Sort a linked list of 0s, 1s and 2s
- 27. Sort a linked list of 0s, 1s and 2s by changing links
- 28. Rearrange a given linked list in-place. (MICROSOFT)
- 29. Sort a linked list that is sorted alternating ascending and descending orders.
- 30. Delete alternate nodes of a Linked List
- 31. Rearrange a Linked List in Zig-Zag fashion
- 32. Sort linked list which is already sorted on absolute values
- 33. Partitioning a linked list around a given value and keeping the original order
- 34. Reverse a linked list
- 35. Iteratively Reverse a linked list using only 2 pointers (An Interesting Method)

- 36. Reverse a Linked List in groups of given size (MICROSOFT)
- 37. Delete N nodes after M nodes of a linked list (MICROSOFT)
- 38. Merge two sorted linked lists such that merged list is in reverse order
- 39. Add two numbers represented by linked lists | Set 1 (MICROSOFT)
- 40. Add two numbers represented by linked lists | Set 2
- 41. Add 1 to a number represented as linked list
- 42. Subtract Two Numbers represented as Linked Lists
- 43. Rotate a Linked List
- 44. Rotate Linked List block wise
- 45. Flattening a Linked List
- 46. Flatten a multilevel linked list
- 47. Flatten a multi-level linked list | Set 2 (Depth wise)
- 48. Given a linked list of line segments, remove middle points
- 49. Clone a linked list with next and random pointer | Set 1
- 50. Clone a linked list with next and random pointer | Set 2
- 51. Clone a linked list with next and random pointer in O(1) space
- 52. Select a Random Node from a Singly Linked List (MICROSOFT)
- 53. Point arbit pointer to greatest value right side node in a linked list
- 54. Delete last occurrence of an item from linked list
- 55. Decimal Equivalent of Binary Linked List (COMPANY)
- 56. Find pair for given sum in a sorted singly linked without extra space
- 57. Count pairs from two linked lists whose sum is equal to a given value
- 58. Find a triplet from three linked lists with sum equal to a given number
- 59. Length of longest palindrome list in a linked list using O(1) extra space
- 60. Adding two polynomials using Linked List
- 61. Move all occurrences of an element to end in a linked list
- 62. Remove all occurrences of duplicates from a sorted Linked List
- 63. Remove every k-th node of the linked list
- 64. Merge two sorted linked lists
- 65. Merge two sorted lists (in-place)
- 66. Merge a linked list into another linked list at alternate positions
- 67. In-place Merge two linked lists without changing links of first list
- 68. Merge K sorted linked lists | Set 1 (MICROSOFT)
- 69. Merge k sorted linked lists | Set 2 (Using Min Heap) (MICROSOFT)
- 70. Union and Intersection of two Linked Lists
- 71. Union and Intersection of two linked lists | Set-2 (Using Merge Sort)
- 72. Union and Intersection of two linked lists | Set-3 (Hashing)
- 73. Generic Linked List in C.
- 74. QuickSort on Singly Linked List
- 75. Insertion Sort for Singly Linked List

# 76. Merge Sort for Linked Lists (MICROSOFT)

# **Doubly Linked List:**

- 1. Doubly Linked List Introduction and Insertion
- 2. Program to find size of Doubly Linked List
- 3. Delete a Doubly Linked List node at a given position
- 4. Delete a node in a Doubly Linked List
- 5. Reverse a Doubly Linked List
- 6. QuickSort on Doubly Linked List
- 7. Merge Sort for Doubly Linked List
- 8. Find pairs with given sum in doubly linked list
- 9. Count triplets in a sorted doubly linked list whose sum is equal to a given value x
- 10. Insert value in sorted way in a sorted doubly linked list
- 11. Remove duplicates from a sorted doubly linked list
- 12. Delete all occurrences of a given key in a doubly linked list
- 13. Remove duplicates from an unsorted doubly linked list
- 14. Sort a k sorted doubly linked list
- 15. Priority Queue using doubly linked list

#### Circular Linked List:

- 1. Circular Linked List Introduction and Applications,
- 2. Circular Singly Linked List | Insertion
- 3. Circular Linked List Traversal
- 4. Check if a linked list is Circular Linked List
- 5. Deletion from a Circular Linked List
- 6. Split a Circular Linked List into two halves
- 7. Sorted insert for circular linked list
- 8. Circular Queue | Set 2 (Circular Linked List Implementation)
- 9. Josephus Circle using circular linked list (MICROSOFT)
- 10. Convert singly linked list into circular linked list
- 11. Implementation of Deque using circular array
- 12. Doubly Circular Linked List | Set 1 (Introduction and Insertion)
- 13. Doubly Circular Linked List | Set 2 (Deletion)