ARRAYS

1. Find 2 elements with given sum
2. Majority Element
3. Find the number occuring odd number of times
4. Merge an array of size n into another of size m + n
5. Rotate an array
6. Leaders in an array
7. Majority element in sorted array
8. Segregate 0s and 1s in an array
9. Product array
10. Find 2 repeating elements
11. Find the smallest missing number
12. Find max j-i such that arr[j] > arr[i]
13. Find subarray with given sum
14. Find the smallest positive number missing from an unsorted array
15. Find 2 numbers with odd occurence
16. Largest subarray with equal number of 0s and 1s
17. Replace every element with the greatest on right side
18. Stock buy sell to maximize profit
19. Find common elements in 3 sorted arrays
20. Nuts and bolts problem
21. Trapping rain water
22. Merge 2 sorted arrays in O(1) space

STRINGS

1. Remove duplicates from string
2. Remove characters from the first string which are present in the second string
3. Check if strings are rotations of each other
4. Print all permutations of a given string
5. Reverse words in a given string
6. Find the smallest window in a string containing all the characters of the second string
7. Check whether two strings are anagrams of each other
8. Write your own atoi()
9. Rearrange a string so that similar characters become d distance away
10. Find excel column name from a given column number

LINKED LIST

1. Get Nth node in a linked list
2. Delete a node given a pointer to it
3. Print middle
4. Find Nth node from the end
5. Delete linked list
6. Reverse linked list
7. Detect loop in a linked list - McKinsey
8. Check if a singly linked list is a palindrome
9. Clone a linked list with next and random pointer
10. Memory efficient doubly linked list
11. Insert in sorted linked list
12. Get intersection point of 2 linked lists
13. Print reverse of a linked list
14. Remove duplicates from sorted linked list
15. Remove duplicates from unsorted linked list
16. Reverse doubly linked list
17. Merge 2 sorted linked lists
18. Merge sort for linked lists
19. Reverse a linked list in groups of given size
20. Linked list vs Array
21. Sorted insert for circular linked list
22. Detect and remove loop in a linked list
23. Add 2 numbers represented by linked lists
24. Clone a linked list with next and random pointer | Set 2

TREES

1. Recursive Tree Traversals
2. Calculate size of tree
3. Check if two trees are identical
4. Height of tree
5. Delete a tree
6. Convert a binary tree to its mirror tree
7. Given two traversal sequences, construct the binary tree
8. Print all root to leaf paths in a binary tree
9. Lowest common ancestor in BST

10. Level order traversal
11. Count leaf nodes
12. Spiral level order traversal
13. Diameter of tree
14. Inorder traversal without recursion
15. Root to leaf path sum equal to given number
16. Construct tree from inorder and preorder traversal
17. Print nodes at k distance from root
18. Applications of tree
19. Check if a binary tree is a subtree of another binary tree
20. Find inorder successor for all nodes
21. Vertical sum in a given binary tree
22. Maximum sum root to leaf path
23. Check if a binary tree is complete or not
24. Iterative preorder traversal
25. Iterative postorder traversal
26. Reverse level order traversal
27. Binary tree to doubly linked list OR Binary tree to double linked list
28. Find height of tree iteratively
29. Left view of binary tree
30. Lowest common ancestor binary tree
31. Print all nodes at k distance from given node
32. Right view of binary tree
33. Check if binary tree is subtree of another binary tree
34. Print nodes b/w two given levels
35. Find node with min value in BST
36. Check if a binary tree is BST
37. Find kth smallest element in BST
38. Sorted linked list to balanced BST
39. Kth largest element in BST
40. Advantages of BST over hash table
41. Kth smallest element in BST using O(1) space

STACK

1. Implement queue using stack
2. Check for balanced parentheses in an expression
3. Reverse a string using recursion
4. Design and implement special stack
5. Implement stack using queues
6. Expression evaluation

GRAPH

1. Applications of MST
2. Applications of DFS
3. DFS
4. BFS
5. Detect cycle in a directed graph
6. Find if there is a path b/w two vertices in a directed graph
7. Floyd Warshall Algorithm
8. Detect cycle in undirected graph
9. Kruskal's Algorithm
10. Graph and its representations
11. Prim's algorithm
12. Prim's algorithm 2
13. Dijkstra's algorithm
14. Dijkstra's algorithm 2
15. Bellman-Ford Algorithm
16. Transitive closure of a graph
17. Topological sorting
18. Shortest path in directed acyclic graph
19. Strongly connected components
20. Connectivity in directed graph
21. Detect cycle in an undirected graph 2
22. Applications of BFS

MATRIX

1. Maximum size square submatrix with all 1s
2. Turn an image by 90 degree
3. Search in a row wise and column wise sorted matrix
4. Print a given matrix in spiral form
5. A boolean matrix question
6. Min cost path
7. Find the row with maximum number of 1s
8. Find the number of islands
9. Maximum sum rectangle in a 2D matrix

10. Rotate matrix clockwise
11. Given a boolean matrix. Find k such that all elements in the kth row are 0 and the kth column are 1
12. Maximum size rectangle binary submatrix with all 1s

QUEUE

1. Level order traversal
2. Spiral level order traversal
3. Implement queue using stacks
4. Applications of queue
5. Implement stack using queues
6. First circular tour that visits all petrol pumps
7. Iterative height of binary tree

HEAP

1. k largest elements in an array
2. Applications of heap
3. Build heap
4. Median in a stream of integers
5. Sort a k sorted array
6. Sort numbers stored on different machines
7. Merge k sorted arrays
8. Print all elements in sorted order from row and column wise sorted matrix
9. kth smallest element in unsorted array
10. kth largest element in stream -> Zupee
11. Why prefer heap over BST for priority queue

HASHING

1. Check for pair in array with sum as x
2. Vertical sum in binary tree
3. Largest subarray with equal number of 0s and 1s
4. Find if there is a subarray with 0 sum
5. Print binary tree in vertical order

6. Special data structure
7. Find itinerary from a given list of tickets
8. Largest subarray with 0 sum

BST

1. Find min element
2. Check if binary tree is BST -> McKinsey
3. Inorder successor
4. kth smallest element using order statistics
5. Sorted linked list to balanced BST
6. Construct BST from given preorder traversal
7. Construct BST from given preorder traversal | Set 2

PUZZLES

1. Measure 1 litre using 2 vessels and infinite water supply(This problem is not asked to be coded. It is asked only as a puzzle. See this too)
2. 2 eggs 100 floors
3. Mutilated chessboard problem
4. 100 prisoners, red and blue hats
5. Measure weight of an elephant
6. Measure 9 minutes
7. Shortest path in cube
8. Angle b/w hour and minute hand
9. 100 doors puzzle
10. Biased to unbiased coin
11. Red blue pills
12. 25 horses puzzle
13. Poisoned bottles
14. Find the lightest coin
15. Snail and well problem
16. Prisoner hat riddle
17. Cut the cake
18. 3 bulbs and switches problem -> Koo (Indian Twitter)
19. Ask the question
20. Cheating husbands
21. 12 marbles and a scale

22. Socks puzzle
23. Bee and train puzzle
24. Will you die
25. Globe walker
26. Crossing the river
27. Changing your mind
28. Divide cards symmetrically
29. Where are you
30. Real and fake coins
31. Camel and banana puzzle
32. Probability of observing a car
33. Red and blue marbles
34. Warden and 23 prisoners
35. Crossing a bridge
36. Age of daughter
37. Trains and birds
38. Inverted cards puzzle
39. Aligned clock hands
40. 3 blind men hat color
41. Gold bar problem
42. 5 pirates 100 coins
43. A box of defective balls
44. Probability of having boy
45. Days of month using 2 dice
46. Red and blue balls
47. Measure 45 seconds -> McKinsey
48. Water level
49. 8 marbles find heaviest
50. 100 people with sword
51. Lie tribe and truth tribe
52. Monty hall problem
53. Girl counting on fingers