🧩 Arrays

Easy

1. Second Largest Element
2. Rotate an Array by K
3. Non-Decreasing Array
4. Equilibrium Index
5. Sum Between i and j
6. Find Largest/Smallest Element
7. Remove Duplicates (Sorted Array)
8. Remove Duplicates (Unsorted Array using Set)
9. Reverse Array
10. Check if Array is Palindrome
11. Count Frequency of Elements
12. Find Missing Number
13. Move Negative Numbers to Start
14. Make Unique Array
15. Move Zeroes to End

Medium

1. Subarray Sum Equals K
2. Kadane's Algorithm (Maximum Subarray Sum)
3. Leaders in an Array
4. Stock Buy and Sell (Single & Multi Transaction)
5. Rearrange Positive & Negative Numbers Alternately
6. Next Permutation
7. Product of Array Except Self
8. Longest Subarray with Zero Sum
9. Count All Subarrays Having Sum Divisible By K
10. Maximum Sum Circular Array
11. Maximum Subarray Sum After K Concatenations
12. Pair Sum
13. Sum of Two Elements Equals Third

Hard

1. Maximum Product Subarray
2. Longest Consecutive Sequence
3. Count Inversions
4. Minimum Swaps to Sort
5. Maximum Sum Rectangle
6. Sliding Window Maximum
7. Median of Two Sorted Arrays

Strings

Easy

1. Reverse String Word Wise
2. String Encoding
3. Check Palindrome String
4. Remove Vowels / Spaces
5. Find ASCII Value of Character
6. Capitalize First and Last Character of Each Word
7. Find Frequency of Characters
8. Splitting String into Words

Medium

1. Longest Common Prefix
2. Longest Substring Without Repeating Characters
3. Valid Anagram
4. Group Anagrams
5. Reverse Words in a Sentence
6. Count and Say Problem
7. Minimum Operations to Make String Equal
8. Beautiful Strings

Hard

1. Minimum Window Substring
2. Regular Expression Matching
3. Word Break
4. Edit Distance
5. Rabin-Karp / KMP String Matching

🔢 Sorting

Easy

1. Bubble Sort
2. Insertion Sort
3. Selection Sort

Medium

1. Merge Sort
2. Quick Sort
3. Heap Sort

Hard

1. Counting Sort
2. Bucket Sort
3. Radix Sort
4. External Merge Sort

🎯 Two Pointers / Sliding Window

Easy

1. Reverse Array Using Two Pointers
2. Check Palindrome (String / Array)
3. Maximum Sum Subarray of Size K
4. Count Occurrence of Anagram

Medium

1. Two Sum (Sorted Array using Two Pointers)
2. Remove Duplicates from Sorted Array
3. Container With Most Water
4. Intersection of Two Sorted Arrays
5. Minimum Size Subarray Sum
6. Longest Repeating Character Replacement

Hard

1. 3Sum / 4Sum Problem
2. Trapping Rain Water
3. Sliding Window Maximum
4. Minimum Window Substring

🔍 Binary Search

Easy

1. Binary Search (Iterative & Recursive)
2. Lower Bound / Upper Bound
3. First and Last Occurrence in Sorted Array

Medium

1. Search in Rotated Sorted Array
2. Find Peak Element
3. Square Root using Binary Search
4. Aggressive Cows
5. Allocate Books

Hard

1. Median of Two Sorted Arrays
2. Painter Partition Problem
3. Find Kth Element in Two Sorted Arrays

🧮 Recursion & Math

Easy

1. Factorial
2. Fibonacci
3. Prime Number Check
4. Armstrong Number
5. Count Digits / Sum of Digits

Medium

1. Power of Number (Fast Exponentiation)
2. Tower of Hanoi
3. Generate All Subsequences / Subsets

Hard

1. N-Queens Problem
2. Sudoku Solver
3. Word Search

💡 Greedy Algorithms

Easy

1. Activity Selection Problem
2. Fractional Knapsack

Medium

1. Job Sequencing Problem
2. Minimum Coins for Change
3. Huffman Encoding

Hard

1. Dijkstra’s Algorithm
2. Kruskal’s Algorithm
3. Prim’s Algorithm

♻️ Backtracking

Easy

1. Print All Subsequences
2. Generate Parentheses

Medium

1. N-Queens Problem
2. Rat in a Maze
3. Subset Sum

Hard

1. Sudoku Solver
2. Word Search II
3. Combination Sum / Permutations

🔗 Linked List

Easy

1. Reverse a Linked List
2. Mid-Point in Linked List

Medium

1. Merge Sort (on Linked List)
2. Add Two Linked Lists
3. Insertion Sort on Linked List
4. Delete Kth Node from End
5. Detect and Remove Cycle
6. Swap Nodes in Pairs
7. Segregate Odd Even
8. Append Nodes
9. Check if Linked List is Palindrome
10. K Reverse Linked List
11. Rearrange Linked List

Hard

1. Quick Sort on Linked List
2. Flatten Linked List / Binary Tree to Linked List
3. Clone Linked List with Random Pointer
4. Sorted Linked List to Balanced BST

Stack & Queue

Easy

1. Implement Stack Using Array
2. Implement Stack Using Linked List
3. Implement Queue Using Array
4. Implement Queue Using Linked List

Medium

1. Implement Queue Using 2 Stacks
2. Implement Stack Using 2 Queues
3. Min Stack
4. Next Greater Element
5. Stock Span Problem
6. Reverse Queue
7. Valid Parentheses
8. Sort a Stack

Hard

1. LRU Cache

🌳 Binary Trees

Easy

1. Preorder / Inorder / Postorder Traversal
2. Level Order Traversal

Medium

1. Height of Tree
2. Diameter of Tree
3. Lowest Common Ancestor
4. Mirror Tree
5. Check Balanced Tree
6. ZigZag Order Traversal
7. Left View of Binary Tree
8. Top View of Binary Tree
9. Bottom Right View of Binary Tree

Hard

1. Serialize and Deserialize Binary Tree
2. Construct Binary Tree from Inorder and Preorder
3. Boundary Traversal
4. Vertical Order Traversal
5. Time to Burn Tree
6. Merge Two Binary Trees

🌲 Binary Search Tree (BST)

Easy

1. Check if Binary Tree is BST

Medium

1. LCA of Two Nodes in BST
2. BST Delete
3. Kth Smallest Element in BST
4. Predecessor and Successor in BST
5. Pair Sum in BST

Hard

1. Fix BST
2. Remove Keys Outside Given Range
3. Merge Two BSTs
4. Size of the Largest BST

🧭 Graphs

Easy

1. BFS / DFS
2. Representation (Adjacency List / Matrix)

Medium

1. Topological Sort
2. Detect Cycle (BFS/DFS)
3. Connected Components
4. Shortest Path in Unweighted Graph (BFS)

Hard

1. Dijkstra’s Algorithm
2. Bellman-Ford Algorithm
3. Floyd-Warshall Algorithm
4. Kruskal’s Algorithm
5. Prim’s Algorithm

🧠 Dynamic Programming (DP)

Easy

1. Fibonacci (DP)
2. Climbing Stairs
3. Minimum Cost Climbing Stairs

Medium

1. 0/1 Knapsack Problem
2. Longest Increasing Subsequence
3. Longest Common Subsequence
4. Subset Sum Problem
5. Coin Change

Hard

1. Matrix Chain Multiplication
2. Edit Distance
3. Partition Equal Subset Sum
4. Maximum Profit in Job Scheduling
5. Palindromic Subsequence Problems

⚙️ Bit Manipulation

Easy

1. Check if Number is Power of 2
2. Count Set Bits
3. Single Number (Find Element Appearing Once)

Medium

1. Subset Generation using Bits
2. XOR of All Subarrays
3. Find 2 Non-Repeating Elements

Hard

1. Divide Two Integers (without / operator)
2. Maximum XOR Pair
3. Count Total Set Bits from 1 to N

Matrix Problems

Easy

1. Matrix Symmetric
2. Spiral Order

Medium

1. Set Matrix Zeroes
2. Inplace Rotate Matrix 90 Degree
3. Rotate Matrix to Right
4. Matrix Median
5. Search in Row and Column Wise Sorted Matrix
6. Nth Element of Spiral Matrix

Hard

1. Maximum Sum Rectangle
2. Find All Subsquares of Size K

📜 Miscellaneous

Easy

1. Family Structure
2. Binary String with No Consecutive 1s

Medium

1. Nth Root of Integer
2. Closest Distance Pair

Hard

1. Maximum Product Count
2. Allocate Books
3. Tower of Hanoi