

# DSA 150 Problems for Mastery

## Arrays & Strings (30)

- Two Sum
- Best Time to Buy and Sell Stock
- Maximum Subarray
- Merge Sorted Array
- Remove Duplicates from Sorted Array
- Move Zeros
- Rotate Array
- Kadane's Algorithm
- Product of Array Except Self
- Subarray Sum Equals K
- Longest Consecutive Sequence
- Set Matrix Zeros
- Spiral Matrix
- Container With Most Water
- Trapping Rain Water
- Next Permutation
- Majority Element
- Find Duplicate Number
- Missing Number
- Kth Largest Element
- Sort Colors
- Minimum Window Substring
- Longest Substring Without Repeating Characters
- Valid Anagram
- Group Anagrams
- String Compression
- Reverse Words in String
- Longest Palindromic Substring
- Z Algorithm
- KMP Pattern Matching

## Linked List (20)

- Reverse Linked List
- Detect Cycle
- Merge Two Sorted Lists
- Remove Nth Node From End
- Intersection of Two Linked Lists
- Palindrome Linked List
- Add Two Numbers
- Swap Nodes in Pairs
- Reverse Nodes in K-Group
- Copy List with Random Pointer
- LRU Cache
- Flatten a Multilevel Doubly Linked List
- Rotate List
- Odd Even Linked List
- Remove Duplicates from Unsorted List

- Middle of Linked List
- Delete Node in a Linked List
- Reorder List
- Split Linked List in Parts
- Design Browser History

## Stack & Queue (20)

- Valid Parentheses
- Min Stack
- Next Greater Element
- Daily Temperatures
- Evaluate Reverse Polish Notation
- Largest Rectangle in Histogram
- Sliding Window Maximum
- Implement Queue using Stacks
- Implement Stack using Queues
- Decode String
- Asteroid Collision
- Remove K Digits
- Online Stock Span
- Simplify Path
- Maximal Rectangle
- Basic Calculator
- Circular Queue Design
- Monotonic Stack Problems
- LRU Cache using Deque
- First Unique Character in Stream

## Trees & BST (30)

- Binary Tree Inorder Traversal
- Binary Tree Level Order Traversal
- Maximum Depth of Binary Tree
- Diameter of Binary Tree
- Balanced Binary Tree
- Lowest Common Ancestor
- Validate Binary Search Tree
- Convert Sorted Array to BST
- Kth Smallest Element in BST
- Serialize and Deserialize Binary Tree
- Binary Tree Right Side View
- Path Sum I & II
- Symmetric Tree
- Invert Binary Tree
- Flatten Binary Tree to Linked List
- Construct Tree from Traversals
- Zigzag Level Order Traversal
- Morris Traversal
- Recover BST
- Binary Tree Cameras
- Sum Root to Leaf Numbers
- BST Iterator
- Range Sum of BST

- Maximum Path Sum
- Count Complete Tree Nodes
- Vertical Order Traversal
- Top View of Binary Tree
- Bottom View of Binary Tree
- Burning Tree Problem
- Boundary Traversal

## **Graphs (25)**

- BFS Traversal
- DFS Traversal
- Number of Islands
- Clone Graph
- Course Schedule I & II
- Detect Cycle in Graph
- Topological Sort
- Dijkstra's Algorithm
- Bellman Ford
- Floyd Warshall
- Minimum Spanning Tree (Kruskal)
- Minimum Spanning Tree (Prim)
- Word Ladder
- Shortest Path in Binary Matrix
- Rotting Oranges
- Bridges in Graph
- Articulation Points
- Kosaraju Algorithm
- Tarjan SCC
- Bipartite Graph Check
- Alien Dictionary
- Network Delay Time
- Cheapest Flights Within K Stops
- Evaluate Division
- Reconstruct Itinerary

## **DP, Greedy & Misc (25)**

- Climbing Stairs
- House Robber I & II
- Longest Increasing Subsequence
- 0/1 Knapsack
- Coin Change
- Edit Distance
- Matrix Chain Multiplication
- Palindrome Partitioning
- Word Break
- Unique Paths
- Minimum Path Sum
- Partition Equal Subset Sum
- Burst Balloons
- Egg Dropping Problem
- Job Sequencing
- Activity Selection

- Gas Station
- Jump Game I & II
- Greedy Scheduling
- N-Queens
- Sudoku Solver
- Bit Manipulation Basics
- Trie Implementation
- Design URL Shortener
- Bloom Filter Concept