14-Day DSA Problem Solving Plan Using Python (Days 6–14)

# Day 6: Dynamic Programming - 1D Basics

Climbing Stairs

House Robber

House Robber II

Maximum Subarray

Min Cost Climbing Stairs

Jump Game

Jump Game II

Unique Paths

Coin Change

Coin Change II

Longest Increasing Subsequence

Partition Equal Subset Sum

Rod Cutting

0/1 Knapsack

Perfect Squares

Minimum Path Sum

Decode Ways

Paint House

Buy and Sell Stock with Cooldown

Word Break

# Day 7: Dynamic Programming - 2D and State Transition

Edit Distance

Wildcard Matching

Regular Expression Matching

Interleaving String

Longest Palindromic Subsequence

Palindromic Partitioning

Longest Common Subsequence

Maximum Rectangle

Minimum Falling Path Sum

Cherry Pickup

Distinct Subsequences

Matrix Chain Multiplication

Boolean Parenthesization

Egg Dropping

Scramble String

Shortest Common Supersequence

Word Ladder II

Paint Fence

Number of Ways to Stay in the Same Place

Dice Roll Sum

# Day 8: Trees - Traversals and Basic Operations

Preorder, Inorder, Postorder Traversal

Level Order Traversal

Invert Binary Tree

Height of Binary Tree

Diameter of Binary Tree

Maximum Depth

Lowest Common Ancestor

Symmetric Tree

Path Sum

Path Sum II

Zigzag Level Order

Construct Binary Tree from Inorder and Preorder

Serialize and Deserialize

Flatten Binary Tree

Check Balanced Binary Tree

Right Side View

Vertical Order Traversal

Sum Root to Leaf Numbers

Binary Tree Maximum Path Sum

Morris Traversal

# Day 9: Trees - BST and Advanced

Validate BST

Convert Sorted Array to BST

Kth Smallest Element in BST

Lowest Common Ancestor in BST

BST Iterator

Delete Node in BST

Recover BST

Convert BST to Greater Tree

Two Sum BST

Construct BST from Preorder

Closest Binary Search Tree Value

Tree to Doubly Linked List

Inorder Successor

Flatten BST to Linked List

Sum of BST in range

BST From Postorder

Count BST nodes in range

Merge Two BSTs

Diameter of BST

Find Mode in BST

# Day 10: Graphs - BFS & DFS

Number of Islands

Clone Graph

Pacific Atlantic Water Flow

Rotting Oranges

Walls and Gates

Graph Valid Tree

Course Schedule

Course Schedule II

Word Ladder

Word Ladder II

Reconstruct Itinerary

Find Eventual Safe States

Find All Paths from Source to Target

All Nodes Distance K in Binary Tree

Surrounded Regions

Is Graph Bipartite

Detect Cycle in Undirected Graph

Detect Cycle in Directed Graph

Count Connected Components

DFS Matrix Connected Paths

# Day 11: Graphs - Topological Sort, Dijkstra, Union Find

Topological Sort

Alien Dictionary

Course Schedule III

Find Redundant Connection

Union Find (Disjoint Sets)

Number of Connected Components

Path with Maximum Probability

Network Delay Time

Cheapest Flights with K Stops

Bellman Ford Implementation

Dijkstra’s Algorithm

Kruskal’s MST

Prim’s MST

Minimum Cost to Connect All Cities

Graph Coloring

Bridges in Graph (Tarjan’s Algo)

Articulation Points

Floyd Warshall

Detect Negative Weight Cycle

Minimum Spanning Tree in Grid

# Day 12: Backtracking & Advanced Recursion

N-Queens

Sudoku Solver

Word Search

Combination Sum

Letter Combinations of Phone Number

Restore IP Addresses

Palindrome Partitioning

Permutations

Subsets

Rat in a Maze

Knight's Tour

M Coloring Problem

Hamiltonian Path

Crossword Puzzle

Tug of War

Crossword Fitting

Partition to K Equal Sum Subsets

Word Break with Dictionary

Expression Add Operators

All Valid Parentheses Combinations

# Day 13: Hard Mix of DP, Graphs, and Recursion

Hard DP: Candy

Max Profit with K transactions

Regular Expression Matching

LRU Cache (Design Problem)

LFU Cache

Minimum Window Subsequence

Sliding Window Median

Trapping Rain Water

Russian Doll Envelopes

Paint House III

Maximum Profit Job Scheduling

Largest Rectangle in Histogram

Maximal Square

Max Sum of Rectangle No Larger Than K

Word Search II

Jump Game III

Longest Path in Matrix

Critical Connections in a Network

Min Cost to Connect All Points

Parallel Courses III

# Day 14: Mock Test + Problem Marathon

One hard problem from each of the 13 categories above

Array Problem

String Problem

Recursion Problem

Two Sum Variant

Divide and Conquer

1D DP

2D DP

Tree Problem

BST Problem

BFS/DFS Graph

Union-Find/Dijkstra

Backtracking

Marathon Set: Solve as many as possible from LeetCode Weekly Contests or HackerRank Interview Prep Kit