DSA Topic-wise LeetCode Study Guide

EASY LEVEL – Traversal & Basic Graph/Tree

Binary Tree Inorder Traversal

– LeetCode 94

– Video: “Inorder Traversal (recursion + stack)” by Tushar Roy

Binary Tree Level Order Traversal (BFS)

– LeetCode 102

– Video: “Binary Tree Level Order Traversal – BFS explained” by NeetCode

Symmetric Tree

– LeetCode 101

– Video: “Symmetric Tree (DFS + BFS)” by Kevin Naughton Jr.

Maximum Depth of Binary Tree (DFS)

– LeetCode 104

– Video: “Max Depth of Binary Tree – DFS tutorial” by NeetCode

Same Tree

– LeetCode 100

– Video: “Same Tree – DFS check” by Tushar Roy

Flood Fill

– LeetCode 733

– Video: “Flood Fill – DFS/BFS solution” by NeetCode

Number of Islands

– LeetCode 200

– Video: “Number of Islands – BFS & DFS” by WilliamFiset

Convert Sorted Array to BST (DFS)

– LeetCode 108

– Video: “Convert Sorted Array to BST – recursion” by NeetCode

Path Sum

– LeetCode 112

– Video: “Path Sum – DFS tutorial” by NeetCode

Find if Path Exists in Graph

– LeetCode 1971

– Video: “Check path in graph using DFS/BFS” by Algorithms Live!

🟡 MEDIUM LEVEL

🧭 Shortest Path Algorithms

Network Delay Time (Dijkstra)

– LeetCode 743

– Video: “Dijkstra Algorithm in C++” by WilliamFiset

Cheapest Flights Within K Stops (Bellman–Ford)

– LeetCode 787

– Video: “Bellman-Ford algorithm explanation” by Tushar Roy

All Pairs Shortest Path (Floyd–Warshall)

– LeetCode 1148 (similar matrix DP)

– Video: “Floyd-Warshall algorithm explained” by WilliamFiset

🌲 Minimum Spanning Tree (MST)

Connecting Cities With Minimum Cost (Prim’s)

– LeetCode 1135

– Video: “Prim’s algorithm in C++” by Abdul Bari

Min Cost to Connect All Points (Kruskal’s)

– LeetCode 1584

– Video: “Kruskal’s algorithm + DSU” by Tushar Roy

🔁 Topological Sort

Course Schedule (BFS)

– LeetCode 207

– Video: “Course Schedule – Kahn’s Topo Sort” by NeetCode

Course Schedule II (DFS)

– LeetCode 210

– Video: “Course Schedule II – DFS Topological Sort” by WilliamFiset

🌳 Tree Traversal Variations

Binary Tree Zigzag Level Order Traversal

– LeetCode 103

– Video: “Binary Tree Zigzag Level Order Traversal” by Abdul Bari

Clone Graph

– LeetCode 133

– Video: “Clone Graph – BFS & DFS” by NeetCode

Word Ladder (BFS Shortest Path)

– LeetCode 127

– Video: “Word Ladder BFS solution” by NeetCode

🔴 HARD LEVEL

🧠 Network Flow Algorithms

Maximum Bipartite Matching (Ford–Fulkerson)

– (No direct LeetCode problem; see implementation reference)

– Video: “Ford-Fulkerson algorithm explained” by WilliamFiset

Maximum Flow (Edmonds–Karp)

– LeetCode Dinic’s-Ford (external)

– Video: “Edmonds-Karp in C++” by Tushar Roy

⏱ Shortest Path Advanced

Path with Minimum Effort (Dijkstra variant)

– LeetCode 1631

– Video: “Minimum Effort Path – BFS vs Dijkstra” by NeetCode

Find the City With the Smallest Number of Neighbors (Floyd–Warshall)

– LeetCode 1334

– Video: “Floyd-Warshall for threshold distance” by williamfiset

🌲 Complex MST Applications

Optimize Water Distribution in a Village (Prim’s with Virtual Node)

– LeetCode 1168

– Video: “Optimize Water Distribution – MST (Prim + DSU)” by NeetCode

🌀 Topological Sort + DFS

Alien Dictionary

– LeetCode 269

– Video: “Alien Dictionary Topological Sort” by WilliamFiset

Parallel Courses III

– LeetCode 2050

– Video: “Parallel Courses III – Word DAG + DP” by NeetCode

🏹 Advanced Traversal

Word Search II (DFS + Trie)

– LeetCode 212

– Video: “Word Search II – Trie + DFS” by Tushar Roy

Binary Tree Cameras (DFS Greedy)

– LeetCode 968

– Video: “Binary Tree Cameras greedy solution” by NeetCode

Redundant Connection II (Union-Find + Cycle Detection)

– LeetCode 685

– Video: “Redundant Connection II – DSU & Graph” by WilliamFiset