Complete DSA Syllabus (Java) – Beginner to Advanced

Module 1: Programming Basics – Variables, Data Types, I/O, Operators, Loops, Functions, Arrays, Strings

Module 2: Complexity & Problem Solving – Time & Space Complexity, Problem Breakdown

Module 3: Core Data Structures – Arrays, Linked List, Stack, Queue, HashMap

Module 4: Recursion & Backtracking – Recursion, Subsets, Permutations, N-Queens

Module 5: Searching & Sorting – Binary Search, Merge Sort, Quick Sort

Module 6: Problem Solving Patterns – Two Pointer, Sliding Window, Prefix Sum

Module 7: Trees & Heaps – Binary Tree, BST, Heap, Priority Queue

Module 8: Graphs – BFS, DFS, Topological Sort, Dijkstra

Module 9: Dynamic Programming – Memoization, Tabulation, Knapsack, LCS

Module 10: Interview Preparation – Practice 150–300 problems, Mock Interviews