

Data Structures & Algorithms

A. Foundations

1. **Time Complexity**
 - Big-O
 - Big-Theta
2. **Space Complexity**
 - Memory usage

Output: Complexity exercises

B. Core Data Structures

1. **Arrays & Strings**
 - Searching
 - Manipulation
2. **Linked Lists**
 - SLL, DLL
 - Traversal
3. **Stacks & Queues**
 - Applications
 - Implementation

Output: DS problem set

C. Trees & Graphs

1. **Binary Trees**
 - Traversals
2. **Graphs**
 - BFS
 - DFS

Output: Tree & graph programs

D. Algorithms

1. **Sorting**
 - Merge Sort
 - Quick Sort
2. **Searching**
 - Binary Search
3. **Greedy & DP**
 - Coin change
 - Knapsack

Output: Algorithm practice sheet

E. Interview Prep

1. **Coding Patterns**

- Two-pointer
- Sliding window

2. **Mock Tests**

- Timed practice

Output: Mock interview test