
✅ MASTER DSA ORDER (JAVA)

Topic → Primary Source → Secondary Use

PHASE 0: ABSOLUTE FOUNDATION (Do once, fast)

0. Time & Space Complexity

Start: Kunal
Then: GFG (definitions only)
Skip Striver here

Why: Kunal explains intuition better.

PHASE 1: ARRAYS & STRINGS (MOST IMPORTANT)

1. Arrays (Basics → Advanced)

- Traversal
- Prefix sum
- Sliding window
- Two pointers
- Kadane
- Subarrays

Start: Kunal
Then: Striver (patterns only)
GFG: Edge cases + extra practice

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2. Strings

- Frequency
- Palindrome
- Anagram

- Sliding window on strings

Start: Kunal
Then: Striver
GFG: Reference only

PHASE 2: MATHEMATICS + BIT MANIPULATION

3. Basic Math for DSA

- GCD/LCM
- Prime
- Sieve
- Fast power

Start: Kunal
GFG: Only formulas
Skip Striver

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4. Bit Manipulation

- Bit operators
- XOR tricks
- Bit masking

Start: Striver
Then: Kunal (if confused)
GFG: Examples only

PHASE 3: SEARCHING & SORTING

5. Searching (Binary Search Patterns)

- Classic BS
- BS on answer
- Rotated array

Start: Striver
Then: Kunal (intuition gaps)
GFG: Practice only

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6. Sorting Algorithms

- Merge sort
- Quick sort
- Heap sort

Start: Kunal
GFG: Pseudocode
Skip Striver

PHASE 4: RECURSION & BACKTRACKING

7. Recursion

- Recursion tree
- Base cases

Start: Kunal
GFG: Read only
Skip Striver

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8. Backtracking

- Subsets
- Permutations
- N-Queens

Start: Kunal
Then: Striver (problem patterns)
GFG: Reference only

PHASE 5: LINKED LIST + STACK + QUEUE

9. Linked List

- Reverse
- Cycle
- Palindrome

Start: Striver
Then: Kunal (if stuck)
GFG: Edge cases

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10. Stack

- Monotonic stack
- Histogram
- Parentheses

Start: Striver
Then: Kunal
GFG: Practice

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11. Queue & Deque

- Sliding window max
- Circular queue

Start: Striver
GFG: Examples
Skip Kunal unless confused

PHASE 6: HASHING

12. HashMap / HashSet

- Prefix sum + map
- Two sum
- Frequency problems

Start: Striver
Then: Kunal
GFG: Reference only

PHASE 7: TREES (CRITICAL)

13. Binary Tree

- Traversals
- Height
- Diameter
- LCA

Start: Striver
Then: Kunal (intuition)
GFG: Diagrams + edge cases

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14. Binary Search Tree

- Validate
- Kth smallest
- Floor & ceil

Start: Striver
GFG: Reference
Skip Kunal unless needed

PHASE 8: HEAPS

15. Heap / Priority Queue

- Top K
- Kth largest
- Median stream

Start: Striver
Then: Kunal (basics)
GFG: Practice

PHASE 9: GREEDY

16. Greedy Algorithms

- Activity selection
- Knapsack
- Interval problems

Start: Striver
GFG: Proof logic
Skip Kunal

PHASE 10: DYNAMIC PROGRAMMING (MOST DIFFICULT)

17. DP Basics

- Memoization
- Tabulation
- State definition

Start: Kunal
Then: Striver
GFG: Reference

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18. DP Patterns

- Knapsack
- LIS
- LCS
- Grid DP
- DP on trees

Start: Striver
Then: Kunal (intuition)
GFG: Extra problems

PHASE 11: GRAPHS (ADVANCED INTERVIEW)

19. Graph Basics

- BFS / DFS
- Representation

Start: Kunal
Then: Striver
GFG: Reference

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20. Advanced Graphs

- Dijkstra
- MST
- Topo sort
- DSU

Start: Striver
GFG: Proofs & variations

PHASE 12: ADVANCED DATA STRUCTURES (OPTIONAL)

21. Trie

Start: Striver
GFG: Reference

22. Segment Tree / BIT

Start: Striver
GFG: Practice

FINAL RULES (DON'T IGNORE)

1. ❌ Never do full Kunal + full Striver for same topic
2. ✅ Videos → problems **same day**

3. ❌ Don’t touch DP or Graphs early
4. ✅ GFG is a **dictionary**, not a teacher
5. ❌ Quantity ≠ mastery

How I fit into this plan

After **each topic**, come to me and say:

“I finished **X topic**.
Give me **curated problems** (Easy / Medium / Hard).
Then review my approach.”

That’s when your **problem-solving ability explodes**.
