■■ 50-Day JavaScript DSA Practice Plan

■ Week 1 (Arrays & Strings – Basics)

- Day 1: Reverse a string, Find the max/min in an array
- Day 2: Check if a string is palindrome, Count vowels
- Day 3: Find second largest element in array
- Day 4: Remove duplicates from array, Merge two sorted arrays
- Day 5: Rotate array by K steps (left & right)
- Day 6: Check if two strings are anagrams
- Day 7 (Review): Solve 5 easy problems on arrays/strings (LeetCode: Two Sum, Valid Palindrome, Remove Duplicates)

■ Week 2 (Stack, Queue & Recursion)

- Day 8: Implement stack using array (push, pop, peek)
- Day 9: Balanced parentheses problem using stack
- Day 10: Implement queue using array (enqueue, dequeue)
- Day 11: Circular queue (concept) + practice
- Day 12: Recursion basics → factorial, fibonacci
- Day 13: Reverse a string using recursion
- Day 14 (Review): Solve 5 recursion/stack/queue problems

■ Week 3 (Hashing & Maps)

- Day 15: Count frequency of elements (using Map)
- Day 16: First unique character in a string
- Day 17: Find duplicates in an array (using Set)
- Day 18: Subarray with sum = 0
- Day 19: Longest substring without repeating characters
- Day 20: Group anagrams problem
- Day 21 (Review): 5 hashing problems (LeetCode easy/medium)

■ Week 4 (Linked List)

- Day 22: Implement singly linked list (insert, delete, print)
- Day 23: Reverse a linked list
- Day 24: Detect cycle in linked list (Floyd's algorithm)
- Day 25: Merge two sorted linked lists
- Day 26: Middle of linked list problem
- Day 27: Remove nth node from end
- Day 28 (Review): Solve 5 linked list problems

■ Week 5 (Trees & Binary Search)

- Day 29: Implement binary tree (insert, traversal basics)
- Day 30: Inorder, Preorder, Postorder traversal
- Day 31: Level order traversal (BFS in tree)
- Day 32: Height of binary tree
- Day 33: Validate binary search tree (BST)

- Day 34: Lowest common ancestor in BST
- Day 35 (Review): Solve 5 tree problems

■ Week 6 (Graphs)

- Day 36: Graph representations (adjacency list & matrix)
- Day 37: BFS traversal of graph
- Day 38: DFS traversal of graph
- Day 39: Detect cycle in graph
- Day 40: Shortest path in unweighted graph (BFS)
- Day 41: Dijkstra's algorithm
- Day 42 (Review): Solve 3–5 graph problems

■ Week 7 (Sorting & Searching)

- Day 43: Bubble sort, Selection sort
- Day 44: Insertion sort
- Day 45: Merge sort
- Day 46: Quick sort
- Day 47: Linear search, Binary search
- Day 48: Search in rotated sorted array
- Day 49: Kth largest element (using heap or sort)
- Day 50 (Review): Mix of sorting/searching problems