7-Day DSA Mock Interview Preparation Plan

Preparing for a mock interview in **Data Structures and Algorithms (DSA)** is a crucial step in your Scaler journey. The most effective approach to learning is to attempt problem-solving first; if you encounter difficulties, refer to the document for guidance.

Please refer to this video to find any problem using the name: **https://rb.gy/2e74f**

Here's your own personalized **To-Do List**. Make a **copy** of this doc and keep track of your progress with this checklist. Keep Learning!!

Note: Keep a list of your mistakes or areas of difficulty and focus on improving them.

Try Solving the problems

Stuck??

Refer the doc

Day 1: Arrays

- Solve following problems for revision:
    - ☐ Equilibrium Index of an array
    - ☐ Max Sum Contiguous Subarray
    - ☐ Sum of all subarrays
    - ☐ Subarray with given sum and length
    - ☐ First Missing Integer
    - ☐ Rain water trapped
- If you are able to solve these problems. Congratulations!! Your task is done for today. Relax!!
- If you face difficulty, No worries. Go through the doc attached to revise Arrays

Day 2: Searching and Sorting

- Solve following problems for practice:
  - ☐ Rotated Sorted Array Search
  - ☐ Painters Partition Problem
  - ☐ Merge Sort
  - ☐ B closest Point to Origin [Custom comparator]
- Brush up on basic Sorting algorithms (e.g., quicksort, mergesort)
- Study Binary Search

Day 3: Stacks, Queues, and Hashing

- Solve problems related to stacks, queues, and hashing
  - ☐ Longest Subarray Zero Sum
  - ☐ Balanced Parenthesis
  - ☐ Largest rectangle in histogram
  - ☐ Queue using stack
- Review Stacks and queues and their use cases.
- Learn about HashMap.

Day 4: Linked Lists and Trees

- Solve problems related to Trees and linkedlist.
  - ☐ Detect a cycle in a linked list and find the starting node of the cycle.
  - ☐ Find the lowest common ancestor (LCA) of two nodes in a binary tree.
  - ☐ ZigZag Level order
  - ☐ Remove Loop from Linked List
  - ☐ Binary Tree from In and Preorder
  - ☐ Diameter of Binary Tree
  - ☐ K Places Apart
- Focus on LinkedList, their types, and common operations.
- Focus on Trees data structures (binary trees, binary search trees) and their common operations.

Delve into more advanced data structures like Heaps [priority queues].

don't stop now, you're almost there!

## Day 5: Dynamic Programming

- Solve dynamic programming problems:
  - ☐ 0-1 Knapsack
  - ☐ Fibonacci Sequence
  - ☐ N Stairs
  - ☐ Minimum no of squares
  - ☐ Max Sum Without Adjacent Elements
  - ☐ Longest common subsequence
- Study the principles of Dynamic programming and common techniques (e.g., memoization and tabulation).

Day 6: Graphs

- Solve the following problems:
  - ☐ Rotten oranges
  - ☐ Number of islands
  - ☐ Cycle in directed graph
  - ☐ Dijkstra
- Study Graph data structures and basic graph algorithms (e.g., depth-first search and breadth-first search).

Day 7 : Relax!!

Take a break or revise the topics that you found difficult.
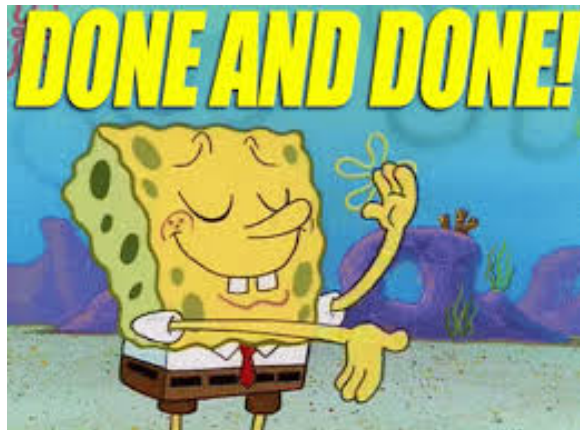
Remember that the key to success in DSA interviews is not just memorizing solutions but understanding the underlying principles and being able to apply them to new problems. Keep practicing and stay confident in your abilities.

Good luck with your mock interview!