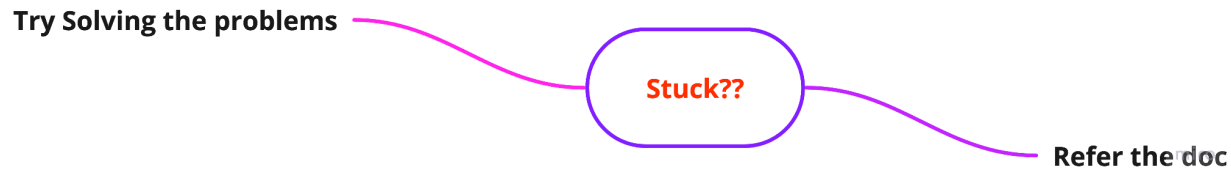
15-Day DSA Mock Interview Preparation Plan



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.

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 today. Relax!!
- If you face difficulty, No worries. Go through the doc attached to revise ***Arrays***

Day 2 : Bit Manipulation

- Solve following problems for practice:
  - ☐ Flip bit
  - ☐ Number of 1 bits
  - ☐ Check bit
  - ☐ Single Number
  - ☐ Single Number 2
  - ☐ Single Number III
- If you are able to solve these problems. Congratulations!! Your task is done today. Relax!!
- If you face difficulty, No worries. Go through the doc attached to revise **Bit Manipulation**

Day 3 : Sorting

- Solve following problems for revision:
  - ☐ Merge Sort
  - ☐ B closest Point to Origin **[Custom comparator]**
- Brush up on basic Sorting algorithms (e.g., quicksort, mergesort)

Day 4 : Searching

- Solve following problems for revision:
  - ☐ Binary Search: Implement binary search to find a target element in a sorted array.
  - ☐ Rotated Sorted Array Search
  - ☐ Painters Partition Problem
  - ☐ Aggressive cows
- Revise Binary Search

Day 5: Hashing

- Solve following problems for revision:
  - ☐ Count distinct elements
  - ☐ Longest Subarray Zero Sum
  - ☐ Longest Consecutive Sequence
- If you are able to solve these problems. Congratulations!! Your task is done today. Relax!!
- If you face difficulty, No worries. Go through the doc attached to revise Hashing

Day 6: Break Time

Take a break OR revise the topics that you found difficult.

Day 7: Linked Lists

- Solve following problems for revision:
  - ☐ Middle element of linked list
  - ☐ Remove Loop from Linked List
  - ☐ LRU Cache
- Take help from this doc if you're stuck : LinkedList

Day 8 : Stacks and Queues

- Try solving following problems first:
  - ☐ Balanced Parenthesis
  - ☐ Largest rectangle in histogram
  - ☐ Nearest Smaller Element
  - ☐ Queue using stack
- Do revise the syntax and implementation of Stacks and queues

Day 9 : Trees

- Try to solve the following problems:
  - ☐ Zig Zag Level order
  - ☐ Binary Tree from In and Preorder
  - ☐ Diameter of Binary Tree
  - ☐ Least Common Ancestor
- Please do revise different traversals in Trees

Day 10 : Break

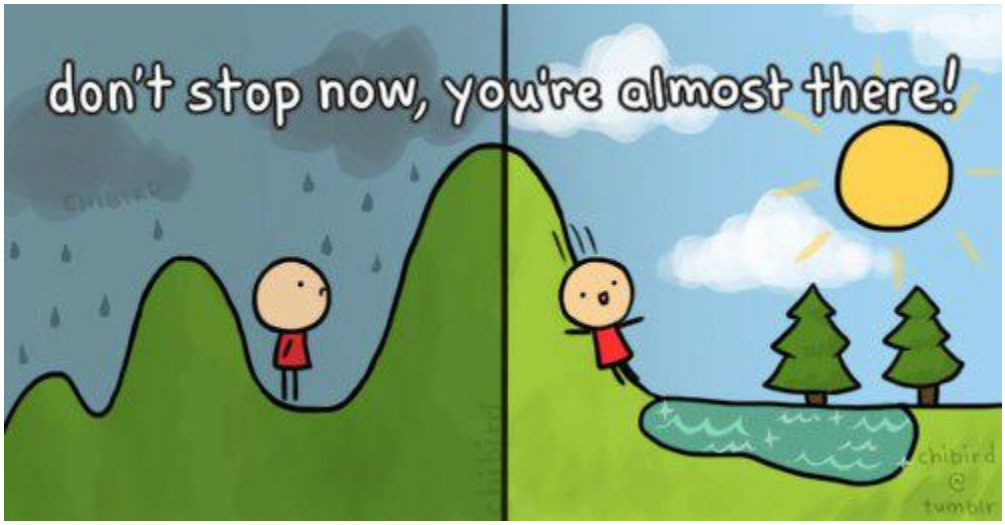
Take a break or revise the topics that you found difficult.

Day 11 : Recursion and Backtracking

- Solve the following problems:
  - ☐ Implement Power Function
  - ☐ Generate all Parentheses II
  - ☐ N Queens [Backtracking]
- Please revise the 3 Steps of Recursion and concept of Backtracking

Day 12 : Greedy

- Solve the following problems:
  - ☐ Fractional knapsack
  - ☐ Distribute candies
  - ☐ Weighted Job Scheduling
- Please go through your Greedy lecture, if you are not able to come up with a solution for the above mentioned problems.



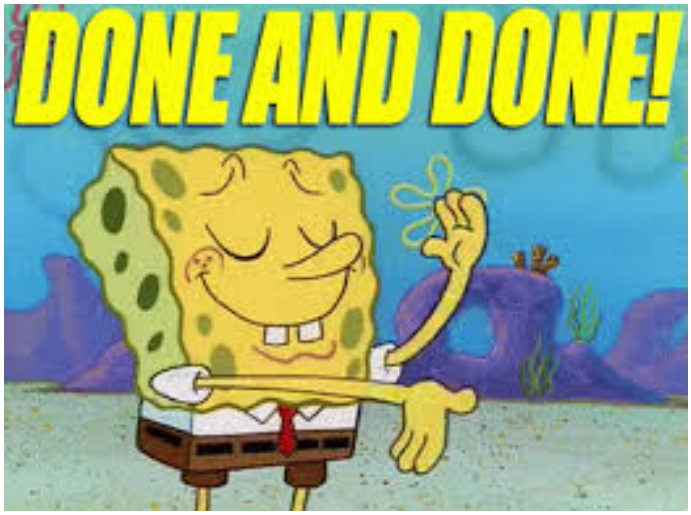
Day 13 : Dynamic Programming

- Solve the following 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 14 : 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 15 : Relax!!



Good luck with your mock interview!