Check the review of this SDE sheet at Striver's instagram story highlights.
Instagram id: Striver_79

To know the entire list and other stuffs like Projects, Resume, how to give interviews....watch the entire video at:
https://www.youtube.com/watch?v=WNtzUR_MwUQ

Find the placement series at:
https://www.youtube.com/watch?v=c0_1QnyVYQY&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=1

Subscribe to the channel. :) (**take U forward**) (striver_79)
(Channel run by ex-Amazon | Media.net(Directi) | GFG) employee, CM at Codeforces and 6* at Codechef)

Only start doing these problems if you feel you are comfortable with solving basic problems of DSA. Once you are, you can start preparing for these problems, because these problems are solely interview based.

Day 1: (Arrays)

1. **Sort an array of 0's 1's 2's without using extra space or sorting algo**
   https://www.youtube.com/watch?v=oaVa-9wmpns&list=PLgUwDviBIf0rPG3Ictpu74YWBQ1CaBkm2&index=2 (Problem link in description)

2. **Repeat and Missing Number**
   https://www.youtube.com/watch?v=5nMGY4VUoRY&list=PLgUwDviBIf0rPG3Ictpu74YWBQ1CaBkm2&index=3 (Problem link in description)

3. **Merge two sorted Arrays without extra space**
   https://www.youtube.com/watch?v=hVl2b3bLzBw&list=PLgUwDviBIf0rPG3Ictpu74YWBQ1CaBkm2&index=4 (Problem link in description)

4. **Kadane's Algorithm**
   https://www.youtube.com/watch?v=w_KEocd__20&list=PLgUwDviBIf0rPG3Ictpu74YWBQ1CaBkm2&index=5

5. **Merge Overlapping Subintervals**
   https://www.youtube.com/watch?v=2JzRBPFYbKE&list=PLgUwDviBIf0rPG3Ictpu74YWBQ1CaBkm2&index=6

6. **Find the duplicate in an array of N+1 integers.**
   (Ignore the video quality, as this was the first video which i recorded)
   https://www.youtube.com/watch?v=32Ll35mhWg0&list=PLgUwDviBIf0rPG3Ictpu74Y
   WBQ1CaBkm2&index=1

Day2: (Arrays)
1. **Set Matrix Zeros**
   (https://www.youtube.com/watch?v=M65xBewcqcI&list=PLgUwDviBIf0rPG3Ictpu74Y
   WBQ1CaBkm2&index=7)

2. **Pascal Triangle**
   https://www.youtube.com/watch?v=6FLvhQjZqvM&list=PLgUwDviBIf0rPG3Ictpu74Y
   WBQ1CaBkm2&index=8

3. **Next Permutation**
   https://www.youtube.com/watch?v=LuLCLgMEIus&list=PLgUwDviBIf0rPG3Ictpu74Y
   WBQ1CaBkm2&index=9

4. **Inversion of Array** (Using Merge Sort)
   https://www.youtube.com/watch?v=kQ1mJlwW-c0&list=PLgUwDviBIf0rPG3Ictpu74Y
   WBQ1CaBkm2&index=10

5. **Stock Buy and Sell**
   https://www.youtube.com/watch?v=eMSfBgbiEjk&list=PLgUwDviBIf0rPG3Ictpu74YW
   BQ1CaBkm2&index=11

6. **Rotate Matrix**
   https://www.youtube.com/watch?v=Y72QeX0Efxw&list=PLgUwDviBIf0rPG3Ictpu74Y
   WBQ1CaBkm2&index=12

Day3: (Arrays/maths)
1. **Search in a 2D matrix**
   https://www.youtube.com/watch?v=ZYpYur0znng&list=PLgUwDviBIf0rPG3Ictpu74YW
   BQ1CaBkm2&index=13

2. **Pow(X,n)**
   https://www.youtube.com/watch?v=l0YC3876qxg&list=PLgUwDviBIf0rPG3Ictpu74Y
   WBQ1CaBkm2&index=14

3. **Majority Element (>N/2 times)**
   https://www.youtube.com/watch?v=AoX3BPWNnoE&list=PLgUwDviBIf0rPG3Ictpu74
   YWBQ1CaBkm2&index=15

4. **Majority Element (>N/3 times)**
   https://www.youtube.com/watch?v=yDbkQd9t2ig&list=PLgUwDviBIf0rPG3Ictpu74YW
   BQ1CaBkm2&index=16

5. **Grid Unique Paths**
   https://www.youtube.com/watch?v=t_f0nwwdg5o&list=PLgUwDviBIf0rPG3Ictpu74YW
   BQ1CaBkm2&index=17

6. **Reverse Pairs (Leetcode)**
   https://www.youtube.com/watch?v=S6rsAlj_iB4&list=PLgUwDviBIf0rPG3Ictpu74YWB
   Q1CaBkm2&index=18

7. **Go through Puzzles from GFG** (Search on own)

Day4: (Hashing)
1. **2 Sum problem**
   https://www.youtube.com/watch?v=dRUpbt8vHpo&list=PLgUwDviBIf0rVwua0kKYlsS
   _ik_1lyVK_&index=1

2. **4 Sum problem**
   https://www.youtube.com/watch?v=4ggF3tXIAp0&list=PLgUwDviBIf0p4ozDR_kJJkO
   Nnb1wdx2Ma&index=20

3. **Longest Consecutive Sequence**
   https://www.youtube.com/watch?v=qgizvmgeyUM&list=PLgUwDviBIf0p4ozDR_kJJk
   ONnb1wdx2Ma&index=21

4. **Largest Subarray with 0 sum**
   https://www.youtube.com/watch?v=xmguZ6GbatA&list=PLgUwDviBIf0p4ozDR_kJJk
   ONnb1wdx2Ma&index=22

5. **Count number of subarrays with given XOR**(this clears a lot of problems)
   https://www.youtube.com/watch?v=lO9R5CaGRPY&list=PLgUwDviBIf0p4ozDR_kJJk
   ONnb1wdx2Ma&index=23

6. **Longest substring without repeat**
   https://www.youtube.com/watch?v=qtVh-XEpsJo&list=PLgUwDviBIf0p4ozDR_kJJkO
   Nnb1wdx2Ma&index=25

Day5: (LinkedList)
1. **Reverse a LinkedList**
   https://www.youtube.com/watch?v=iRtLEoL-r-g&list=PLgUwDviBIf0p4ozDR_kJJkON
   nb1wdx2Ma&index=26

2. **Find middle of LinkedList**
   https://www.youtube.com/watch?v=sGdwSH8RK-o&list=PLgUwDviBIf0p4ozDR_kJJk
   ONnb1wdx2Ma&index=27

3. **Merge two sorted Linked List**

https://www.youtube.com/watch?v=Xb4slcp1U38&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=28

4. **Remove N-th node from back of LinkedList**
https://www.youtube.com/watch?v=Lhu3MsXZy-Q&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=29

5. **Delete a given Node when a node is given. (0(1) solution)**
https://www.youtube.com/watch?v=icnp4FJdZ_c&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=30

6. **Add two numbers as LinkedList**
https://www.youtube.com/watch?v=LBVsXSMOIk4&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=31

Day6:
1. **Find intersection point of Y LinkedList**
https://www.youtube.com/watch?v=u4FWXfgS8jw&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=32

2. **Detect a cycle in Linked List**
https://www.youtube.com/watch?v=354J83hX7RI&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=33

3. **Reverse a LinkedList in groups of size k.**
https://www.youtube.com/watch?v=Of0HPkk3JgI&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=33

4. **Check if a LinkedList is palindrome or not.**
https://www.youtube.com/watch?v=-DtNInqFUXs&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=35

5. **Find the starting point of the Loop of LinkedList**
https://www.youtube.com/watch?v=QfbOhn0WZ88&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=36

6. **Flattening of a LinkedList**
https://www.youtube.com/watch?v=ysytSSXpAI0&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=37

7. **Rotate a LinkedList**
https://www.youtube.com/watch?v=9VPm6nEbVPA&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=38

Day7: (2-pointer)

1. **Clone a Linked List with random and next pointer**
   https://www.youtube.com/watch?v=VNf6VynfpdM&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=39

2. **3 sum**
   https://www.youtube.com/watch?v=onLoX6Nhvmg&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=40

3. **Trapping rainwater**
   https://www.youtube.com/watch?v=m18Hntz4go8&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=41

4. **Remove Duplicate from Sorted array**
   https://www.youtube.com/watch?v=Fm_p9lJ4Z_8&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=42

5. **Max consecutive ones**
   https://www.youtube.com/watch?v=Mo33MjjMlyA&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=43

Day8: (Greedy)
1. **N meeting in one room**
   https://www.youtube.com/watch?v=II6ziNnub1Q&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=44

2. **Minimum number of platforms required for a railway**
   https://www.youtube.com/watch?v=dxVcMDI7vyI&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=45

3. **Job sequencing Problem**
   https://www.youtube.com/watch?v=LjPx4wQaRls&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=46

4. **Fractional Knapsack Problem**
   https://www.youtube.com/watch?v=F_DDzYnxO14&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=48

5. **Greedy algorithm to find minimum number of coins**
   https://www.youtube.com/watch?v=mVg9CfJvayM&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=47

6. **Activity Selection (it is same as N meeting in one room)**
   https://www.youtube.com/watch?v=II6ziNnub1Q&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=44

Day9 (Recursion):

1. **Subset Sums**
   https://www.youtube.com/watch?v=rYkfBRtMJr8&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=52

2. **Subset-II**
   https://www.youtube.com/watch?v=RIn3gOkbhQE&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=53

3. **Combination sum-1**
   https://www.youtube.com/watch?v=OyZFFqQtu98&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=49

4. **Combination sum-2**
   https://www.youtube.com/watch?v=G1fRTGRxXU8&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=50

5. **Palindrome Partitioning**
   https://www.youtube.com/watch?v=WBgsABoClE0&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=51

6. **K-th permutation Sequence**
   https://www.youtube.com/watch?v=wT7gcXLYoao&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=55

Day10: (Recursion and Backtracking)
1. **Print all Permutations of a string/array**

2. N queens Problem
3. Sudoku
4. M coloring Problem (Graph prob)
5. Rat in a Maze
6. Word Break (print all ways)

Day11: (Divide and Conquer)
1. 1/N-th root of an integer (use binary search) (square root, cube root, ..)
2. Matrix Median
3. Find the element that appears once in sorted array, and rest element appears twice (Binary search)
4. Search element in a sorted and rotated array/ find pivot where it is rotated
5. Median of 2 sorted arrays
6. K-th element of two sorted arrays

Day12: (Bits) (Optional, very rare topic in interviews, but if you have time left, someone might ask)

1. Check if a number if a power of 2 or not in O(1)
2. Count total set bits
3. Divide Integers without / operator
4. Power Set (this is very important)
5. Find MSB in o(1)
6. Find square of a number without using multiplication or division operators.

Day13: (Stack and Queue)

1. Implement Stack / Implement Queue
2. BFS
3. Implement Stack using Queue
4. Implement Queue using Stack
5. Check for balanced parentheses
6. Next Greater Element

Day14:

1. Next Smaller Element
2. LRU cache (vvvv. imp)
3. Largest rectangle in histogram
4. Sliding Window maximum
5. Implement Min Stack
6. Rotten Orange (Using BFS)

Day15: (String)

1. Reverse Words in a String
2. Longest Palindrome in a string
3. Roman Number to Integer and vice versa
4. Implement ATOI/STRSTR
5. Longest Common Prefix
6. Rabin Karp

Day16: (String)

1. Prefix Function/Z-Function
2. KMP algo
3. Minimum characters needed to be inserted in the beginning to make it palindromic.
4. Check for Anagrams
5. Count and Say
6. Compare version numbers

Day17: (Binary Tree)

1. Inorder Traversal (with recursion and without recursion)
2. Preorder Traversal (with recursion and without recursion)
3. Postorder Traversal (with recursion and without recursion)

4. LeftView Of Binary Tree
5. Bottom View of Binary Tree
6. Top View of Binary Tree

Day18: (Binary Tree)
1. Level order Traversal / Level order traversal in spiral form
2. Height of a Binary Tree
3. Diameter of Binary Tree
4. Check if Binary tree is height balanced or not
5. LCA in Binary Tree
6. Check if two trees are identical or not

Day 19: (Binary Tree)
1. Maximum path sum
2. Construct Binary Tree from inorder and preorder
3. Construct Binary Tree from Inorder and Postorder
4. Symmetric Binary Tree
5. Flatten Binary Tree to LinkedList
6. Check if Binary Tree is mirror of itself or not

Day 20: (Binary Search Tree)
1. Populate Next Right pointers of Tree
2. Search given Key in BST
3. Construct BST from given keys.
4. Check is a BT is BST or not
5. Find LCA of two nodes in BST
6. Find the inorder predecessor/successor of a given Key in BST.

Day21: (BinarySearchTree)
1. Floor and Ceil in a BST
2. Find K-th smallest and K-th largest element in BST (2 different Questions)
3. Find a pair with a given sum in BST
4. BST iterator
5. Size of the largest BST in a Binary Tree
6. Serialize and deserialize Binary Tree

Day22: (Mixed Questions)
1. Binary Tree to Double Linked List
2. Find median in a stream of running integers.
3. K-th largest element in a stream.
4. Distinct numbers in Window.
5. K-th largest element in an unsorted array.
6. Flood-fill Algorithm

Day23: (Graph)
1. Clone a graph (Not that easy as it looks)

2. DFS
3. BFS
4. Detect A cycle in Undirected Graph/Directed Graph
5. Topo Sort
6. Number of islands (Do in Grid and Graph both)
7. Bipartite Check

Day24: (Graph)
1. SCC(using KosaRaju's algo)
2. Djisktra's Algorithm
3. Bellman Ford Algo
4. Floyd Warshall Algorithm
5. MST using Prim's Algo
6. MST using Kruskal's Algo

Day25: (Dynamic Programming)
1. Max Product Subarray
2. Longest Increasing Subsequence
3. Longest Common Subsequence
4. 0-1 Knapsack
5. Edit Distance
6. Maximum sum increasing subsequence
7. Matrix Chain Multiplication

Day26: (DP)
1. Maximum sum path in matrix, (count paths, and similar type do, also backtrack to find the maximum path)
2. Coin change
3. Subset Sum
4. Rod Cutting
5. Egg Dropping
6. Word Break
7. Palindrome Partitioning (MCM Variation)
8. Maximum profit in Job scheduling

Day27:
1. Revise OS notes that you would have made during your sem
2. If not made notes, spend 2 or 3 days and make notes from Knowledge Gate.

Day28:
1. Revise DBMS notes that you would have made during your semesters.
2. If not made notes, spend 2 or 3 days and make notes from Knowledge Gate.

Day29:
1. Revise CN notes, that you would have made during your sem.
2. If not made notes, spend 2 or 3 days and make notes from Knowledge Gate.

Day30:

1. Make a note of how will your represent your projects, and prepare all questions related to tech which you have used in your projects. Prepare a note which you can say for 3-10 minutes when he asks you that say something about the project.

Hurrah!! You are ready for your placement after a month of hard-work without a cheat day.