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.*

**Day1: (Arrays)**

1. **Find the duplicate in an array of N+1 integers. (Course) (PID - 25)**(Ignore the video quality, as this was the first video which i recorded)  
   <https://www.youtube.com/watch?v=32Ll35mhWg0&list=PLgUwDviBIf0rPG3Ictpu74YWBQ1CaBkm2&index=1>  (Problem link in description)

1. **Sort an array of 0’s 1’s 2’s without using extra space or sorting algo (Course) (PID - 7303)**

<https://www.youtube.com/watch?v=oaVa-9wmpns&list=PLgUwDviBIf0rPG3Ictpu74YWBQ1CaBkm2&index=2> (Problem link in description)

1. **Repeat and Missing Number (Codestudio) PID 8409**

<https://www.youtube.com/watch?v=5nMGY4VUoRY&list=PLgUwDviBIf0rPG3Ictpu74YWBQ1CaBkm2&index=3>  (Problem link in description)

1. **Merge two sorted Arrays without extra space (Course)(PID- 981)**

<https://www.youtube.com/watch?v=hVl2b3bLzBw&list=PLgUwDviBIf0rPG3Ictpu74YWBQ1CaBkm2&index=4>  (Problem link in description)

1. **Kadane’s Algorithm (Course)(PID - 2197)**

<https://www.youtube.com/watch?v=w_KEocd__20&list=PLgUwDviBIf0rPG3Ictpu74YWBQ1CaBkm2&index=5>

1. **Merge Overlapping Subintervals(Codestudio) (PID 7572)**

<https://www.youtube.com/watch?v=2JzRBPFYbKE&list=PLgUwDviBIf0rPG3Ictpu74YWBQ1CaBkm2&index=6>

Day2: (Arrays)

1. **Set Matrix Zeros (Codestudio)(PID - 9208)**

(<https://www.youtube.com/watch?v=M65xBewcqcI&list=PLgUwDviBIf0rPG3Ictpu74YWBQ1CaBkm2&index=7>)

1. **Pascal Triangle (Codestudio) (PID 9764)**

<https://www.youtube.com/watch?v=6FLvhQjZqvM&list=PLgUwDviBIf0rPG3Ictpu74YWBQ1CaBkm2&index=8>

1. **Next Permutation (Codestudio) (8556)**

<https://www.youtube.com/watch?v=LuLCLgMElus&list=PLgUwDviBIf0rPG3Ictpu74YWBQ1CaBkm2&index=9>

1. **Inversion of Array** (Using Merge Sort) (Course)(PID - 594)

<https://www.youtube.com/watch?v=kQ1mJlwW-c0&list=PLgUwDviBIf0rPG3Ictpu74YWBQ1CaBkm2&index=10>

1. **Stock Buy and Sell** (Codestudio)(<https://leetcode.com/problems/best-time-to-buy-and-sell-stock/>) PID 8784

<https://www.youtube.com/watch?v=eMSfBgbiEjk&list=PLgUwDviBIf0rPG3Ictpu74YWBQ1CaBkm2&index=11>

1. **Rotate Matrix**  (Codestudio) (PID 9233(square), 9232(rectangle))

<https://www.youtube.com/watch?v=Y72QeX0Efxw&list=PLgUwDviBIf0rPG3Ictpu74YWBQ1CaBkm2&index=12>

**Day3: (Arrays/maths)**

1. **Search in a 2D matrix**  (Codestudio) (PID 9193)

<https://www.youtube.com/watch?v=ZYpYur0znng&list=PLgUwDviBIf0rPG3Ictpu74YWBQ1CaBkm2&index=13>

1. **Pow(X,n)  (Codestudio) (PID 9701 for (X^N)%M))** <https://www.youtube.com/watch?v=l0YC3876qxg&list=PLgUwDviBIf0rPG3Ictpu74YWBQ1CaBkm2&index=14>

1. **Majority Element (>N/2 times)**       (Codestudio)  (PID 8561)         <https://www.youtube.com/watch?v=AoX3BPWNnoE&list=PLgUwDviBIf0rPG3Ictpu74YWBQ1CaBkm2&index=15>

1. **Majority Element (>N/3 times) (Codestudio) PID 8548**

<https://www.youtube.com/watch?v=yDbkQd9t2ig&list=PLgUwDviBIf0rPG3Ictpu74YWBQ1CaBkm2&index=16>

1. **Grid Unique Paths (Codestudio) (PID 9678)**

<https://www.youtube.com/watch?v=t_f0nwwdg5o&list=PLgUwDviBIf0rPG3Ictpu74YWBQ1CaBkm2&index=17>

1. **Reverse Pairs (Leetcode) (Codestudio) PID 9971**

<https://www.youtube.com/watch?v=S6rsAlj_iB4&list=PLgUwDviBIf0rPG3Ictpu74YWBQ1CaBkm2&index=18>

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

**Day4: (Hashing)**

1. **2 Sum problem** (Course)(PID - 1292)

<https://www.youtube.com/watch?v=dRUpbt8vHpo&list=PLgUwDviBIf0rVwua0kKYlsS_ik_1lyVK_&index=1>

1. **4 Sum problem(Codestudio) PID 9351**

<https://www.youtube.com/watch?v=4ggF3tXIAp0&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=20>

1. **Longest Consecutive Sequence(Course)** (PID - 623)  
   <https://www.youtube.com/watch?v=qgizvmgeyUM&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=21>

1. **Largest Subarray with 0 sum** (Course)(PID - 750)

<https://www.youtube.com/watch?v=xmguZ6GbatA&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=22>

1. **Count number of subarrays with given XOR**(this clears a lot of problems) (Course) (PID 10001)

<https://www.geeksforgeeks.org/count-number-subarrays-given-xor/>

<https://www.youtube.com/watch?v=lO9R5CaGRPY&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=23>

1. **Longest substring without repeat** (Course)(PID - 66)

<https://www.youtube.com/watch?v=qtVh-XEpsJo&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=25>

**Day5: (LinkedList)**

1. **Reverse a LinkedList (Course)(PID - 13)**

<https://www.youtube.com/watch?v=iRtLEoL-r-g&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=26>

1. **Find middle of LinkedList (Course)(PID - 328)**<https://www.youtube.com/watch?v=sGdwSH8RK-o&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=27>

1. **Merge two sorted Linked List (Course)(PID - 1144)**

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

1. **Remove N-th node from back of LinkedList (Codestudio) PID 8041**

<https://www.youtube.com/watch?v=Lhu3MsXZy-Q&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=29>

1. **Delete a given Node when a node is given.**(Codestudio) PID 9939 **(0(1) solution)**

<https://www.youtube.com/watch?v=icnp4FJdZ_c&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=30>

1. **Add two numbers as LinkedList  (Codestudio) PID 8017**<https://www.youtube.com/watch?v=LBVsXSMOIk4&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=31>

**Day6:**

1. **Find intersection point of Y LinkedList (Codestudio) PID 7223**

<https://www.youtube.com/watch?v=u4FWXfgS8jw&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=32>

1. **Detect a cycle in Linked List(Codestudio) PID 5672**

<https://www.youtube.com/watch?v=354J83hX7RI&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=33>

1. **Reverse a LinkedList in groups of size k**. (Course)(PID - 7)

<https://www.youtube.com/watch?v=Of0HPkk3JgI&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=33>

1. **Check if a LinkedList is palindrome or not. (Course)(PID - 330)**

<https://www.youtube.com/watch?v=-DtNInqFUXs&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=35>

1. **Find the starting point of the Loop of LinkedList**(Codestudio) PID 9967<https://www.youtube.com/watch?v=QfbOhn0WZ88&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=36>
2. **Flattening of a LinkedList (Codestudio) PID 9974**<https://www.youtube.com/watch?v=ysytSSXpAI0&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=37>

1. **Rotate a LinkedList (Codestudio) PID 8867**

<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(Codestudio) PID 9350**<https://www.youtube.com/watch?v=VNf6VynfpdM&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=39>

1. **3 sum (Course)(PID - 28)**

<https://www.youtube.com/watch?v=onLoX6Nhvmg&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=40>

1. **Trapping rainwater(Codestudio)**   PID 7287

<https://www.youtube.com/watch?v=m18Hntz4go8&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=41>

1. **Remove Duplicate from Sorted array(Codestudio)**   PID 9920

<https://www.youtube.com/watch?v=Fm_p9lJ4Z_8&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=42>

1. **Max consecutive ones**  (Codestudio) PID 8521

<https://www.youtube.com/watch?v=Mo33MjjMlyA&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=43>

**Day8: (Greedy)**

1. **N meeting in one room** (Codestudio) PID 9566

<https://www.youtube.com/watch?v=II6ziNnub1Q&list=PLgUwDviBIf0p4ozDR_kJJkONnb1wdx2Ma&index=44>

1. **Minimum number of platforms required for a railway(Codestudio) PID 8006**
2. Greedy algorithm to find minimum number of coins(Codestudio) PID 9083
3. Fractional Knapsack Problem (Course)(PID - 2052)
4. Activity Selection(Course)(PID - 2056)
5. Job sequencing Problem (Course)(PID - 2057)

Day9: (Backtracking)

1. N queens Problem (Course)(PID - 868)
2. Sudoko (Course)(PID - 908)
3. M coloring Problem (Graph prob) (Codestudio) PID 9242
4. Rat in a Maze (Course)(PID - 905)
5. Print all Permutations of a string/array (Course)(PID - 47)
6. Word Break (print all ways)  (Codestudio) PID 9373

Day10:

1. Combination sum-1 (Course)(PID - 180)
2. Combination sum-2 (Codestudio) PID 9961
3. Palindrome Partioning (Codestudio) PID 8055
4. Print Subsets(Course) (PID - 49)
5. Return Subsets (Codestudio) PID 179
6. K-th permutation Sequence (Codestudio) PID 9965

Day11: (Divide and Conquer)

1. 1/N-th root of an integer (use binary search) (square root, cube root, ..)(Codestudio) PID 9580
2. Matrix Median(Codestudio) PID 8420
3. Find the element that appears once in sorted array, and rest element appears twice (Binary search) **(Codestudio) PID 9973**
4. Search element in a sorted and rotated array/ find pivot where it is rotated (Codestudio) PID 7216
5. Median of 2 sorted arrays (Codestudio)   PID 9430
6. K-th element of two sorted arrays **(Codestudio) PID 9968**

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)  PID 8569
2. Count total set bits (Codestudio) PID 9966
3. Divide Integers without / operator(Codestudio) PID 9956
4. Power Set (this is very important) PID 9575
5. Find MSB in o(1)(Codestudio) PID 9940
6. Find square of a number without using multiplication or division operators.(Codestudio) PID 9962

Day13: (Stack and Queue)

1. Implement Stack / Implement Queue(Course) (Stack PID - 1474) (Queue PID -1475)
2. BFS (Course)(PID - 1699)
3. Implement Stack using Queue(Course)(PID - 1416)
4. Implement Queue using Stack (Codestudio) (PID - 8012)
5. Check for balanced parentheses (Course)(PID - 418)
6. Next Greater Element (Codestudio) PID 7987

Day14:

1. Next Smaller Element (Codestudio) PID 9951
2. LRU cache (vvvv. imp) (Codestudio) PID 7503
3. Largest rectangle in histogram (Codestudio) PID 9476
4. Sliding Window maximum (Codestudio) PID 9177
5. Implement Min Stack  (CODESTUDIO) PID 9418(Max-Stack this should work everything is same just min ki jagah max h)?
6. Rotten Orange (Using BFS)  (Codestudio) PID 7596

Day15: (String)

1. Reverse Words in a String (Course) (PID - 62)
2. Longest Palindrome in a string (Course)(PID - 123)
3. Roman Number to Integer and vice versa(Codestudio) PID 9273, 9274
4. Implement ATOI/STRSTR (Codestudio) PID 9239
5. Longest Common Prefix (Course)(PID - 5571)
6. Rabin Karp (Codestudio) (PID 10013)

Day16: (String)

1. Prefix Function/Z-Function(Codestudio) PID 9958
2. KMP algo (Codestudio 9960)
3. Minimum characters needed to be inserted in the beginning to make it palindromic. (Codestudio) PID 8524
4. Check for Anagrams (Course)(PID - 349)
5. Count and Say PID (Codestudio) 9789
6. Compare version numbers (Codestudio) PID 9426

Day17: (Binary Tree)

1. Preorder Traversal (with recursion) (Course with recursion)(PID- 1565)
2. Postorder Traversal (with recursion)  (Course with recursion)(PID - 1566)
3. Traversals (without recursion) (Codestudio) - PID - 9238
4. LeftView Of Binary Tree(Codestudio) PID 8914
5. Bottom View of Binary Tree(codestudio) PID 8613
6. Top View of Binary Tree (Codestudio) PID 8575

Day18: (Binary Tree)

1. Level order Traversal / Level order traversal in spiral form (Course)(PID - 353) Spiral Form - (Course pid - 82)
2. Height of a Binary Tree  (Course)(PID - 1564)
3. Diameter of Binary Tree  (Course) (PID - 1157)
4. Check if Binary tree is height balanced or not  (Course)(PID - 79)
5. LCA in Binary Tree  (Course)(PID - 513)
6. Check if two trees are identical or not  (Codestudio) (PID - 7995)

Day 19: (Binary Tree)

1. Maximum path sum (Course)(PId- 787)
2. Construct Binary Tree from inorder and preorder (Course)(PID - 100)
3. Construct Binary Tree from Inorder and Postorder (Course)(PID - 355)
4. Symmetric Binary Tree (Codestudio) (9204)
5. Flatten Binary Tree to LinkedList(Codestudio) PID 9954

Day 20: (Binary Search Tree)

1. Populate Next Right pointers of Tree (Codestudio) (PID 9443)
2. Search given Key in BST (Course)(PID - 1600)
3. Construct BST from given keys. (Course)(PID - 1159)
4. Check is a BT is BST or not  (Course)(PID - 861)
5. Find LCA of two nodes in BST (Course)(PID - 106)
6. Find the inorder predecessor/successor of a given Key in BST. (Codestudio) PID 8559

Day21: (BinarySearchTree)

1. Floor and Ceil in a BST (Codestudio) PID 8870, 8877
2. Find K-th smallest and K-th largest element in BST (2 different Questions) (Codestudio) PID 8854, 8851
3. Find a pair with a given sum in BST (Course)(PID - 105)
4. BST iterator (Codestudio) PID 9952
5. Size of the largest BST in a Binary Tree (Course)(PID - 520)
6. Serialize and deserialize Binary Tree(Codestudio) PID 8820

Day22: (Mixed Questions)

1. Binary Tree to Double Linked List (Codestudio) PID 8610
2. Find median in a stream of running integers. (Course)(PID - 1642)
3. K-th largest element in a stream. (Codestudio) PID 8070
4. Distinct numbers in Window. (Codestudio) PID 8827
5. K-th largest element in an unsorted array. (Course)(PID - 1641)
6. Flood-fill Algorithm (Codestudio) PID 9778

Day23: (Graph)

1. Clone a graph (Not that easy as it looks) (Codestudio) PID 9933
2. DFS(Course)(PID - 1695)
3. BFS(Course)(PID - 1696)
4. Detect A cycle in Undirected Graph/Directed Graph (Codestudio) PID 9546, 9578
5. Topo Sort (Codestudio) PID 9340
6. Number of islands (Do in Grid and Graph both) (Course)(PID - 555)
7. Bipartite Check (Codestudio) (PID- 9509)

Day24: (Graph)

1. SCC(using KosaRaju’s algo) (Codestudio) (PID - 9441)
2. Djisktra’s Algorithm (Course)(PID - 1725)
3. Bellman Ford Algo (Course)(PID - 7990)
4. Floyd Warshall Algorithm  (Course)(PID - 7991)
5. MST using Prim’s Algo (Course)(PID - 1724)
6. MST using Kruskal’s Algo  (Course)(PID - 1723)

Day25: (Dynamic Programming)

1. Max Product Subarray (Codestudio)(Pid - 9992)
2. Longest Increasing Subsequence(Course)(Pid - 1679)
3. Longest Common Subsequence (Course)(PID - 859)
4. 0-1 Knapsack (Course)(PID - 845)
5. Edit Distance(Course)(PID - 858)
6. Maximum sum increasing subsequence (Codestudio) PID 9963
7. Matrix Chain Multiplication (Course)(Pid-860)

Day26: (DP)

1. Maximum sum path in matrix, (count paths, and similar type do, also backtrack to find the maximum path) (Course)(PID - 1674)
2. Coin change (Course) (PID - 855)
3. Subset Sum (Course)(PID - 1941)
4. Rod Cutting (Codestudio) PID 8057
5. Egg Dropping (Codestudio) (PID 9303 statement modified to cut logs)
6. Word Break (Codestudio) PID 9845
7. Palindrome Partitioning (MCM Variation) (Codestudio) PID 8390

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.