Day1: (Arrays)

* Find the duplicate in an array of N integers.
* Sort an array of 0’s 1’s 2’s without using extra space or sorting algo
* Repeat and Missing Number
* Merge two sorted Arrays without extra space
* Kadane’s Algorithm
* Merge Overlapping Subintervals

Day2: (Arrays)

* Set Matrix Zeros
* Pascal Triangle
* Next Permutation
* Inversion of Array (Using Merge Sort)
* Stock Buy and Sell
* Rotate Matrix

Day3: (Math)

* Excel Column Number
* Find n^x in log N
* Count trailing zeros in factorial of a number
* Find GCD in Log N
* Grid Unique Paths
* Go through Puzzles from GFG (Search on own)

Day4: (Hashing)

* 2 Sum problem
* 4 Sum problem
* Longest Consecutive Sequence
* Longest Subarray with 0 sum
* Count number of subarrays with given XOR(this clears a lot of problems)
* Longest substring without repeat

Day5: (LinkedList)

* Reverse a LinkedList
* Find the middle of LinkedList
* Merge two sorted Linked List
* Remove the N-th node from the back of LinkedList
* Delete a given Node when a node is given. (0(1) solution)
* Add two numbers as LinkedList

Day6:

* Find intersection point of Y LinkedList
* Check if a LinkedList is a palindrome or not.
* Reverse a LinkedList in groups.
* Detect a cycle and removing loop(two different questions and same concept)
* Flattening of a LinkedList
* Rotate a LinkedList
* Clone a Linked List with random and next pointer.

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Day7: (2-pointer)

* Merge two sorted linked lists
* Find the starting point of the loop.
* 3 sum
* Trapping rainwater
* Remove Duplicate from Sorted array
* Max continuous number of 1’s

Day8: (Greedy)

* N meeting in one room
* Activity Selection
* Greedy algorithm to find the minimum number of coins
* Fractional Knapsack Problem
* Minimum number of platforms required for a railway
* Job sequencing Problem

Day9: (Backtracking)

* N queens Problem
* Sudoku
* M coloring Problem
* Rat in a Maze
* Print all permutations of a string/array
* Word Break (print all ways)
* The largest number in K swaps

Day10:

* Combination sum-1
* Combination sum-2
* Palindrome Partitioning
* Subset Sum-1
* Subset Sum-2
* K-th permutation Sequence

Day11: (Divide and Conquer)

* 1/N-th root of an integer (use binary search) (square root, cube root, ..)
* Matrix Median
* Find the element that appears once in sorted array, and rest element appears twice (Binary search)
* Search element in a sorted and rotated array.
* K-th element of two sorted arrays
* Media of an array

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

* Check if a number if a power of 2 or not in O(1)
* Count total set bits
* Total set bits from 1 to n
* Divide Integers without / operator
* Power Set (this is very important)
* Find MSB in o(1)
* Find first MSB that’s 1 in O(1)
* Find the square of a number without using multiplication or division operators.

Day13: (Stack and Queue)

* Implement Stack / Implement Queue
* BFS
* Implement Stack using Queue
* Implement Queue using Stack
* Check for balanced parentheses
* Next Greater Element

Day14:

* Next Smaller Element
* LRU cache (vvvv. imp)
* Largest rectangle in a histogram
* Sliding Window maximum
* Implement Min Stack
* Rotten Orange (Using BFS)

Day15: (String)

* Reverse Words in a String
* Longest Palindrome in a string
* Roman Number to Integer and vice versa
* Implement ATOI/STRSTR
* Longest Common Prefix
* Rabin Karp

Day16: (String)

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

Day17: (Binary Tree)

* Inorder Traversal (with recursion and without recursion)
* Preorder Traversal (with recursion and without recursion)
* Postorder Traversal (with recursion and without recursion)
* LeftView Of Binary Tree
* RightView Of Binary Tree
* Bottom View of Binary Tree
* Top View of Binary Tree

Day18: (Binary Tree)

* Level order Traversal / Level order traversal in spiral form
* Height of a Binary Tree
* The diameter of a Binary Tree
* Check if the Binary tree is height-balanced or not
* LCA in Binary Tree
* Check if two trees are identical or not

Day 19: (Binary Tree)

* Maximum path sum
* Construct Binary Tree from inorder and preorder
* Construct Binary Tree from Inorder and Postorder
* Symmetric Binary Tree
* Flatten Binary Tree to LinkedList
* Check if Binary Tree is mirror of itself or not

Day 20: (Binary Search Tree)

* Populate Next Right pointers of Tree
* Search given Key in BST
* Construct BST from given keys.
* Check is a BT is BST or not
* Find LCA of two nodes in BST
* Find the inorder predecessor/successor of a given Key in BST.

Day21: (BinarySearchTree)

* Floor and Ceil in a BST
* Find K-th smallest and K-th largest element in BST (2 different Questions)
* Find a pair with a given sum in BST
* BST iterator
* Size of the largest BST in a Binary Tree
* Serialize and deserialize Binary Tree

Day22: (Mixed Questions)

* Binary Tree to Double Linked List
* Find median in a stream of running integers.
* K-th largest element in a stream.
* Distinct numbers in Window.
* K-th largest element in an unsorted array.
* Flood-fill Algorithm

Day23: (Graph)

* Clone a graph (Not that easy as it looks)
* DFS
* BFS
* Detect A cycle in Undirected Graph/Directed Graph
* Topo Sort
* Number of islands (Do in Grid and Graph both)
* Bipartite Check

Day24: (Graph)

* SCC(using KosaRaju’s algo)
* Djisktra’s Algorithm
* Bellman Ford Algo
* Floyd Warshall Algorithm
* MST using Prim’s Algo
* MST using Kruskal’s Algo

Day25: (Dynamic Programming)

* Max Product Subarray
* Longest Increasing Subsequence
* Longest Common Subsequence
* 0-1 Knapsack
* Edit Distance
* Maximum sum increasing subsequence
* Matrix Chain Multiplication

Day26: (DP)

* Maximum sum path in matrix, (count paths, and similar type do, also backtrack to find the maximum path)
* Coin change
* Subset Sum
* Rod Cutting
* Egg Dropping
* Word Break
* Palindrome Partitioning (MCM Variation)

Day27:

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

Day28:

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

Day29:

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

Day30:

* 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.