

450 DSA Cracker

Topics (/) / Array

Serial No.	Questions
1	Reverse the array (https://www.geeksforgeeks.org/write-a-program-to-reverse-an-array-or-string/)
2	Find the maximum and minimum element in an array (https://www.geeksforgeeks.org/maximum-and-minimum-in-an-array/)
3	Find the "Kth" max and min element of an array (https://practice.geeksforgeeks.org/problems/kth-smallest-element/0)
4	Given an array which consists of only 0, 1 and 2. Sort the array without using any sorting algo (https://practice.geeksforgeeks.org/problems/sort-an-array-of-0s-1s-and-2s/0)
5	Move all the negative elements to one side of the array (https://www.geeksforgeeks.org/move-negative-numbers-beginning-positive-end-constant-extra-space/)
6	Find the Union and Intersection of the two sorted arrays. (https://practice.geeksforgeeks.org/problems/union-of-two-arrays/0)
7	Write a program to cyclically rotate an array by one. (https://practice.geeksforgeeks.org/problems/cyclically-rotate-an-array-by-one/0)
8	find Largest sum contiguous Subarray [V. IMP] (https://practice.geeksforgeeks.org/problems/kadanes-algorithm/0)
9	Minimise the maximum difference between heights [V.IMP] (https://practice.geeksforgeeks.org/problems/minimize-the-heights3351/1)
10	Minimum no. of Jumps to reach end of an array (https://practice.geeksforgeeks.org/problems/minimum-number-of-jumps/0)
11	find duplicate in an array of N+1 Integers (https://leetcode.com/problems/find-the-duplicate-number/)

Serial No.	Questions
12	Merge 2 sorted arrays without using Extra space. (https://practice.geeksforgeeks.org/problems/merge-two-sorted-arrays5135/1)
13	Kadane's Algo [V.V.V.V.V IMP] (https://practice.geeksforgeeks.org/problems/kadanes-algorithm/0)
14	Merge Intervals (https://leetcode.com/problems/merge-intervals/)
15	Next Permutation (https://leetcode.com/problems/next-permutation/)
16	Count Inversion (https://practice.geeksforgeeks.org/problems/inversion-of-array/0)
17	Best time to buy and Sell stock (https://leetcode.com/problems/best-time-to-buy-and-sell-stock/)
18	find all pairs on integer array whose sum is equal to given number (https://practice.geeksforgeeks.org/problems/count-pairs-with-given-sum5022/1)
19	find common elements In 3 sorted arrays (https://practice.geeksforgeeks.org/problems/common-elements1132/1)
20	Rearrange the array in alternating positive and negative items with O(1) extra space (https://www.geeksforgeeks.org/rearrange-array-alternating-positive-negative-items-o1-extra-space/)
21	Find if there is any subarray with sum equal to 0 (https://practice.geeksforgeeks.org/problems/subarray-with-0-sum/0)
22	Find factorial of a large number (https://practice.geeksforgeeks.org/problems/factorials-of-large-numbers/0)
23	find maximum product subarray (https://practice.geeksforgeeks.org/problems/maximum-product-subarray3604/1)
24	Find longest consecutive subsequence (https://practice.geeksforgeeks.org/problems/longest-consecutive-subsequence/0)
25	Given an array of size n and a number k, find all elements that appear more than " n/k " times. (https://leetcode.com/problems/majority-element-ii/)
26	Maximum profit by buying and selling a share atmost twice (https://www.geeksforgeeks.org/maximum-profit-by-buying-and-selling-a-share-at-most-twice/)
27	Find whether an array is a subset of another array (https://practice.geeksforgeeks.org/problems/array-subset-of-another-array/0)

Serial No.	Questions
28	Find the triplet that sum to a given value (https://practice.geeksforgeeks.org/problems/triplet-sum-in-array/0)
29	Trapping Rain water problem (https://practice.geeksforgeeks.org/problems/trapping-rain-water-1587115621/1)
30	Chocolate Distribution problem (https://practice.geeksforgeeks.org/problems/chocolate-distribution-problem/0)
31	Smallest Subarray with sum greater than a given value (https://practice.geeksforgeeks.org/problems/smallest-subarray-with-sum-greater-than-x/0)
32	Three way partitioning of an array around a given value (https://practice.geeksforgeeks.org/problems/three-way-partitioning/1)
33	Minimum swaps required bring elements less equal K together (https://practice.geeksforgeeks.org/problems/minimum-swaps-required-to-bring-all-elements-less-than-or-equal-to-k-together/0)
34	Minimum no. of operations required to make an array palindrome (https://practice.geeksforgeeks.org/problems/palindromic-array/0)
35	Median of 2 sorted arrays of equal size (https://practice.geeksforgeeks.org/problems/find-the-median0527/1)
36	Median of 2 sorted arrays of different size (https://www.geeksforgeeks.org/median-of-two-sorted-arrays-of-different-sizes/)

450 DSA Cracker

Topics (/) / Backtracking

Serial No.	Questions
1	Rat in a maze Problem (https://practice.geeksforgeeks.org/problems/rat-in-a-maze-problem/1)
2	Printing all solutions in N-Queen Problem (https://www.geeksforgeeks.org/printing-solutions-n-queen-problem/)
3	Word Break Problem using Backtracking (https://practice.geeksforgeeks.org/problems/word-break-part-2/0)
4	Remove Invalid Parentheses (https://leetcode.com/problems/remove-invalid-parentheses/)
5	Sudoku Solver (https://practice.geeksforgeeks.org/problems/solve-the-sudoku/0)
6	m Coloring Problem (https://practice.geeksforgeeks.org/problems/m-coloring-problem/0)
7	Print all palindromic partitions of a string (https://www.geeksforgeeks.org/given-a-string-print-all-possible-palindromic-partition/)
8	Subset Sum Problem (https://practice.geeksforgeeks.org/problems/subset-sum-problem2014/1)
9	The Knight's tour problem (https://www.geeksforgeeks.org/the-knights-tour-problem-backtracking-1/)
10	Tug of War (https://www.geeksforgeeks.org/tug-of-war/)
11	Find shortest safe route in a path with landmines (https://www.geeksforgeeks.org/find-shortest-safe-route-in-a-path-with-landmines/)
12	Combinational Sum (https://practice.geeksforgeeks.org/problems/combination-sum/0)



Serial No.	Questions
13	Find Maximum number possible by doing at-most K swaps (https://practice.geeksforgeeks.org/problems/largest-number-in-k-swaps/0)
14	Print all permutations of a string (https://practice.geeksforgeeks.org/problems/permutations-of-a-given-string/0)
15	Find if there is a path of more than k length from a source (https://www.geeksforgeeks.org/find-if-there-is-a-path-of-more-than-k-length-from-a-source/)
16	Longest Possible Route in a Matrix with Hurdles (https://www.geeksforgeeks.org/longest-possible-route-in-a-matrix-with-hurdles/)
17	Print all possible paths from top left to bottom right of a mXn matrix (https://www.geeksforgeeks.org/print-all-possible-paths-from-top-left-to-bottom-right-of-a-mxn-matrix/)
18	Partition of a set intoK subsets with equal sum (https://practice.geeksforgeeks.org/problems/partition-array-to-k-subsets/1)
19	Find the K-th Permutation Sequence of first N natural numbers (https://www.geeksforgeeks.org/find-the-k-th-permutation-sequence-of-first-n-natural-numbers/)
20	Implement Stack from Scratch (https://www.tutorialspoint.com/javaexamples/data_stack.htm)
21	Implement Queue from Scratch (https://www.geeksforgeeks.org/queue-set-1introduction-and-array-implementation/)
22	Implement 2 stack in an array (https://practice.geeksforgeeks.org/problems/implement-two-stacks-in-an-array/1)

450 DSA Cracker

Topics (/) / Binary Tree

Serial No.	Questions
1	level order traversal (https://practice.geeksforgeeks.org/problems/level-order-traversal/1)
2	Reverse Level Order traversal (https://practice.geeksforgeeks.org/problems/reverse-level-order-traversal/1)
3	Height of a tree (https://practice.geeksforgeeks.org/problems/height-of-binary-tree/1)
4	Diameter of a tree (https://practice.geeksforgeeks.org/problems/diameter-of-binary-tree/1)
5	Mirror of a tree (https://www.geeksforgeeks.org/create-a-mirror-tree-from-the-given-binary-tree/)
6	Inorder Traversal of a tree both using recursion and Iteration (https://www.techiedelight.com/inorder-tree-traversal-iterative-recursive/)
7	Preorder Traversal of a tree both using recursion and Iteration (https://www.techiedelight.com/preorder-tree-traversal-iterative-recursive/)
8	Postorder Traversal of a tree both using recursion and Iteration (https://www.techiedelight.com/postorder-tree-traversal-iterative-recursive/)
9	Left View of a tree (https://practice.geeksforgeeks.org/problems/left-view-of-binary-tree/1)
10	Right View of Tree (https://practice.geeksforgeeks.org/problems/right-view-of-binary-tree/1)
11	Top View of a tree (https://practice.geeksforgeeks.org/problems/top-view-of-binary-tree/1)
12	Bottom View of a tree (https://practice.geeksforgeeks.org/problems/bottom-view-of-binary-tree/1)

Serial No.	Questions
13	Zig-Zag traversal of a binary tree (https://practice.geeksforgeeks.org/problems/zigzag-tree-traversal/1)
14	Check if a tree is balanced or not (https://practice.geeksforgeeks.org/problems/check-for-balanced-tree/1)
15	Diagnol Traversal of a Binary tree (https://www.geeksforgeeks.org/diagonal-traversal-of-binary-tree/)
16	Boundary traversal of a Binary tree (https://practice.geeksforgeeks.org/problems/boundary-traversal-of-binary-tree/1)
17	Construct Binary Tree from String with Bracket Representation (https://www.geeksforgeeks.org/construct-binary-tree-string-bracket-representation/)
18	Convert Binary tree into Doubly Linked List (https://practice.geeksforgeeks.org/problems/binary-tree-to-dll/1)
19	Convert Binary tree into Sum tree (https://practice.geeksforgeeks.org/problems/transform-to-sum-tree/1)
20	Construct Binary tree from Inorder and preorder traversal (https://practice.geeksforgeeks.org/problems/construct-tree-1/1)
21	Find minimum swaps required to convert a Binary tree into BST (https://www.geeksforgeeks.org/minimum-swap-required-convert-binary-tree-binary-search-tree/)
22	Check if Binary tree is Sum tree or not (https://practice.geeksforgeeks.org/problems/sum-tree/1)
23	Check if all leaf nodes are at same level or not (https://practice.geeksforgeeks.org/problems/leaf-at-same-level/1)
24	Check if a Binary Tree contains duplicate subtrees of size 2 or more [IMP] (https://practice.geeksforgeeks.org/problems/duplicate-subtree-in-binary-tree/1)
25	Check if 2 trees are mirror or not (https://practice.geeksforgeeks.org/problems/check-mirror-in-n-ary-tree/0)
26	Sum of Nodes on the Longest path from root to leaf node (https://practice.geeksforgeeks.org/problems/sum-of-the-longest-bloodline-of-a-tree/1)
27	Check if given graph is tree or not. [IMP] (https://www.geeksforgeeks.org/check-given-graph-tree/)



Serial No.	Questions
28	Find Largest subtree sum in a tree (https://www.geeksforgeeks.org/find-largest-subtree-sum-tree/)
29	Maximum Sum of nodes in Binary tree such that no two are adjacent (https://www.geeksforgeeks.org/maximum-sum-nodes-binary-tree-no-two-adjacent/)
30	Print all "K" Sum paths in a Binary tree (https://www.geeksforgeeks.org/print-k-sum-paths-binary-tree/)
31	Find LCA in a Binary tree (https://practice.geeksforgeeks.org/problems/lowest-common-ancestor-in-a-binary-tree/1)
32	Find distance between 2 nodes in a Binary tree (https://practice.geeksforgeeks.org/problems/min-distance-between-two-given-nodes-of-a-binary-tree/1)
33	Kth Ancestor of node in a Binary tree (https://www.geeksforgeeks.org/kth-ancestor-node-binary-tree-set-2/)
34	Find all Duplicate subtrees in a Binary tree [IMP] (https://practice.geeksforgeeks.org/problems/duplicate-subtrees/1)
35	Tree Isomorphism Problem (https://practice.geeksforgeeks.org/problems/check-if-tree-is-isomorphic/1)

450 DSA Cracker

Topics (/) / Bitmanipulation

Serial No.	Questions
1	Count set bits in an integer (https://practice.geeksforgeeks.org/problems/set-bits0143/1)
2	Find the two non-repeating elements in an array of repeating elements (https://practice.geeksforgeeks.org/problems/finding-the-numbers0215/1)
3	Count number of bits to be flipped to convert A to B (https://practice.geeksforgeeks.org/problems/bit-difference/0)
4	Count total set bits in all numbers from 1 to n (https://practice.geeksforgeeks.org/problems/count-total-set-bits/0)
5	Program to find whether a no. is power of two (https://practice.geeksforgeeks.org/problems/power-of-2/0)
6	Find position of the only set bit (https://practice.geeksforgeeks.org/problems/find-position-of-set-bit3706/1)
7	Copy set bits in a range (https://www.geeksforgeeks.org/copy-set-bits-in-a-range/)
8	Divide two integers without using multiplication, division and mod operator (https://www.geeksforgeeks.org/divide-two-integers-without-using-multiplication-division-mod-operator/)
9	Calculate square of a number without using *, / and pow() (https://www.geeksforgeeks.org/calculate-square-of-a-number-without-using-and-pow/)
10	Power Set (https://practice.geeksforgeeks.org/problems/power-set4302/1)



450 DSA Cracker

Topics (/) / BST

Serial No.	Questions
1	Find a value in a BST (https://www.geeksforgeeks.org/binary-search-tree-set-1-search-and-insertion/)
2	Deletion of a node in a BST (https://leetcode.com/problems/delete-node-in-a-bst/)
3	Find min and max value in a BST (https://practice.geeksforgeeks.org/problems/minimum-element-in-bst/1)
4	Find inorder successor and inorder predecessor in a BST (https://practice.geeksforgeeks.org/problems/predecessor-and-successor/1)
5	Check if a tree is a BST or not (https://practice.geeksforgeeks.org/problems/check-for-bst/1)
6	Populate Inorder successor of all nodes (https://practice.geeksforgeeks.org/problems/populate-inorder-successor-for-all-nodes/1)
7	Find LCA of 2 nodes in a BST (https://practice.geeksforgeeks.org/problems/lowest-common-ancestor-in-a-bst/1)
8	Construct BST from preorder traversal (https://www.geeksforgeeks.org/construct-bst-from-given-preorder-traversal/)
9	Convert Binary tree into BST (https://practice.geeksforgeeks.org/problems/binary-tree-to-bst/1)
10	Convert a normal BST into a Balanced BST (https://www.geeksforgeeks.org/convert-normal-bst-balanced-bst/)
11	Merge two BST [V.V.V>IMP] (https://www.geeksforgeeks.org/merge-two-balanced-binary-search-trees/)
12	Find Kth largest element in a BST  (https://practice.geeksforgeeks.org/problems/kth-largest-element-in-bst/1)

Serial No.	Questions
13	Find Kth smallest element in a BST (https://practice.geeksforgeeks.org/problems/find-k-th-smallest-element-in-bst/1)
14	Count pairs from 2 BST whose sum is equal to given value "X" (https://practice.geeksforgeeks.org/problems/brothers-from-different-root/1)
15	Find the median of BST in $O(n)$ time and $O(1)$ space (https://www.geeksforgeeks.org/find-median-bst-time-o1-space/)
16	Count BST nodes that lie in a given range (https://practice.geeksforgeeks.org/problems/count-bst-nodes-that-lie-in-a-given-range/1)
17	Replace every element with the least greater element on its right (https://www.geeksforgeeks.org/replace-every-element-with-the-least-greater-element-on-its-right/)
18	Given "n" appointments, find the conflicting appointments (https://www.geeksforgeeks.org/given-n-appointments-find-conflicting-appointments/)
19	Check preorder is valid or not (https://practice.geeksforgeeks.org/problems/preorder-to-postorder/0)
20	Check whether BST contains Dead end (https://practice.geeksforgeeks.org/problems/check-whether-bst-contains-dead-end/1)
21	Largest BST in a Binary Tree [V.V.V.V.V IMP] (https://practice.geeksforgeeks.org/problems/largest-bst/1)
22	Flatten BST to sorted list (https://www.geeksforgeeks.org/flatten-bst-to-sorted-list-increasing-order/)

450 DSA Cracker

Topics (/) / Dynamic Programming

Serial No.	Questions
1	Coin ChangeProblem (https://practice.geeksforgeeks.org/problems/coin-change2448/1)
2	Knapsack Problem (https://practice.geeksforgeeks.org/problems/0-1-knapsack-problem/0)
3	Binomial CoefficientProblem (https://practice.geeksforgeeks.org/problems/ncr1019/1)
4	Permutation CoefficientProblem (https://www.geeksforgeeks.org/permutation-coefficient/)
5	Program for nth Catalan Number (https://www.geeksforgeeks.org/program-nth-catalan-number/)
6	Matrix Chain Multiplication (https://www.geeksforgeeks.org/matrix-chain-multiplication-dp-8/)
7	Edit Distance (https://practice.geeksforgeeks.org/problems/edit-distance3702/1)
8	Subset Sum Problem (https://practice.geeksforgeeks.org/problems/subset-sum-problem2014/1)
9	Friends Pairing Problem (https://practice.geeksforgeeks.org/problems/friends-pairing-problem5425/1)
10	Gold Mine Problem (https://www.geeksforgeeks.org/gold-mine-problem/)
11	Assembly Line SchedulingProblem (https://www.geeksforgeeks.org/assembly-line-scheduling-dp-34/)
12	Painting the Fenceproblem (https://practice.geeksforgeeks.org/problems/painting-the-fence3727/1)
13	Maximize The Cut Segments (https://practice.geeksforgeeks.org/problems/cutted-segments/0)

Serial No.	Questions
14	Longest Common Subsequence (https://practice.geeksforgeeks.org/problems/longest-common-subsequence/0)
15	Longest Repeated Subsequence (https://practice.geeksforgeeks.org/problems/longest-repeating-subsequence/0)
16	Longest Increasing Subsequence (https://practice.geeksforgeeks.org/problems/longest-increasing-subsequence/0)
17	Space Optimized Solution of LCS (https://www.geeksforgeeks.org/space-optimized-solution-lcs/)
18	LCS (Longest Common Subsequence) of three strings (https://practice.geeksforgeeks.org/problems/lcs-of-three-strings/0)
19	Maximum Sum Increasing Subsequence (https://practice.geeksforgeeks.org/problems/maximum-sum-increasing-subsequence4749/1)
20	Count all subsequences having product less than K (https://www.geeksforgeeks.org/count-subsequences-product-less-k/)
21	Longest subsequence such that difference between adjacent is one (https://practice.geeksforgeeks.org/problems/longest-subsequence-such-that-difference-between-adjacents-is-one4724/1)
22	Maximum subsequence sum such that no three are consecutive (https://www.geeksforgeeks.org/maximum-subsequence-sum-such-that-no-three-are-consecutive/)
23	Egg Dropping Problem (https://practice.geeksforgeeks.org/problems/egg-dropping-puzzle/0)
24	Maximum Length Chain of Pairs (https://practice.geeksforgeeks.org/problems/max-length-chain/1)
25	Maximum size square sub-matrix with all 1s (https://practice.geeksforgeeks.org/problems/largest-square-formed-in-a-matrix/0)
26	Maximum sum of pairs with specific difference (https://practice.geeksforgeeks.org/problems/pairs-with-specific-difference/0)
27	Min Cost Path Problem (https://practice.geeksforgeeks.org/problems/path-in-matrix3805/1)
28	Maximum difference of zeros and ones in binary string (https://practice.geeksforgeeks.org/problems/maximum-difference-of-zeros-and-ones-in-binary-string4111/1)

Serial No.	Questions
29	Minimum number of jumps to reach end (https://practice.geeksforgeeks.org/problems/minimum-number-of-jumps/0)
30	Minimum cost to fill given weight in a bag (https://practice.geeksforgeeks.org/problems/minimum-cost-to-fill-given-weight-in-a-bag1956/1)
31	Minimum removals from array to make $\max - \min \leq K$ (https://www.geeksforgeeks.org/minimum-removals-array-make-max-min-k/)
32	Longest Common Substring (https://practice.geeksforgeeks.org/problems/longest-common-substring/0)
33	Count number of ways to reach a given score in a game (https://practice.geeksforgeeks.org/problems/reach-a-given-score/0)
34	Count Balanced Binary Trees of Height h (https://practice.geeksforgeeks.org/problems/bbt-counter/0)
35	Largest Sum Contiguous Subarray [V>V>V>V IMP] (https://practice.geeksforgeeks.org/problems/kadanes-algorithm/0)
36	Smallest sum contiguous subarray (https://www.geeksforgeeks.org/smallest-sum-contiguous-subarray/)
37	Unbounded Knapsack (Repetition of items allowed) (https://practice.geeksforgeeks.org/problems/knapsack-with-duplicate-items4201/1)
38	Word Break Problem (https://practice.geeksforgeeks.org/problems/word-break/0)
39	Largest Independent Set Problem (https://www.geeksforgeeks.org/largest-independent-set-problem-dp-26/)
40	Partition problem (https://practice.geeksforgeeks.org/problems/subset-sum-problem2014/1)
41	Longest Palindromic Subsequence (https://www.geeksforgeeks.org/longest-palindromic-subsequence-dp-12/)
42	Count All Palindromic Subsequence in a given String (https://practice.geeksforgeeks.org/problems/count-palindromic-subsequences/1)
43	Longest Palindromic Substring (https://leetcode.com/problems/longest-palindromic-substring/)
44	Longest alternating subsequence (https://practice.geeksforgeeks.org/problems/longest-alternating-subsequence/0)



Serial No.	Questions
45	Weighted Job Scheduling (https://www.geeksforgeeks.org/weighted-job-scheduling/)
46	Coin game winner where every player has three choices (https://www.geeksforgeeks.org/coin-game-winner-every-player-three-choices/)
47	Count Derangements (Permutation such that no element appears in its original position) [IMPORTANT] (https://www.geeksforgeeks.org/count-derangements-permutation-such-that-no-element-appears-in-its-original-position/)
48	Maximum profit by buying and selling a share at most twice [IMP] (https://www.geeksforgeeks.org/maximum-profit-by-buying-and-selling-a-share-at-most-twice/)
49	Optimal Strategy for a Game (https://practice.geeksforgeeks.org/problems/optimal-strategy-for-a-game/0)
50	Optimal Binary Search Tree (https://www.geeksforgeeks.org/optimal-binary-search-tree-dp-24/)
51	Palindrome Partitioning Problem (https://practice.geeksforgeeks.org/problems/palindromic-partitioning4845/1)
52	Word Wrap Problem (https://practice.geeksforgeeks.org/problems/word-wrap/0)
53	Mobile Numeric Keypad Problem [IMP] (https://practice.geeksforgeeks.org/problems/mobile-numeric-keypad5456/1)
54	Boolean Parenthesization Problem (https://practice.geeksforgeeks.org/problems/boolean-parenthesization/0)
55	Largest rectangular sub-matrix whose sum is 0 (https://www.geeksforgeeks.org/largest-rectangular-sub-matrix-whose-sum-0/)
56	Largest area rectangular sub-matrix with equal number of 1's and 0's [IMP] (https://www.geeksforgeeks.org/largest-area-rectangular-sub-matrix-equal-number-1s-0s/)
57	Maximum sum rectangle in a 2D matrix (https://practice.geeksforgeeks.org/problems/maximum-sum-rectangle/0)
58	Maximum profit by buying and selling a share at most k times (https://practice.geeksforgeeks.org/problems/maximum-profit4657/1)
59	Find if a string is interleaved of two other strings (https://practice.geeksforgeeks.org/problems/interleaved-strings/1)
60	Maximum Length of Pair Chain (https://leetcode.com/problems/maximum-length-of-pair-chain/)

450 DSA Cracker

Topics (/) / Graph

Serial No.	Questions
1	Create a Graph, print it (https://1drv.ms/t/s!AqTOHFO77CqEiRua06v1PATyiFg5)
2	Implement BFS algorithm (https://practice.geeksforgeeks.org/problems/bfs-traversal-of-graph/1)
3	Implement DFS Algo (https://www.geeksforgeeks.org/depth-first-search-or-dfs-for-a-graph/)
4	Detect Cycle in Directed Graph using BFS/DFS Algo (https://www.geeksforgeeks.org/detect-cycle-in-a-graph/)
5	Detect Cycle in UnDirected Graph using BFS/DFS Algo (https://practice.geeksforgeeks.org/problems/detect-cycle-in-an-undirected-graph/1)
6	Search in a Maze (https://practice.geeksforgeeks.org/problems/rat-in-a-maze-problem/1)
7	Minimum Step by Knight (https://practice.geeksforgeeks.org/problems/steps-by-knight/0)
8	flood fill algo (https://leetcode.com/problems/flood-fill/)
9	Clone a graph (https://leetcode.com/problems/clone-graph/)
10	Making wired Connections (https://leetcode.com/problems/number-of-operations-to-make-network-connected/)
11	word Ladder (https://leetcode.com/problems/word-ladder/)
12	Dijkstra algo (https://www.geeksforgeeks.org/dijkstras-shortest-path-algorithm-greedy-algo-7/)
13	Implement Topological Sort (https://practice.geeksforgeeks.org/problems/topological-sort/1)



Serial No.	Questions
14	Minimum time taken by each job to be completed given by a Directed Acyclic Graph (https://www.geeksforgeeks.org/minimum-time-taken-by-each-job-to-be-completed-given-by-a-directed-acyclic-graph/)
15	Find whether it is possible to finish all tasks or not from given dependencies (https://www.geeksforgeeks.org/find-whether-it-is-possible-to-finish-all-tasks-or-not-from-given-dependencies/)
16	Find the no. of Islands (https://practice.geeksforgeeks.org/problems/find-the-number-of-islands/1)
17	Given a sorted Dictionary of an Alien Language, find order of characters (https://practice.geeksforgeeks.org/problems/alien-dictionary/1)
18	Implement Kruksal's Algorithm (https://www.geeksforgeeks.org/kruskals-minimum-spanning-tree-algorithm-greedy-algo-2/)
19	Implement Prim's Algorithm (https://www.geeksforgeeks.org/prims-minimum-spanning-tree-mst-greedy-algo-5/)
20	Total no. of Spanning tree in a graph (https://www.geeksforgeeks.org/total-number-spanning-trees-graph/)
21	Implement Bellman Ford Algorithm (https://practice.geeksforgeeks.org/problems/negative-weight-cycle/0)
22	Implement Floyd warshall Algorithm (https://practice.geeksforgeeks.org/problems/implementing-floyd-warshall/0)
23	Travelling Salesman Problem (https://www.geeksforgeeks.org/travelling-salesman-problem-set-1/)
24	Graph Colouring Problem (https://www.geeksforgeeks.org/graph-coloring-applications/)
25	Snake and Ladders Problem (https://leetcode.com/problems/snakes-and-ladders/)
26	Find bridge in a graph (https://www.geeksforgeeks.org/bridge-in-a-graph/)
27	Count Strongly connected Components (Kosaraju Algo) (https://practice.geeksforgeeks.org/problems/strongly-connected-components-kosarajus-algo/1)
28	Check whether a graph is Bipartite or Not (https://www.geeksforgeeks.org/bipartite-graph/)
29	Detect Negative cycle in a graph (https://www.geeksforgeeks.org/detect-negative-cycle-graph-bellman-ford/)



Serial No.	Questions
30	Longest path in a Directed Acyclic Graph (https://www.geeksforgeeks.org/find-longest-path-directed-acyclic-graph/)
31	Journey to the Moon (https://www.hackerrank.com/challenges/journey-to-the-moon/problem)
32	Cheapest Flights Within K Stops (https://leetcode.com/problems/cheapest-flights-within-k-stops/description/)
33	Oliver and the Game (https://www.hackerearth.com/practice/algorithms/graphs/topological-sort/practice-problems/algorithm/oliver-and-the-game-3/)
34	Water Jug problem using BFS (https://www.geeksforgeeks.org/water-jug-problem-using-bfs/)
35	Water Jug problem using BFS (https://www.geeksforgeeks.org/water-jug-problem-using-bfs/)
36	Find if there is a path of more than k length from a source (https://www.geeksforgeeks.org/find-if-there-is-a-path-of-more-than-k-length-from-a-source/)
37	M-Colouring Problem (https://practice.geeksforgeeks.org/problems/m-coloring-problem/0)
38	Minimum edges to reverse to make path from source to destination (https://www.geeksforgeeks.org/minimum-edges-reverse-make-path-source-destination/)
39	Paths to travel each node using each edge (Seven Bridges) (https://www.geeksforgeeks.org/paths-travel-nodes-using-edges-seven-bridges-konigsberg/)
40	Vertex Cover Problem (https://www.geeksforgeeks.org/vertex-cover-problem-set-1-introduction-approximate-algorithm-2/)
41	Chinese Postman or Route Inspection (https://www.geeksforgeeks.org/chinese-postman-route-inspection-set-1-introduction/)
42	Number of Triangles in a Directed and Undirected Graph (https://www.geeksforgeeks.org/number-of-triangles-in-directed-and-undirected-graphs/)
43	Minimise the cashflow among a given set of friends who have borrowed money from each other (https://www.geeksforgeeks.org/minimize-cash-flow-among-given-set-friends-borrowed-money/)
44	Two Clique Problem (https://www.geeksforgeeks.org/two-clique-problem-check-graph-can-divided-two-cliques/)

450 DSA Cracker

Topics (/) / Greedy

Serial No.	Questions
1	Activity Selection Problem (https://practice.geeksforgeeks.org/problems/n-meetings-in-one-room/0)
2	Job Sequencing Problem (https://practice.geeksforgeeks.org/problems/job-sequencing-problem/0)
3	Huffman Coding (https://practice.geeksforgeeks.org/problems/huffman-encoding/0)
4	Water Connection Problem (https://practice.geeksforgeeks.org/problems/water-connection-problem/0)
5	Fractional Knapsack Problem (https://practice.geeksforgeeks.org/problems/fractional-knapsack/0)
6	Greedy Algorithm to find Minimum number of Coins (https://practice.geeksforgeeks.org/problems/coin-piles/0)
7	Maximum trains for which stoppage can be provided (https://www.geeksforgeeks.org/maximum-trains-stoppage-can-provided/)
8	Minimum Platforms Problem (https://practice.geeksforgeeks.org/problems/minimum-platforms/0)
9	Buy Maximum Stocks if i stocks can be bought on i-th day (https://www.geeksforgeeks.org/buy-maximum-stocks-stocks-can-bought-th-day/)
10	Find the minimum and maximum amount to buy all N candies (https://practice.geeksforgeeks.org/problems/shop-in-candy-store/0)
11	Minimize Cash Flow among a given set of friends who have borrowed money from each other (https://www.geeksforgeeks.org/minimize-cash-flow-among-given-set-friends-borrowed-money/)



Serial No.	Questions
12	Minimum Cost to cut a board into squares (https://www.geeksforgeeks.org/minimum-cost-cut-board-squares/)
13	Check if it is possible to survive on Island (https://www.geeksforgeeks.org/survival/)
14	Find maximum meetings in one room (https://www.geeksforgeeks.org/find-maximum-meetings-in-one-room/)
15	Maximum product subset of an array (https://www.geeksforgeeks.org/maximum-product-subset-array/)
16	Maximize array sum after K negations (https://practice.geeksforgeeks.org/problems/maximize-sum-after-k-negations/0)
17	Maximize the sum of $\text{arr}[i] * i$ (https://practice.geeksforgeeks.org/problems/maximize-arr-i-of-an-array/0)
18	Maximum sum of absolute difference of an array (https://www.geeksforgeeks.org/maximum-sum-absolute-difference-array/)
19	Maximize sum of consecutive differences in a circular array (https://practice.geeksforgeeks.org/problems/swap-and-maximize/0)
20	Minimum sum of absolute difference of pairs of two arrays (https://www.geeksforgeeks.org/minimum-sum-absolute-difference-pairs-two-arrays/)
21	Program for Shortest Job First (or SJF) CPU Scheduling (https://www.geeksforgeeks.org/program-for-shortest-job-first-or-sjf-cpu-scheduling-set-1-non-preemptive/)
22	Program for Least Recently Used (LRU) Page Replacement algorithm (https://practice.geeksforgeeks.org/problems/page-faults-in-lru/0)
23	Smallest subset with sum greater than all other elements (https://www.geeksforgeeks.org/smallest-subset-sum-greater-elements/)
24	Chocolate Distribution Problem (https://practice.geeksforgeeks.org/problems/chocolate-distribution-problem/0)
25	DEFKIN -Defense of a Kingdom (https://www.spoj.com/problems/DEFKIN/)
26	DIEHARD -DIE HARD (https://www.spoj.com/problems/DIEHARD/)
27	GERGOVIA -Wine trading in Gergovia (https://www.spoj.com/problems/GERGOVIA/)
28	Picking Up Chicks (https://www.spoj.com/problems/GCJ101BB/)
29	CHOCOLA -Chocolate (https://www.spoj.com/problems/CHOCOLA/)

Serial No.	Questions
30	ARRANGE -Arranging Amplifiers (https://www.spoj.com/problems/ARRANGE/)
31	K Centers Problem (https://www.geeksforgeeks.org/k-centers-problem-set-1-greedy-approximate-algorithm/)
32	Minimum Cost of ropes (https://practice.geeksforgeeks.org/problems/minimum-cost-of-ropes/0)
33	Find smallest number with given number of digits and sum of digits (https://practice.geeksforgeeks.org/problems/smallest-number5829/1)
34	Rearrange characters in a string such that no two adjacent are same (https://practice.geeksforgeeks.org/problems/rearrange-characters/0)
35	Find maximum sum possible equal sum of three stacks (https://www.geeksforgeeks.org/find-maximum-sum-possible-equal-sum-three-stacks/)

450 DSA Cracker

Topics (/) / Heap

Serial No.	Questions
1	Implement a Maxheap/MinHeap using arrays and recursion. (https://www.geeksforgeeks.org/building-heap-from-array/)
2	Sort an Array using heap. (HeapSort) (https://www.geeksforgeeks.org/heap-sort/)
3	Maximum of all subarrays of size k. (https://www.geeksforgeeks.org/sliding-window-maximum-maximum-of-all-subarrays-of-size-k/)
4	"k" largest element in an array (https://practice.geeksforgeeks.org/problems/k-largest-elements4206/1)
5	Kth smallest and largest element in an unsorted array (https://www.geeksforgeeks.org/kth-smallestlargest-element-unsorted-array/)
6	Merge "K" sorted arrays. [IMP] (https://practice.geeksforgeeks.org/problems/merge-k-sorted-arrays/1)
7	Merge 2 Binary Max Heaps (https://practice.geeksforgeeks.org/problems/merge-two-binary-max-heap/0)
8	Kth largest sum continuous subarrays (https://www.geeksforgeeks.org/k-th-largest-sum-contiguous-subarray/)
9	Leetcode- reorganize strings (https://leetcode.com/problems/reorganize-string/)
10	Merge "K" Sorted Linked Lists [V.IMP] (https://practice.geeksforgeeks.org/problems/merge-k-sorted-linked-lists/1)
11	Smallest range in "K" Lists (https://practice.geeksforgeeks.org/problems/find-smallest-range-containing-elements-from-k-lists/1)
12	Median in a stream of Integers (https://practice.geeksforgeeks.org/problems/find-median-in-a-stream/0)
13	Check if a Binary Tree is Heap (https://practice.geeksforgeeks.org/problems/is-a-binary-tree-heap/1)

Serial No.	Questions
14	Connect “n” ropes with minimum cost (https://practice.geeksforgeeks.org/problems/minimum-cost-of-ropes/0)
15	Convert BST to Min Heap (https://www.geeksforgeeks.org/convert-bst-min-heap/)
16	Convert min heap to max heap (https://www.geeksforgeeks.org/convert-min-heap-to-max-heap/)
17	Rearrange characters in a string such that no two adjacent are same. (https://practice.geeksforgeeks.org/problems/rearrange-characters/0)
18	Minimum sum of two numbers formed from digits of an array (https://practice.geeksforgeeks.org/problems/minimum-sum4058/1)

450 DSA Cracker

Topics (/) / Linked List

Serial No.	Questions
1	Write a Program to reverse the Linked List. (Both Iterative and recursive) (https://www.geeksforgeeks.org/reverse-a-linked-list/)
2	Reverse a Linked List in group of Given Size. [Very Imp] (https://practice.geeksforgeeks.org/problems/reverse-a-linked-list-in-groups-of-given-size/1)
3	Write a program to Detect loop in a linked list. (https://practice.geeksforgeeks.org/problems/detect-loop-in-linked-list/1)
4	Write a program to Delete loop in a linked list. (https://practice.geeksforgeeks.org/problems/remove-loop-in-linked-list/1)
5	Find the starting point of the loop. (https://www.geeksforgeeks.org/find-first-node-of-loop-in-a-linked-list/)
6	Remove Duplicates in a sorted Linked List. (https://practice.geeksforgeeks.org/problems/remove-duplicate-element-from-sorted-linked-list/1)
7	Remove Duplicates in a Un-sorted Linked List. (https://practice.geeksforgeeks.org/problems/remove-duplicates-from-an-unsorted-linked-list/1)
8	Write a Program to Move the last element to Front in a Linked List. (https://www.geeksforgeeks.org/move-last-element-to-front-of-a-given-linked-list/)
9	Add "1" to a number represented as a Linked List. (https://practice.geeksforgeeks.org/problems/add-1-to-a-number-represented-as-linked-list/1)
10	Add two numbers represented by linked lists. (https://practice.geeksforgeeks.org/problems/add-two-numbers-represented-by-linked-lists/1)

Serial No.	Questions
11	Intersection of two Sorted Linked List. (https://practice.geeksforgeeks.org/problems/intersection-of-two-sorted-linked-lists/1)
12	Intersection Point of two Linked Lists. (https://practice.geeksforgeeks.org/problems/intersection-point-in-y-shapped-linked-lists/1)
13	Merge Sort For Linked lists.[Very Important] (https://practice.geeksforgeeks.org/problems/sort-a-linked-list/1)
14	Quicksort for Linked Lists.[Very Important] (https://practice.geeksforgeeks.org/problems/quick-sort-on-linked-list/1)
15	Find the middle Element of a linked list. (https://leetcode.com/problems/middle-of-the-linked-list/)
16	Check if a linked list is a circular linked list. (https://practice.geeksforgeeks.org/problems/circular-linked-list/1)
17	Split a Circular linked list into two halves. (https://practice.geeksforgeeks.org/problems/split-a-circular-linked-list-into-two-halves/1)
18	Write a Program to check whether the Singly Linked list is a palindrome or not. (https://practice.geeksforgeeks.org/problems/check-if-linked-list-is-pallindrome/1)
19	Deletion from a Circular Linked List. (https://www.geeksforgeeks.org/deletion-circular-linked-list/)
20	Reverse a Doubly Linked list. (https://practice.geeksforgeeks.org/problems/reverse-a-doubly-linked-list/1)
21	Find pairs with a given sum in a DLL. (https://www.geeksforgeeks.org/find-pairs-given-sum-doubly-linked-list/)
22	Count triplets in a sorted DLL whose sum is equal to given value "X". (https://www.geeksforgeeks.org/count-triplets-sorted-doubly-linked-list-whose-sum-equal-given-value-x/)
23	Sort a "k"sorted Doubly Linked list.[Very IMP] (https://www.geeksforgeeks.org/sort-k-sorted-doubly-linked-list/)
24	Rotate DoublyLinked list by N nodes. (https://www.geeksforgeeks.org/rotate-doubly-linked-list-n-nodes/)
25	Rotate a Doubly Linked list in group of Given Size.[Very IMP] (https://www.geeksforgeeks.org/reverse-doubly-linked-list-groups-given-size/)

Serial No.	Questions
26	Can we reverse a linked list in less than $O(n)$? ($\leftarrow \rightarrow$)
27	Why Quicksort is preferred for. Arrays and Merge Sort for LinkedLists ? ($\leftarrow \rightarrow$)
28	Flatten a Linked List (https://practice.geeksforgeeks.org/problems/flattening-a-linked-list/1)
29	Sort a LL of 0's, 1's and 2's (https://practice.geeksforgeeks.org/problems/given-a-linked-list-of-0s-1s-and-2s-sort-it/1)
30	Clone a linked list with next and random pointer (https://practice.geeksforgeeks.org/problems/clone-a-linked-list-with-next-and-random-pointer/1)
31	Merge K sorted Linked list (https://practice.geeksforgeeks.org/problems/merge-k-sorted-linked-lists/1)
32	Multiply 2 no. represented by LL (https://practice.geeksforgeeks.org/problems/multiply-two-linked-lists/1)
33	Delete nodes which have a greater value on right side (https://practice.geeksforgeeks.org/problems/delete-nodes-having-greater-value-on-right/1)
34	Segregate even and odd nodes in a Linked List (https://practice.geeksforgeeks.org/problems/segregate-even-and-odd-nodes-in-a-linked-list/0)
35	Program for n'th node from the end of a Linked List (https://practice.geeksforgeeks.org/problems/nth-node-from-end-of-linked-list/1)
36	Find the first non-repeating character from a stream of characters (https://practice.geeksforgeeks.org/problems/first-non-repeating-character-in-a-stream/0)

450 DSA Cracker

Topics (/) / Matrix

Serial No.	Questions
1	Spiral traversal on a Matrix (https://practice.geeksforgeeks.org/problems/spirally-traversing-a-matrix/0)
2	Search an element in a matrix (https://leetcode.com/problems/search-a-2d-matrix/)
3	Find median in a row wise sorted matrix (https://practice.geeksforgeeks.org/problems/median-in-a-row-wise-sorted-matrix1527/1)
4	Find row with maximum no. of 1's (https://practice.geeksforgeeks.org/problems/row-with-max-1s0023/1)
5	Print elements in sorted order using row-column wise sorted matrix (https://practice.geeksforgeeks.org/problems/sorted-matrix/0)
6	Maximum size rectangle (https://practice.geeksforgeeks.org/problems/max-rectangle/1)
7	Find a specific pair in matrix (https://www.geeksforgeeks.org/find-a-specific-pair-in-matrix/)
8	Rotate matrix by 90 degrees (https://www.geeksforgeeks.org/rotate-a-matrix-by-90-degree-in-clockwise-direction-without-using-any-extra-space/)
9	Kth smallest element in a row-column wise sorted matrix (https://practice.geeksforgeeks.org/problems/kth-element-in-matrix/1)
10	Common elements in all rows of a given matrix (https://www.geeksforgeeks.org/common-elements-in-all-rows-of-a-given-matrix/)



450 DSA Cracker

Topics (/) / Search & Sort

Serial No.	Questions
1	Find first and last positions of an element in a sorted array (https://practice.geeksforgeeks.org/problems/first-and-last-occurrences-of-x/0)
2	Find a Fixed Point (Value equal to index) in a given array (https://practice.geeksforgeeks.org/problems/value-equal-to-index-value1330/1)
3	Search in a rotated sorted array (https://leetcode.com/problems/search-in-rotated-sorted-array/)
4	square root of an integer (https://practice.geeksforgeeks.org/problems/count-squares3649/1)
5	Maximum and minimum of an array using minimum number of comparisons (https://practice.geeksforgeeks.org/problems/middle-of-three2926/1)
6	Optimum location of point to minimize total distance (https://www.geeksforgeeks.org/optimum-location-point-minimize-total-distance/)
7	Find the repeating and the missing (https://practice.geeksforgeeks.org/problems/find-missing-and-repeating2512/1)
8	find majority element (https://practice.geeksforgeeks.org/problems/majority-element/0)
9	Searching in an array where adjacent differ by at most k (https://www.geeksforgeeks.org/searching-array-adjacent-differ-k/)
10	find a pair with a given difference (https://practice.geeksforgeeks.org/problems/find-pair-given-difference/0)
11	find four elements that sum to a given value (https://practice.geeksforgeeks.org/problems/find-all-four-sum-numbers/0)
12	maximum sum such that no 2 elements are adjacent (https://practice.geeksforgeeks.org/problems/stickler-theif/0)

Serial No.	Questions
13	Count triplet with sum smaller than a given value (https://practice.geeksforgeeks.org/problems/count-triplets-with-sum-smaller-than-x5549/1)
14	merge 2 sorted arrays (https://practice.geeksforgeeks.org/problems/merge-two-sorted-arrays5135/1)
15	print all subarrays with 0 sum (https://practice.geeksforgeeks.org/problems/zero-sum-subarrays/0)
16	Product array Puzzle (https://practice.geeksforgeeks.org/problems/product-array-puzzle/0)
17	Sort array according to count of set bits (https://practice.geeksforgeeks.org/problems/sort-by-set-bit-count/0)
18	minimum no. of swaps required to sort the array (https://practice.geeksforgeeks.org/problems/minimum-swaps/1)
19	Bishu and Soldiers (https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/bishu-and-soldiers/)
20	Rasta and Kheshtak (https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/rasta-and-kheshtak/)
21	Kth smallest number again (https://www.hackerearth.com/practice/algorithms/searching/binary-search/practice-problems/algorithm/kth-smallest-number-again-2/)
22	Find pivot element in a sorted array (http://theoryofprogramming.com/2017/12/16/find-pivot-element-sorted-rotated-array/)
23	K-th Element of Two Sorted Arrays (https://practice.geeksforgeeks.org/problems/k-th-element-of-two-sorted-array/0)
24	Aggressive cows (https://www.spoj.com/problems/AGGRCOW/)
25	Book Allocation Problem (https://practice.geeksforgeeks.org/problems/allocate-minimum-number-of-pages/0)
26	EKOSPOJ: (https://www.spoj.com/problems/EKO/)
27	Job Scheduling Algo (https://www.geeksforgeeks.org/weighted-job-scheduling-log-n-time/)
28	Missing Number in AP (https://practice.geeksforgeeks.org/problems/arithmetic-number/0)

Serial No.	Questions
29	Smallest number with atleast n trailing zeroes in factorial (https://practice.geeksforgeeks.org/problems/smallest-factorial-number5929/1)
30	Painters Partition Problem: (https://practice.geeksforgeeks.org/problems/allocate-minimum-number-of-pages/0)
31	ROTI-Prata SPOJ (https://www.spoj.com/problems/PRATA/)
32	DoubleHelix SPOJ (https://www.spoj.com/problems/ANARC05B/)
33	Subset Sums (https://www.spoj.com/problems/SUBSUMS/)
34	Find the inversion count (https://practice.geeksforgeeks.org/problems/inversion-of-array/0)
35	Implement Merge-sort in-place (https://www.geeksforgeeks.org/in-place-merge-sort/)
36	Partitioning and Sorting Arrays with Many Repeated Entries (https://www.baeldung.com/java-sorting-arrays-with-repeated-entries)

450 DSA Cracker

Topics (/) / Stacks & Queue

Serial No.	Questions
1	Implement Stack from Scratch (https://www.tutorialspoint.com/javaexamples/data_stack.htm)
2	Implement Queue from Scratch (https://www.geeksforgeeks.org/queue-set-1introduction-and-array-implementation/)
3	Implement 2 stack in an array (https://practice.geeksforgeeks.org/problems/implement-two-stacks-in-an-array/1)
4	find the middle element of a stack (https://www.geeksforgeeks.org/design-a-stack-with-find-middle-operation/)
5	Implement "N" stacks in an Array (https://www.geeksforgeeks.org/efficiently-implement-k-stacks-single-array/)
6	Check the expression has valid or Balanced parenthesis or not. (https://practice.geeksforgeeks.org/problems/parenthesis-checker/0)
7	Reverse a String using Stack (https://practice.geeksforgeeks.org/problems/reverse-a-string-using-stack/1)
8	Design a Stack that supports getMin() in O(1) time and O(1) extra space. (https://practice.geeksforgeeks.org/problems/special-stack/1)
9	Find the next Greater element (https://practice.geeksforgeeks.org/problems/next-larger-element/0)
10	The celebrity Problem (https://practice.geeksforgeeks.org/problems/the-celebrity-problem/1)
11	Arithmetic Expression evaluation (https://www.geeksforgeeks.org/arithmetic-expression-evaluation/)
12	Evaluation of Postfix expression  (https://practice.geeksforgeeks.org/problems/evaluation-of-postfix-expression/0)

Serial No.	Questions
13	Implement a method to insert an element at its bottom without using any other data structure. (https://stackoverflow.com/questions/45130465/inserting-at-the-end-of-stack)
14	Reverse a stack using recursion (https://www.geeksforgeeks.org/reverse-a-stack-using-recursion/)
15	Sort a Stack using recursion (https://practice.geeksforgeeks.org/problems/sort-a-stack/1)
16	Merge Overlapping Intervals (https://practice.geeksforgeeks.org/problems/overlapping-intervals/0)
17	Largest rectangular Area in Histogram (https://practice.geeksforgeeks.org/problems/maximum-rectangular-area-in-a-histogram/0)
18	Length of the Longest Valid Substring (https://practice.geeksforgeeks.org/problems/valid-substring0624/1)
19	Expression contains redundant bracket or not (https://www.geeksforgeeks.org/expression-contains-redundant-bracket-not/)
20	Implement Stack using Queue (https://practice.geeksforgeeks.org/problems/stack-using-two-queues/1)
21	Implement Stack using Deque (https://www.geeksforgeeks.org/implement-stack-queue-using-deque/)
22	Stack Permutations (Check if an array is stack permutation of other) (https://www.geeksforgeeks.org/stack-permutations-check-if-an-array-is-stack-permutation-of-other/)
23	Implement Queue using Stack (https://practice.geeksforgeeks.org/problems/queue-using-two-stacks/1)
24	Implement "n" queue in an array (https://www.geeksforgeeks.org/efficiently-implement-k-queues-single-array/)
25	Implement a Circular queue (https://www.geeksforgeeks.org/circular-queue-set-1-introduction-array-implementation/)
26	LRU Cache Implementationa (https://practice.geeksforgeeks.org/problems/lru-cache/1)
27	Reverse a Queue using recursion (https://practice.geeksforgeeks.org/problems/queue-reversal/1)



Serial No.	Questions
28	Reverse the first “K” elements of a queue (https://practice.geeksforgeeks.org/problems/reverse-first-k-elements-of-queue/1)
29	Interleave the first half of the queue with second half (https://www.geeksforgeeks.org/interleave-first-half-queue-second-half/)
30	Find the first circular tour that visits all Petrol Pumps (https://practice.geeksforgeeks.org/problems/circular-tour/1)
31	Minimum time required to rot all oranges (https://practice.geeksforgeeks.org/problems/rotten-oranges/0)
32	Distance of nearest cell having 1 in a binary matrix (https://practice.geeksforgeeks.org/problems/distance-of-nearest-cell-having-1/0)
33	First negative integer in every window of size “k” (https://practice.geeksforgeeks.org/problems/first-negative-integer-in-every-window-of-size-k/0)
34	Check if all levels of two trees are anagrams or not. (https://www.geeksforgeeks.org/check-if-all-levels-of-two-trees-are-anagrams-or-not/)
35	Sum of minimum and maximum elements of all subarrays of size “k”. (https://www.geeksforgeeks.org/sum-minimum-maximum-elements-subarrays-size-k/)
36	Minimum sum of squares of character counts in a given string after removing “k” characters. (https://practice.geeksforgeeks.org/problems/game-with-string/0)
37	Queue based approach or first non-repeating character in a stream. (https://practice.geeksforgeeks.org/problems/first-non-repeating-character-in-a-stream/0)
38	Next Smaller Element (https://www.geeksforgeeks.org/next-smaller-element/)

450 DSA Cracker

Topics (/) / String

Serial No.	Questions
1	Reverse a String (https://leetcode.com/problems/reverse-string/)
2	Check whether a String is Palindrome or not (https://practice.geeksforgeeks.org/problems/palindrome-string0817/1)
3	Find Duplicate characters in a string (https://www.geeksforgeeks.org/print-all-the-duplicates-in-the-input-string/)
4	Why strings are immutable in Java? (https://www.baeldung.com/java-string-immutable)
5	Write a Code to check whether one string is a rotation of another (https://www.geeksforgeeks.org/a-program-to-check-if-strings-are-rotations-of-each-other/)
6	Write a Program to check whether a string is a valid shuffle of two strings or not (https://www.programiz.com/java-programming/examples/check-valid-shuffle-of-strings)
7	Count and Say problem (https://leetcode.com/problems/count-and-say/)
8	Write a program to find the longest Palindrome in a string.[Longest palindromic Substring] (https://practice.geeksforgeeks.org/problems/longest-palindrome-in-a-string/0)
9	Find Longest Recurring Subsequence in String (https://practice.geeksforgeeks.org/problems/longest-repeating-subsequence/0)
10	Print all Subsequences of a string. (https://www.geeksforgeeks.org/print-subsequences-string/)
11	Print all the permutations of the given string (https://practice.geeksforgeeks.org/problems/permutations-of-a-given-string/0)



Serial No.	Questions
12	Split the Binary string into two substring with equal 0's and 1's (https://www.geeksforgeeks.org/split-the-binary-string-into-substrings-with-equal-number-of-0s-and-1s/)
13	Word Wrap Problem [VERY IMP]. (https://practice.geeksforgeeks.org/problems/word-wrap/0)
14	EDIT Distance [Very Imp] (https://practice.geeksforgeeks.org/problems/edit-distance3702/1)
15	Find next greater number with same set of digits. [Very Very IMP] (https://practice.geeksforgeeks.org/problems/next-permutation/0)
16	Balanced Parenthesis problem.[Imp] (https://practice.geeksforgeeks.org/problems/parenthesis-checker/0)
17	Word break Problem[Very Imp] (https://practice.geeksforgeeks.org/problems/word-break/0)
18	Rabin Karp Algo (https://www.geeksforgeeks.org/rabin-karp-algorithm-for-pattern-searching/)
19	KMP Algo (https://practice.geeksforgeeks.org/problems/longest-prefix-suffix2527/1)
20	Convert a Sentence into its equivalent mobile numeric keypad sequence. (https://www.geeksforgeeks.org/convert-sentence-equivalent-mobile-numeric-keypad-sequence/)
21	Minimum number of bracket reversals needed to make an expression balanced. (https://practice.geeksforgeeks.org/problems/count-the-reversals/0)
22	Count All Palindromic Subsequence in a given String. (https://practice.geeksforgeeks.org/problems/count-palindromic-subsequences/1)
23	Count of number of given string in 2D character array (https://www.geeksforgeeks.org/find-count-number-given-string-present-2d-character-array/)
24	Search a Word in a 2D Grid of characters. (https://practice.geeksforgeeks.org/problems/find-the-string-in-grid/0)
25	Boyer Moore Algorithm for Pattern Searching. (https://www.geeksforgeeks.org/boyer-moore-algorithm-for-pattern-searching/)
26	Converting Roman Numerals to Decimal (https://practice.geeksforgeeks.org/problems/roman-number-to-integer/0)
27	Longest Common Prefix (https://leetcode.com/problems/longest-common-prefix/)

Serial No.	Questions
28	Number of flips to make binary string alternate (https://practice.geeksforgeeks.org/problems/min-number-of-flips/0)
29	Find the first repeated word in string. (https://practice.geeksforgeeks.org/problems/second-most-repeated-string-in-a-sequence/0)
30	Minimum number of swaps for bracket balancing. (https://practice.geeksforgeeks.org/problems/minimum-swaps-for-bracket-balancing/0)
31	Find the longest common subsequence between two strings. (https://practice.geeksforgeeks.org/problems/longest-common-subsequence/0)
32	Program to generate all possible valid IP addresses from given string. (https://www.geeksforgeeks.org/program-generate-possible-valid-ip-addresses-given-string/)
33	Write a program to find the smallest window that contains all characters of string itself. (https://practice.geeksforgeeks.org/problems/smallest-distant-window/0)
34	Rearrange characters in a string such that no two adjacent are same (https://practice.geeksforgeeks.org/problems/rearrange-characters/0)
35	Minimum characters to be added at front to make string palindrome (https://www.geeksforgeeks.org/minimum-characters-added-front-make-string-palindrome/)
36	Given a sequence of words, print all anagrams together (https://practice.geeksforgeeks.org/problems/k-anagrams-1/0)
37	Find the smallest window in a string containing all characters of another string (https://practice.geeksforgeeks.org/problems/smallest-window-in-a-string-containing-all-the-characters-of-another-string/0)
38	Recursively remove all adjacent duplicates (https://practice.geeksforgeeks.org/problems/consecutive-elements/0)
39	String matching where one string contains wildcard characters (https://practice.geeksforgeeks.org/problems/wildcard-string-matching/0)
40	Function to find Number of customers who could not get a computer (https://www.geeksforgeeks.org/function-to-find-number-of-customers-who-could-not-get-a-computer/)
41	Transform One String to Another using Minimum Number of Given Operation (https://www.geeksforgeeks.org/transform-one-string-to-another-using-minimum-number-of-given-operation/)



Serial No.	Questions
42	Check if two given strings are isomorphic to each other (https://practice.geeksforgeeks.org/problems/isomorphic-strings/0)
43	Recursively print all sentences that can be formed from list of word lists (https://www.geeksforgeeks.org/recursively-print-all-sentences-that-can-be-formed-from-list-of-word-lists/)

450 DSA Cracker

Topics (/) / Trie

Serial No.	Questions
1	Construct a trie from scratch (https://www.geeksforgeeks.org/trie-insert-and-search/)
2	Find shortest unique prefix for every word in a given list (https://www.geeksforgeeks.org/find-all-shortest-unique-prefixes-to-represent-each-word-in-a-given-list/)
3	Word Break Problem (Trie solution) (https://www.geeksforgeeks.org/word-break-problem-trie-solution/)
4	Given a sequence of words, print all anagrams together (https://practice.geeksforgeeks.org/problems/k-anagrams-1/0)
5	Implement a Phone Directory (https://practice.geeksforgeeks.org/problems/phone-directory/0)
6	Print unique rows in a given boolean matrix (https://practice.geeksforgeeks.org/problems/unique-rows-in-boolean-matrix/1)

