Array find Largest sum contiguous Subarray [V. IMP] **Array** Minimise the maximum difference between heights [V.IMP] **Array** Minimum no. of Jumps to reach end of an array **Array** find duplicate in an array of N+1 Integers **Array** Merge 2 sorted arrays without using Extra space. **Array** Kadane's Algo [V.V.V.V.V IMP] **Array** Merge Intervals **Array Next Permutation Array Count Inversion Array** Best time to buy and Sell stock **Array** find all pairs on integer array whose sum is equal to given number **Array** find common elements In 3 sorted arrays **Array Array Array**

Find the maximum and minimum element in an array

Move all the negative elements to one side of the array

Find the Union and Intersection of the two sorted arrays.

Write a program to cyclically rotate an array by one.

Find the "Kth" max and min element of an array

Reverse the array

Topic:

Array

Matrix

Matrix

Matrix

Matrix

Matrix

Matrix

Matrix

Matrix

Matrix

Matrix

Rearrange the array in alternating positive and negative items with O(1) extra space Find if there is any subarray with sum equal to 0 Find factorial of a large number find maximum product subarray Find longest coinsecutive subsequence Given an array of size n and a number k, fin all elements that appear more than " n/k " times. Maximum profit by buying and selling a share atmost twice Find whether an array is a subset of another array Find the triplet that sum to a given value Trapping Rain water problem Chocolate Distribution problem Smallest Subarray with sum greater than a given value Three way partitioning of an array around a given value Minimum swaps required bring elements less equal K together

Questions by Love Babbar:

Problem:

Given an array which consists of only 0, 1 and 2. Sort the array without using any sorting algo

Done [yes or no]

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Minimum no. of operations required to make an array palindrome Median of 2 sorted arrays of equal size Median of 2 sorted arrays of different size Spiral traversal on a Matrix Search an element in a matriix Find median in a row wise sorted matrix Find row with maximum no. of 1's Print elements in sorted order using row-column wise sorted matrix Maximum size rectangle Find a specific pair in matrix Rotate matrix by 90 degrees Kth smallest element in a row-cpumn wise sorted matrix Common elements in all rows of a given matrix

String Reverse a String Check whether a String is Palindrome or not String Find Duplicate characters in a string String Why strings are immutable in Java? String Write a Code to check whether one string is a rotation of another String Write a Program to check whether a string is a valid shuffle of two strings or not String Count and Say problem String Write a program to find the longest Palindrome in a string. [Longest palindromic Substring] String Find Longest Recurring Subsequence in String String Print all Subsequences of a string. String Print all the permutations of the given string String Split the Binary string into two substring with equal 0's and 1's Word Wrap Problem [VERY IMP]. **EDIT Distance [Very Imp]** Find next greater number with same set of digits. [Very Very IMP] Balanced Parenthesis problem.[Imp] Word break Problem[Very Imp] Rabin Karp Algo KMP Algo Convert a Sentence into its equivalent mobile numeric keypad sequence. Minimum number of bracket reversals needed to make an expression balanced. Count All Palindromic Subsequence in a given String. Count of number of given string in 2D character array Search a Word in a 2D Grid of characters. Boyer Moore Algorithm for Pattern Searching. **Converting Roman Numerals to Decimal Longest Common Prefix** Number of flips to make binary string alternate Find the first repeated word in string. Minimum number of swaps for bracket balancing.

String <-> String <-> **String** <-> **String** <-> **String** <-> **String** <-> **String** <-> **String** <-> String <-> String <-> String <-> **String** <-> String <-> String <-> String <-> String <-> String <-> String <-> **String** Find the longest common subsequence between two strings. String <-> Program to generate all possible valid IP addresses from given string. String <-> Write a program to find the smallest window that contains all characters of string itself. **String** <-> Rearrange characters in a string such that no two adjacent are same **String** <-> Minimum characters to be added at front to make string palindrome String <-> Given a sequence of words, print all anagrams together String <-> Find the smallest window in a string containing all characters of another string String <-> String Recursively remove all adjacent duplicates <-> String matching where one string contains wildcard characters String <-> Function to find Number of customers who could not get a computer String <-> Transform One String to Another using Minimum Number of Given Operation String <-> Check if two given strings are isomorphic to each other String <-> Recursively print all sentences that can be formed from list of word lists String <-> **Searching & Sorting** Find first and last positions of an element in a sorted array <-> Find a Fixed Point (Value equal to index) in a given array **Searching & Sorting** <-> Search in a rotated sorted array **Searching & Sorting** <-> square root of an integer **Searching & Sorting** <-> Maximum and minimum of an array using minimum number of comparisons **Searching & Sorting** <-> **Searching & Sorting** Optimum location of point to minimize total distance <-> Find the repeating and the missing **Searching & Sorting** <-> **Searching & Sorting** find majority element <-> Searching in an array where adjacent differ by at most k **Searching & Sorting** <-> find a pair with a given difference **Searching & Sorting** <-> find four elements that sum to a given value **Searching & Sorting** <-> maximum sum such that no 2 elements are adjacent **Searching & Sorting** <-> **Searching & Sorting** Count triplet with sum smaller than a given value <-> **Searching & Sorting** merge 2 sorted arrays <-> print all subarrays with 0 sum **Searching & Sorting** <-> Product array Puzzle **Searching & Sorting** <-> Sort array according to count of set bits **Searching & Sorting** <-> minimum no. of swaps required to sort the array **Searching & Sorting** <-> Bishu and Soldiers **Searching & Sorting** <-> Rasta and Kheshtak **Searching & Sorting** <-> Kth smallest number again **Searching & Sorting** <-> **Searching & Sorting** Find pivot element in a sorted array <-> K-th Element of Two Sorted Arrays **Searching & Sorting** <-> **Searching & Sorting** Aggressive cows <-> **Book Allocation Problem Searching & Sorting** <-> **EKOSPOJ: Searching & Sorting** <-> Job Scheduling Algo **Searching & Sorting** <->

Searching & Sorting Missing Number in AP Smallest number with atleastn trailing zeroes infactorial **Searching & Sorting Searching & Sorting** Painters Partition Problem: **Searching & Sorting ROTI-Prata SPOJ Searching & Sorting DoubleHelix SPOJ Searching & Sorting** Subset Sums **Searching & Sorting** Findthe inversion count Implement Merge-sort in-place **Searching & Sorting Searching & Sorting** Partitioning and Sorting Arrays with Many Repeated Entries LinkedList Write a Program to reverse the Linked List. (Both Iterative and recursive) LinkedList Reverse a Linked List in group of Given Size. [Very Imp] LinkedList Write a program to Detect loop in a linked list. Write a program to Delete loop in a linked list. LinkedList Find the starting point of the loop. LinkedList Remove Duplicates in a sorted Linked List. LinkedList Remove Duplicates in a Un-sorted Linked List. LinkedList LinkedList Write a Program to Move the last element to Front in a Linked List. LinkedList Add "1" to a number represented as a Linked List. LinkedList Add two numbers represented by linked lists. Intersection of two Sorted Linked List. LinkedList Intersection Point of two Linked Lists. LinkedList LinkedList Merge Sort For Linked lists. [Very Important] Quicksort for Linked Lists. [Very Important] LinkedList LinkedList Find the middle Element of a linked list. Check if a linked list is a circular linked list. LinkedList Split a Circular linked list into two halves. LinkedList Write a Program to check whether the Singly Linked list is a palindrome or not. LinkedList LinkedList Deletion from a Circular Linked List. Reverse a Doubly Linked list. LinkedList LinkedList Find pairs with a given sum in a DLL. Count triplets in a sorted DLL whose sum is equal to given value "X". LinkedList Sort a "k"sorted Doubly Linked list.[Very IMP] LinkedList Rotate DoublyLinked list by N nodes. LinkedList Rotate a Doubly Linked list in group of Given Size. [Very IMP] LinkedList Can we reverse a linked list in less than O(n)? LinkedList Why Quicksort is preferred for. Arrays and Merge Sort for LinkedLists? LinkedList Flatten a Linked List LinkedList Sort a LL of 0's, 1's and 2's LinkedList Clone a linked list with next and random pointer LinkedList Merge K sorted Linked list LinkedList LinkedList Multiply 2 no. represented by LL LinkedList Delete nodes which have a greater value on right side Segregate even and odd nodes in a Linked List LinkedList Program for n'th node from the end of a Linked List LinkedList LinkedList Find the first non-repeating character from a stream of characters **Binary Trees** level order traversal Reverse Level Order traversal **Binary Trees Binary Trees** Height of a tree Diameter of a tree **Binary Trees Binary Trees** Mirror of a tree Inorder Traversal of a tree both using recursion and Iteration **Binary Trees**

<-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> <-> Preorder Traversal of a tree both using recursion and Iteration **Binary Trees** <-> Postorder Traversal of a tree both using recursion and Iteration **Binary Trees** <-> Left View of a tree **Binary Trees** <-> Right View of Tree **Binary Trees** <-> Top View of a tree **Binary Trees** <-> Bottom View of a tree **Binary Trees** <-> Zig-Zag traversal of a binary tree **Binary Trees** <-> Check if a tree is balanced or not **Binary Trees** <-> Diagnol Traversal of a Binary tree **Binary Trees** <-> Boundary traversal of a Binary tree **Binary Trees** <-> Construct Binary Tree from String with Bracket Representation **Binary Trees** <-> **Binary Trees** Convert Binary tree into Doubly Linked List <-> Convert Binary tree into Sum tree **Binary Trees** <-> Construct Binary tree from Inorder and preorder traversal **Binary Trees** <-> Find minimum swaps required to convert a Binary tree into BST **Binary Trees** <-> **Binary Trees** Check if Binary tree is Sum tree or not <-> Check if all leaf nodes are at same level or not **Binary Trees** <-> Check if a Binary Tree contains duplicate subtrees of size 2 or more [IMP] **Binary Trees** <-> Check if 2 trees are mirror or not **Binary Trees** <-> Sum of Nodes on the Longest path from root to leaf node **Binary Trees** <-> **Binary Trees** Check if given graph is tree or not. [IMP] <-> Find Largest subtree sum in a tree **Binary Trees** <-> Maximum Sum of nodes in Binary tree such that no two are adjacent **Binary Trees** <-> Print all "K" Sum paths in a Binary tree **Binary Trees** <-> Find LCA in a Binary tree **Binary Trees** <-> **Binary Trees** Find distance between 2 nodes in a Binary tree <-> **Binary Trees** Kth Ancestor of node in a Binary tree <-> Find all Duplicate subtrees in a Binary tree [IMP] **Binary Trees** <-> **Binary Trees** Tree Isomorphism Problem <->

Fina a value in a BST **Binary Search Trees** <-> **Binary Search Trees** Deletion of a node in a BST <-> Find min and max value in a BST **Binary Search Trees** <-> Find inorder successor and inorder predecessor in a BST **Binary Search Trees** <-> Check if a tree is a BST or not **Binary Search Trees** <-> Populate Inorder successor of all nodes **Binary Search Trees** <-> Find LCA of 2 nodes in a BST **Binary Search Trees** <-> Construct BST from preorder traversal **Binary Search Trees** <-> Convert Binary tree into BST **Binary Search Trees** <-> Convert a normal BST into a Balanced BST **Binary Search Trees** <-> Merge two BST [V.V.V>IMP] **Binary Search Trees** <-> Find Kth largest element in a BST **Binary Search Trees** <-> **Binary Search Trees** Find Kth smallest element in a BST <-> Count pairs from 2 BST whose sum is equal to given value "X" **Binary Search Trees** <-> **Binary Search Trees** Find the median of BST in O(n) time and O(1) space <-> Count BST ndoes that lie in a given range **Binary Search Trees** <-> Replace every element with the least greater element on its right **Binary Search Trees** <-> Given "n" appointments, find the conflicting appointments **Binary Search Trees** <-> Check preorder is valid or not **Binary Search Trees** <-> Check whether BST contains Dead end **Binary Search Trees** <-> Largest BST in a Binary Tree [V.V.V.V.V IMP] **Binary Search Trees** <-> **Binary Search Trees** Flatten BST to sorted list <-> **Activity Selection Problem** Greedy <-> Job SequencingProblem Greedy <-> **Huffman Coding** Greedy <-> Water Connection Problem Greedy <-> Fractional Knapsack Problem Greedy <-> Greedy Algorithm to find Minimum number of Coins Greedy <-> Maximum trains for which stoppage can be provided Greedy <-> Minimum Platforms Problem Greedy <-> Buy Maximum Stocks if i stocks can be bought on i-th day Greedy <-> Find the minimum and maximum amount to buy all N candies Greedy <-> Minimize Cash Flow among a given set of friends who have borrowed money from each other Greedy <-> Minimum Cost to cut a board into squares Greedy <-> Check if it is possible to survive on Island Greedy <-> Find maximum meetings in one room Greedy <-> Maximum product subset of an array Greedy <-> Maximize array sum after K negations Greedy <-> Maximize the sum of arr[i]*i Greedy <-> Maximum sum of absolute difference of an array Greedy <-> Maximize sum of consecutive differences in a circular array Greedy <-> Minimum sum of absolute difference of pairs of two arrays Greedy <-> Program for Shortest Job First (or SJF) CPU Scheduling Greedy <-> Program for Least Recently Used (LRU) Page Replacement algorithm Greedy <-> Smallest subset with sum greater than all other elements Greedy <-> **Chocolate Distribution Problem** Greedy <-> **DEFKIN** -Defense of a Kingdom Greedy <-> **DIEHARD - DIE HARD** Greedy <-> Greedy **GERGOVIA** -Wine trading in Gergovia <-> Picking Up Chicks Greedy <-> CHOCOLA -Chocolate Greedy <-> **ARRANGE** -Arranging Amplifiers Greedy <-> **K Centers Problem** Greedy <-> Minimum Cost of ropes Greedy <->

Find smallest number with given number of digits and sum of digits

Rearrange characters in a string such that no two adjacent are same

Find maximum sum possible equal sum of three stacks

Printing all solutions in N-Queen Problem

Word Break Problem using Backtracking

Print all palindromic partitions of a string

Find shortest safe route in a path with landmines

Longest Possible Route in a Matrix with Hurdles

Partition of a set intoK subsets with equal sum

Find Maximum number possible by doing at-most K swaps

Find if there is a path of more than k length from a source

Print all possible paths from top left to bottom right of a mXn matrix

Find the K-th Permutation Sequence of first N natural numbers

Check the expression has valid or Balanced parenthesis or not.

Design a Stack that supports getMin() in O(1) time and O(1) extra space.

Stack Permutations (Check if an array is stack permutation of other)

Sum of minimum and maximum elements of all subarrays of size "k".

Queue based approach or first non-repeating character in a stream.

Rearrange characters in a string such that no two adjacent are same.

Minimum time taken by each job to be completed given by a Directed Acyclic Graph

Find whether it is possible to finish all tasks or not from given dependencies

Given a sorted Dictionary of an Alien Language, find order of characters

Minimum sum of two numbers formed from digits of an array

Detect Cycle in Directed Graph using BFS/DFS Algo

Detect Cycle in UnDirected Graph using BFS/DFS Algo

Implement a Maxheap/MinHeap using arrays and recursion.

Kth smallest and largest element in an unsorted array

Minimum sum of squares of character counts in a given string after removing "k" characters.

Implement a method to insert an element at its bottom without using any other data structure.

Rat in a maze Problem

Sudoku Solver

Tug of War

m Coloring Problem

Subset Sum Problem

Combinational Sum

The Knight's tour problem

Print all permutations of a string

Implement Stack from Scratch

Implement Queue from Scratch

find the middle element of a stack

Implement "N" stacks in an Array

Implement 2 stack in an array

Reverse a String using Stack

The celebrity Problem

Find the next Greater element

Arithmetic Expression evaluation

Evaluation of Postfix expression

Reverse a stack using recursion

Largest rectangular Area in Histogram

Length of the Longest Valid Substring

Expression contains redundant bracket or not

Sort a Stack using recursion

Merge Overlapping Intervals

Implement Stack using Queue

Implement Stack using Deque

Implement Queue using Stack

Implement a Circular queue

LRU Cache Implementationa

Next Smaller Element

Implement "n" queue in an array

Reverse a Queue using recursion

Reverse the first "K" elements of a queue

Minimum time required to rot all oranges

Sort an Array using heap. (HeapSort)

Maximum of all subarrays of size k.

"k" largest element in an array

Merge "K" sorted arrays. [IMP]

Kth largest sum continuous subarrays

Merge "K" Sorted Linked Lists [V.IMP]

Connect "n" ropes with minimum cost

Merge 2 Binary Max Heaps

Leetcode- reorganize strings

Smallest range in "K" Lists

Convert BST to Min Heap

Create a Graph, print it

Implement DFS Algo

Search in a Maze

flood fill algo

Clone a graph

word Ladder

Dijkstra algo

Implement BFS algorithm

Minimum Step by Knight

Making wired Connections

Implement Topological Sort

Implement Kruksal's Algorithm

Total no. of Spanning tree in a graph

Implement Bellman Ford Algorithm

Implement Floyd warshallAlgorithm

Check whether a graph is Bipartite or Not

Longest path in a Directed Acyclic Graph

Count Strongly connected Components (Kosaraju Algo)

Find if there is a path of more thank length from a source

Paths to travel each nodes using each edge(Seven Bridges)

Number of Triangles in a Directed and Undirected Graph

Find shortest unique prefix for every word in a given list

Given a sequence of words, print all anagrams together

Minimum edges to reverse o make path from source to destination

Minimise the cashflow among a given set of friends who have borrowed money from each other

Implement Prim's Algorithm

Travelling Salesman Problem

Snake and Ladders Problem

Detect Negative cycle in a graph

Cheapest Flights Within K Stops

Water Jug problem using BFS

Water Jug problem using BFS

Chinese Postman or Route Inspection

Word Break Problem | (Trie solution)

Print unique rows in a given boolean matrix

Graph Colouring Problem

Find bridge in a graph

Journey to the Moon

Oliver and the Game

M-ColouringProblem

Vertex Cover Problem

Two Clique Problem

Construct a trie from scratch

Implement a Phone Directory

Binomial CoefficientProblem

Matrix Chain Multiplication

Permutation CoefficientProblem

Program for nth Catalan Number

Assembly Line SchedulingProblem

Coin ChangeProblem

Knapsack Problem

Edit Distance

Subset Sum Problem

Gold Mine Problem

Friends Pairing Problem

Painting the Fenceproblem

Maximize The Cut Segments

Longest Common Subsequence

Longest Repeated Subsequence

Longest Increasing Subsequence

Space Optimized Solution of LCS

Maximum Length Chain of Pairs

Egg Dropping Problem

Min Cost PathProblem

Longest Common Substring

Word Break Problem

Partition problem

Maximum Sum Increasing Subsequence

Maximum size square sub-matrix with all 1s

Minimum number of jumps to reach end

Minimum cost to fill given weight in a bag

Count Balanced Binary Trees of Height h

Smallest sum contiguous subarray

Largest Independent Set Problem

Longest Palindromic Subsequence

Longest Palindromic Substring

Weighted Job Scheduling

Optimal Strategy for a Game

Palindrome PartitioningProblem

Boolean Parenthesization Problem

Maximum Length of Pair Chain

Count set bits in an integer

Find position of the only set bit

Copy set bits in a range

Power Set

Mobile Numeric Keypad Problem [IMP]

Maximum sum rectangle in a 2D matrix

Largest rectangular sub-matrix whose sum is 0

Find if a string is interleaved of two other strings

Count number of bits to be flipped to convert A to B

Calculate square of a number without using *, / and pow()

Count total set bits in all numbers from 1 to n

Program to find whether a no is power of two

Optimal Binary Search Tree

Word Wrap Problem

Longest alternating subsequence

Maximum sum of pairs with specific difference

Maximum difference of zeros and ones in binary string

Minimum removals from array to make max –min <= K

Count number of ways to reach a given score in a game

LargestSum Contiguous Subarray [V>V>VV IMP]

Unbounded Knapsack (Repetition of items allowed)

Count All Palindromic Subsequence in a given String

Coin game winner where every player has three choices

Maximum profit by buying and selling a share at most twice [IMP]

Largest area rectangular sub-matrix with equal number of 1's and 0's [IMP]

Find the two non-repeating elements in an array of repeating elements

Divide two integers without using multiplication, division and mod operator

Maximum profit by buying and selling a share at most k times

Count Derangements (Permutation such that no element appears in its original position) [IMPORTANT]

LCS (Longest Common Subsequence) of three strings

Count all subsequences having product less than K

Longest subsequence such that difference between adjacent is one

Maximum subsequence sum such that no three are consecutive

Find the no. of Isalnds

Median in a stream of Integers

Check if a Binary Tree is Heap

Convert min heap to max heap

Interleave the first half of the queue with second half

Find the first circular tour that visits all Petrol Pumps

Distance of nearest cell having 1 in a binary matrix

Check if all levels of two trees are anagrams or not.

First negative integer in every window of size "k"

Remove Invalid Parentheses

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Dynamic Programming

Bit Manipulation

Bit Manipulation