Questions by Love Babbar:

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Topic: Problem:

Array <https://www.geeksforgeeks.org/write-a-program-to-reverse-an-array-or-string/>

Array Find the maximum and minimum element in an array

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

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

Array Move all the negative elements to one side of the array

Array Find the Union and Intersection of the two sorted arrays.

Array Write a program to cyclically rotate an array by one.

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 Rearrange the array in alternating positive and negative items with O(1) extra space

Array Find if there is any subarray with sum equal to 0

Array Find factorial of a large number

Array find maximum product subarray

Array Find longest coinsecutive subsequence

Array Given an array of size n and a number k, fin all elements that appear more than " n/k " times.

Array Maximum profit by buying and selling a share atmost twice

Array Find whether an array is a subset of another array

Array Find the triplet that sum to a given value

Array Trapping Rain water problem

Array Chocolate Distribution problem

Array Smallest Subarray with sum greater than a given value

Array Three way partitioning of an array around a given value

Array Minimum swaps required bring elements less equal K together

Array Minimum no. of operations required to make an array palindrome

Array Median of 2 sorted arrays of equal size

Array Median of 2 sorted arrays of different size

Matrix Spiral traversal on a Matrix

Matrix Search an element in a matriix

Matrix Find median in a row wise sorted matrix

Matrix Find row with maximum no. of 1's

Matrix Print elements in sorted order using row-column wise sorted matrix

Matrix Maximum size rectangle

Matrix Find a specific pair in matrix

Matrix Rotate matrix by 90 degrees

Matrix Kth smallest element in a row-cpumn wise sorted matrix

Matrix Common elements in all rows of a given matrix

String Reverse a String

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

String Word Wrap Problem [VERY IMP].

String EDIT Distance [Very Imp]

String Find next greater number with same set of digits. [Very Very IMP]

String Balanced Parenthesis problem.[Imp]

String Word break Problem[ Very Imp]

String Rabin Karp Algo

String KMP Algo

String Convert a Sentence into its equivalent mobile numeric keypad sequence.

String Minimum number of bracket reversals needed to make an expression balanced.

String Count All Palindromic Subsequence in a given String.

String Count of number of given string in 2D character array

String Search a Word in a 2D Grid of characters.

String Boyer Moore Algorithm for Pattern Searching.

String Converting Roman Numerals to Decimal

String Longest Common Prefix

String Number of flips to make binary string alternate

String Find the first repeated word in string.

String Minimum number of swaps for bracket balancing.

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 tofind 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 Recursively remove all adjacent duplicates

String 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

Searching & Sorting Find first and last positions of an element in a sorted array

Searching & Sorting 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 Optimum location of point to minimize total distance

Searching & Sorting Find the repeating and the missing

Searching & Sorting find majority element

Searching & Sorting 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 Count triplet with sum smaller than a given value

Searching & Sorting merge 2 sorted arrays

Searching & Sorting 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 Find pivot element in a sorted array

Searching & Sorting K-th Element of Two Sorted Arrays

Searching & Sorting Aggressive cows

Searching & Sorting Book Allocation Problem

Searching & Sorting EKOSPOJ:

Searching & Sorting Job Scheduling Algo

Searching & Sorting Missing Number in AP

Searching & Sorting Smallest number with atleastn trailing zeroes infactorial

Searching & Sorting Painters Partition Problem:

Searching & Sorting ROTI-Prata SPOJ

Searching & Sorting DoubleHelix SPOJ

Searching & Sorting Subset Sums

Searching & Sorting Findthe inversion count

Searching & Sorting Implement Merge-sort in-place

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.

LinkedList 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 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.

LinkedList Intersection of two Sorted Linked List.

LinkedList Intersection Point of two Linked Lists.

LinkedList Merge Sort For Linked lists.[Very Important]

LinkedList Quicksort for Linked Lists.[Very Important]

LinkedList Find the middle Element of a linked list.

LinkedList 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 Deletion from a Circular Linked List.

LinkedList Reverse a Doubly Linked list.

LinkedList Find pairs with a given sum in a DLL.

LinkedList 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 Multiply 2 no. represented by LL

LinkedList Delete nodes which have a greater value on right side

LinkedList Segregate even and odd nodes in a Linked List

LinkedList Program for n’th node from the end of a Linked List

LinkedList Find the first non-repeating character from a stream of characters

Binary Trees level order traversal

Binary Trees Reverse Level Order traversal

Binary Trees Height of a tree

Binary Trees Diameter of a tree

Binary Trees Mirror of a tree

Binary Trees 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 Convert Binary tree into Doubly Linked List

Binary Trees 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 Check if Binary tree is Sum tree or not

Binary Trees 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 Check if given graph is tree or not. [ IMP ]

Binary Trees 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 Find distance between 2 nodes in a Binary tree

Binary Trees Kth Ancestor of node in a Binary tree

Binary Trees Find all Duplicate subtrees in a Binary tree [ IMP ]

Binary Trees Tree Isomorphism Problem

Binary Search Trees Fina a value in a BST

Binary Search Trees Deletion of a node in a BST

Binary Search Trees 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 Find Kth smallest element in a BST

Binary Search Trees Count pairs from 2 BST whose sum is equal to given value "X"

Binary Search Trees Find the median of BST in O(n) time and O(1) space

Binary Search Trees 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 Flatten BST to sorted list

Greedy 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 GERGOVIA -Wine trading in Gergovia

Greedy 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

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

Greedy Find maximum sum possible equal sum of three stacks

BackTracking Rat in a maze Problem

BackTracking Printing all solutions in N-Queen Problem

BackTracking Word Break Problem using Backtracking

BackTracking Remove Invalid Parentheses

BackTracking Sudoku Solver

BackTracking m Coloring Problem

BackTracking Print all palindromic partitions of a string

BackTracking Subset Sum Problem

BackTracking The Knight’s tour problem

BackTracking Tug of War

BackTracking Find shortest safe route in a path with landmines

BackTracking Combinational Sum

BackTracking Find Maximum number possible by doing at-most K swaps

BackTracking Print all permutations of a string

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

BackTracking Longest Possible Route in a Matrix with Hurdles

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

BackTracking Partition of a set intoK subsets with equal sum

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

Stacks & Queues Implement Stack from Scratch

Stacks & Queues Implement Queue from Scratch

Stacks & Queues Implement 2 stack in an array

Stacks & Queues find the middle element of a stack

Stacks & Queues Implement "N" stacks in an Array

Stacks & Queues Check the expression has valid or Balanced parenthesis or not.

Stacks & Queues Reverse a String using Stack

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

Stacks & Queues Find the next Greater element

Stacks & Queues The celebrity Problem

Stacks & Queues Arithmetic Expression evaluation

Stacks & Queues Evaluation of Postfix expression

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

Stacks & Queues Reverse a stack using recursion

Stacks & Queues Sort a Stack using recursion

Stacks & Queues Merge Overlapping Intervals

Stacks & Queues Largest rectangular Area in Histogram

Stacks & Queues Length of the Longest Valid Substring

Stacks & Queues Expression contains redundant bracket or not

Stacks & Queues Implement Stack using Queue

Stacks & Queues Implement Stack using Deque

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

Stacks & Queues Implement Queue using Stack

Stacks & Queues Implement "n" queue in an array

Stacks & Queues Implement a Circular queue

Stacks & Queues LRU Cache Implementationa

Stacks & Queues Reverse a Queue using recursion

Stacks & Queues Reverse the first “K” elements of a queue

Stacks & Queues Interleave the first half of the queue with second half

Stacks & Queues Find the first circular tour that visits all Petrol Pumps

Stacks & Queues Minimum time required to rot all oranges

Stacks & Queues Distance of nearest cell having 1 in a binary matrix

Stacks & Queues First negative integer in every window of size “k”

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

Stacks & Queues Sum of minimum and maximum elements of all subarrays of size “k”.

Stacks & Queues Minimum sum of squares of character counts in a given string after removing “k” characters.

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

Stacks & Queues Next Smaller Element

Heap Implement a Maxheap/MinHeap using arrays and recursion.

Heap Sort an Array using heap. (HeapSort)

Heap Maximum of all subarrays of size k.

Heap “k” largest element in an array

Heap Kth smallest and largest element in an unsorted array

Heap Merge “K” sorted arrays. [ IMP ]

Heap Merge 2 Binary Max Heaps

Heap Kth largest sum continuous subarrays

Heap Leetcode- reorganize strings

Heap Merge “K” Sorted Linked Lists [V.IMP]

Heap Smallest range in “K” Lists

Heap Median in a stream of Integers

Heap Check if a Binary Tree is Heap

Heap Connect “n” ropes with minimum cost

Heap Convert BST to Min Heap

Heap Convert min heap to max heap

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

Heap Minimum sum of two numbers formed from digits of an array

Graph Create a Graph, print it

Graph Implement BFS algorithm

Graph Implement DFS Algo

Graph Detect Cycle in Directed Graph using BFS/DFS Algo

Graph Detect Cycle in UnDirected Graph using BFS/DFS Algo

Graph Search in a Maze

Graph Minimum Step by Knight

Graph flood fill algo

Graph Clone a graph

Graph Making wired Connections

Graph word Ladder

Graph Dijkstra algo

Graph Implement Topological Sort

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

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

Graph Find the no. of Isalnds

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

Graph Implement Kruksal’sAlgorithm

Graph Implement Prim’s Algorithm

Graph Total no. of Spanning tree in a graph

Graph Implement Bellman Ford Algorithm

Graph Implement Floyd warshallAlgorithm

Graph Travelling Salesman Problem

Graph Graph ColouringProblem

Graph Snake and Ladders Problem

Graph Find bridge in a graph

Graph Count Strongly connected Components(Kosaraju Algo)

Graph Check whether a graph is Bipartite or Not

Graph Detect Negative cycle in a graph

Graph Longest path in a Directed Acyclic Graph

Graph Journey to the Moon

Graph Cheapest Flights Within K Stops

Graph Oliver and the Game

Graph Water Jug problem using BFS

Graph Water Jug problem using BFS

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

Graph M-ColouringProblem

Graph Minimum edges to reverse o make path from source to destination

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

Graph Vertex Cover Problem

Graph Chinese Postman or Route Inspection

Graph Number of Triangles in a Directed and Undirected Graph

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

Graph Two Clique Problem

Trie Construct a trie from scratch

Trie Find shortest unique prefix for every word in a given list

Trie Word Break Problem | (Trie solution)

Trie Given a sequence of words, print all anagrams together

Trie Implement a Phone Directory

Trie Print unique rows in a given boolean matrix

Dynamic Programming Coin ChangeProblem

Dynamic Programming Knapsack Problem

Dynamic Programming Binomial CoefficientProblem

Dynamic Programming Permutation CoefficientProblem

Dynamic Programming Program for nth Catalan Number

Dynamic Programming Matrix Chain Multiplication

Dynamic Programming Edit Distance

Dynamic Programming Subset Sum Problem

Dynamic Programming Friends Pairing Problem

Dynamic Programming Gold Mine Problem

Dynamic Programming Assembly Line SchedulingProblem

Dynamic Programming Painting the Fenceproblem

Dynamic Programming Maximize The Cut Segments

Dynamic Programming Longest Common Subsequence

Dynamic Programming Longest Repeated Subsequence

Dynamic Programming Longest Increasing Subsequence

Dynamic Programming Space Optimized Solution of LCS

Dynamic Programming LCS (Longest Common Subsequence) of three strings

Dynamic Programming Maximum Sum Increasing Subsequence

Dynamic Programming Count all subsequences having product less than K

Dynamic Programming Longest subsequence such that difference between adjacent is one

Dynamic Programming Maximum subsequence sum such that no three are consecutive

Dynamic Programming Egg Dropping Problem

Dynamic Programming Maximum Length Chain of Pairs

Dynamic Programming Maximum size square sub-matrix with all 1s

Dynamic Programming Maximum sum of pairs with specific difference

Dynamic Programming Min Cost PathProblem

Dynamic Programming Maximum difference of zeros and ones in binary string

Dynamic Programming Minimum number of jumps to reach end

Dynamic Programming Minimum cost to fill given weight in a bag

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

Dynamic Programming Longest Common Substring

Dynamic Programming Count number of ways to reacha given score in a game

Dynamic Programming Count Balanced Binary Trees of Height h

Dynamic Programming LargestSum Contiguous Subarray [V>V>V>V IMP ]

Dynamic Programming Smallest sum contiguous subarray

Dynamic Programming Unbounded Knapsack (Repetition of items allowed)

Dynamic Programming Word Break Problem

Dynamic Programming Largest Independent Set Problem

Dynamic Programming Partition problem

Dynamic Programming Longest Palindromic Subsequence

Dynamic Programming Count All Palindromic Subsequence in a given String

Dynamic Programming Longest Palindromic Substring

Dynamic Programming Longest alternating subsequence

Dynamic Programming Weighted Job Scheduling

Dynamic Programming Coin game winner where every player has three choices

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

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

Dynamic Programming Optimal Strategy for a Game

Dynamic Programming Optimal Binary Search Tree

Dynamic Programming Palindrome PartitioningProblem

Dynamic Programming Word Wrap Problem

Dynamic Programming Mobile Numeric Keypad Problem [ IMP ]

Dynamic Programming Boolean Parenthesization Problem

Dynamic Programming Largest rectangular sub-matrix whose sum is 0

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

Dynamic Programming Maximum sum rectangle in a 2D matrix

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

Dynamic Programming Find if a string is interleaved of two other strings

Dynamic Programming Maximum Length of Pair Chain

Bit Manipulation Count set bits in an integer

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

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

Bit Manipulation Count total set bits in all numbers from 1 to n

Bit Manipulation Program to find whether a no is power of two

Bit Manipulation Find position of the only set bit

Bit Manipulation Copy set bits in a range

Bit Manipulation Divide two integers without using multiplication, division and mod operator

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

Bit Manipulation Power Set