Questions by Love Babbar:

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Topic:	Problem:
Array	Reverse the array
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