

Curious freaks CODING SHEET by Nandhini

Checkout this video to understand efficient way to use this sheet - <https://youtu.be/ALpPS2FokQ>

Youtube Channel - <https://www.youtube.com/@curiousfreaks>

Lets use #CFCodingSheet tag to share with friends on social media - https://www.instagram.com/its_me_nandy

Connect with me on LinkedIn - <https://www.linkedin.com/in/nandhini-raja-8b71b4143/>

Only sheet you need to get placed in super high paying companies including google, amazon, salesforce, microsoft, adobe, etc

Solving time - Easy Problems - 5 to 10mins

Solving time - Medium Problems - 15 to 30mins

Solving time - Hard problems - At max 45mins - 50mins

Imp Note: Its not necessary that you know a topic, so for every topic you have here, first understand the basics of the topic, then for every pattern, you can learn the first prob in that pattern and then try solving other probs in that pattern yourself.

TOPIC	Problem	Problem link	Solution Tutorial	Solution Article	Solved	Notes
Basics						
Beginners basic math probs						
	Find even or odd	https://practice.geeksforgeeks.org/problems/odd-or-even/0181/	Best Tutorial link - click to view	Article link click to view		
	Find test digit in a number	https://www.geeksforgeeks.org/problems/find-test-digit-of-ab-for-large-numbers/15461/	Best Tutorial link - click to view	Article link click to view		
	Count digits in a number(Solving above last digit prob will make this easy for you)	https://practice.geeksforgeeks.org/problems/count-digits/719/1	Best Tutorial link - click to view	Article link click to view		
	Reverse a number(Try thinking how you can use above logic in solving this)	https://www.geeksforgeeks.org/problems/reverse-digit/0319/1	Best Tutorial link - click to view	Article link click to view		
	Find power of a number	https://www.geeksforgeeks.org/problems/power-of-numbers/1587115640/1	Best Tutorial link - click to view	Article link click to view		
	GCD	https://www.geeksforgeeks.org/problems/power-of-two-numbers/3459/1	Best Tutorial link - click to view	Article link click to view		
	Print all divisors of a number	https://www.geeksforgeeks.org/problems/print-all-divisors-of-a-number/11641/8	Best Tutorial link - click to view	Article link click to view		
	Prime number(Try solving by yourself)	https://practice.geeksforgeeks.org/problems/prime-number/214/1	Best Tutorial link - click to view	Article link click to view		
	Armstrong numbers(Solving power of number, will make this easy for you)	https://www.geeksforgeeks.org/problems/armstrong-numbers/2727/1	Best Tutorial link - click to view	Article link click to view		
	Check palindrome of number(Use the techniques you learnt so far solving above probs and solve this by yourself)	https://practice.geeksforgeeks.org/problems/palindrome/0746/1	Best Tutorial link - click to view	Article link click to view		
	Square root of a number(Try to first figure out algo to solve this)	https://www.geeksforgeeks.org/problems/square-root/1	Best Tutorial link - click to view	Article link click to view		
	Perfect number	https://practice.geeksforgeeks.org/problems/perfect-numbers/2207/1	Best Tutorial link - click to view	Article link click to view		
Array - Data structure						
Basics with traversal						
	What is an array? How is it represented?		Best Tutorial link - click to view	Article link click to view		
	Find the maximum and minimum element in array(After solving the search - you can solve all probs in this basics by yourself)	https://www.geeksforgeeks.org/problems/find-minimum-and-maximum-element-in-an-array/428/1	Best Tutorial link - click to view	Article link click to view		
	Find third largest element in array	https://practice.geeksforgeeks.org/problems/third-largest-element/1	Best Tutorial link - click to view	Article link click to view		
	Search an element in array(Understand how to traverse through the array and how to access the elements)	https://www.geeksforgeeks.org/problems/search-an-element-in-an-array/1587115621/1	Best Tutorial link - click to view	Article link click to view		
	Find missing number in array	https://practice.geeksforgeeks.org/problems/missing-number-in-array/1416/1	Best Tutorial link - click to view	Article link click to view		
	Find repeating number in array		Best Tutorial link - click to view	Article link click to view		
	Sort an array of 0s, 1s and 2s (You dont need to know any sorting algo, just using basics, once solved, definitely learn the optimal algo)	https://www.geeksforgeeks.org/problems/sort-an-array-of-0s-1s-and-2s/2311/1	Best Tutorial link - click to view	Article link click to view		
	Check if two arrays are equal or not	https://www.geeksforgeeks.org/problems/check-if-two-arrays-are-equal-or-not/3847/1/1	Best Tutorial link - click to view	Article link click to view		
	Check if two arrays are equal or not	https://www.geeksforgeeks.org/problems/cyclically-rotate-an-array-by-one/2614/1/1	Best Tutorial link - click to view	Article link click to view		
	Rotate the array by 1	https://www.geeksforgeeks.org/problems/cyclically-rotate-an-array-by-one/2614/1/1	Best Tutorial link - click to view	Article link click to view		
	Rotate the array by k	https://www.geeksforgeeks.org/problems/cyclically-rotate-an-array-by-one/2614/1/1	Best Tutorial link - click to view	Article link click to view		
	Array subset of another array	https://www.geeksforgeeks.org/problems/array-subset-of-another-array/2317/1	Best Tutorial link - click to view	Article link click to view		
	Learn what is map and how its represented before moving forward		Best Tutorial link - click to view	Article link click to view		
	Count frequency of elements in array(Solve efficiently, try applying what you learnt about map)	https://practice.geeksforgeeks.org/problems/frequency-of-array-elements/1587115620/1	Best Tutorial link - click to view	Article link click to view		
Two pointer(This is very imp pattern, not just for these probs but very commonly you can use this technique)						
	Just like search, sort, this is also imp technique to learn					
	Find pair with given sum	https://www.geeksforgeeks.org/problems/key-value-pair/0616/1/1	Best Tutorial link - click to view	Article link click to view		
	3 Sum	https://www.geeksforgeeks.org/problems/3sum-in-array/1587115641/1/1	Best Tutorial link - click to view	Article link click to view		
	4 Sum	https://leetcode.com/problems/4sum/	Best Tutorial link - click to view	Article link click to view		
	Find triplets with zero sum	https://www.geeksforgeeks.org/problems/find-triplets-with-zero-sum/1	Best Tutorial link - click to view	Article link click to view		
	Find count of triplets	https://www.geeksforgeeks.org/problems/count-triplets-with-zero-sum/1	Best Tutorial link - click to view	Article link click to view		
	Union of two arrays(learn the brute force & optimal soln, you will learn about set datastructure, which will be super useful in many probs in brute force)	https://www.geeksforgeeks.org/problems/union-of-two-arrays/3538/1	Best Tutorial link - click to view	Article link click to view		
	Intersection of two arrays	https://www.geeksforgeeks.org/problems/intersection-of-two-arrays/2404/1/1	Best Tutorial link - click to view	Article link click to view		
	Perfect number	https://www.geeksforgeeks.org/problems/remove-duplicate-elements-from-sorted-array/1/1	Best Tutorial link - click to view	Article link click to view		
	Remove duplicates from array(Quite diff from above, try to solve on own, this actually shows that not always you will have pointers at start and end)	https://www.geeksforgeeks.org/problems/k-th-element-of-two-sorted-array/1371/1/1	Best Tutorial link - click to view	Article link click to view		
	kth element of 2 sorted arrays	https://www.geeksforgeeks.org/problems/k-th-element-of-two-sorted-array/1371/1/1	Best Tutorial link - click to view	Article link click to view		
	Length of longest subarray with sum k	https://www.geeksforgeeks.org/problems/longest-sub-array-with-sum-k/0806/1/1	Best Tutorial link - click to view	Article link click to view		
	Trapping rain water	https://www.geeksforgeeks.org/problems/trapping-rain-water/1587115621/1/1	Best Tutorial link - click to view	Article link click to view		
Must Solve						
	Majority element	https://leetcode.com/problems/majority-element/	Best Tutorial link - click to view	Article link click to view		
	Kadane's algo(super imp)	https://practice.geeksforgeeks.org/problems/kadanes-algorithm/1587115620/1	Best Tutorial link - click to view	Article link click to view		
	Count inversions	https://practice.geeksforgeeks.org/problems/inversion-of-array/1587115620/1	Best Tutorial link - click to view	Article link click to view		
	Merge intervals	https://leetcode.com/problems/merge-intervals/	Best Tutorial link - click to view	Article link click to view		
	Maximum product subarray	https://practice.geeksforgeeks.org/problems/maximum-product-subarray/2041/1	Best Tutorial link - click to view	Article link click to view		
	Next permutation	https://leetcode.com/problems/next-permutation/	Best Tutorial link - click to view	Article link click to view		
	Sieve of eratosthenes(Popular algo for prime numbers)	https://www.geeksforgeeks.org/problems/sieve-of-eratosthenes/0242/1	Best Tutorial link - click to view	Article link click to view		
Time and space complexity						
	https://youtu.be/FV0d6s7WtPsm - After learning this, make sure to learn time and space complexity for all the problems moving forward					
Matrix - Data structure						
Traversal & Basic & Must solve						
	What is a 2D Array? How to access element?		Best Tutorial link - click to view	Article link click to view		
	Search in a matrix	https://leetcode.com/problems/search-a-2d-matrix/	Best Tutorial link - click to view	Article link click to view		
	Rotate by 90 degree	https://www.geeksforgeeks.org/problems/rotate-by-90-degree/1587115621/1	Best Tutorial link - click to view	Article link click to view		
	Maximum num of 1's row	https://www.geeksforgeeks.org/problems/rotate-matrix-by-90-degree/2551/1	Best Tutorial link - click to view	Article link click to view		
	Left rotate matrix k times	https://practice.geeksforgeeks.org/problems/print-matrix-in-diagonal-pattern/1/1	Best Tutorial link - click to view	Article link click to view		
	Print matrix in diagonal pattern	https://www.geeksforgeeks.org/problems/print-matrix-in-diagonal-pattern/1/1	Best Tutorial link - click to view	Article link click to view		
	Set matrix zeros	https://leetcode.com/problems/set-matrix-zeroes/	Best Tutorial link - click to view	Article link click to view		
Recursion - Technique						
Basics						
	Recursion is super important concept! Lets first understand the basics of recursion in this section (before moving forward)					
	Understand what recursion is and how it works(Draw the recursive tree for every recursive prob you solve)		Best Tutorial link - click to view	Article link click to view		
	Print 1 to N using recursion	https://www.geeksforgeeks.org/problems/print-1-to-n-without-using-loop/1587115620/1	Best Tutorial link - click to view	Article link click to view		
	Factorial of N numbers	https://practice.geeksforgeeks.org/problems/factorial/5739/1	Best Tutorial link - click to view	Article link click to view		
	Fibonacci series using recursion	https://www.geeksforgeeks.org/problems/nth-fibonacci-number/1336/1/1	Best Tutorial link - click to view	Article link click to view		
	Power(x,n) Draw the recursion tree for all the probs for sure	https://www.geeksforgeeks.org/problems/power-of-numbers/1587115640/1/1	Best Tutorial link - click to view	Article link click to view		
	Print pattern	https://www.geeksforgeeks.org/problems/print-pattern/3648/1/1	Best Tutorial link - click to view	Article link click to view		
	Recursive implementation of atoi	https://leetcode.com/problems/atoi/	Best Tutorial link - click to view	Article link click to view		
	Pascal triangle	https://www.geeksforgeeks.org/problems/pascal-triangle/0652/1/1	Best Tutorial link - click to view	Article link click to view		
Binary Search - Algo						
Basic pattern						
	Search in a sorted array(Efficiently -> So learn binary search for this)	https://www.geeksforgeeks.org/problems/who-will-win-1587115621/1/1	Best Tutorial link - click to view	Article link click to view		
	Find floor and ceil in sorted array	https://www.geeksforgeeks.org/problems/floor-in-a-sorted-array/1587115620/1	Best Tutorial link - click to view	Article link click to view		
	Find first and last occurrence of element in sorted array	https://www.geeksforgeeks.org/problems/first-and-last-occurrences-of-x/1161/1/1	Best Tutorial link - click to view	Article link click to view		
	Find missing num from 1 to N	https://leetcode.com/problems/missing-number/	Best Tutorial link - click to view	Article link click to view		
	Find square root	https://www.geeksforgeeks.org/problems/square-root/1/1	Best Tutorial link - click to view	Article link click to view		
	Search for element in infinite array	https://www.geeksforgeeks.org/problems/search-in-infinite-sorted-0-1-array/406183	Best Tutorial link - click to view	Article link click to view		
Sorted rotated array						
	Search element in sorted rotated array(With and without duplicate)	https://leetcode.com/problems/search-in-rotated-sorted-array-ii/	Best Tutorial link - click to view	Article link click to view		
	Minimum element in sorted rotated array(With and without duplicate)A twist in normal BS is needed, once you learnt this, solve the below by yourself even try to solve this also by yourself	https://www.geeksforgeeks.org/problems/minimum-number-in-a-sorted-rotated-array/1587115620/1/1	Best Tutorial link - click to view	Article link click to view		

		https://www.geeksforgeeks.org/problems/rotate472017/ https://www.geeksforgeeks&in_medium=Article&in_campaign=bottom_sl_cx_on_Article	Best Tutorial link - click to view	Article link click to view		
	Number of times array is sorted Maximum element in sorted rotated array		Best Tutorial link - click to view	Article link click to view		
Biotonic array						
	Find the peak element	https://www.geeksforgeeks.org/problems/peak-element17?page=1&category=Arrays&difficulty=Medium&status=solved&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
Matrix	Search element in biotonic array	https://www.intervuebit.com/problems/search-in-biotonic-array/	Best Tutorial link - click to view	Article link click to view		
	Find row with maximum number of 1's	https://www.geeksforgeeks.org/problems/binary-matrix-having-maximum-number-of-1s-1706417?page=1&category=Binary%20Search&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Search in row wise column wise sorted matrix	https://www.geeksforgeeks.org/problems/search-in-a-matrix-15871156217/ https://www.geeksforgeeks&in_medium=Article&in_campaign=bottom_sl_cx_on_Article	Best Tutorial link - click to view	Article link click to view		
Application(Super Imp)	Search in sorted matrix II	https://leetcode.com/problems/search-a-2d-matrix-ii/	Best Tutorial link - click to view	Article link click to view		
	Find peak in sorted matrix	https://leetcode.com/problems/find-a-peak-element-ii/	Best Tutorial link - click to view	Article link click to view		
	Aggressive cows	https://www.geeksforgeeks.org/problems/aggressive-cows17?page=1&category=Binary%20Search&sortBy=submissions https://www.geeksforgeeks.org/problems/bal-scale-minimum-number-of-pages263717/ https://www.geeksforgeeks&in_medium=Article&in_campaign=bottom_sl_cx_on_Article	Best Tutorial link - click to view	Article link click to view		
	Allocate minimum pages	https://www.geeksforgeeks.org/problems/the-painter-partition-problem-153417?page=1&category=Binary%20Search&sortBy=submissions https://www.geeksforgeeks.org/problems/split-array-largest-sum-14163417?page=2&category=Binary%20Search&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Painter partition	https://www.geeksforgeeks.org/problems/the-painter-partition-problem-153417?page=1&category=Binary%20Search&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Split array largest sum	https://www.geeksforgeeks.org/problems/split-array-largest-sum-14163417?page=2&category=Binary%20Search&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Minimum num of days to make m bouquets	https://leetcode.com/problems/minimum-number-of-days-to-make-m-bouquets/	Best Tutorial link - click to view	Article link click to view		
	Capacity to ship packages within D days	https://www.geeksforgeeks.org/problems/capacity-to-ship-packages-within-d-days17?page=1&category=Binary%20Search&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	koko eating bananas	https://leetcode.com/problems/koko-eating-bananas/	Best Tutorial link - click to view	Article link click to view		
	kth smallest number in matrix multiplication table	https://leetcode.com/problems/kth-smallest-number-in-multiplication-table/	Best Tutorial link - click to view	Article link click to view		
	kth smallest pair distance	https://leetcode.com/problems/find-k-th-smallest-pair-distance/	Best Tutorial link - click to view	Article link click to view		
	Ugly number II	https://leetcode.com/problems/ugly-number-ii/	Best Tutorial link - click to view	Article link click to view		
	Median of 2 sorted arrays	Median of 2 Sorted Arrays of Different Sizes Question GeeksforGeeks	Best Tutorial link - click to view	Article link click to view		
	Find smallest divisor given threshold	Find the Smallest Divisor Given a Threshold - LeetCode	Best Tutorial link - click to view	Article link click to view		
Sorting - Algo						
Basics	Make sure to completely understand the algo thoroughly, and time & space complexity					
	Bubble sort(very basic sorting technique)	https://www.geeksforgeeks.org/problems/bubble-sort17/ https://www.geeksforgeeks&in_medium=Article&in_campaign=bottom_sl_cx_on_Article	Best Tutorial link - click to view	Article link click to view		
	Selection sort	https://www.geeksforgeeks.org/problems/selection-sort17/ https://www.geeksforgeeks&in_medium=Article&in_campaign=bottom_sl_cx_on_Article	Best Tutorial link - click to view	Article link click to view		
	Insertion sort	https://www.geeksforgeeks.org/problems/insertion-sort17/ https://www.geeksforgeeks&in_medium=Article&in_campaign=bottom_sl_cx_on_Article	Best Tutorial link - click to view	Article link click to view		
	Merge sort	https://www.geeksforgeeks.org/problems/merge-sort17/ https://www.geeksforgeeks&in_medium=Article&in_campaign=bottom_sl_cx_on_Article	Best Tutorial link - click to view	Article link click to view		
LinkedList - Data structure	Quick sort	https://www.geeksforgeeks.org/problems/quick-sort17/ https://www.geeksforgeeks&in_medium=Article&in_campaign=bottom_sl_cx_on_Article	Best Tutorial link - click to view	Article link click to view		
Basic patterns						
	Completely understand how Node in linked list is represented and then go ahead with the patterns		Best Tutorial link - click to view	Article link click to view		
	Create, Insert, Delete Operations in LL		Best Tutorial link - click to view	Article link click to view		
	Search for an element in LL(Once create, insert is done, this should be easy)	https://www.geeksforgeeks.org/problems/search-in-linked-list-16643432017/	Best Tutorial link - click to view	Article link click to view		
	Reverse a LL(Learn the O space approach, learn recursive & iterative soln)	https://www.geeksforgeeks.org/problems/reverse-a-linked-list17?page=1&category=Linked%20List&sortBy=submissions https://www.geeksforgeeks.org/problems/check-if-linked-list-is-palindrome17?page=1&category=Linked%20List&sortBy=submissions	Best Tutorial link - click to view	Article link - click to view		
	Check if LL is a Palindrome(Once reversing is learnt, this should be easy)	https://www.geeksforgeeks.org/problems/check-if-linked-list-is-palindrome17?page=1&category=Linked%20List&sortBy=submissions	Best Tutorial link - click to view	Article link - click to view		
	Middle element of LL (Learn efficient approach)	https://www.geeksforgeeks.org/problems/middle-element-of-linked-list-1706417?page=2&category=Linked%20List&sortBy=submissions	Best Tutorial link - click to view	Article link - click to view		
	Find the intersection point of Y LL(Once you know traversal, apply node logic to solve this)	https://www.geeksforgeeks.org/problems/intersection-point-in-y-shaped-linked-list17?page=1&category=Linked%20List&sortBy=submissions https://www.geeksforgeeks&in_medium=Article&in_campaign=bottom_sl_cx_on_Article	Best Tutorial link - click to view	Article link - click to view		
	Union and Intersection of LL	https://www.geeksforgeeks.org/problems/union-of-two-linked-list17/ https://www.geeksforgeeks&in_medium=Article&in_campaign=bottom_sl_cx_on_Article	Best Tutorial link - click to view	Article link - click to view		
	Delete without head pointer	https://www.geeksforgeeks.org/problems/delete-without-head-pointer17?page=1&category=Linked%20List&sortBy=submissions	Best Tutorial link - click to view	Article link - click to view		
	Count pairs with given sum	https://www.geeksforgeeks.org/problems/count-pairs-whose-sum-is-equal-to-x17?page=2&category=Linked%20List&sortBy=submissions	Best Tutorial link - click to view	Article link - click to view		
Loop	Reverse LL in groups of given size(Once you learn reverse of LL's efficient approach, you can try this)	https://www.geeksforgeeks.org/problems/reverse-a-linked-list-in-groups-of-given-size17?page=1&category=Linked%20List&sortBy=submissions	Best Tutorial link - click to view	Article link - click to view		
	Detect loop in LL(Once this is learnt, all the loop pattern probs below should be easy)	https://www.geeksforgeeks.org/problems/detect-loop-in-linked-list17?page=1&category=Linked%20List&sortBy=submissions https://www.geeksforgeeks.org/problems/first-length-of-loop17?page=1&category=Linked%20List&difficulty=Easy&sortBy=submissions	Best Tutorial link - click to view	Article link - click to view		
	Find length of loop in LL	https://www.geeksforgeeks.org/problems/first-length-of-loop17?page=1&category=Linked%20List&difficulty=Easy&sortBy=submissions	Best Tutorial link - click to view	Article link - click to view		
Sorting, Merging & Related	Find the starting point of loop	https://www.geeksforgeeks.org/problems/find-the-first-node-of-loop-in-linked-list-1706417/	Best Tutorial link - click to view	Article link - click to view		
	Remove the loop	https://www.geeksforgeeks.org/problems/remove-loop-in-linked-list17?page=1&category=Linked%20List&sortBy=submissions	Best Tutorial link - click to view	Article link - click to view		
	Sort 0s, 1s, 2s in LL	https://www.geeksforgeeks.org/problems/given-a-linked-list-of-0s-1s-and-2s-sort-it17?page=1&category=Linked%20List&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Pairwise swap elements	https://www.geeksforgeeks.org/problems/pairwise-swap-elements-of-a-linked-list-by-swapping-data17?page=2&category=Linked%20List&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Merge k sorted LL(Merge two sorted is easy version of this ques, if you are finding it diff to come up with logic, first solve that)	https://www.geeksforgeeks.org/problems/merge-two-sorted-linked-lists17?page=1&category=Linked%20List&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Merge sort in LL	https://www.geeksforgeeks.org/problems/sort-a-linked-list17?page=2&category=Linked%20List&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Quick sort in LL	https://www.geeksforgeeks.org/problems/quick-sort-on-linked-list17/ https://www.geeksforgeeks&in_medium=Article&in_campaign=bottom_sl_cx_on_Article	Best Tutorial link - click to view	Article link click to view		
	Remove occurrence of duplicates in sorted & unsorted LL	https://www.geeksforgeeks.org/problems/remove-duplicate-element-from-sorted-linked-list17?page=1&category=Linked%20List&sortBy=submissions https://www.geeksforgeeks.org/problems/remove-duplicate-from-an-unsorted-linked-list17?page=1&category=Linked%20List&difficulty=Easy&sortBy=submissions https://practice.geeksforgeeks.org/problems/segregate-even-and-odd-nodes-in-a-linked-list1705417/	Best Tutorial link - click to view	Article link click to view		
	Segregate even and odd nodes in LL	https://practice.geeksforgeeks.org/problems/segregate-even-and-odd-nodes-in-a-linked-list1705417/	Best Tutorial link - click to view	Article link click to view		
Arithmetic(Reversal & traversal - Once you learnt these, you can solve probs in this pattern)	Add 1 to a number represented as LL	https://practice.geeksforgeeks.org/problems/add-1-to-a-number-represented-as-linked-list1/	Best Tutorial link - click to view	Article link click to view		
	Add 2 numbers represented as LL	https://practice.geeksforgeeks.org/problems/add-two-numbers-represented-by-linked-lists1/	Best Tutorial link - click to view	Article link click to view		
	Subtraction on LL(Comes under hard but should be solvable once the above ones are solved)	https://www.geeksforgeeks.org/problems/subtraction-in-linked-list17?page=1&category=Linked%20List&difficulty=Hard&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
Must solve other probs(Try to solve these probs on own, brute force atleast you can come up for most of them after solving above)	Rotate LL	https://www.geeksforgeeks.org/problems/rotate-list17?page=1&category=Linked%20List&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Flattening a LL(make sure to learn the efficient approach)	https://www.geeksforgeeks.org/problems/flattening-a-linked-list-17064177?page=1&category=Linked%20List&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Delete nodes having greater value on right	https://practice.geeksforgeeks.org/problems/delete-nodes-having-greater-value-on-right17/	Best Tutorial link - click to view	Article link click to view		
	Delete N nodes after M nodes	https://www.geeksforgeeks.org/problems/delete-n-nodes-after-m-nodes-of-a-linked-list17?page=1&category=Linked%20List&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Delete all occurrence of node	https://www.geeksforgeeks.org/problems/delete-n-nodes-after-m-nodes-of-a-linked-list17?page=1&category=Linked%20List&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Clone a LL	https://www.geeksforgeeks.org/problems/clone-a-linked-list-with-next-and-random-pointers17?page=1&category=Linked%20List&difficulty=Hard&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Length of longest palindrome in LL	https://www.geeksforgeeks.org/problems/length-of-longest-palindrome-in-linked-list17?page=2&category=Linked%20List&difficulty=Medium&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Learn the basics of circular LL		Best Tutorial link - click to view	Article link click to view		
	Learn the basic representation of the nodes in LL		Best Tutorial link - click to view	Article link click to view		
	Insert, Delete, Reverse DLL	https://www.geeksforgeeks.org/problems/reverse-a-doubly-linked-list17?page=1&category=Doubly%20List&sortBy=submissions https://www.geeksforgeeks.org/problems/find-pairs-with-given-sum-in-doubly-linked-list17?page=1&category=Doubly%20List&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Pairs with given sum in DLL	https://www.geeksforgeeks.org/problems/find-pairs-with-given-sum-in-doubly-linked-list17?page=1&category=Doubly%20List&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
Stack - Data structure						
Basic						
	What is stack? Learn how to represent the data structure and working of it	https://www.geeksforgeeks.org/problems/implement-stack-using-array17?page=1&category=Stack&sortBy=submissions https://www.geeksforgeeks.org/problems/implement-two-stacks-in-an-array17?page=1&category=Stack&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Implement 2 stack using array	https://www.geeksforgeeks.org/problems/implement-two-stacks-in-an-array17?page=1&category=Stack&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Check for balanced parenthesis	https://www.geeksforgeeks.org/problems/parenthesis-checker274417/ https://www.geeksforgeeks.org/problems/set-minimum-element-from-stack17?page=1&category=Stack&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
Next greater element	Get min from stack in O(1) space and time	https://www.geeksforgeeks.org/problems/set-minimum-element-from-stack17?page=1&category=Stack&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
Next smallest element(Once above pattern is covered, try to solve this on own)	Next greater element	https://www.geeksforgeeks.org/problems/next-larger-element-158711562017?page=1&category=Stack&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Next greater element II	https://leetcode.com/problems/next-greater-element-ii/	Best Tutorial link - click to view	Article link click to view		
	Next smallest element on left	https://www.geeksforgeeks.org/problems/help-classmates-141631177/ https://www.geeksforgeeks.org/problems/next-smaller-element-1112581/	Best Tutorial link - click to view	Article link click to view		
	Next smallest element on right	https://www.geeksforgeeks.org/problems/next-smaller-element-1112581/	Best Tutorial link - click to view	Article link click to view		
	Stock span problem(implementation prob - Try to figure out the pattern from above next greater & smaller)	https://www.geeksforgeeks.org/problems/stock-span-problem-15871156217?page=1&category=Stack&sortBy=submissions https://www.geeksforgeeks.org/problems/trapping-rain-water-15871156217/ https://www.geeksforgeeks&in_medium=Article&in_campaign=bottom_sl_cx_on_Article	Best Tutorial link - click to view	Article link click to view		
	Trapping rainwater	https://www.geeksforgeeks.org/problems/trapping-rain-water-15871156217/ https://www.geeksforgeeks&in_medium=Article&in_campaign=bottom_sl_cx_on_Article	Best Tutorial link - click to view	Article link click to view		

	Maximum rectangular area on histogram(Once next greater and next smallest pattern is covered, this can be solved easily)	https://www.geeksforgeeks.org/problems/maximum-rectangular-area-in-a-histogram-15871562001?page=1&category=Stack&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
Expressions	Max rectangle(Same as above, just a small twist)	https://www.geeksforgeeks.org/problems/max-rectangle1?page=1&category=Stack&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Infix to postfix	https://www.geeksforgeeks.org/problems/infix-to-postfix-15871562001?page=2&category=Stack&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Evaluation of postfix expression	https://www.geeksforgeeks.org/problems/evaluation-of-postfix-expression-173517350?page=1&category=Stack&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Prefix to postfix	https://practice.geeksforgeeks.org/problems/infix-to-postfix-15871562001	Best Tutorial link - click to view	Article link click to view		
	Arithmetic expression evaluation	https://www.codingninjas.com/studio/problems/arithmetic-expression-evaluation_1172611?	Best Tutorial link - click to view	Article link click to view		
Reversing stack	Insert at bottom of stack	https://www.geeksforgeeks.org/problems/insert-an-element-at-the-bottom-of-a-stack1?page=1&category=Stack&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Reverse a stack	https://www.geeksforgeeks.org/problems/reverse-a-stack1?page=2&category=Stack&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Sort stack(Solving above two can give you hint for this)	https://www.geeksforgeeks.org/problems/sort-a-stack1?page=1&category=Stack&sortBy=submissions	Best Tutorial link - click to view			
Implementation probs	Celebrity problem	https://www.geeksforgeeks.org/problems/the-celebrity-problem1?page=1&category=Stack&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Restrictive candy crush	https://www.geeksforgeeks.org/problems/restrictive-candy-crush-1416311?	Best Tutorial link - click to view	Article link click to view		
	Count the reversals	https://www.geeksforgeeks.org/problems/count-the-reversals04011?page=1&category=Queue&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
Queue - Data structure						
Basic pattern						
	What is queue? Learn the basic representation and how its implemented?	https://www.geeksforgeeks.org/problems/implement-queue-using-array1?page=1&category=Queue&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Implement queue using linkedlist	https://www.geeksforgeeks.org/problems/implement-queue-using-linked-list1?page=1&category=Queue&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Implement queue using stack(super imp)	https://www.geeksforgeeks.org/problems/queue-using-two-stacks1?page=1&category=Queue&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Implement stack using queue(super imp)	https://www.geeksforgeeks.org/problems/stack-using-two-queues1?page=1&category=Queue&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Reverse a queue	https://www.geeksforgeeks.org/problems/queue-reversal1?page=1&category=Queue&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
Implementation probs	Circular tour	https://www.geeksforgeeks.org/problems/circular-tour-15871562001?page=1&category=Circular&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	First non repeating char in stream	https://www.geeksforgeeks.org/problems/first-non-repeating-character-in-a-stream2161?page=1&category=Queue&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Reverse first k elements in queue	https://www.geeksforgeeks.org/problems/reverse-first-k-elements-of-queue1?page=1&category=Circular&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	LRU Cache(super imp)	https://www.geeksforgeeks.org/problems/lru-cache1?page=1&category=Circular&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Minimum cost of ropes	https://www.geeksforgeeks.org/problems/minimum-cost-of-ropes-15871562001?page=1&category=Queue&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Nearly sorted(Learn priority queue for sure)	https://www.geeksforgeeks.org/problems/nearly-sorted-15871562001?page=3&category=Circular&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
Sliding Window - Technique						
(Court dip the topic , personally have been asked this topic many interview)		https://leetcode.com/problems/longest-substring-without-repeating-characters/				
Fixed Sliding Window(Size of the window will be provided)						
	Maximum sum subarray of size k	https://www.geeksforgeeks.org/problems/sum-subarray-of-size-k31311?				
	Count distinct element in every window(Once you understand handling window size fixed from above prob, this will be easy)	https://www.geeksforgeeks.com/medium/Article&lin_campaign=bottom_all_questions_Article	Best Tutorial link - click to view	Article link click to view		
	First negative integer in every window of size k(Try to solve on own before looking for soln since you did above topics too already)	https://www.geeksforgeeks.org/problems/count-distinct-elements-in-every-window-1?page=1&category=Sliding%20Window&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Maximum of all subarray of size k(Try to solve on own)	https://www.geeksforgeeks.org/problems/first-negative-integer-in-every-window-of-size-k3481?page=1&category=sliding-window&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Count subarray of length k with k-1 distinct elements	https://www.geeksforgeeks.org/problems/maximum-of-all-subarrays-of-size-k31011?page=1&category=sliding-window&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Maximum of minimum for every window(imp)	https://www.geeksforgeeks.org/problems/maximum-of-minimum-for-every-window-size54531?page=1&category=sliding-window&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
Variable sliding window(Each prob will teach something in addition to the window so do solve everything)						
	Subarray with given sum	https://www.geeksforgeeks.org/problems/subarray-with-given-sum-1587156211?page=1&category=sliding-window&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Longest subarray with given sum k(Same as above with slight modification)	https://www.geeksforgeeks.org/problems/longest-subarray-with-sum-k50501?page=1&category=sliding-window&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Subarray with 0 sum	https://www.geeksforgeeks.org/problems/subarray-with-0-sum-1587156211?page=1&category=sliding-window&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Smallest window of distinct elements	https://www.geeksforgeeks.org/problems/smallest-distinct-window1321?page=2&category=sliding-window&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Smallest window containing 0,1,2	https://www.geeksforgeeks.org/problems/smallest-window-containing-0-1-and-2-1706371?page=2&category=sliding-window&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Smallest window in string containing all chars of another string	https://www.geeksforgeeks.org/problems/smallest-window-in-a-string-containing-all-the-characters-of-another-string-1587156211?page=1&category=sliding-window&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Length of longest subarray	https://www.geeksforgeeks.org/problems/length-of-the-longest-subarray30301?page=1&category=sliding-window&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Largest subarray of 0s and 1s	https://www.geeksforgeeks.org/problems/largest-subarray-of-0s-and-1s12?page=1&category=sliding-window&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Count of anagram occurrence(Super imp)	https://www.geeksforgeeks.org/problems/count-occurrences-of-anagrams50301?page=1&category=sliding-window&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Max consecutive ones III	https://leetcode.com/problems/max-consecutive-ones-iii/	Best Tutorial link - click to view	Article link click to view		
	Fruit into basket	https://leetcode.com/problems/fruit-into-baskets/	Best Tutorial link - click to view	Article link click to view		
	Count number of nice subarrays	https://leetcode.com/problems/count-number-of-nice-subarrays/	Best Tutorial link - click to view	Article link click to view		
	Longest repeating char replacement	https://leetcode.com/problems/longest-repeating-character-replacement/	Best Tutorial link - click to view			
	Minimum window subarray	https://leetcode.com/problems/minimum-window-subarray/	Best Tutorial link - click to view	Article link click to view		
	Minimum window subsequence(Understand the diff between subarray and subsequence before starting this prob)	https://leetcode.com/problems/minimum-window-subsequence/	Best Tutorial link - click to view	Article link click to view		
	Subarray with k diff integers	https://leetcode.com/problems/subarrays-with-k-different-integers/	Best Tutorial link - click to view	Article link click to view		
Trees - Data structure						
Traversals						
	Understand the basic of how tree data structure is represented		Best Tutorial link - click to view			
	PreOrder Traversal	https://www.geeksforgeeks.org/problems/preorder-traversal1?page=1&category=Tree&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	InOrder Traversal	https://www.geeksforgeeks.org/problems/inorder-traversal1?page=2&category=Tree&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	PostOrder Traversal	https://www.geeksforgeeks.org/problems/postorder-traversal1?page=2&category=Tree&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Level Order Traversal	https://www.geeksforgeeks.org/problems/level-order-traversal1?page=1&category=Tree&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Boundary Traversal(Once level traversal is learnt, this you can solve)	https://www.geeksforgeeks.org/problems/boundary-traversal-of-binary-tree1?page=1&category=Tree&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Vertical Traversal(Once level traversal is learnt, this you can solve, if extra logic is needed)	https://www.geeksforgeeks.org/problems/print-a-binary-tree-in-vertical-order1?page=1&category=Tree&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Top View of BT(Once you have mastered level traversal, this should be easy)	https://www.geeksforgeeks.org/problems/top-view-of-binary-tree1?page=1&category=Tree&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Bottom View of BT(Once you have mastered level traversal, this should be easy)	https://www.geeksforgeeks.org/problems/bottom-view-of-binary-tree1?page=1&category=Tree&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Left View of BT(Once you have mastered vertical traversal, this should be easy)	https://www.geeksforgeeks.org/problems/left-view-of-binary-tree1?page=1&category=Tree&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Right View of BT(Once you have mastered vertical traversal, this should be easy)	https://www.geeksforgeeks.org/problems/right-view-of-binary-tree1?page=1&category=Tree&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Diagonal Traversal	https://www.geeksforgeeks.org/problems/diagonal-traversal-of-binary-tree1?page=3&category=Tree&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
Basic and Easy patterns(Try to solve these once you learnt traversals)						
	Insert node in a tree		Best Tutorial link - click to view	Article link click to view		
	Height of the tree	https://www.geeksforgeeks.org/problems/height-of-binary-tree1?page=1&category=Tree&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Diameter of the tree	https://www.geeksforgeeks.org/problems/diameter-of-binary-tree1?page=1&category=Tree&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Check if 2 trees are identical	https://www.geeksforgeeks.org/problems/determine-if-two-trees-are-identical1?page=1&category=Tree&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Check if subtree	https://www.geeksforgeeks.org/problems/check-if-subtree1?page=2&category=Tree&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Check for balanced tree	https://www.geeksforgeeks.org/problems/check-for-balanced-tree1?page=1&category=Tree&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Lowest common Ancestor in BT	https://www.geeksforgeeks.org/problems/lowest-common-ancestor-in-a-binary-tree-1?page=1&category=Tree&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Sum tree	https://www.geeksforgeeks.org/problems/sum-tree1?page=1&category=Tree&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Symmetric tree	https://www.geeksforgeeks.org/problems/symmetric-tree1?page=2&category=Tree&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Minor of a tree	https://www.geeksforgeeks.org/problems/minor-tree1?page=1&category=Tree&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Check if isomorphic	https://www.geeksforgeeks.org/problems/check-if-tree-is-isomorphic1?page=2&category=Tree&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
Path and Distance						
	Root to leaf paths	https://www.geeksforgeeks.org/problems/root-to-leaf-paths1?page=1&category=Tree&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Root to leaf path sum (Once the root to leaf path is solved, this should be easy)	https://www.geeksforgeeks.org/problems/root-to-leaf-paths1?page=2&category=Tree&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Maximum path sum from any node(Once the root to leaf path is solved, this should be easy)	https://www.geeksforgeeks.org/problems/maximum-path-sum-from-any-node1?page=3&category=Tree&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	K Sum Paths (Once the root to leaf path is solved, this should be easy)	https://www.geeksforgeeks.org/problems/k-sum-paths1?page=1&category=Tree&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Nodes at given distance	https://www.geeksforgeeks.org/problems/nodes-at-given-distance-in-binary-tree1?page=3&category=Tree&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Range sum of BST(Solving nodes at given distance, will make this easy)		Best Tutorial link - click to view	Article link click to view		
	Minimum distance between 2 nodes(Solving nodes at given distance, will make this easy)	https://www.geeksforgeeks.org/problems/min-distance-between-two-given-nodes-of-a-binary-tree1?page=2&category=Tree&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Maximum distance between node and ancestor(Must solve though distance pattern is covered)	https://www.geeksforgeeks.org/problems/maximum-distance-between-nodes-and-its-ancestor1?page=3&category=Tree&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		
	Min time to burn a tree(Using distance logic, this can be solved)	https://www.geeksforgeeks.org/problems/burning-tree1?page=3&category=Tree&sortBy=submissions	Best Tutorial link - click to view	Article link click to view		

Binary Search Tree(Once the above patterns are covered, BST probe will become easy, but make sure to learn what BST is in general before starting with probe)	Understand what BST is?	https://leetcode.com/problems/insert-into-a-binary-search-tree/	Best Tutorial link - click to view	Article link-click to view		
	Insert a node in BST	https://leetcode.com/problems/insert-into-a-binary-search-tree/	Best Tutorial link - click to view	Article link-click to view		
	Search a value in BST(Learn efficient algo to do it, since this can be handled efficiently in BST than BT)	https://leetcode.com/problems/search-a-node-in-bst/	Best Tutorial link - click to view	Article link-click to view		
	Find minimum and maximum in BST	https://leetcode.com/problems/min-and-max-element-in-binary-tree/	Best Tutorial link - click to view	Article link-click to view		
	Find the Kth largest element(Kth Smallest in BST(Try to solve it without looking for soln, once you have mastered all the above patterns, this should be easy))	https://leetcode.com/problems/kth-largest-element-in-bst/	Best Tutorial link - click to view	Article link-click to view		
	Check for BST(Try solving probe in this pattern by yourself III LCA once above are solved)	https://leetcode.com/problems/check-for-bst/	Best Tutorial link - click to view	Article link-click to view		
	Find the closest element in BST	https://leetcode.com/problems/find-the-closest-element-in-bst/	Best Tutorial link - click to view	Article link-click to view		
	Count BST nodes in the given range	https://leetcode.com/problems/count-bst-nodes-in-a-given-range/	Best Tutorial link - click to view	Article link-click to view		
	Largest BST in BT(Super imp - Must solve)	https://leetcode.com/problems/largest-bst/	Best Tutorial link - click to view	Article link-click to view		
	Lowest Common Ancestor in BST	https://leetcode.com/problems/lowest-common-ancestor-in-a-bst/	Best Tutorial link - click to view	Article link-click to view		
	Merge two BST(Super imp - Must solve)	https://leetcode.com/problems/merge-two-bst/	Best Tutorial link - click to view	Article link-click to view		
	Inorder successor and predecessor	https://leetcode.com/problems/inorder-successor-in-bst/	Best Tutorial link - click to view	Article link-click to view		
	Populate inorder successor for all nodes	https://leetcode.com/problems/populate-inorder-successor-for-all-nodes/	Best Tutorial link - click to view	Article link-click to view		
	BST to greater sum tree	https://leetcode.com/problems/bst-to-greater-sum-tree/	Best Tutorial link - click to view	Article link-click to view		
	Delete given node from BST	https://leetcode.com/problems/delete-node-in-a-bst/	Best Tutorial link - click to view	Article link-click to view		
	Construct from given	https://leetcode.com/problems/construct-binary-tree-from-preorder-and-inorder-traversal/	Best Tutorial link - click to view	Article link-click to view		
	Construct Binary Tree from Inorder and Postorder Traversal	https://leetcode.com/problems/construct-binary-tree-from-inorder-and-postorder-traversal/	Best Tutorial link - click to view	Article link-click to view		
Subtree & Other must do tree probs	Construct BST from given preorder traversal	https://leetcode.com/problems/construct-binary-tree-from-preorder-traversal/	Best Tutorial link - click to view	Article link-click to view		
	Construct BT from parent array	https://leetcode.com/problems/construct-binary-tree-from-parent-array/	Best Tutorial link - click to view	Article link-click to view		
	Serialize and deserialize BT	https://leetcode.com/problems/serialize-and-deserialize-binary-tree/	Best Tutorial link - click to view	Article link-click to view		
	Largest subtree sum in a tree	https://leetcode.com/problems/largest-subtree-sum/	Best Tutorial link - click to view	Article link-click to view		
Backtracking & Recursion Advanced - Technique	Maximum sum of non adjacent nodes	https://leetcode.com/problems/maximum-sum-of-non-adjacent-nodes/	Best Tutorial link - click to view	Article link-click to view		
	Duplicate subtree	https://leetcode.com/problems/duplicate-subtree/	Best Tutorial link - click to view	Article link-click to view		
	Flatten BT to linked list	https://leetcode.com/problems/flatten-binary-tree-to-linked-list/	Best Tutorial link - click to view	Article link-click to view		
	This is super imp topic before moving further!! Draw the recursion tree to understand the flow as the first step, this will help in visualization of the flow	https://leetcode.com/discuss/general-discussion/680269/a-general-approach-to-backtracking-problems-in-exhaustive-searching				
	Understand the basics of backtracking and start solving	https://leetcode.com/problems/permutations/	Best Tutorial link - click to view	Article link-click to view		
	Permutations of a string	https://leetcode.com/problems/permutations/	Best Tutorial link - click to view	Article link-click to view		
	Permutation II (You can solve on own once you solve above)	https://leetcode.com/problems/permutation-ii/	Best Tutorial link - click to view	Article link-click to view		
	Combination sum I	https://leetcode.com/problems/combination-sum/	Best Tutorial link - click to view	Article link-click to view		
	Combination sum II(Once you solve combination I, you should be able to solve this and below 2 probe too easily)	https://leetcode.com/problems/combination-sum-ii/	Best Tutorial link - click to view	Article link-click to view		
	Combination sum III	https://leetcode.com/problems/combination-sum-iii/	Best Tutorial link - click to view	Article link-click to view		
	Rat in maze(Once above probs are solved, you can do this easily)	https://leetcode.com/problems/rat-in-a-maze-problem/	Best Tutorial link - click to view	Article link-click to view		
	Possible words from phone digits	https://leetcode.com/problems/possible-word-from-phone-digits/	Best Tutorial link - click to view	Article link-click to view		
	Subsets	https://leetcode.com/problems/subsets/	Best Tutorial link - click to view	Article link-click to view		
	Unique subset(Solving above, you will be able to solve this easily)	https://leetcode.com/problems/subsets-ii/	Best Tutorial link - click to view	Article link-click to view		
	N-Queen(Super imp)	https://leetcode.com/problems/n-queens/	Best Tutorial link - click to view	Article link-click to view		
	N Queen II	https://leetcode.com/problems/n-queens-ii/	Best Tutorial link - click to view	Article link-click to view		
	Permutation with spaces	https://leetcode.com/problems/permutation-with-spaces/	Best Tutorial link - click to view	Article link-click to view		
Graphs & Data structure Traversals & Basic	Generate parentheses	https://leetcode.com/problems/generate-parentheses/	Best Tutorial link - click to view	Article link-click to view		
	Generate IP address	https://leetcode.com/problems/generate-ip-addresses/	Best Tutorial link - click to view	Article link-click to view		
	Solve the sudoku	https://leetcode.com/problems/sudoku-solver/	Best Tutorial link - click to view	Article link-click to view		
	kth permutation	https://leetcode.com/problems/kth-permutation/	Best Tutorial link - click to view	Article link-click to view		
	Word search	https://leetcode.com/problems/word-search/	Best Tutorial link - click to view	Article link-click to view		
	Palindrome partition of string	https://leetcode.com/problems/palindrome-partitioning/	Best Tutorial link - click to view	Article link-click to view		
	Decode the string	https://leetcode.com/problems/decode-string/	Best Tutorial link - click to view	Article link-click to view		
	Letter case permutation	https://leetcode.com/problems/letter-case-permutation/	Best Tutorial link - click to view	Article link-click to view		
	sum string	https://leetcode.com/problems/sum-string/	Best Tutorial link - click to view	Article link-click to view		
	word boggle	https://leetcode.com/problems/word-boggle/	Best Tutorial link - click to view	Article link-click to view		
	Largest number in k swaps	https://leetcode.com/problems/largest-number-in-k-swaps/	Best Tutorial link - click to view	Article link-click to view		
	Partition array to k subsets	https://leetcode.com/problems/partition-array-into-k-subsets/	Best Tutorial link - click to view	Article link-click to view		
	Most of the probs in this topics can be solved once you learn first couple of probs in each pattern of the flow	https://leetcode.com/discuss/general-discussion/655019/overall-for-backtracking-problems-patterns-approach-solution				
	Understand how graph is represented?	https://leetcode.com/problems/is-graph-a-tree/	Best Tutorial link - click to view			
	BFS Traversal(Super imp and basic)	https://leetcode.com/problems/bfs-traversal/	Best Tutorial link - click to view	Article link-click to view		
	DFS Traversal(Super imp and basic)	https://leetcode.com/problems/dfs-traversal/	Best Tutorial link - click to view	Article link-click to view		
	Detect cycle in Directed graph	https://leetcode.com/problems/cycle-in-directed-graph/	Best Tutorial link - click to view	Article link-click to view		
	Detect cycle in Undirected graph	https://leetcode.com/problems/cycle-in-undirected-graph/	Best Tutorial link - click to view	Article link-click to view		
	Detect Negative cycle in graph	https://leetcode.com/problems/negative-weight-cycle-in-graph/	Best Tutorial link - click to view	Article link-click to view		
Connected component(After traversal, this will be easy to solve)	Connected components(Once you master this ,all the below using this pattern will become super easy)	https://leetcode.com/problems/strongly-connected-components/	Best Tutorial link - click to view	Article link-click to view		
	Number of Provinces(Learn how to solve this prob and solve the below in this pattern)	https://leetcode.com/problems/number-of-provinces/	Best Tutorial link - click to view	Article link-click to view		
	Number of Islands	https://leetcode.com/problems/number-of-islands/	Best Tutorial link - click to view	Article link-click to view		
	Number of distinct island	https://leetcode.com/problems/distinct-sub-islands/	Best Tutorial link - click to view	Article link-click to view		
	Number of closed island	https://leetcode.com/problems/closed-islands/	Best Tutorial link - click to view	Article link-click to view		
	Bipartite	https://leetcode.com/problems/is-graph-bipartite/	Best Tutorial link - click to view	Article link-click to view		
	M-colouring	https://leetcode.com/problems/m-coloring/	Best Tutorial link - click to view	Article link-click to view		
Shortest Path	Find shortest path in UG(Once you learn this, try to solve other probs in this pattern by yourself)	https://leetcode.com/problems/shortest-path-in-unweighted-graph/	Best Tutorial link - click to view	Article link-click to view		
	Find shortest path in DAG	https://leetcode.com/problems/shortest-path-in-weighted-graph/	Best Tutorial link - click to view	Article link-click to view		
	Dijkstra Algo	https://leetcode.com/problems/dijkstra-algorithm/	Best Tutorial link - click to view	Article link-click to view		
	Step by Knight	https://leetcode.com/problems/knight-dialer/	Best Tutorial link - click to view	Article link-click to view		
	Shortest path source to destiny	https://leetcode.com/problems/shortest-path-from-start-to-end/	Best Tutorial link - click to view	Article link-click to view		
	Find if path exists	https://leetcode.com/problems/path-exists/	Best Tutorial link - click to view	Article link-click to view		
	Covid spread	https://leetcode.com/problems/covid-spread/	Best Tutorial link - click to view	Article link-click to view		
	Minimum cost path	https://leetcode.com/problems/minimum-cost-path/	Best Tutorial link - click to view	Article link-click to view		
	Word ladder I	https://leetcode.com/problems/word-ladder/	Best Tutorial link - click to view	Article link-click to view		
	Word ladder II	https://leetcode.com/problems/word-ladder-ii/	Best Tutorial link - click to view	Article link-click to view		
	Floyd warshall algo	https://leetcode.com/problems/floyd-warshall-algorithm/	Best Tutorial link - click to view	Article link-click to view		
	Bellman ford algo(imp - Will be used for negative cycle)	https://leetcode.com/problems/bellman-ford-algorithm/	Best Tutorial link - click to view	Article link-click to view		
Multi Source	Flood fill	https://leetcode.com/problems/flood-fill/	Best Tutorial link - click to view	Article link-click to view		
	Replace 0's with X's(Below can be solved easily in this pattern once you learnt flood fill)	https://leetcode.com/problems/replace-0s-with-x/	Best Tutorial link - click to view	Article link-click to view		
	Unit area of largest region of 1s	https://leetcode.com/problems/largest-1-area-in-binary-matrix/	Best Tutorial link - click to view	Article link-click to view		
Topological sort	Rotten Oranges	https://leetcode.com/problems/rotten-oranges/	Best Tutorial link - click to view	Article link-click to view		

	Topological sort algo(Learning this algo, will make you solve all the probs in this pattern)	https://www.geeksforgeeks.org/problems/topological-sort/12?page=1&category=Graph&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Prerequisite tasks	https://www.geeksforgeeks.org/problems/prerequisite-tasks/12?page=2&category=Graph&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Course schedule I	https://www.geeksforgeeks.org/problems/course-schedule/12?page=1&category=Graph&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Course schedule II	https://leetcode.com/problems/course-schedule-ii	Best Tutorial link - click to view	Article link-click to view		
	Eventual safe states	https://www.geeksforgeeks.org/problems/eventual-safe-states/12?page=1&category=Graph&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Alien dictionary	https://www.geeksforgeeks.org/problems/alien-dictionary/12?page=1&category=Graph&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
Minimum Spanning Tree	Minimum spanning tree(Once you learn this, then you will be able to solve the probs in this pattern by yourself)	https://www.geeksforgeeks.org/problems/minimum-spanning-tree/12?page=1&category=Graph&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Kruskals algo	https://leetcode.com/problems/minimum-cost-to-connect-all-points	Best Tutorial link - click to view	Article link-click to view		
	Minimum cost to connect cities	https://leetcode.com/problems/connecting-cities-with-minimum-cost	Best Tutorial link - click to view	Article link-click to view		
	Minimum cost to connect all points	https://leetcode.com/problems/min-cost-to-connect-all-points	Best Tutorial link - click to view	Article link-click to view		
	Optimize water distribution	https://leetcode.com/problems/optimize-water-distribution-in-a-village	Best Tutorial link - click to view	Article link-click to view		
Disjoint set	Learn the disjoint set Algo		Best Tutorial link - click to view	Article link-click to view		
	Union by rank, path compression(Super imp, dont skip)		Best Tutorial link - click to view	Article link-click to view		
	Networks connected	https://leetcode.com/problems/number-of-operations-to-make-network-connected	Best Tutorial link - click to view	Article link-click to view		
	Minimum swaps to sort	https://www.geeksforgeeks.org/problems/minimum-swaps-17?page=1&category=Arrays&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Santa Banta	https://www.geeksforgeeks.org/problems/santa-banta2814/12?page=2&category=Graph&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
Must solve imp algos	Number of pairs	https://www.geeksforgeeks.org/problems/number-of-pairs-164536896/12?page=1&category=Graph&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Number of Island II	https://leetcode.com/problems/number-of-islands-ii	Best Tutorial link - click to view	Article link-click to view		
	Making a large island	https://leetcode.com/problems/making-a-large-island	Best Tutorial link - click to view	Article link-click to view		
	Bridges in graph	https://www.geeksforgeeks.org/problems/bridge-edge-in-graph/12?page=1&category=Graph&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Articulation point	https://www.geeksforgeeks.org/problems/articulation-point-1/12?page=1&category=Graph&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
Greedy - Technique	Critical connection	https://www.geeksforgeeks.org/problems/critical-connections/12?page=1&category=Graph&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Kosaraju algo (Strongly connected component algo)	https://www.geeksforgeeks.org/problems/strongly-connected-components-kosaraju-algo-17?page=2&category=Graph&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Word boggie	https://www.geeksforgeeks.org/problems/word-boggle-143/12?page=1&category=Arrays&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Word boggie II	https://www.geeksforgeeks.org/problems/word-boggle-ii-141931/12?page=1&category=Arrays&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
Basics and must solves						
	Minimum number of jumps	https://www.geeksforgeeks.org/problems/minimum-number-of-jumps-1587115620/1?page=1&category=Arrays&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Minimum operations	https://www.geeksforgeeks.org/problems/minimum-operations-504/12?page=1&category=Greedy&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Minimize the sum of product	https://www.geeksforgeeks.org/problems/minimize-the-sum-of-product-1505/1?page=1&category=Greedy&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Largest number possible	https://www.geeksforgeeks.org/problems/largest-number-possible5028/12?page=1&category=Arrays&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Lemonade change	https://www.geeksforgeeks.org/problems/lemonade-change/12?page=2&category=Greedy&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Activity selection probt(Super imp)	https://www.geeksforgeeks.org/problems/activity-selection-1587115620/1?page=1&category=Greedy&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	N meetings in a room(Super imp)	https://www.geeksforgeeks.org/problems/n-meetings-in-one-room-1587115620/1?page=1&category=Greedy&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Minimum platforms	https://www.geeksforgeeks.org/problems/minimum-platforms-1587115620/1?page=1&category=Greedy&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Minimize the height	https://www.geeksforgeeks.org/problems/minimize-the-heights-1/12?page=1&category=Greedy&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Minimum number of coins using greedy(This can be solved using naive, DP also but make sure to use greedy here)	https://www.geeksforgeeks.org/problems/minimum-number-of-coins4426/12?page=1&category=Greedy&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Job sequencing prob	https://www.geeksforgeeks.org/problems/job-sequencing-problem-1587115620/1?page=1&category=Greedy&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Fractional knapsack	https://www.geeksforgeeks.org/problems/fractional-knapsack-1587115620/1?page=1&category=Greedy&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Jump game	https://www.geeksforgeeks.org/problems/jump-game-12?page=2&category=Greedy&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Insert interval	https://leetcode.com/problems/insert-interval	Best Tutorial link - click to view	Article link-click to view		
	Merge interval	https://leetcode.com/problems/merge-intervals	Best Tutorial link - click to view	Article link-click to view		
	Non overlapping interval	https://leetcode.com/problems/non-overlapping-intervals	Best Tutorial link - click to view	Article link-click to view		
	Minimum cost of ropes	https://practice.geeksforgeeks.org/problems/minimum-cost-of-ropes-1587115620/1	Best Tutorial link - click to view	Article link-click to view		
	Partition labels	https://leetcode.com/problems/partition-labels	Best Tutorial link - click to view	Article link-click to view		
	Cinema seat allocation	https://leetcode.com/problems/cinema-seat-allocation	Best Tutorial link - click to view	Article link-click to view		
	Max length chain	https://www.geeksforgeeks.org/problems/length-chain/12?page=1&category=Greedy&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Valid parentheses - Minimum	https://leetcode.com/problems/minimum-add-to-make-parentheses-valid	Best Tutorial link - click to view	Article link-click to view		
	Shortest job first	https://practice.geeksforgeeks.org/problems/shortest-job-first/1	Best Tutorial link - click to view	Article link-click to view		
		https://leetcode.com/problems/shortest-job-first/1				
	Least recently used	https://leetcode.com/problems/least-recently-used/1292006/for-leap-years-problems-patterns-sample-solutions	Best Tutorial link - click to view	Article link-click to view		
Dynamic Programming - Technique						
Basic						
1D - Linear DP	Understand the basics!!		Best Tutorial link - click to view	Article link-click to view		
	Count num of hops	https://www.geeksforgeeks.org/problems/count-number-of-hops-1587115620/1?page=2&category=Dynamic%20Programming&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Count way to reach nth stair(Order matters)	https://www.geeksforgeeks.org/problems/count-ways-to-reach-the-nth-stair-1587115620/1?page=2&category=Dynamic%20Programming&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Count way to reach nth stair(Order doesn't matter)	https://www.geeksforgeeks.org/problems/count-ways-to-reach-the-nth-stair-order-does-not-matter5636/1?page=2&category=Dynamic%20Programming&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	House robber	https://leetcode.com/problems/house-robber	Best Tutorial link - click to view	Article link-click to view		
2D Grid DP	House robber II	https://leetcode.com/problems/house-robber-ii	Best Tutorial link - click to view	Article link-click to view		
	Count paths - grid	https://www.geeksforgeeks.org/problems/count-the-paths4332/12?page=1&category=Dynamic%20Programming&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Unique paths II	https://leetcode.com/problems/unique-paths-ii	Best Tutorial link - click to view	Article link-click to view		
	Count all possible paths with condition(You can solve this by yourself once above two are solved)	https://www.geeksforgeeks.org/problems/count-all-possible-paths-from-top-left-to-bottom-right5011/1?page=1&category=Dynamic%20Programming&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Minimum path sum in grid	https://leetcode.com/problems/minimum-path-sum/	Best Tutorial link - click to view	Article link-click to view		
DP on subsequence	Max path sum	https://www.geeksforgeeks.org/problems/path-sum-3805/12?page=2&category=Dynamic%20Programming&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Minimum path sum in triangular grid	https://leetcode.com/problems/triangle	Best Tutorial link - click to view	Article link-click to view		
	Number of paths with k coins	https://www.geeksforgeeks.org/problems/number-of-paths-in-a-matrix-with-k-coins728/1?page=2&category=Dynamic%20Programming&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Minimum/Maximum falling path sum	https://leetcode.com/problems/minimum-falling-path-sum	Best Tutorial link - click to view	Article link-click to view		
	Minimum falling path sum II	https://leetcode.com/problems/minimum-falling-path-sum-ii	Best Tutorial link - click to view	Article link-click to view		
DP on subsequence	Subset sum problem	https://www.geeksforgeeks.org/problems/subset-sum-problem-161155630/1?page=1&category=Dynamic%20Programming&sortBy=submissions	Best Tutorial link - click to view	Article link - click to view		
	Count subset with given sum k	https://www.geeksforgeeks.org/problems/perfect-sum-problem5633/12?page=1&category=Dynamic%20Programming&sortBy=submissions	Best Tutorial link - click to view	Article link - click to view		
	Partition equal subset sum(Try to do it on own after solving above two, just a small trick)	https://www.geeksforgeeks.org/problems/subset-sum-problem2014/12?page=1&category=Dynamic%20Programming&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Minimum sum partition	https://www.geeksforgeeks.org/problems/minimum-sum-partition5317/12?page=2&category=Dynamic%20Programming&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Count partition with given diff	https://www.geeksforgeeks.org/problems/0-1-knapsack-problem0945/12?page=1&category=Dynamic%20Programming&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
0-1 Knapsack	0-1 Knapsack	https://www.geeksforgeeks.org/problems/0-1-knapsack-problem0945/12?page=1&category=Dynamic%20Programming&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Maximum non adjacent subsequence	https://www.geeksforgeeks.org/problems/max-sum-without-adjacent2430/1?page=1&category=Dynamic%20Programming&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Coin change	https://www.geeksforgeeks.org/problems/coin-change2448/12?page=1&category=Dynamic%20Programming&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Min number of coins	https://www.geeksforgeeks.org/problems/number-of-coins1824/12?page=2&category=Dynamic%20Programming&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Roll cutting	https://www.geeksforgeeks.org/problems/minimum-cost-to-cut-a-stick4940/12?page=2&category=Dynamic%20Programming&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
DP on strings(Using Longest common subsequence pattern)	Target sum	https://leetcode.com/problems/target-sum	Best Tutorial link - click to view	Article link-click to view		
	Minimum cost to fill given weight in bag(Solving the above probs in this pattern will make this super easy)	https://www.geeksforgeeks.org/problems/minimum-cost-to-fill-given-weight-in-bag1596/17?page=1&category=Dynamic%20Programming&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Knapsack with duplication items	https://www.geeksforgeeks.org/problems/knapsack-with-duplicate-items5401/12?page=2&category=Dynamic%20Programming&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Longest increasing subsequence	https://leetcode.com/problems/longest-increasing-subsequence/	Best Tutorial link - click to view	Article link-click to view		
	Print longest increasing subsequence	https://leetcode.com/problems/longest-increasing-subsequence/	Best Tutorial link - click to view	Article link-click to view		
DP on Increasing subsequence	Longest bitonic subsequence(Solve on own, definitely you can do it once the above two are solved)	https://www.geeksforgeeks.org/problems/longest-bitonic-subsequence084/1?page=1&category=Dynamic%20Programming&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		
	Longest divisible subset(This and the below are just extended version of longest increasing subsequence, so try on own)	https://leetcode.com/problems/longest-divisible-subset/	Best Tutorial link - click to view	Article link-click to view		
	Longest string chain	https://leetcode.com/problems/longest-string-chain/	Best Tutorial link - click to view	Article link-click to view		
	Num of longest increasing subsequence	https://leetcode.com/problems/number-of-longest-increasing-subsequence/	Best Tutorial link - click to view	Article link-click to view		
DP on strings(Using Longest common subsequence pattern)	Longest common subsequence(Once you learn this pattern, all probs under this pattern can be solved by yourself)	https://www.geeksforgeeks.org/problems/longest-common-subsequence-1587115620/1?page=1&category=Dynamic%20Programming&sortBy=submissions	Best Tutorial link - click to view	Article link-click to view		

LeetCode Article for behavioural rounds	https://leetcode.com/discuss/interview-experience/1532708/tips-for-answering-few-tricky-behavioural-interview-questions
LeetCode Article for major patterns	https://leetcode.com/discuss/general-discussion/665604/important-and-useful-links-from-all-over-the-LeetCode
Resume standard template	https://www.overleaf.com/Articles/ravi_kukreja_resume/cxprbocbgb
Try to solve atleast 5+ problems per day to master it at the earliest	