

[How to solve this sheet?](#)

Easy	Ideal Time : 5-10 mins		
Medium	Ideal Time : 15-20 mins		
Hard	Ideal Time : 40-60 mins (based on Qs) 88 Qs	5 Questions each Day	
Topics	Question (375)	Companies	Remarks
Arrays	Maximum and Minimum Element in an Array	ABCO Accolite Amazon Cisco Hike Microsoft Snapdeal VMWare Google Adobe Infosys Moonfrog Labs	
Arrays	Reverse the Array	Microsoft + Facebook Interview Qs	use Kadane's Algorithm
Arrays	Maximum-Subarray	Amazon Interview Qs	
Arrays	Contains Duplicate	Amazon Interview Qs	
Arrays	Chocolate Distribution Problem	Microsoft Google Adobe Amazon D-E-Shaw Flipkart Hike Intuit MakeMyTrip Pay	
Arrays	Search in Rotated Sorted Array	Uber + Goldman Sachs + Adobe Interview Qs	
Arrays	Next Permutation	Amazon D-E-Shaw Directi Flipkart Goldman Sachs Intuit MakeMyTrip Microsoft	
Arrays	Best time to Buy and Sell Stock	Amazon Interview Qs	
Arrays	Repeat and Missing Number Array	Amazon Microsoft Walmart Adobe	
Arrays	Kth-Largest Element in an Array	Samsung Interview Qs	
Arrays	Trapping Rain Water	Microsoft + Facebook Interview Qs	use auxiliary arrays
Arrays	Product of Array Except Self	Amazon D-E-Shaw Microsoft Morgan Stanley OYO Rooms Google	
Arrays	Maximum Product Subarray	Adobe Amazon Microsoft Morgan Stanley Samsung Snapdeal Times Internet	
Arrays	Find Minimum in Rotated Sorted Array	Microsoft + Google + Apple Interview Qs	
Arrays	Find Pair with Sum in Sorted & Rotated Array	Adobe Amazon Microsoft Morgan Stanley Samsung Snapdeal Times Internet	
Arrays	3Sum	Flipkart + Dunzo Interview Qs	
Arrays	Container With Most Water	Infosys + Amazon + Flipkart Interview Qs	use 2 pointer approach
Arrays	Given Sum Pair	ABCO Accolite Amazon Cisco Hike Microsoft Snapdeal VMWare Google Adobe	
Arrays	Kth - Smallest Element	Google Interview Qs	
Arrays	Merge Overlapping Intervals	Amazon	
Arrays	Find Minimum Number of Merge Operations to Make an Array Palindrome	Barclays Interview Qs	
Arrays	Given an Array of Numbers Arrange the Numbers to Form the Biggest Number	Amazon	
Arrays	Space Optimization Using Bit Manipulations	Microsoft	
Arrays	Subarray Sum Divisible K	Amazon	
Arrays	Print all Possible Combinations of r Elements in a Given Array of Size n	Microsoft	
Arrays	Mo's Algorithm		
Strings	Valid Palindrome	Amazon Cisco D-E-Shaw Facebook FactSet Morgan Stanley Paytm Zoho	
Strings	Valid Anagram	Nagarro Media.net Directi Google Adobe Flipkart	
Strings	Valid parentheses	Google Interview Qs	use Stacks (if possible)
Strings	Remove Consecutive Characters	Samsung + Adobe	
Strings	Longest Common Prefix	Adobe + Grofers + Dunzo Interview Qs	
Strings	Convert a Sentence into its Equivalent Mobile Numeric Keypad Sequence	Adobe	
Strings	Print all the Duplicates in the Input String	Ola + Amdocs IQ	
Strings	Longest Substring without Repeating Characters	Morgan Stanley + Amazon IQ	
Strings	Longest Repeating Character Replacement	Amazon Google	
Strings	Group Anagrams	Samsung + Adobe + Amazon Interview Qs	
Strings	Longest Palindromic Substring	Microsoft + Google + Samsung + Visa IQ	
Strings	Palindromic Substrings	Microsoft IQ	
Strings	Next Permutation	Adobe + Goldman Sachs + Uber	
Strings	Count Palindromic Subsequences	Myatra Interview Qs	
Strings	Smallest Window in a String Containing all the Characters of Another String	Microsoft + Amazon IQ	
Strings	Wildcard String Matching	Microsoft + Amazon + Ola IQ	
Strings	Longest Prefix Suffix	Flipkart + Swiggy IQ	
Strings	Rabin-Karp Algorithm for Pattern Searching	Microsoft	
Strings	Transform One String to Another using Minimum Number of Given Operation	Directi	
Strings	Minimum Window Substring	Amazon Google MakeMyTrip Streamoid Technologies Microsoft Media.net Atta	
Strings	Boyer Moore Algorithm for Pattern Searching	Amdocs	
Strings	Word Wrap	Microsoft	use Dynaminc Programming
2D Arrays	Zigzag (or diagonal) Traversal of Matrix	Amazon	
2D Arrays	Set Matrix Zeroes	Amazon Microsoft	
2D Arrays	Spiral Matrix	Flipkart + Apple + Societe Generale IQ	
2D Arrays	Rotate Image	Microsoft Paytm Samsung Adobe	
2D Arrays	Word Search	Google + Ola + Goldman Sachs IQ	
2D Arrays	Find the Number of Islands Set 1 (Using DFS)	Microsoft + Uber + Apple + Amazon IQ	Read about DFS
2D Arrays	Given a Matrix of 'O' and 'X', Replace 'O' with 'X' if Surrounded by 'X'	Google	
2D Arrays	Find a Common Element in all Rows of a Given Row-Wise Sorted Matrix	MAQ Software Microsoft VMWare	
2D Arrays	Create a Matrix with Alternating Rectangles of O and X	MAQ VMWare	
2D Arrays	Maximum Size Rectangle of all 1s	Amazon Microsoft	
Searching & Sorting	Permute Two Arrays such that Sum of Every Pair is Greater or Equal to K	Samsung	
Searching & Sorting	counting sort	Samsung + Morgan Stanley + Snapdeal + EPAM Systems	
Searching & Sorting	find common elements three sorted arrays	MAQ Software Microsoft VMWare	
Searching & Sorting	Searching in an array where adjacent differ by at most k	TCS Amazon	
Searching & Sorting	ceiling in a sorted array	TCS	
Searching & Sorting	Pair with given difference	Amazon Visa	
Searching & Sorting	majority element	Amazon+ Google	
Searching & Sorting	count triplets with sum smaller than a given value	Amazon SAP Labs	
Searching & Sorting	Maximum Sum Subsequence with no adjacent elements	Amazon FactSet Oixgen Wallet OYO Rooms Paytm Walmart Yahoo Adobe Flipk	
Searching & Sorting	Merge Sorted Arrays using O(1) Space	Amdocs Brocade Goldman Sachs Juniper Networks Linkedin Microsoft Quirk Sr	
Searching & Sorting	Inversion of Array	Adobe Amazon BankBazaar Flipkart Microsoft Mynta MakeMyTrip	
Searching & Sorting	Find Duplicates in O(n) Time and O(1) Extra Space	Amazon D-E-Shaw Flipkart Paytm Qualcomm Zoho	
Searching & Sorting	Radix Sort	Amazon+ Microsoft	
Searching & Sorting	Product of Array except itself	Accolite Amazon D-E-Shaw Intuit Morgan Stanley Opera Microsoft Flipkart	
Searching & Sorting	Make all Array Elements Equal	Amazon	
Searching & Sorting	Check if Reversing a Sub Array Make the Array Sorted	Amazon	
Searching & Sorting	Find Four Elements that Sum to a Given Value	Adobe Amazon Google Microsoft OYO Rooms	

Searching & Sorting	Median of Two Sorted Array with Different Size	Amazon Samsung Microsoft Google
Searching & Sorting	Median of Stream of Integers Running Integers	Amazon + Google
Searching & Sorting	Print Subarrays with 0 Sum	Paytm Adobe
Searching & Sorting	Aggressive Cows	Adobe
Searching & Sorting	Allocate Minimum number of Pages	Google Infosys Codenation Amazon Microsoft
Searching & Sorting	Minimum Swaps to Sort	Amazon + Google
Backtracking	Backtracking Set 2 Rat in a Maze	Microsoft Amazon
Backtracking	Combinational Sum	Adobe Amazon Microsoft
Backtracking	Crossword-Puzzle	Microsoft
Backtracking	Longest Possible Route in a Matrix with Hurdles	Microsoft
Backtracking	Printing all solutions in N-Queen Problem	Accolite Amazon Amdocs D-E-Shaw MAQ Software Twitter Visa Microsoft
Backtracking	Solve the Sudoku	Amazon Directi Flipkart MakeMyTrip MAQ Software Microsoft Ola Cabs Oracle F
Backtracking	Partition Equal Subset Sum	Amazon + Adobe + Accolite + Traveloka
Backtracking	M Coloring Problem	Amazon
Backtracking	Knight Tour	IBM
Backtracking	Sudoku	Amazon + Adobe + Accolite + Traveloka
Backtracking	Remove Invalid Parentheses	Uber
Backtracking	Word Break Problem using Backtracking	Facebook Amazon Microsoft
Backtracking	Print all Palindromic Partitions of a String	Facebook Amazon Microsoft
Backtracking	Find Shortest Safe Route in a Path with Landmines	Amazon
Backtracking	Partition of Set into K Subsets with Equal Sum	Amazon
Backtracking	Backtracking set-7 hamiltonian cycle	Amazon
Backtracking	tug-of-war	Google
Backtracking	Maximum Possible Number by doing at most K swaps	Amazon + Adobe + Accolite + Traveloka
Backtracking	Backtracking set-8 solving cryptarithmetic puzzles	Goldman Sachs
Backtracking	Find paths from corner cell to middle cell in maze	Meta
Backtracking	Arithmetic Expressions	Flipkart
Linked List	Reverse Linked List	Sprinklr
Linked List	Linked List Cycle	Accolite Amazon D-E-Shaw Hike Lybrate Mahindra Comviva MakeMyTrip MAQ Software Microsoft OYO Rooms
Linked List	Merge Two Sorted Lists	Accolite Amazon Belzabar Brocade FactSet Flipkart MakeMyTrip Microsoft OAT!
Linked List	Delete without Head node	Amazon Goldman Sachs Kritikal Solutions Microsoft Samsung Visa
Linked List	Remove duplicates from an unsorted linked list	Amazon Intuit
Linked List	Sort a linked list of 0s-1s-or-2s	Microsoft Amazon MakeMyTrip
Linked List	Multiply two numbers represented linked lists	Amazon
Linked List	Remove nth node from end of list	Accolite Adobe Amazon Citicorp Epic Systems FactSet Hike MAQ Software Mondelez
Linked List	Reorder List	Amazon Microsoft OYO Rooms Intuit
Linked List	Detect and remove loop in a linked list	Accolite Amazon D-E-Shaw Hike Lybrate Mahindra Comviva MakeMyTrip MAQ Software Microsoft OYO Rooms
Linked List	Write a Function to get the Intersection Point of two Linked Lists	Amazon
Linked List	Flatten a linked list with next and child pointers	Google
Linked List	Linked list in zip-zag fashion	Microsoft
Linked List	Reverse a doubly linked list	Walmart
Linked List	Delete nodes which have a greater value on right side	Amazon
Linked List	Segregate even and odd Elements in a Linked List	Walmart
Linked List	Point to next higher value node in a linked list with an Arbitrary Pointer	GeekyAnts
Linked List	Rearrange a given linked list in place	Ola Uber
Linked List	Sort Bi-tonic Doubly Linked Lists	Morgan Stanley
Linked List	Merge K Sorted Lists	Microsoft+ Ola+ eBay
Linked List	Merge sort for linked list	Accolite Adobe Amazon MAQ Software Microsoft Paytm Veritas
Linked List	Quicksort on singly-linked list	Important
Linked List	Sum of two linked lists	Paytm
Linked List	Hattening a linked list	Accolite Amazon Flipkart MakeMyTrip Microsoft Morgan Stanley Qualcomm Samsung
Linked List	Clone a linked list with next and random Pointer	24*7 Innovation Labs Amazon Drishti-Soft Flipkart Goldman Sachs Microsoft Paytm
Linked List	Subtract two numbers represented as linked lists	Triology
Linked List	Amazon Goldman Sachs	Amazon Goldman Sachs
Stacks & Queues	Implement two stacks in an Array	24*7 Innovation Labs Microsoft Samsung Snapdeal
Stacks & Queues	Evaluation of Postfix Expression	Amazon + Google + Facebook
Stacks & Queues	Implement Stack using Queues	Facebook
Stacks & Queues	Queue Reversal	Amazon + Morgan Stanley
Stacks & Queues	Implement Stack Queue using Deque	Microsoft +Atlassian
Stacks & Queues	Reverse first k elements of queue	Microsoft + Amdocs
Stacks & Queues	Design Stack with Middle Operation	MaQ Software
Stacks & Queues	Infix to Postfix	Amazon + Samsung + Paytm + VMware inc
Stacks & Queues	Design and Implement Special stack	Amazon Google Microsoft Visa Goldman Sachs
Stacks & Queues	Longest Valid String	Google Microsoft
Stacks & Queues	Find if an expression has duplicate parenthesis or not	Flipkart Oracle OYO Rooms Snapdeal Walmart Yatra.com Microsoft Google
Stacks & Queues	Stack permutations check if an array is stack permutation of other	Visa
Stacks & Queues	Count natural numbers whose permutation greater number	Amazon
Stacks & Queues	Sort a stack using Recursion	Amazon Goldman Sachs IBM Intuit Kuliza Yahoo Microsoft
Stacks & Queues	Queue based approach for first non repeating character in a stream	Microsoft Flipkart
Stacks & Queues	The Celebrity Problem	Google + Visa + Apple
Stacks & Queues	Next larger Element	Visa
Stacks & Queues	Distance of nearest cell	Flipkart + Facebook
Stacks & Queues	Rotten-oranges	Facebook
Stacks & Queues	Next smaller element	Codenation
Stacks & Queues	Circular-tour	Codenation Flipkart
Stacks & Queues	Efficiently implement k-stacks single array	Flipkart
Stacks & Queues	The celebrity problem	Google + Visa + Apple
Stacks & Queues	Iterative tower of hanoi	Microsoft Flipkart
Stacks & Queues	Find the maximum of minimums for every window size in a given array	Amazon Microsoft Flipkart
Stacks & Queues	Lru cache implementation	Microsoft + Uber + Alibaba
Stacks & Queues	Find a tour that visits all stations	Uber
Greedy	Activity selection problem greedy algo	Facebook Morgan Stanley Flipkart
Greedy	Greedy algorithm to find minimum number of coins	Accolite Amazon Morgan Stanley Oracle Paytm Samsung Snapdeal Synopsys Visa
Greedy	Minimum sum two numbers formed digits array-2	Google

Greedy	Minimum sum absolute difference pairs two arrays	Amazon
Greedy	Find maximum height pyramid from the given array of objects	Flipkart Amazon
Greedy	Minimum cost for acquiring all coins with k extra coins allowed with every coin	Microsoft Amazon Flipkart
Greedy	Find maximum equal sum of every three stacks	Microsoft + Acolite
Greedy	Job sequencing problem	
Greedy	Greedy algorithm egyptian fraction	
Greedy	Fractional knapsack problem	Microsoft
Greedy	Maximum length chain of pairs	Amazon Microsoft
Greedy	Find smallest number with given number of digits and digit sum	MAQ Software OYO Rooms
Greedy	Maximize sum of consecutive differences circular-array	Maccafe
Greedy	paper-cut minimum number squares	Google
Greedy	Lexicographically smallest array-k consecutive swaps	Amazon
Greedy	Problems-CHOCOLA	Flipkart
Greedy	Find minimum time to finish all jobs with given constraints	Samsung
Greedy	Job sequencing using disjoint set union	Amazon Microsoft
Greedy	Rearrange characters string such that no two adjacent are same	
Greedy	Minimum edges to reverse to make path from a source to a destination	
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	Maccafe
Binary Trees	Maximum Depth of Binary Tree	Amazon Cadence India CouponDunia D-E-Shaw FactSet FreeCharge MakeMyTri
Binary Trees	Reverse Level Order Traversal	Amazon + Microsoft + flipkart + Adobe
Binary Trees	Subtree of Another Tree	Amazon + Microsoft + Facebook
Binary Trees	Invert Binary Tree	Amazon Hike
Binary Trees	Binary Tree Level Order Traversal	Accolite Adobe Amazon Cisco D-E-Shaw Flipkart
Binary Trees	Left View of Binary Tree	Microsoft + Adobe + Cisco Networking Academy
Binary Trees	Right View of Binary Tree	Amdocs
Binary Trees	ZigZag Tree Traversal	Amazon Cisco FactSet Hike Snapdeal Walmart Microsoft Flipkart
Binary Trees	Create a mirror tree from the given binary tree	Accolite Adobe Amazon Bezelbar EBay Goldman Sachs Microsoft Morgan Stanley
Binary Trees	Leaf at same level	Amazon
Binary Trees	Check for Balanced Tree	Amazon Walmart Microsoft
Binary Trees	Transform to Sum Tree	Amazon FactSet Microsoft Samsung Walmart
Binary Trees	Check if Tree is Isomorphic	Amazon Microsoft
Binary Trees	Same Tree	Amazon Microsoft Flipkart
Binary Trees	Construct Binary Tree from Preorder and Inorder Traversals	Accolite Amazon Microsoft
Binary Trees	Height of Binary Tree	Amazon Cadence India CouponDunia D-E-Shaw FactSet FreeCharge MakeMyTri
Binary Trees	Diameter of a Binary Tree	Amazon Microsoft OYO Rooms
Binary Trees	Top View of Binary Tree	Microsoft + Adobe + Expedia Group
Binary Trees	Bottom View of Binary Tree	D-E Shaw India
Binary Trees	Diagonal Traversal of Binary Tree	Amazon Microsoft
Binary Trees	Boundary Traversal of binary tree	Accolite Amazon FactSet Hike Kritikal Solutions
Binary Trees	Construct Binary Tree From String with Brackets	Microsoft Morgan Stanley OYO Rooms Payu Samsung Snapdeal Flipkart
Binary Trees	Minimum swap required to convert binary tree to binary search tree	Adobe Amazon
Binary Trees	Duplicate subtree in Binary Tree	Google
Binary Trees	Check if a given graph is tree or not	Microsoft Amazon
Binary Trees	Lowest Common Ancestor in a Binary Tree	Accolite Amazon American Express Cisco Expedia Flipkart MakeMyTrip Microsoft
Binary Trees	Min distance between two given nodes of a Binary Tree	Amazon LinkedIn MakeMyTrip Ola Cabs Qualcomm Samsung
Binary Trees	Duplicate Subtrees	Ola
Binary Trees	Kth ancestor of a node in binary tree	Josh Technology Group
Binary Trees	Binary Tree Maximum Path Sum	Samsung + Facebook
Binary Trees	Serialize and Deserialize Binary Tree	Flipkart InMobi LinkedIn MAQ Software Microsoft Paytm Quikr Yahoo
Binary Trees	Binary Tree to DLL	Accolite Amazon Goldman Sachs Microsoft Morgan Stanley Salesforce Snapdeal
Binary Trees	Print all k-sum paths in a binary tree	Accolite Amazon Goldman Sachs
Binary Search Trees	Lowest Common Ancestor of a Binary Search Tree	Accolite Amazon Flipkart MAQ Software Microsoft Samsung Synopsys
Binary Search Trees	Binary Search Tree Set 1 (Search and Insertion)	Accolite Amazon Microsoft Paytm Samsung
Binary Search Trees	Minimum element in BST	Microsoft
Binary Search Trees	Predecessor and Successor	Google + Adobe + Goldman Sachs + Direct
Binary Search Trees	Check whether BST contains Dead End	Walmart
Binary Search Trees	Binary Tree to BST	HSBC
Binary Search Trees	Kth largest element in BST	Accolite Amazon Samsung SAP Labs Microsoft
Binary Search Trees	Validate Binary Search Tree	OYO Rooms Qualcomm Samsung Snapdeal VMware Walmart Wooker Amazon
Binary Search Trees	Kth Smallest Element in a BST	Accolite Amazon Google
Binary Search Trees	Delete Node in a BST	Adobe Barclays
Binary Search Trees	Convert BST to sorted list	Microsoft
Binary Search Trees	Preorder to Postorder	Amazon LinkedIn Flipkart
Binary Search Trees	Count BST nodes that lie in a given range	D-E-Shaw Google
Binary Search Trees	Populate Inorder Successor for all Nodes	Sap labs
Binary Search Trees	Convert Normal BST to Balanced BST	Paytm
Binary Search Trees	Merge Two BSTs	DE Shaw India
Binary Search Trees	Given n appointments, find all conflicting appointments	Samsung
Binary Search Trees	Replace every element	Samsung
Binary Search Trees	Construct BST from given preorder traversal	Adobe Morgan Stanley Microsoft
Binary Search Trees	Find median of BST in O(n) time and O(1) space	Amazon
Binary Search Trees	Largest BST in a Binary Tree	Amazon D-E-Shaw Samsung Microsoft Flipkart
		Important
Heaps & Hashing	Choose k array elements such that difference of maximum and minimum is minimized	
Heaps & Hashing	Heap Sort	Adobe
Heaps & Hashing	Top K Frequent Elements	Amazon Microsoft
Heaps & Hashing	k largest elements in an array	Amazon Microsoft Walmart Adobe
Heaps & Hashing	Next Greater Element	Amazon + Microsoft + Flipkart + Adobe
Heaps & Hashing	Kth Smallest/Largest Element in Unsorted Array	ABCO Accolite Amazon Cisco Hike Microsoft Snapdeal VMware Google Adobe
Heaps & Hashing	Find the maximum repeating number in O(n) time and O(1) extra space	Accolite Amazon
Heaps & Hashing	K-th smallest element after removing some integers from natural numbers	ABCO Accolite Amazon Cisco Hike Microsoft Snapdeal VMware Google Adobe
Heaps & Hashing	Find k closest elements to a given value	Amazon OYO Rooms
Heaps & Hashing	Kth largest element in a stream	Amazon Cisco Hike OYO Rooms Walmart Microsoft Flipkart
Heaps & Hashing	Connect Ropes	Amazon + Oyo + Goldman Sachs
Heaps & Hashing	Cuckoo Hashing	Amazcon

Heaps & Hashing	Itinerary from a List of Tickets	Microsoft + Ola + eBay
Heaps & Hashing	Largest Subarray with 0 Sum	Amazon MakeMyTrip Microsoft
Heaps & Hashing	Count distinct elements in every window of size _k	Accolite Amazon Microsoft
Heaps & Hashing	Group Shifted Strings	Oracle
Heaps & Hashing	Merge K Sorted Lists	Microsoft + Ola + eBay
Heaps & Hashing	Find Median from Data Stream	Adobe Amazon Apple Belzabar D-E-Shaw Facebook Flipkart Google Intuit Micro
Heaps & Hashing	Sliding Window Maximum	Amazon Directi Flipkart Microsoft Google
Heaps & Hashing	Find the smallest positive number	Accolite Amazon Samsung Snapdeal
Heaps & Hashing	Find Surpasser Count of each element in array	Amazon Morgan Stanley Ola Cabs SAP Labs
Heaps & Hashing	Tournament Tree and Binary Heap	Amazon Cisco D-E-Shaw Facebook FactSet Morgan Stanley Paytm Zoho
Heaps & Hashing	Check for palindrome	Amazon Intuit Microsoft
Heaps & Hashing	Length of the largest subarray with contiguous elements	Amazon Morgan Stanley Ola Cabs SAP Labs
Heaps & Hashing	Palindrome Substring Queries	Microsoft + Ola + eBay
Heaps & Hashing	Subarray distinct elements	MAQ Software
Heaps & Hashing	Find the recurring function	Amazon
Heaps & Hashing	K maximum sum combinations from two arrays	
<hr/>		
Graphs	BFS	Samsung + Delhivery + SAP Labs
Graphs	DFS	Samsung + Intuit + Goldman Sachs
Graphs	Flood Fill Algorithm	Google + Adobe + Apple
Graphs	Number of Triangles	IBM
Graphs	Detect cycle in a graph	Lenksart
Graphs	Detect cycle in an undirected graph.	Samsung
Graphs	BFS in a Maze Problem	Sharechat + Directi
Graphs	Steps by Knight	Samsung
Graphs	Clone graph	Google + MAQ Software + Apple + Facebook
Graphs	Number of Operations to Make Network Connected	Samsung
Graphs	Dijkstra's shortest path algorithm	Amazon
Graphs	Topological Sort	Amazon + Google + Flipkart + Oyo + Fipkart + Samsung
Graphs	Oliver and the Game	Sharechat + Directi
Graphs	Minimum time taken by each job to be completed given by a Directed Acyclic Graph	Amazon
Graphs	Find whether it is possible to finish all tasks or not from given dependencies	Directi + Sharechat
Graphs	Find the number of islands	Razorpay
Graphs	Prim's Algo	Visa
Graphs	Negative Weighted Cycle	Amazon
Graphs	Hoyd Warshall	Google + Uber
Graphs	Graph Coloring	Morgan Stanley
Graphs	Snakes and Ladders	Goldman Sachs +Makemytrip
Graphs	Kosaraju's Theorem	Paytm
Graphs	Journey to moon	Lenksart + Payload
Graphs	Vertex Cover	Intuit
Graphs	M Coloring Problem	Uber
Graphs	Cheapest Flights Within K Stops	Uber + Paypal
Graphs	Find if there is a path of more than k length from a source	Cisco + Intuit
Graphs	Bellman Ford	Sharechat + Directi
Graphs	Bipartite Graph	Microsoft Flipkart
Graphs	Word-Ladder	Microsoft
Graphs	Allen Dictionary	Samsung
Graphs	Kruskals MST	Amazon Cisco Samsung
Graphs	Total number spanning trees graph	Important
Graphs	Travelling Salesman	Amazon Cisco Samsung Microsoft Flipkart
Graphs	Find longest path directed acyclic graph.	Google + Microsoft + Opera
Graphs	Two Clique Problem	Important
Graphs	Minimise the cash flow	Google
Graphs	Chinese postman	Microsoft
Graphs	Water Jug	Intuit + Uber
Graphs	Water Jug 2	Intuit + Uber
Graphs	MakeMyTrip MAQ Software	
<hr/>		
Tries	Construct a trie from scratch	Accolite Amazon D-E-Shaw FactSet Microsoft
Tries	Print unique rows in a given boolean matrix	Amazon Zoho
Tries	Word Break Problem (Trie solution)	Amazon Google Hike IBM MAQ Software Microsoft Walmart Zoho
Tries	Given a sequence of words, print all anagrams together	Amazon D-E-Shaw Goldman Sachs Morgan Stanley Snapdeal Microsoft
Tries	Find shortest unique prefix for every word in a given list	Microsoft Google
Tries	Implement a Phone Directory	Important
Tries	Amazon + Microsoft + Snapdeal	
<hr/>		
DP	Knapsack with Duplicate Items	Amazon
DP	BBT counter	Microsoft
DP	Reach a given score	Samsung
DP	Maximum difference of zeros and ones in binary string	Ola
DP	Climbing Stairs	Intuit
DP	Permutation Coefficient	Amazon
DP	Longest Repeating Subsequence	Google + Amazon
DP	Pairs with specific difference.	Ola
DP	Longest subsequence=1	Amazon
DP	Coin Change	Microsoft+ Samsung + Barclays + Apple + Adobe
DP	US	Amazon + Google + Facebook + Fidelity International
DP	Longest Common Subsequence	Siemens + Amazon + Google
DP	Word Break	Amazon + Google + Microsoft + Walmart + Apple + IBM
DP	Combination Sum IV	Adobe Amazon Microsoft
DP	House Robber	Apple + Uber
DP	House Robber 2	Arrays Dynamic Programming
DP	Decode Ways	Adobe + Uber
DP	Unique Paths	Google + Microsoft
DP	Jump Game	Facebook Amazon Microsoft Google
DP	Knapsack Problem	Amazon Directi Flipkart GreyOrange Microsoft Mobiclip Morgan Stanley Oracle I
DP	nCr	Google
DP	Catalan Number	Amazon + Google
DP	Edit Distance	Google + Goldman Sachs + Citrix

DP	Subset Sum	Amazon + Google
DP	Gold mine	Samsung
DP	Assembly Line Scheduling	Goldman Sachs
DP	Maximize The Cut Segments	Amazon OYO Rooms Microsoft
DP	Maximum sum increasing subsequence	Amazon Morgan Stanley Microsoft
DP	Count all subsequences having product less than K	Goldman Sachs
DP	Maximum sum increasing subsequence	Amazon Morgan Stanley Microsoft
DP	Egg dropping puzzle	Amazon D-E-Shaw Goldman Sachs Google Hike MakeMyTrip MAQ Software My
DP	Max length chain	Amazon Microsoft
DP	Largest Square in Matrix	Amazon Samsung
DP	Maximum Path Sum	Amazon + Microsoft + Oyo + Directi
DP	Minimum Number of Jumps	Adobe Amazon Housing.com Moonfrog Labs Walmart Microsoft Google Flipkart
DP	Minimum removals from array to make max - min <= K	Amazon
DP	Longest Common Substring	Webarch Club
DP	Partition Equal Subset Sum	Amazon + Accolite + Traveloka + Adobe
DP	Longest Palindromic Subsequence	Amazon Google
DP	Count Palindromic Subsequences	Myatra
DP	Longest Palindromic Substring	Amazon + Microsoft + Samsung + Visa
DP	Longest Alternating Sequence	Ola
DP	Weighted Job Scheduling	Intuit
DP	Coin Game	Salesforce
DP	Coin Game Winner	Ola
DP	Optimal Strategy for a game	Google + IBM
DP	Word Wrap	Microsoft
DP	Mobile numeric keypad	Amazon Microsoft
DP	Maximum Length of Pair Chain	Amazon Microsoft
DP	Matrix Chain Multiplication	Walmart + Flipkart
DP	Maximum profit by buying and selling a share at most twice	Accolite Amazon Microsoft
DP	Optimal BST	Google
DP	Largest Submatrix with sum 0	Amazon MakeMyTrip Microsoft
DP	Largest area rectangular sub-matrix with equal number of 1's and 0's	Amazon Directi Intuit MakeMyTrip Microsoft Samsung Google Flipkart
Bit Manipulation	Count set bits in an integer	Adobe Apple
Bit Manipulation	Find the two non-repeating elements in an array of repeating elements	Accolite Amazon FactSet Google MakeMyTrip Microsoft Qualcomm Samsung
Bit Manipulation	Program to find whether a no is power of two	Adobe
Bit Manipulation	Find position of the only set bit	Microsoft
Bit Manipulation	Count number of bits to be flipped to convert A to B	Maq Software
Bit Manipulation	Count total set bits in all numbers from 1 to n	Microsoft
Bit Manipulation	Copy set bits in a range	Facebook
Bit Manipulation	Calculate square of a number without using * , / and pow()	Amazon
Bit Manipulation	Divide two integers without using multiplication, division and mod operator	Microsoft
Bit Manipulation	Power Set	Google + Adobe + Paytm
Segment Trees	Range Sum Query - Immutable	Google Interview Qs
Segment Trees	Range Minimum Query	Alibaba
Segment Trees	Range Sum Query - Mutable	Samsung + Accolite
Segment Trees	Create Sorted Array through Instructions	Walmart
Segment Trees	Count of Range Sum	Codernation Google
Segment Trees	Count of Smaller Numbers After Self	

DSA by Shradha Didi & Aman Bhaiya

[Meet us on Youtube \(Apna College\)](#)

Topics	Question	Remarks
Strings	Edit Distance	use Dynaminc Programming (if possible)
Searching & Sorting	Sort a Nearly Sorted (or K sorted) Array	
Searching & Sorting	How to Efficiently Sort a Big List Dates in 20's	
Searching & Sorting	find a repeating and a missing number	
Searching & Sorting	sort array according count set bits	
Searching & Sorting	Minimum Swaps to Make Two Array Identical	
Searching & Sorting	Insert in Sorted and Non-Overlapping Interval Array	
Searching & Sorting	3-Way QuickSort	
Backtracking	Find if There is a Path of More Than k Length From a Source	
Backtracking	Match a Pattern and String without Using Regular Expressions	
Linked List	Josephus Circle implementation using STL list	
Linked List	Find a triplet from three linked lists with sum equal to a given Number	
Linked List	Pair with given sum	
Linked List	Select a random node from a singly linked list	
Linked List	First non repeating character	
Stacks & Queues	Implement Stack using Queue or heap	
Stacks & Queues	Sum of minimum-maximum elements subarrays size-k	
Stacks & Queues	Minimum time required so that all oranges become rotten	
Stacks & Queues	Efficiently implement k-queues single array	
Greedy	Maximize array sum after k-negation operations	
Greedy	Program for shortest job first or sjf-cpu scheduling set 1 non-preemptive	
Binary Trees	Check Mirror in N-ary tree	
Binary Trees	Maximum sum of nodes in Binary tree such that no two are adjacent	
Binary Search Trees	Brothers From Different Roots	
Heaps & Hashing	Check the condition	
Heaps & Hashing	Check if an array can be divided into pairs whose sum is divisible by k	
Heaps & Hashing	Design a effective DSA	
Heaps & Hashing	Find number of Employees Under every Manager	
Heaps & Hashing	Pancake Sorting	

Graphs	Bride in a graph
Graphs	Seven Bridges of Königsberg
Graphs	Minimum edges to reverse to make path from a source to a destination
DP	Maximum Sum Rectangle
DP	Interleaved Strings
DP	Painting the Fence
DP	Largest independent Set
DP	Minimum cost to fill given weight in a bag
DP	Boolean Parenthesization
DP	Maximum Profit
DP	Palindromic Partitioning