DSA by Shradha Didi & Aman Bhaiya

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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	
Arrays	Reverse the Array	Infosys Moonfrog Labs	
Arrays	Maximum-Subarray	Microsoft + Facebook Interview Qs	use Kadane's Algorithm
Arrays	Contains Duplicate	Amazon Interview Qs	
Arrays	Chocolate Distribution Problem	Amazon Interview Qs	
Arrays	Search in Rotated Sorted Array	Microsoft Google Adobe Amazon D-E-Shaw Flipkart Hike Intuit MakeMyTrip P	
Arrays	Next Permutation	Uber + Goldman Sachs + Adobe Interview Qs	
Arrays	Best time to Buy and Sell Stock	Amazon D-E-Shaw Directi Flipkart Goldman Sachs Intuit MakeMyTrip Microsof	
Arrays	Repeat and Missing Number Array	Amazon Interview Qs	
Arrays	Kth-Largest Element in an Array	Amazon Microsoft Walmart Adobe	
Arrays	Trapping Rain Water	Samsung Interview Qs	use auxiliary arrays
Arrays	Product of Array Except Self	Microsoft + Facebook Interview Qs	
Arrays	Maximum Product Subarray	Amazon D-E-Shaw Microsoft Morgan Stanley OYO Rooms Google	
Arrays	Find Minimum in Rotated Sorted Array	Adobe Amazon Microsoft Morgan Stanley Samsung Snapdeal Times Internet	
Arrays	Find Pair with Sum in Sorted & Rotated Array	Microsoft + Google + Apple Interview Qs	
Arrays	3Sum	Adobe Amazon Microsoft Morgan Stanley Samsung Snapdeal Times Internet	
Arrays	Container With Most Water	Flipkart + Dunzo Interview Qs	use 2 pointer approach
Arrays	Given Sum Pair	Infosys + Amazon + Flipkart Interview Qs	
Arrays	Kth - Smallest Element	ABCO Accolite Amazon Cisco Hike Microsoft Snapdeal VMWare Google Adobe	
Arrays	Merge Overlapping Intervals	Google Interview Qs	
Arrays	Find Minimum Number of Merge Operations to Make an Array Palindrome	Amazon	
Arrays	Given an Array of Numbers Arrange the Numbers to Form the Biggest Number	Barclays Interview Qs	
Arrays	Space Optimization Using Bit Manipulations	Amazon	
Arrays	Subarray Sum Divisible K	Snapdeal Microsoft	
Arrays	Print all Possible Combinations of r Elements in a Given Array of Size n	Amazon	
Arrays	Mo's Algorithm	Microsoft	
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	Myntra 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 At	
Strings	Boyer Moore Algorithm for Pattern Searching	Amdocs	
Strings	Word Wrap	Microsoft	use Dynaming 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	Piar with given difference	Amazon Visa	
Searching & Sorting	majority element	Amazon+ Google	
Searching & Sorting	count triplets with sum smaller that a given value	Amazon SAP Labs	
Searching & Sorting	Maximum Sum Subsequence with no adjacent elements	Amazon FactSet Oxigen Wallet OYO Rooms Paytm Walmart Yahoo Adobe Flip	
Searching & Sorting	Merge Sorted Arrays using O(1) Space	Amdocs Brocade Goldman Sachs Juniper Networks Linkedin Microsoft Quikr	
Searching & Sorting	Inversion of Array	Adobe Amazon BankBazaar Flipkart Microsoft Myntra 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	
Backtracking	Partition Equal Subset Sum	Amazon + Adobe + Accolite + Traveloka	
Backtracking	M Coloring Problem	Amazon	

Backtracking	Knight Tour	IBM	
Backtracking	Soduko	Amazon + Adobe + Accolite + Traveloka	
Backtracking	Remove Invalid Parentheses	Uber	
Backtracking	Word Break Problem using Backtracking		
Backtracking	Print all Palindromic Partitions of a String	Facebook Amazon Microsoft	
Backtracking	Find Shortest Safe Route in a Path with Landmines	Facebook Amazon Microsoft	
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 MAC	
Linked List	Merge Two Sorted Lists	Accolite Amazon Belzabar Brocade FactSet Flipkart MakeMyTrip Microsoft OA	
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 Mo	
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 MAC	
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 zig-zag fashion	Micorsoft	
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 Biotonic 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	Important
Linked List	Quicksort on singly-linked list	Paytm	Important
Linked List	Sum of two linked lists	Accolite Amazon Flipkart MakeMyTrip Microsoft Morgan Stanley Qualcomm S	
Linked List	Flattening a linked list	24*7 Innovation Labs Amazon Drishti-Soft Flipkart Goldman Sachs Microsoft	
Linked List	Clone a linked list with next and random Pointer	Triology	
Linked List	Subtract two numbers represented as linked lists	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 + Morgain 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	Flipkar + 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	Iru 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	
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		
Greedy	Find maximum equal sum of every three stacks	Microsoft Amazon Flipkart	
Greedy	Job sequencing problem	Microsoft + Acolite	
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		
Greedy	Job sequencing using disjoint set union	Samsung	
Greedy	Rearrange characters string such that no two adjacent are same	Amazon Microsoft	
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 MakeMy	
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 Belzabar EBay Goldman Sachs Microsoft Morgan Sta	
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 Traversal	Accolite Amazon Microsoft	
Binary Trees	Height of Binary Tree	Amazon Cadence India CouponDunia D-E-Shaw FactSet FreeCharge MakeMyT	
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	DE 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 Micros	
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 Snapd	
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 + Goladman 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 Amazo	
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	Flatten 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	K'th 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	K'th largest element in a stream	Amazon Cisco Hike OYO Rooms Walmart Microsoft Flipkart	
Heaps & Hashing	Connect Ropes	Amazoon + Oyo + Goldman Sachs	
Heaps & Hashing	Cuckoo Hashing	Amaxon	
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 Mic	
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 Ola Cabs Samsung Synopsys Walmart Microsoft	
Heaps & Hashing	Check for palindrome	Amazon Cisco D-E-Shaw Facebook FactSet Morgan Stanley Paytm Zoho	
Heaps & Hashing	Length of the largest subarray with contiguous elements	Amazon Intuit Microsoft	
Heaps & Hashing	Palindrome Substring Queries	Amazon Morgan Stanley Ola Cabs SAP Labs	
Heaps & Hashing	Subarray distinct elements	Microsoft + Ola + eBay	
Heaps & Hashing	Find the recurring function	MAQ Software	
Heaps & Hashing	K maximum sum combinations from two arrays	Amazon	
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	Rat 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	Floyd 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	Bipartitie Graph	Microsoft Flipkart	
Graphs	Word-Ladder	Microsoft	
Graphs	Allen Dictionary	Samsung	

Graphs	Kruskals MST	Amazon Cisco Samsung	Important
Graphs	Total number spanning trees graph	Amazon Cisco Samsung Microsoft Flipkart	
Graphs	Travelling Salesman	Google + Microsoft + Opera	Important
Graphs	Find longest path directed acyclic graph	Google	
Graphs	Two Clique Problem	Microsoft	
Graphs	Minimise the cash flow	Intuit + Uber	
Graphs	Chinese postman	Intuit	
Graphs	Water Jug	Intuit + Uber	
Graphs	Water Jug 2	MakeMyTrip MAQ Software	
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	Amazon + Microsoft + Snapdeal	
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	LIS	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	Houe Robber 2	Arrays Dynamic Programming	
DP	Decode Ways	Adobe + Uber	
DP	Unique Paths	Google + Microsoft	
DP	Jumps Game	Facebook Amazon Microsoft Google	
DP	Knapsack Problem	Amazon Directi Flipkart GreyOrange Microsoft Mobicip Morgan Stanley Oracl	
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 M	
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 Flipk	
DP	Minimum removals from array to make max – min <= K	Amazon	
DP	Longest Common Substring	Webarch Club	
DP	Partition Equal Subset Sum	Amazon + Accolite + Traveloca + Adobe	
DP	Longest Palindromic Subsequnce	Amazon Google	
DP	Count Palindromic Subsequences	Myntra	
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		
Segment Trees	Range Minimum Query	Google Interview Qs	
Segment Trees	Range Sum Query - Mutable	Alibaba	
Segment Trees	Create Sorted Array through Instructions	Samsung + Accolite	
Segment Trees	Count of Range Sum	Walmart	
Segment Trees	Count of Smaller Numbers After Self	Codenation Google	

DSA by Shradha Didi & Aman Bhaiya

Meet us on Youtube (Apna College)

Easy	**Ideal Time : 5-10 mins**	
Medium	**Ideal Time : 15-20 mins**	
Hard	**Ideal Time : 40-60 mins (based on Qs)**	
Topics	**Question**	**Remarks**
Strings	Edit Distance	use Dynaming 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	