

Cheat

CODE

A Workbook to Get You Started with DSA

Made with  at [GeeksforGeeks](https://www.geeksforgeeks.org/)

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- 1 Which Programming Language Should I Choose?
- 2 Data Structures & Algorithms
- 3 Easy Level Problems
- 4 Medium Level Problems
- 5 Hard Level Problems
- 6 Building Soft Skills
- 7 Bonus: How to Prepare for Interviews

{The Dilemma}

Which Programming Language Should I Choose?



Beginner Problems

Which Programming Language Should I Start With?

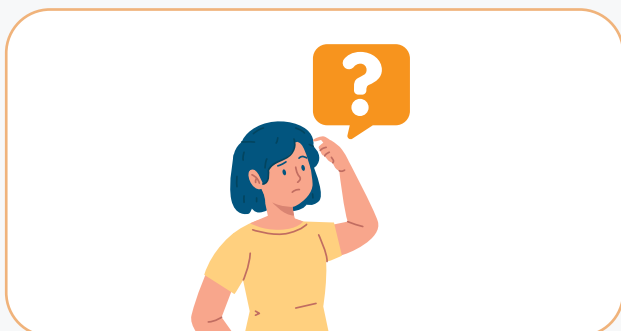
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Top 10

Top 10 Programming Languages to Learn

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C++, JAVA or Python

Which one's the Best?

[Read More](#)

{Pick your language}



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Golang

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{The Frenemy}

Data Structures & Algorithms

Time Complexity »

Space Complexity »

Arrays »

Searching »

Sorting »

String »

Hashing »

Bitwise Algorithms »

Linked List »

Stacks »

Queues »

Heaps »

Trees »

Graphs »

Greedy »

Dynamic Programming »

Algorithms »

Design Patterns »



{Build your knowledge}

Easy Problems

Use checkboxes to track your progress.
Keep practicing, Geek.

Math

Missing Number
in Array



Minimum steps
to make product
equal to one



Trailing Zeros
in Factorial



Array

Rotate Array



Majority Element



Plus one



Array of
alternative +ve
and -ve nos.



Product Array
puzzle



Large Factorial



Searching

Left most and right most index



Bitonic Point



Collecting Wood



Sorting

Wave Array



Sort an array of 0's,1's and 2's



Chocolate Distribution Problem



Matrix

Sort a 2D vector diagonally



Search in Sorted 2D and not 2d matrix



Boundary traversal of matrix



String

Reverse words
in a given string



Longest
Common Prefix



Roman Number
to Integer



Hashing

Key Pair



Top K Frequent
Elements in
Array



Intersection
of two arrays



Bit Masking

Reverse bits



Number of
set bits



Sum of two
integers



Check whether
K-th bit is set
or not



Longest
Consecutive 1's



Non repeating
numbers



Linked List

Merge Two Sorted Linked Lists



Reverse a Linked List



Delete a Node without Head Pointer



Add two Numbers represented by linked lists



Finding middle element in a linked list



Check if linked list is palindrome



Stack

Parenthesis Checker



Infix to Postfix



Restrictive Candy Crush



Queue

First negative integer in every window of size k



Valid Substring



Maximum Diamonds



Heap

Adding Array Elements



Minimum Cost of ropes



Binary Heap Operations



Binary Tree

Symmetric Tree



Zigzag Tree Traversal



Checked for Balanced tree



Height of Binary Tree



Diameter of Binary tree



Minimum depth of binary tree



Binary Search Tree

Check for BST



Array to BST



Inorder Successor in BST



Graph

Print Adjacency List



BFS of Graph



DFS of Graph



Mother Vertex



Count the Paths



Eulerian Path in an Undirected Graph



Greedy

Largest number with given Sum



Maximum Sum without Adjacents



Maximize Toys



Dynamic Programming

Count ways to reach the n'th stair



Nth Fibonacci Number



Gold Mine Problem



Recursion

Number of Paths



Juggler Sequence



Tower of Hanoi



Permutations



Permutation with Spaces



Pascals Triangle



Algorithms

Bubble Sort



Insertion Sort



Selection Sort



Design Patterns

Stack using two queues



Queue using stack



Queue Operations



{Let's Step Up a Bit}

Medium Level Problems

Use checkboxes to track your progress.
Keep practicing, Geek.

Math

A Simple Fraction



Count of sum of consecutive



nCr()



Array

Jump Game



Maximum number of 1's



Stock Buy and Sell



Maximum index



Trapping Rain Water



3 sum closest



Searching

Search an element in sorted and rotated array



Square root of a number



Find missing in second array



Sorting

Count the number of possible triangles



Triplets with sum with given range



Count Inversions



Relative Sorting



Minimum Platforms



Maximum Index



Matrix

Spiral Matrix



Boolean matrix



Rotate matrix by 90 degrees



Search in a row-column sorted Matrix



Find nth element of spiral matrix



Row with maximum 1s



String

Length of longest prefix suffix



Validate an IP address



Implement Atoi



Look and say Pattern



Longest substring without repeating characters



Longest K unique characters substring



Hashing

Triplet Sum in Array



Length of the longest substring



Is Sudoku Valid



Print Anagrams Together



Subarrays with sum K



Longest subarray with sum divisible by K



Bit Masking

Find the element that appears once



Gray code



Maximum AND



Linked List

Rearrange a linked list



Detect and Remove a loop In Linked List



Merge Sort for Linked List



Intersection of Linked List



Rotate Linked List by K places



Flattening a Linked List



Stack

Next Larger Element



Stock span problem



The Celebrity Problem



Queue

Maximum of all subarrays of size K



Circular tour (Sliding Window)



First non repeating character in a stream



Heap

Kth largest element of stream



Merge k sorted arrays



Nearly Sorted



Binary Tree

Inorder Traversal (iterative)



Preorder Traversal (iterative)



Postorder Traversal (iterative)



Connect nodes at same level



Boundary Traversal



Sum tree



Binary Search Tree

Pair with given target in BST



Unique BSTs



Preorder Traversal and BST



Graph

Number of Islands



COVID Spread



Prerequisite tasks



Minimum swaps to sort



Snake and Ladder Problem



Unit Area of Largest region of 1s



Greedy

N meetings in one room



Coin Piles



Maximize Toys



Job Sequencing



Police and Thieves



Water the Plants



Dynamic Programming

Number of Coins



Box Stacking



Longest Palindromic Substring



Wildcard Pattern Matching



Minimum number of jumps



Player with max score



Recursion

Special Keyboard



Flood Fill Algorithm



Word Boggle - 1



Rat in a Maze Problem



Letter Combinations of a Phone Number



Generate Parentheses



Algorithms

Merge Sort



Quick Sort



Heap Sort



Kadane Algorithm



Minimum Spanning Tree



Huffman Encoding



Design

Ternary Search



Binary Heap Operations



LRU cache



{When the Going Gets Tough}

Hard Level Problems

Use checkboxes to track your progress.
Keep practicing, Geek.

Math

Nth Natural Number



Smallest Positive Integer that can not be represented as Sum



Generalised Fibonacci Number



Array

Maximum circular Subarray Sum



Merge without Extra Space



Number of subsets with product less than K



Searching

Painter's Partition Problem



Median of 2 sorted arrays of Different sizes



Allocate minimum number of pages



String

Numbers with one absolute difference



Longest Palindromic Substring



Distinct Palindromic substrings



Bit Masking

Maximum subset XOR



Minimum X (xor) A



Bit Difference



Linked List

Clone a linked list with next and random pointers



Reorder List



QuickSort on Doubly Linked List



Stack

Longest Valid Parentheses



Remove K digits



132 Geeky Buildings



Heap

Median of stream



Smallest range in K lists



Rearrange characters



Binary Tree

Binary Tree to Doubly Linked List



Maximum sum path between two leaf nodes



Burning Tree



Binary Search Tree

Merge two BST's



Fixing two nodes of a BST



Sorted Linked List to BST



Graph

Number of Provinces



Alien Dictionary



Word Ladder



Word Ladder II



Minimum Cost Path



Strongly Connected Components (Tarjan's Algo)



Dynamic Programming

Matrix Chain



Partition Equal Subset Sum



Palindromic Partitioning



Recursion

Palindrome Partitioning



N-Queen Problem



Solve the Sudoku



Algorithms

Bellman Ford Algorithm



Dijkstra Algorithm



Floyd Warshall



Rabin-Karp Algorithm



KMP algorithm



Z Algorithm



{The Endgame}

Building Soft Skills

Resume Building-
Resources and
Tips

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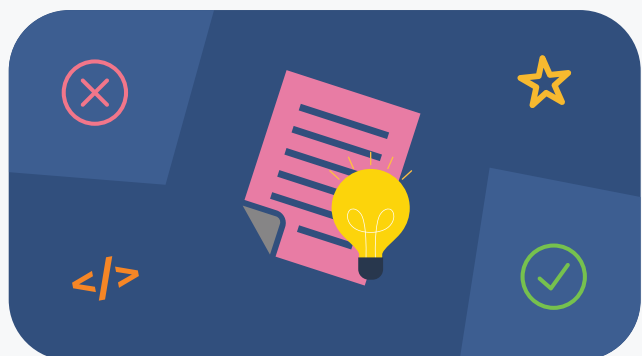
7 Ways to Add
Value to Your
Resume

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12 Best Resume
Do's & Don'ts

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{Bonus}

How to Prepare for Interviews

Tell me about yourself!

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What are your strengths & weaknesses?

[Read Answer](#)

Why should you be hired?

[Read Answer](#)





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