

## Must Do Coding Questions for Companies like Amazon, Microsoft, Adobe, ...

Difficulty Level : Medium • Last Updated : 25 Feb, 2021

As the placement season is back so are we to help you ace the interview. We have selected some most commonly asked and must do practice problems for you.

You can also take part in our *mock placement contests* which will help you learn different topics and practice at the same time, simulating the feeling of a real placement test environment.

**Note :** Now you can track your progress of these questions [Must Do Interview Preparation Course](#).

Preparing for Product-Based Companies ? Check Out [Must Do Coding Questions for Product Based Companies](#)

### Topic :

- [Arrays](#)
- [String](#)
- [Linked List](#)
- [Stack and Queue](#)
- [Tree and BST](#)
- [Heap](#)
- [Recursion](#)
- [Hashing](#)
- [Graph](#)
- [Greedy](#)
- [Dynamic Programming](#)
- [Divide and Conquer](#)
- [Backtracking](#)
- [Bit Magic](#)



### Arrays :

1. [Subarray with given sum](#)
2. [Count the triplets](#)
3. [Kadane's Algorithm](#)
4. [Missing number in array](#)
5. [Merge two sorted arrays](#)
6. [Rearrange array alternatively](#)
7. [Number of pairs](#)
8. [Inversion of Array](#)
9. [Sort an array of 0s, 1s and 2s](#)
10. [Equilibrium point](#)
11. [Leaders in an array](#)
12. [Minimum Platforms](#)
13. [Reverse array in groups](#)
14. [K'th smallest element](#)
15. [Trapping Rain Water](#)
16. [Pythagorean Triplet](#)
17. [Chocolate Distribution Problem](#)
18. [Stock buy and sell](#)
19. [Element with left side smaller and right side greater](#)

### WHAT'S NEW



Data Structures and Algorithms – Self Paced Course

[View Details](#)



Ad-Free Experience – GeeksforGeeks Premium

[View Details](#)

ADVERTISE ON GEEKSFORGEEKS  
ADS BY ADRECOVER



DigitalOcean

The Cloud Platform Developers Love.

[Try It free](#)

### MOST POPULAR IN ARTICLES

[find command in Linux with examples](#)

20. [Convert array into Zig-Zag fashion](#)
21. [Last Index of 1](#)
22. [Spirally traversing a matrix](#)
23. [Largest Number formed from an Array](#)

[SQL | Join \(Inner, Left, Right and Full Joins\)](#)

[Commonly Asked Data Structure Interview Questions | Set 1](#)

How to write a Pseudo Code?

[Analysis of Algorithms | Set 1 \(Asymptotic Analysis\)](#)

#### String :

1. [Reverse words in a given string](#)
2. [Permutations of a given string](#)
3. [Longest Palindrome in a String](#)
4. [Recursively remove all adjacent duplicates](#)
5. [Check if string is rotated by two places](#)
6. [Roman Number to Integer](#)
7. [Anagram](#)
8. [Remove Duplicates](#)
9. [Form a Palindrome](#)
10. [Longest Distinct Characters in the string](#)
11. [Implement atoi](#)
12. [Implement strstr](#)
13. [Longest Common Prefix](#)

ADVERTISE ON GEEKSFORGEEKS  
ADS BY ADRECOVER

 Ad removed. [Details](#)

#### Solved the above? Go for some more Questions

#### Linked List :

1. [Finding middle element in a linked list](#)
2. [Reverse a linked list](#)
3. [Rotate a Linked List](#)
4. [Reverse a Linked List in groups of given size](#)
5. [Intersection point in Y shaped linked lists](#)
6. [Detect Loop in linked list](#)
7. [Remove loop in Linked List](#)
8. [n'th node from end of linked list](#)
9. [Flattening a Linked List](#)
10. [Merge two sorted linked lists](#)
11. [Intersection point of two Linked Lists](#)
12. [Pairwise swap of a linked list](#)
13. [Add two numbers represented by linked lists](#)
14. [Check if Linked List is Palindrome](#)
15. [Implement Queue using Linked List](#)
16. [Implement Stack using Linked List](#)
17. [Given a linked list of 0s, 1s and 2s, sort it](#)
18. [Delete without head pointer](#)

#### MORE RELATED ARTICLES IN ARTICLES

[Analysis of Algorithms | Set 3 \(Asymptotic Notations\)](#)

[Understanding "extern" keyword in C](#)

[Mutex vs Semaphore](#)

[Analysis of Algorithms | Set 2 \(Worst, Average and Best Cases\)](#)

[SQL | GROUP BY](#)

#### Stack and Queue :

1. [Parenthesis Checker](#)
2. [Next larger element](#)
3. [Queue using two Stacks](#)
4. [Stack using two queues](#)
5. [Get minimum element from stack](#)
6. [LRU Cache](#)
7. [Circular tour](#)
8. [First non-repeating character in a stream](#)
9. [Rotten Oranges](#)
10. [Maximum of all subarrays of size k](#)

#### Tree :

1. [Print Left View of Binary Tree](#)
2. [Check for BST](#)
3. [Print Bottom View of Binary Tree](#)
4. [Print a Binary Tree in Vertical Order](#)
5. [Level Order traversal in spiral form](#)
6. [Connect Nodes at Same Level](#)
7. [Lowest Common Ancestor in a BST](#)
8. [Convert a given Binary Tree to Doubly Linked List](#)
9. [Write Code to Determine if Two Trees are Identical or Not](#)
10. [Given a binary tree check whether it is a mirror of itself](#)

- 11. [Height of Binary Tree](#)
- 12. [Maximum Path Sum](#)
- 13. [Diameter of a Binary Tree](#)
- 14. [Number of leaf nodes](#)
- 15. [Check if given Binary Tree is Height Balanced or Not](#)
- 16. [Serialize and Deserialize a Binary Tree](#)

**Solved the above? Go for some more Questions**

**Heap :**

- 1. [Find median in a stream](#)
- 2. [Heap Sort](#)
- 3. [Operations on Binary Min Heap](#)
- 4. [Rearrange characters](#)
- 5. [Kth largest element in a stream](#)
- 6. [Merge K sorted linked lists](#)
- 7. [Kth largest element in a stream](#)

**Recursion :**

- 1. [Flood fill Algorithm](#)
- 2. [Number of paths](#)
- 3. [Combination Sum - Part 2](#)
- 4. [Special Keyboard](#)
- 5. [Josephus problem](#)

**Hashing :**

- 1. [Relative Sorting](#)
- 2. [Sorting Elements of an Array by Frequency](#)
- 3. [Largest subarray with 0 sum](#)
- 4. [Common elements](#)
- 5. [Find all four sum numbers](#)
- 6. [Swapping pairs make sum equal](#)
- 7. [Count distinct elements in every window](#)
- 8. [Array Pair Sum Divisibility Problem](#)
- 9. [Longest consecutive subsequence](#)
- 10. [Array Subset of another array](#)
- 11. [Find all pairs with a given sum](#)
- 12. [Find first repeated character](#)
- 13. [Zero Sum Subarrays](#)
- 14. [Minimum indexed character](#)
- 15. [Check if two arrays are equal or not](#)
- 16. [Uncommon characters](#)
- 17. [Smallest window in a string containing all the characters of another string](#)
- 18. [First element to occur k times](#)
- 19. [Check if frequencies can be equal](#)

**Graph :**

- 1. [Depth First Traversal](#)
- 2. [Breadth First Traversal](#)
- 3. [Detect cycle in undirected graph](#)
- 4. [Detect cycle in a directed graph](#)
- 5. [Topological sort](#)
- 6. [Find the number of islands](#)
- 7. [Implementing Dijkstra](#)
- 8. [Minimum Swaps](#)
- 9. [Strongly Connected Components](#)
- 10. [Shortest Source to Destination Path](#)
- 11. [Find whether path exist](#)
- 12. [Minimum Cost Path](#)
- 13. [Circle of Strings](#)
- 14. [Floyd Warshall](#)
- 15. [Alien Dictionary](#)
- 16. [Snake and Ladder Problem](#)

**Greedy :**

- [Activity Selection](#)
- [N meetings in one room](#)
- [Coin Piles](#)
- [Maximize Toys](#)
- [Page Faults in LRU](#)
- [Largest number possible](#)
- [Minimize the heights](#)
- [Minimize the sum of product](#)
- [Huffman Decoding](#)
- [Minimum Spanning Tree](#)
- [Shop in Candy Store](#)
- [Geek collects the balls](#)

#### **Dynamic Programming :**

- [Minimum Operations](#)
- [Max length chain](#)
- [Minimum number of Coins](#)
- [Longest Common Substring](#)
- [Longest Increasing Subsequence](#)
- [Longest Common Subsequence](#)
- [0 – 1 Knapsack Problem](#)
- [Maximum sum increasing subsequence](#)
- [Minimum number of jumps](#)
- [Edit Distance](#)
- [Coin Change Problem](#)
- [Subset Sum Problem](#)
- [Box Stacking](#)
- [Rod Cutting](#)
- [Path in Matrix](#)
- [Minimum sum partition](#)
- [Count number of ways to cover a distance](#)
- [Egg Dropping Puzzle](#)
- [Optimal Strategy for a Game](#)
- [Shortest Common Supersequence](#)

#### **Divide and Conquer :**

- [Find the element that appears once in sorted array](#)
- [Search in a Rotated Array](#)
- [Binary Search](#)
- [Sum of Middle Elements of two sorted arrays](#)
- [Quick Sort](#)
- [Merge Sort](#)
- [K-th element of two sorted Arrays](#)

#### **Backtracking :**

- [N-Queen Problem](#)
- [Solve the Sudoku](#)
- [Rat in a Maze Problem](#)
- [Word Boggle](#)
- [Generate IP Addresses](#)

#### **Bit Magic :**

- [Find first set bit](#)
- [Rightmost different bit](#)
- [Check whether K-th bit is set or not](#)
- [Toggle bits given range](#)
- [Set kth bit](#)
- [Power of 2](#)
- [Bit Difference](#)
- [Rotate Bits](#)
- [Swap all odd and even bits](#)
- [Count total set bits](#)
- [Longest Consecutive 1's](#)
- [Sparse Number](#)
- [Alone in a couple](#)
- [Maximum subset XOR](#)

#### **Some More Questions on Arrays :**

- 1. [Find Missing And Repeating](#)
- 2. [Maximum Index](#)
- 3. [Consecutive 1's not allowed](#)
- 4. [Majority Element](#)
- 5. [Two numbers with sum closest to zero](#)
- 6. [Nuts and Bolts Problem](#)
- 7. [Boolean Matrix Problem](#)
- 8. [Smallest Positive missing number](#)
- 9. [Jumping Caterpillars](#)

#### **Some More Questions on Strings :**

- 1. [Most frequent word in an array of strings](#)
- 2. [CamelCase Pattern Matching](#)
- 3. [String Ignorance](#)
- 4. [Smallest window in a string containing all the characters of another string](#)
- 5. [Design a tiny URL or URL shortener](#)
- 6. [Permutations of a given string](#)
- 7. [Non Repeating Character](#)
- 8. [Check if strings are rotations of each other or not](#)
- 9. [Save Ironman](#)
- 10. [Repeated Character](#)
- 11. [Remove common characters and concatenate](#)
- 12. [Geek and its Colored Strings](#)
- 13. [Second most repeated string in a sequence](#)

#### **Some more Questions on Trees :**

- 1. [Mirror Tree](#)
- 2. [Longest consecutive sequence in Binary tree](#)
- 3. [Bottom View of Binary Tree](#)
- 4. [Lowest Common Ancestor in a Binary Tree](#)
- 5. [Binary to DLL](#)

#### **Important Links :**

- 1. [Difficulty-wise ordered Coding questions for Interview and Competitive Programming](#)
- 2. Aptitude questions asked in round 1 : [Placements Course](#) designed for this purpose.
- 3. MCQs asked from different computer science subjects : [Subject-Wise Quizzes](#)
- 4. Interview theory and coding questions of all companies : [Company wise all practice questions](#).
- 5. Interview experiences of all companies : [Interview corner](#).

You may also check our [latest online course series](#) to learn DS & Algo is named **DSA**, which covers everything about Data Structures from *Basic to Advanced*.

#### **Key Features of the Course**

- Well organised tutorials on Data-Structures and Algorithms prepared by the GeeksforGeeks Team.
- Premium video lectures by **Mr. Sandeep Jain**, Founder and C.E.O of GeeksforGeeks.
- Dedicated doubt solving team to assist you.
- Assessment Tests with Video Solutions.
- Performance-Based Certificate.
- Internship Opportunities at GeeksforGeeks.
- The courses are self-paced: Anyone can register anytime, make payment and begin the course.

And, many more.

The course is available in two versions:

- 1. **With Doubt Assistance:** The price of the self-paced online DSA course with doubt assistance is INR **3,999**. [Click here to purchase your ticket](#).



₹7499-  
₹3999

Sign Up for Free

DSA  
SELF-PACED WITH  
Online Course

₹4999-  
₹2499

Sign Up for Free

#### Preparing for AMAZON SDE Interview?

Do check out Geeksforgeeks [Amazon SDE Test-Series](#). The price of the online AMAZON Test-Series course is INR **499**.

TEST SERIES  
for  
AMAZON SDE

Online Course

₹1199-  
₹499

Sign Up for Free

#### Geeks Classes Live

An interview centric Live session focused on DSA to enhance your coding & problem-solving skills for product-based companies. The price of the [LIVE Geeks Class course](#) is INR **9,999**.

Geeks  
Classes

Live Classes

₹17999-  
₹9999

Sign Up for Free

If you like GeeksforGeeks and would like to contribute, you can also write an article and mail your article to contribute@geeksforgeeks.org. See your article appearing on the GeeksforGeeks main page and help other Geeks.

Please write comments if you find anything incorrect, or you want to share more information about the topic discussed above



Like 0

[◀ Previous](#)[Next ▶](#)

## Resume Writing For Internship

## Must Do Coding Questions Company-wise

### RECOMMENDED ARTICLES

Page : [1](#) [2](#) [3](#)

- 01 Must Do Questions for Companies like TCS, CTS, HCL, IBM ...  
14, May 19

- 02 Why companies like Amazon, Microsoft, Google focuses on Data Structures and Algorithms : Answered  
28, Jun 19

- 03 Must Do Coding Questions Company-wise  
07, Oct 20

- 04 Recently Asked Interview Questions in Product Based Companies  
01, Feb 21

- 05 How to attempt Function Coding Questions?  
17, Aug 18

- 06 Guide for Non-CS students to get placed in Software companies  
21, Jan 18

- 07 What is the future of those students who are getting selected in mass recruiting companies  
12, Sep 18

- 08 Amazon Interview Questions  
15, May 14



#### Article Contributed By :



GeeksforGeeks

#### Vote for difficulty

Current difficulty : [Medium](#)

[Easy](#) [Normal](#) [Medium](#) [Hard](#) [Expert](#)

Article Tags : [interview-preparation](#), [placement preparation](#), [Articles](#)

[Improve Article](#)

[Report Issue](#)

Writing code in comment? Please use [ide.geeksforgeeks.org](#), generate link and share the link here.



Name

Yoav Sharon • 11 days ago  
hi, when i try to access any question i get a 404 page. can you fix it please?

[^](#) | [v](#) [Reply](#) [Share](#) >

GeeksforGeeks Mod → Yoav Sharon • 8 days ago  
The links seem to be working fine for us. Please let us know if you are still facing this issue.

[^](#) | [v](#) [Reply](#) [Share](#) >

ashok • 5 months ago  
why the contents have gone.. please revert the DB state if some bad check-in has gone in. or fix ASAP

[2 ^](#) | [v](#) [Reply](#) [Share](#) >



**Utkarsh Jaiswal** ↗ ashok • 5 months ago

Here it is

<https://www.geeksforgeeks.o...>

1 ^ | v • Reply • Share >



**Gautam Asopa** ↗ Utkarsh Jaiswal • 5 months ago

thanks

^ | v • Reply • Share >



**Richa Randeria** • 5 months ago

You can find the list of questions here:

<https://www.geeksforgeeks.o...>

1 ^ | v • Reply • Share >



**Utkarsh Jaiswal** ↗ Richa Randeria • 5 months ago

Here it is

<https://www.geeksforgeeks.o...>

1 ^ | v • Reply • Share >



**Anurag Soni** ↗ Utkarsh Jaiswal • 5 months ago

Thanks Utkarsh.

^ | v • Reply • Share >



**Anurag Soni** ↗ Richa Randeria • 5 months ago

Thanks! It helped.

^ | v • Reply • Share >



**Yash Chowdhary** • 5 months ago

Why the list of questions have been removed?

^ | v • Reply • Share >



**Utkarsh Jaiswal** ↗ Yash Chowdhary • 5 months ago

<https://www.geeksforgeeks.o...>

^ | v • Reply • Share >



**Utkarsh Jaiswal** • 5 months ago

Where the list of questions?

^ | v • Reply • Share >



**Ulloa** • 6 months ago

Good list to check!

^ | v • Reply • Share >



**James Walsh** • 6 months ago

test

1 ^ | v • Reply • Share >



**ayush mahajan** • 6 months ago

In Linked list section....the same question to find out the intersection of two linked list is stated twice.....it would be better if some other question is put up there in place of that repeated question.

^ | v • Reply • Share >



**Jafar Fathi** • 9 months ago

thanks for this great article.

1 ^ | v • Reply • Share >



**deepak taneja** • a year ago

hh

^ | v • Reply • Share >



**bobo** • a year ago

how can i code i2c sensors using pic18f4520 mikroc pro for pic

^ | v • Reply • Share >



**Abhishek Kumar** • 2 years ago

5 question a day, keeps the unemployment away. Let's start (7/8)....

2 ^ | v 1 • Reply • Share >



**Aayan Malhotra** ↗ Abhishek Kumar • 7 months ago

its been 1 year...how did it worked for you?

^ | v • Reply • Share >



**Abhishek Kumar** ↗ Aayan Malhotra • 7 months ago

GFG and Leetcode can introduce you to variety of questions(good enough for Amazon), but to gain good problem solving skills and to solve unseen questions, Competitive programming is needed for sure. It's my honest opinion.

3 ^ | v • Reply • Share >



**Sheedy** • 2 years ago

So extensive, thanks!

^ | v • Reply • Share >



**Leandro Silva Do Nascimento** • 2 years ago • edited

For me seems easier build a company like those than get a simple job...

15 ^ | v • Reply • Share >

 **Abhilash** ➔ Leandro Silva Do Nascimento • 2 years ago  
Agree with your sentiment. I feel the same.

1 ^ | v • Reply • Share >

 **HD** ➔ Abhilash • 6 months ago  
I will follow this path  
^ | v • Reply • Share >



**Pravallika Basam** • 2 years ago

Really good collection of questions.....I became a huge fan of [geeksforgeeks](#) after reading this

1 ^ | v • Reply • Share >



**Hodor** • 2 years ago

optimal strategy problem link is not correct.

1 ^ | v • Reply • Share >

 **soul\_xhacker** ➔ Hodor • 2 years ago  
It has been corrected now.  
^ | v • Reply • Share >



**Akshay Reddy** • 2 years ago

Amazing List

^ | v • Reply • Share >



**Neosphere** • 2 years ago

Really great efforts. Thanks for this question list.

1 ^ | v • Reply • Share >



**Itt lum** • 3 years ago • edited

Hi Guys, Please let me know how is this list prepared. Is it based on number of comments or number of tags ?

^ | v • Reply • Share >



**Vijay Chandra** • 3 years ago

Where can we get answer for these Question can anybody provide solution link

^ | v • Reply • Share >

 **Pavanayi** ➔ Vijay Chandra • 3 years ago  
See editorial for each question  
^ | v • Reply • Share >



**Shubham Pandey** • 3 years ago

Are these questions are basic, easy and school level only? I have done the Array section and couldn't find even a mid level question.

3 ^ | v 5 • Reply • Share >



**Anmol Shukla** • 3 years ago

Hi,

In the Linked Lists sub-section, the 9th problem, that is merging of lists should come before the 8th problem, which is flattening the lists, since the 8th problem uses the concepts in the 9th problem.

1 ^ | v • Reply • Share >



**Winsant surat** • 4 years ago

Really amazing how you put such detailed topics on one page. hats off

^ | v • Reply • Share >



**J.P. O'Malley** • 4 years ago • edited

"Find the number of islands" (#5 under Graphs) doesn't link to the right problem. It should link to <http://practice.geeksforgeeks.org/problems/find-number-of-islands-1>....

14 ^ | v 1 • Reply • Share >



**Mayank Dixit** • 4 years ago • edited

Okau

3 ^ | v 1 • Reply • Share >

 **crusader97** ➔ Mayank Dixit • 3 years ago  
abe pagal vaagal hai kya  
1 ^ | v • Reply • Share >

 **Mayank Dixit** ➔ crusader97 • 3 years ago  
Bc account hacked yaar.  
4 ^ | v 1 • Reply • Share >

 **crusader97** ➔ Mayank Dixit • 3 years ago  
koi na bhai password change kar le  
49 ^ | v • Reply • Share >



'abcd' se change krke '1234' rakhega X^D

2 ^ | v · Reply · Share >



Ajay Dubey · 4 years ago

It would be more convinient if these links point to the solution on geeksforgeeks. It points me to the practice arena to solve these problems.

5 ^ | v 5 · Reply · Share >



Piyush29995 · 4 years ago

This is a really wonderful platform....sir

1 ^ | v · Reply · Share >



Rishi Niranjan · 4 years ago

Thanks

1 ^ | v · Reply · Share >



Atul Kumar · 4 years ago

Let the marathon begin :D

7 ^ | v 1 · Reply · Share >



Arun Pratap · 4 years ago

Thank you, It's very helpful.

1 ^ | v · Reply · Share >



Aditya Nihal Kumar Singh · 4 years ago

Good collection.

1 ^ | v · Reply · Share >



maniAC · 4 years ago

Nice

^ | v · Reply · Share >



Puneet Kumar · 4 years ago

thank you sir

4 ^ | v · Reply · Share >

[✉ Subscribe](#)

[>Add Disqus to your site](#)

[⚠ Do Not Sell My Data](#)

**DISQUS**

## GeeksforGeeks

⌚ 5th Floor, A-118,  
Sector-136, Noida, Uttar Pradesh - 201305

✉ feedback@geeksforgeeks.org



### Company

[About Us](#)

[Careers](#)

[Privacy Policy](#)

[Contact Us](#)

[Copyright Policy](#)

### Learn

[Algorithms](#)

[Data Structures](#)

[Languages](#)

[CS Subjects](#)

[Video Tutorials](#)

### Practice

[Courses](#)

[Company-wise](#)

[Topic-wise](#)

[How to begin?](#)

### Contribute

[Write an Article](#)

[Write Interview Experience](#)

[Internships](#)

[Videos](#)

@geeksforgeeks , Some rights reserved