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Hard Collection

Top Interview Questions



Overview

This is LeetCode's official curated list of Top classic interview questions to help you land your dream job. Our top interview questions are divided into the following series: Easy Collection Medium



Array and Strings

Array and String type of questions were asked in interviews frequently. You will most likely encounter one during your interviews. We recommend: Product of Array Except Self, Spiral Matrix, First Missing



Linked List

There are not a lot of difficult Linked List problems. However, these Linked List problems do require some thought. We recommend all of these problems, all of them are classic Linked List interview



Trees and Graphs

Tree is a special type of graphs, so the two usual techniques used to traverse a graph are also applicable to trees. We recommend: Word Ladder, Lowest Common Ancestor of a Binary Tree, Course

Backtracking

Here are some of the best backtracking interview questions. We recommend: Word Search II, Remove Invalid Parentheses and Regular Expression Matching.

Sorting and Searching

These problems deal with sorting or searching in a sorted structure. We recommend: Median of Two Sorted Arrays. Hands down one of the best interview questions.

Dynamic Programming

Here are some classic Dynamic Programming interview questions. We recommend: Best Time to Buy and Sell Stock with Cooldown and Word Break. Burst Balloons is a great problem too, highly

Design

These problems may require you to implement a given interface of a class, and may involve using one or more data structures. These are great exercises to improve your data structure skills. We recommend:

Math

Most of the math questions asked in interviews do not require math knowledge beyond middle school level. We recommend Max Points on a Line.

Others

Here are some other questions that do not fit in other categories. We recommend: Trapping Rain Water and The Skyline Problem. If you'd like more challenge, we highly recommend you to solve the last two

Introduction



This is LeetCode's official curated list of Top classic interview questions to help you land your dream job. Our top interview questions are divided into the following series:

1. Easy Collection (/explore/interview/card/top-interview-questions-easy/)
2. Medium Collection (/explore/interview/card/top-interview-questions-medium/)
3. Hard Collection (/explore/interview/card/top-interview-questions-hard/)

to help you master Data Structure & Algorithms and improve your coding skills.

Just like any other skills, coding interview is one area where you can greatly improve with deliberate practice

([https://en.wikipedia.org/wiki/Practice_\(learning_method\)#Deliberate_practice](https://en.wikipedia.org/wiki/Practice_(learning_method)#Deliberate_practice)).


Most of the classic interview questions have multiple solution approaches. For the best practice result, we strongly advise you to go through this list at least a second time, or even better - a *third time*.

By the second attempt, you may discover some new tricks or new methods. By the third time, you should find that your code appear to be more concise compared to your first attempt. If so, congratulations!


Remember: Deliberate practice does not mean looking for answers and memorizing it. You won't go very far with that approach. The more you are able to solve a problem yourself without any reference to answers, the more you will improve.


Array and Strings



☐  Product of Array Except Self

☐  Spiral Matrix

☐  4Sum II

☐  Container With Most Water

☐  Game of Life

☐  First Missing Positive

☐  Longest Consecutive Sequence

☐  Find the Duplicate Number

☐  Longest Substring with At Most ...






☐  Basic Calculator II

☐  Sliding Window Maximum

☐  Minimum Window Substring










Linked List



- ☐  Merge k Sorted Lists
- ☐  Sort List
- ☐  Copy List with Random Pointer

Trees and Graphs



- ☐  Word Ladder
- ☐  Surrounded Regions
- ☐  Lowest Common Ancestor of a B...
- ☐  Binary Tree Maximum Path Sum
- ☐  Friend Circles
- ☐  Course Schedule
- ☐  Course Schedule II
- ☐  Longest Increasing Path in a Mat...
- ☐  Alien Dictionary




☐  Count of Smaller Numbers After ...

Backtracking



☐  Palindrome Partitioning

☐  Word Search II

☐  Remove Invalid Parentheses

☐  Wildcard Matching

☐  Regular Expression Matching

Sorting and Searching



☐  Wiggle Sort II

☐  Kth Smallest Element in a Sorted...

☐  Median of Two Sorted Arrays

Dynamic Programming



☐  Maximum Product Subarray

☐  Decode Ways

☐  Best Time to Buy and Sell Stock ...

☐  Perfect Squares

☐  Word Break

☐  Word Break II

☐  Burst Balloons

Design




☐  LRU Cache

☐  Implement Trie (Prefix Tree)

☐  Flatten Nested List Iterator

☐  Find Median from Data Stream

☐  Range Sum Query 2D - Mutable



Math



☐  Largest Number

☐  Max Points on a Line

Others



☐  Queue Reconstruction by Height

☐  Trapping Rain Water

☐  The Skyline Problem

☐  Largest Rectangle in Histogram