

# 30

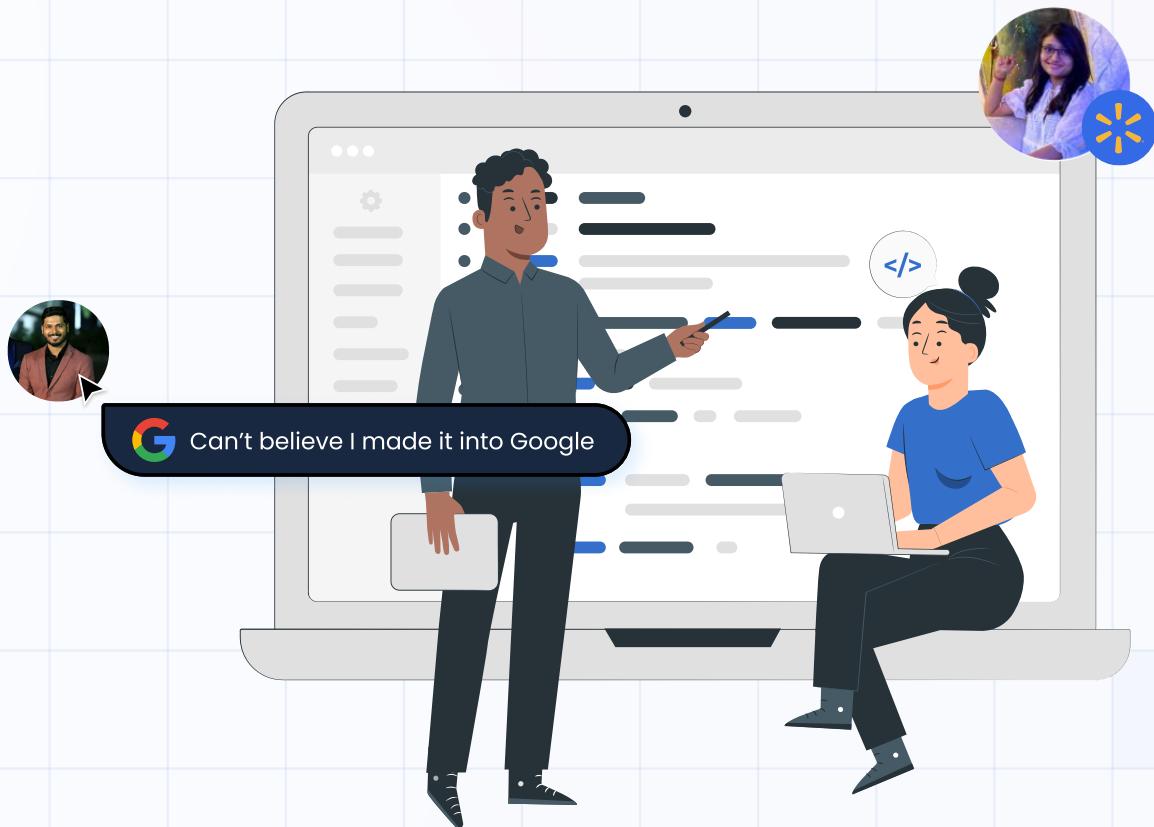
## MOST ASKED CODING QUESTIONS

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## Question 1

## Add Binary

Easy

Given two binary strings `a` and `b` return *their sum as a binary string.* `s`

**Practice**

Question asked in:



## Question 2

## Diameter of Binary Tree

Easy

Given the `root` of a binary tree, return *the length of the diameter of the tree.*

The diameter of a binary tree is the length of the longest path between any two nodes in a tree. This path may or may not pass through the `root`

**Practice**

Question asked in:



Anjali Joshi

Data Engineer - L2 at Twilio

From



To



## Question 3

### Valid Anagram

Easy

Given two strings `s` and `t`, return `true` if `t` is an anagram of `s`, and `false` otherwise.

An **Anagram** is a word or phrase formed by rearranging the letters of a different word or phrase, typically using all the original letters exactly once.

Practice



Question asked in:



## Question 4

### Binary Search

Easy

Given an array of integers `nums` which is sorted in ascending order, and an integer `target`, write a function to search `target` in `nums`. If `target` exists, then return its index. Otherwise, return `-1`.

You must write an algorithm with  $\Theta(\log n)$  runtime complexity.

Practice



Question asked in:



Excellent platform for anyone interested in technology, particularly those who work with computers and programming. One of the best features is their live classes and small batch sizes, which ensure that you receive undivided attention.

## Question 5

## Longest Palindrome

Easy

Given a string `s` which consists of lowercase or uppercase letters, return the length of the longest palindrome that can be built with those letters.

Letters are case sensitive, for example, `"Aa"` is not considered a palindrome here.

[Practice](#)

Question asked in:



## Question 6

## Lowest Common Ancestor of a Binary Search Tree

Easy

Given a binary search tree (BST), find the lowest common ancestor (LCA) node of two given nodes in the BST.

According to the [definition of LCA on Wikipedia](#): "The lowest common ancestor is defined between two nodes `p` and `q` as the lowest node in `T` that has both `p` and `q` as descendants (where we allow a node to be a descendant of itself)."

[Practice](#)

Question asked in:



## Question 7

### Flood Fill

Easy

An image is represented by an  $m \times n$  integer grid `image` where `image[i][j]` represents the pixel value of the image.

You are also given three integers `sr`, `sc` and `color`. You should perform a **flood fill** on the image starting from the pixel `image[sr][sc]`.

Return *the modified image after performing the flood fill*.

Practice

Question asked in:



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## Question 8

## Balanced Binary Tree

Easy

Given a binary tree, determine if it is height-balanced.

**Practice**

Question asked in:



## Question 9

## Linked List Cycle

Easy

Given `head`, the head of a linked list, determine if the linked list has a cycle in it.

There is a cycle in a linked list if there is some node in the list that can be reached again by continuously following the `next` pointer. Internally, `pos` is used to denote the index of the node that tail's `next` pointer is connected to. **Note that `pos` is not passed as a parameter.**

Return `true` if there is a cycle in the linked list. Otherwise, return `false`.

**Practice**

Question asked in:



## Question 10

## First Bad Version

Easy

Suppose you have `n` versions `[1, 2, ..., n]` and you want to find out the first bad one, which causes all the following ones to be bad.

You are given an API `bool isBadVersion(version)` which returns whether `version` is bad. Implement a function to find the first bad version.

**Practice**

Question asked in:



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## Question 11

### Permutations

Medium

Given an array `nums` of distinct integers, return all the possible permutations. You can return the answer in **any order**.

Practice



Question asked in:



## Question 12

### Merge Intervals

Medium

Given an array of `intervals` where `intervals[i] = [starti, endi]` merge all overlapping intervals, and return an array of the non-overlapping intervals that cover all the intervals in the input.

Practice



Question asked in:



The courses well structured, and I use them to learn new things every day as well as revise concepts by solving multiple problems. It also helps you a lot when preparing for an interview because most of the questions were similar to which I solved during the course.

## Question 13

## Container With Most Water

Medium

You are given an integer array `height` of length `n`. There are `n` vertical lines drawn such that the two endpoints of the  $i^{\text{th}}$  line are  $(i, 0)$  and  $(i, \text{height}[i])$

Return *the maximum amount of water a container can store.*

**Practice**

Question asked in:



## Question 14

## Kth Smallest Element in a BST

Medium

Given the `root` of a binary search tree, and an integer `k`, return *the  $k^{\text{th}}$  smallest value (*1-indexed*) of all the values of the nodes in the tree.*

**Practice**

Question asked in:



Best part about this academy is that before joining the program you can talk with the Data Scientist. They have projects from companies so you will work on Real-Time Projects and also got many job referrals from Tutort Academy & got a job as at EY.

## Question 15

## K Closest Points to Origin

Medium

Given an array of `points` , where `points[i] = [xi, yi]` represents a point on the X-Y plane and an integer `k` , return the `k` closest points to the origin `(0, 0)`

You may return the answer in **any order.** ,

**Practice**

Question asked in:



## Question 16

## Longest Substring Without Repeating Characters

Medium

Given a string `s` find the length of the longest substring without repeating characters.

**Practice**

Question asked in:



## Question 17

### 3Sum

Medium

Given an integer array `nums`, return all the triplets

`[nums[i], nums[j], nums[k]]` such that `i != j`, `i != k` and `j != k`,  
and `nums[i] + nums[j] + nums[k] == 0`

Notice that the solution set must not contain duplicate triplets.

Practice

Question asked in:



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## Question 18

## Binary Tree Level Order Traversal

Medium

Given the `root` of a binary tree, return *the level order traversal of its nodes' values*. (i.e., from left to right, level by level).

**Practice**

Question asked in:



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## Question 19

## String to Integer (atoi)

Medium

Implement the `myAtoi(string s)` function, which converts a string string to a 32-bit signed integer (similar to C/C++'s atoi function).

Return the integer as the final result.

**Practice**

Question asked in:



## Question 20

## Spiral Matrix

Medium

Given an `m x n` `matrix` return *all elements of the matrix in spiral order*.

**Practice**

Question asked in:



Avishkar Dalvi

MTS 3 at VMware

From



To

## Question 21

## Course Schedule

Medium

There are a total of `numCourses` courses you have to take, labeled from `0` to `numCourses - 1`. You are given an array `prerequisites` where `prerequisites[i] = [ai, bi]` indicates that you must take course `bi` first if you want to take course `ai`.

Return `true` if you can finish all courses. Otherwise, return `false`.

**Practice**

Question asked in:



## Question 22

## Implement Trie (Prefix Tree)

Medium

Implement the Trie class:

- `Trie()` Initializes the trie object.
- `void insert(String word)` Inserts the string `word` into the trie.
- `boolean search(String word)` Returns `true` if the string `word` is in the trie
- `boolean startsWith(String prefix)` Returns `true` if there is a previously inserted string `word` that has the prefix.

**Practice**

Question asked in:



## Question 23

## Clone Graph

Medium

Given a reference of a node in a connected undirected graph.

Return a deep copy (clone) of the graph.

[Practice](#)

Question asked in:



## Question 24

## Evaluate Reverse Polish Notation

Medium

You are given an array of strings `tokens` that represents an arithmetic expression in a Reverse Polish Notation.

Evaluate the expression. Return an integer that represents the value of the expression.

[Practice](#)

Question asked in:



Basant Pratap Singh  
Software Engineer at Google

From

**TiDA**

To

**Google**

## Question 25

## Find Median from Data Stream

Hard

The median is the middle value in an ordered integer list. If the size of the list is even, there is no middle value, and the median is the mean of the two middle values.

- For example, for `arr = [2, 3, 4]`, the median is `3`
- For example, for `arr = [2, 3]`, the median is `(2 + 3) / 2 = 2.5`

**Practice**

Question asked in:



## Question 26

## Word Ladder

Hard

A **transformation sequence** from word `beginWord` to word `endWord` using a dictionary `wordList` is a sequence of words

`beginWord -> s1 -> s2 -> ... -> sk` such that:

Given two words, `beginWord` and `endWord`, and a dictionary `wordList`, return the **number of words** in the **shortest transformation sequence** from `beginWord` to `endWord`, or `0` if no such sequence exists.

**Practice**

Question asked in:



## Question 27

## Basic Calculator

Hard

Given a string `s` representing a valid expression, implement a basic calculator to evaluate it, and return the result of the evaluation.

**Practice**

Question asked in:



## Question 28

## Maximum Profit in Job Scheduling

Hard

We have `n` where every job is scheduled to be done from

`startTime[i]` to `endTime[i]`, obtaining a profit of `profit[i]`

Return the maximum profit you can take such that there are no two jobs in the subset with overlapping time range.

**Practice**

Question asked in:



Two things I love the most about Tutort Academy. First before enrolling your profile is reviewed by a Data Scientist and Secondly real time projects from companies with small batch size you won't find these two things anywhere.

## Question 29

## Merge k Sorted Lists

Hard

You are given an array of  $k$  linked-lists `lists`, each linked-list is sorted in ascending order.

*Merge all the linked-lists into one sorted linked-list and return it.*

**Practice**

Question asked in:



## Question 30

## Largest Rectangle in Histogram

Hard

Given an array of integers `heights` representing the histogram's bar height where the width of each bar is  $1$ , return *the area of the largest rectangle in the histogram*.

**Practice**

Question asked in:



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