

Amazon DSA Interview – Problem Summary with Solutions

Two Sum (EASY)

Topics: Array, Hash Table

Solution: Use a HashMap to store nums and their indices. For each num, check if target - num exists in map.

Link: <https://leetcode.com/problems/two-sum>

Best Time to Buy and Sell Stock (EASY)

Topics: Array, Dynamic Programming

Solution: Track minimum price so far and calculate max profit for each price.

Link: <https://leetcode.com/problems/best-time-to-buy-and-sell-stock>

LRU Cache (MEDIUM)

Topics: Hash Table, Linked List, Design, Doubly-Linked List

Solution: Use a Doubly Linked List + HashMap to achieve O(1) get/put operations.

Link: <https://leetcode.com/problems/lru-cache>

Number of Islands (MEDIUM)

Topics: Array, Depth-First Search, Breadth-First Search, Union Find, Matrix

Solution: Use DFS/BFS to traverse and mark all connected lands starting from unvisited '1's.

Link: <https://leetcode.com/problems/number-of-islands>

Reorganize String (MEDIUM)

Topics: Hash Table, String, Greedy, Sorting, Heap (Priority Queue), Counting

Solution: Use a max-heap to place characters with highest frequency at alternate positions.

Link: <https://leetcode.com/problems/reorganize-string>

Maximum Frequency After Subarray Operation (MEDIUM)

Topics: Array, Hash Table, Dynamic Programming, Greedy, Enumeration, Prefix Sum

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/maximum-frequency-after-subarray-operation>

Longest Palindromic Substring (MEDIUM)

Topics: Two Pointers, String, Dynamic Programming

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/longest-palindromic-substring>

Add Two Numbers (MEDIUM)

Topics: Linked List, Math, Recursion

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/add-two-numbers>

Koko Eating Bananas (MEDIUM)

Topics: Array, Binary Search

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/koko-eating-bananas>

Longest Substring Without Repeating Characters (MEDIUM)

Topics: Hash Table, String, Sliding Window

Solution: Use sliding window with HashSet to track unique chars.

Link: <https://leetcode.com/problems/longest-substring-without-repeating-characters>

Find First and Last Position of Element in Sorted Array (MEDIUM)

Topics: Array, Binary Search

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/find-first-and-last-position-of-element-in-sorted-array>

Trapping Rain Water (HARD)

Topics: Array, Two Pointers, Dynamic Programming, Stack, Monotonic Stack

Solution: Use two pointers to track water level from both sides.

Link: <https://leetcode.com/problems/trapping-rain-water>

Top K Frequent Elements (MEDIUM)

Topics: Array, Hash Table, Divide and Conquer, Sorting, Heap (Priority Queue), Bucket Sort, Counting, Quickselect

Solution: Use HashMap to count freq, then a Min-Heap to keep top K elements.

Link: <https://leetcode.com/problems/top-k-frequent-elements>

Merge k Sorted Lists (HARD)

Topics: Linked List, Divide and Conquer, Heap (Priority Queue), Merge Sort

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/merge-k-sorted-lists>

Jump Game II (MEDIUM)

Topics: Array, Dynamic Programming, Greedy

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/jump-game-ii>

Merge Intervals (MEDIUM)

Topics: Array, Sorting

Solution: Sort intervals by start. Merge overlapping ones by comparing end values.

Link: <https://leetcode.com/problems/merge-intervals>

Group Anagrams (MEDIUM)

Topics: Array, Hash Table, String, Sorting

Solution: Use sorted string as a key in a HashMap to group anagrams.

Link: <https://leetcode.com/problems/group-anagrams>

Lowest Common Ancestor of a Binary Tree (MEDIUM)

Topics: Tree, Depth-First Search, Binary Tree

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/lowest-common-ancestor-of-a-binary-tree>

Longest Repeating Character Replacement (MEDIUM)

Topics: Hash Table, String, Sliding Window

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/longest-repeating-character-replacement>

Candy (HARD)

Topics: Array, Greedy

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/candy>

Meeting Rooms II (MEDIUM)

Topics: Array, Two Pointers, Greedy, Sorting, Heap (Priority Queue), Prefix Sum

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/meeting-rooms-ii>

Valid Parentheses (EASY)

Topics: String, Stack

Solution: Use a stack to ensure every opening bracket has a matching closing bracket.

Link: <https://leetcode.com/problems/valid-parentheses>

Minimum Window Substring (HARD)

Topics: Hash Table, String, Sliding Window

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/minimum-window-substring>

House Robber (MEDIUM)

Topics: Array, Dynamic Programming

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/house-robber>

Median of Two Sorted Arrays (HARD)

Topics: Array, Binary Search, Divide and Conquer

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/median-of-two-sorted-arrays>

Min Stack (MEDIUM)

Topics: Stack, Design

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/min-stack>

Rotate Image (MEDIUM)

Topics: Array, Math, Matrix

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/rotate-image>

Best Time to Buy and Sell Stock II (MEDIUM)

Topics: Array, Dynamic Programming, Greedy

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/best-time-to-buy-and-sell-stock-ii>

Concatenated Words (HARD)

Topics: Array, String, Dynamic Programming, Depth-First Search, Trie

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/concatenated-words>

Generate Parentheses (MEDIUM)

Topics: String, Dynamic Programming, Backtracking

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/generate-parentheses>

Search a 2D Matrix (MEDIUM)

Topics: Array, Binary Search, Matrix

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/search-a-2d-matrix>

Coin Change (MEDIUM)

Topics: Array, Dynamic Programming, Breadth-First Search

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/coin-change>

Unique Paths (MEDIUM)

Topics: Math, Dynamic Programming, Combinatorics

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/unique-paths>

LFU Cache (HARD)

Topics: Hash Table, Linked List, Design, Doubly-Linked List

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/lfu-cache>

Search in Rotated Sorted Array (MEDIUM)

Topics: Array, Binary Search

Solution: Use modified binary search to handle the rotated pivot.

Link: <https://leetcode.com/problems/search-in-rotated-sorted-array>

Next Permutation (MEDIUM)

Topics: Array, Two Pointers

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/next-permutation>

Rotting Oranges (MEDIUM)

Topics: Array, Breadth-First Search, Matrix

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/rotting-oranges>

Insert Delete GetRandom O(1) (MEDIUM)

Topics: Array, Hash Table, Math, Design, Randomized

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/insert-delete-getrandom-o1>

Flood Fill (EASY)

Topics: Array, Depth-First Search, Breadth-First Search, Matrix

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/flood-fill>

Fizz Buzz (EASY)

Topics: Math, String, Simulation

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/fizz-buzz>

Top K Frequent Words (MEDIUM)

Topics: Array, Hash Table, String, Trie, Sorting, Heap (Priority Queue), Bucket Sort, Counting

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/top-k-frequent-words>

Integer to Roman (MEDIUM)

Topics: Hash Table, Math, String

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/integer-to-roman>

Invert Binary Tree (EASY)

Topics: Tree, Depth-First Search, Breadth-First Search, Binary Tree

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/invert-binary-tree>

Move Zeroes (EASY)

Topics: Array, Two Pointers

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/move-zeroes>

Basic Calculator (HARD)

Topics: Math, String, Stack, Recursion

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/basic-calculator>

Find All Possible Recipes from Given Supplies (MEDIUM)

Topics: Array, Hash Table, String, Graph, Topological Sort

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/find-all-possible-recipes-from-given-supplies>

String to Integer (atoi) (MEDIUM)

Topics: String

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/string-to-integer-atoi>

Capacity To Ship Packages Within D Days (MEDIUM)

Topics: Array, Binary Search

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/capacity-to-ship-packages-within-d-days>

Roman to Integer (EASY)

Topics: Hash Table, Math, String

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/roman-to-integer>

Palindrome Number (EASY)

Topics: Math

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/palindrome-number>

Maximum Subarray (MEDIUM)

Topics: Array, Divide and Conquer, Dynamic Programming

Solution: Use Kadane's algorithm to track max subarray sum ending at each index.

Link: <https://leetcode.com/problems/maximum-subarray>

Word Search (MEDIUM)

Topics: Array, String, Backtracking, Depth-First Search, Matrix

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/word-search>

Edit Distance (MEDIUM)

Topics: String, Dynamic Programming

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/edit-distance>

Kth Largest Element in an Array (MEDIUM)

Topics: Array, Divide and Conquer, Sorting, Heap (Priority Queue), Quickselect

Solution: Use a Min-Heap of size k to track k largest elements.

Link: <https://leetcode.com/problems/kth-largest-element-in-an-array>

Minimum Equal Sum of Two Arrays After Replacing Zeros (MEDIUM)

Topics: Array, Greedy

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/minimum-equal-sum-of-two-arrays-after-replacing-zeros>

Majority Element (EASY)

Topics: Array, Hash Table, Divide and Conquer, Sorting, Counting

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/majority-element>

Maximum Profit in Job Scheduling (HARD)

Topics: Array, Binary Search, Dynamic Programming, Sorting

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/maximum-profit-in-job-scheduling>

Contains Duplicate (EASY)

Topics: Array, Hash Table, Sorting

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/contains-duplicate>

Product of Array Except Self (MEDIUM)

Topics: Array, Prefix Sum

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/product-of-array-except-self>

Combination Sum (MEDIUM)

Topics: Array, Backtracking

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/combination-sum>

Container With Most Water (MEDIUM)

Topics: Array, Two Pointers, Greedy

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/container-with-most-water>

Number of Provinces (MEDIUM)

Topics: Depth-First Search, Breadth-First Search, Union Find, Graph

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/number-of-provinces>

Reverse Integer (MEDIUM)

Topics: Math

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/reverse-integer>

Single Number (EASY)

Topics: Array, Bit Manipulation

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/single-number>

Pascal's Triangle (EASY)

Topics: Array, Dynamic Programming

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/pascals-triangle>

Min Cost Climbing Stairs (EASY)

Topics: Array, Dynamic Programming

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/min-cost-climbing-stairs>

Word Search II (HARD)

Topics: Array, String, Backtracking, Trie, Matrix

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/word-search-ii>

Next Greater Element I (EASY)

Topics: Array, Hash Table, Stack, Monotonic Stack

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/next-greater-element-i>

Analyze User Website Visit Pattern (MEDIUM)

Topics: Array, Hash Table, Sorting

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/analyze-user-website-visit-pattern>

Sliding Window Maximum (HARD)

Topics: Array, Queue, Sliding Window, Heap (Priority Queue), Monotonic Queue

Solution: Use a deque to maintain max in current window of size k.

Link: <https://leetcode.com/problems/sliding-window-maximum>

Word Ladder (HARD)

Topics: Hash Table, String, Breadth-First Search

Solution: Use BFS starting from beginWord to find the shortest transformation to endWord.

Link: <https://leetcode.com/problems/word-ladder>

Valid Sudoku (MEDIUM)

Topics: Array, Hash Table, Matrix

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/valid-sudoku>

Integer to English Words (HARD)

Topics: Math, String, Recursion

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/integer-to-english-words>

Course Schedule II (MEDIUM)

Topics: Depth-First Search, Breadth-First Search, Graph, Topological Sort

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/course-schedule-ii>

Pacific Atlantic Water Flow (MEDIUM)

Topics: Array, Depth-First Search, Breadth-First Search, Matrix

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/pacific-atlantic-water-flow>

Jump Game (MEDIUM)

Topics: Array, Dynamic Programming, Greedy

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/jump-game>

Validate Binary Search Tree (MEDIUM)

Topics: Tree, Depth-First Search, Binary Search Tree, Binary Tree

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/validate-binary-search-tree>

Sudoku Solver (HARD)

Topics: Array, Hash Table, Backtracking, Matrix

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/sudoku-solver>

Find the Duplicate Number (MEDIUM)

Topics: Array, Two Pointers, Binary Search, Bit Manipulation

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/find-the-duplicate-number>

String Compression (MEDIUM)

Topics: Two Pointers, String

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/string-compression>

Course Schedule (MEDIUM)

Topics: Depth-First Search, Breadth-First Search, Graph, Topological Sort

Solution: Use Topological Sort to check if graph (courses) has a cycle.

Link: <https://leetcode.com/problems/course-schedule>

Maximize Distance to Closest Person (MEDIUM)

Topics: Array

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/maximize-distance-to-closest-person>

Spiral Matrix (MEDIUM)

Topics: Array, Matrix, Simulation

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/spiral-matrix>

Magnetic Force Between Two Balls (MEDIUM)

Topics: Array, Binary Search, Sorting

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/magnetic-force-between-two-balls>

Happy Number (EASY)

Topics: Hash Table, Math, Two Pointers

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/happy-number>

Convert Sorted Array to Binary Search Tree (EASY)

Topics: Array, Divide and Conquer, Tree, Binary Search Tree, Binary Tree

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/convert-sorted-array-to-binary-search-tree>

Distribute Candies Among Children II (MEDIUM)

Topics: Math, Combinatorics, Enumeration

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/distribute-candies-among-children-ii>

Find Eventual Safe States (MEDIUM)

Topics: Depth-First Search, Breadth-First Search, Graph, Topological Sort

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/find-eventual-safe-states>

Combinations (MEDIUM)

Topics: Backtracking

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/combinations>

Design Parking System (EASY)

Topics: Design, Simulation, Counting

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/design-parking-system>

Divisible and Non-divisible Sums Difference (EASY)

Topics: Math

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/divisible-and-non-divisible-sums-difference>

Rotate List (MEDIUM)

Topics: Linked List, Two Pointers

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/rotate-list>

Largest Rectangle in Histogram (HARD)

Topics: Array, Stack, Monotonic Stack

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/largest-rectangle-in-histogram>

Design In-Memory File System (HARD)

Topics: Hash Table, String, Design, Trie, Sorting

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/design-in-memory-file-system>

Decode String (MEDIUM)

Topics: String, Stack, Recursion

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/decode-string>

Binary Tree Level Order Traversal (MEDIUM)

Topics: Tree, Breadth-First Search, Binary Tree

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/binary-tree-level-order-traversal>

Subarray Sum Equals K (MEDIUM)

Topics: Array, Hash Table, Prefix Sum

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/subarray-sum-equals-k>

Count Zero Request Servers (MEDIUM)

Topics: Array, Hash Table, Sliding Window, Sorting

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/count-zero-request-servers>

K Closest Points to Origin (MEDIUM)

Topics: Array, Math, Divide and Conquer, Geometry, Sorting, Heap (Priority Queue), Quickselect

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/k-closest-points-to-origin>

Evaluate Division (MEDIUM)

Topics: Array, String, Depth-First Search, Breadth-First Search, Union Find, Graph, Shortest Path

Solution: Solution summary not available.

Link: <https://leetcode.com/problems/evaluate-division>