Mastering the Coding Interview (Big Tech) - Course Outline

zerotomastery.io

Arrays

Question #1 Google Interview Question Two Sum (Easy)

- Two Sum Leetcode Question
- Brute Force Solution Code Repl
- Optimal Solution Code Repl

Question #2 Container With Most Water (Medium)

- Container With Most Water Leetcode Question
- Brute Force Solution Code Repl
- Optimal Solution Code Repl

Question #3 Trapping Rainwater (Hard)

- Trapping Rainwater Leetcode Question
- Brute Force Solution Code Repl
- Optimal Solution Code Repl

Strings

Question #4 Backspace String Compare (Easy)

- Typed Out Strings Leetcode Question
- Brute Force Solution Code Repl
- Optimal Solution Code Repl

Question #5 Longest Substring Without Repeating Characters (Medium)

- Longest Substring Without Repeating Characters Leetcode Question
- Brute Force Solution Code Repl
- Optimal Solution Code Repl

Palindromes

Question #6a Valid Palindrome(Easy)

- Valid Palindrome Leetcode Question
- Solution #1 - Two Pointers From The Center Solution
- Solution #2 - Two Pointers From The Outside Solution
- Solution #3 - Compare Against Reverse Solution

Question #6b Almost Palindrome (Easy)

- Almost Palindrome Leetcode Question
- Final Code Solution Repl

Linked Lists

Basic Algorithm - Reverse Linked List

- Code Solution Repl

Question #7 M, N Reversals (Medium)

- M, N Reversals Leetcode Question
- Code Solution Repl

Doubly Linked Lists

Question #8 Merge Multi-Level Doubly Linked List (Medium)

- Merge Multi-Level Doubly Linked List Leetcode Question
- Code Solution Repl

Question #9 Cycle Detection (Medium)

- Cycle Detection Leetcode Question
- Floyd's Tortoise and Hare Algorithm Code Repl
- Code solution with Set Object Code Repl

Stacks

Question #10 Valid Parentheses (Easy)

- Valid Parentheses Leetcode Question
- Code Solution Repl

Question #11 Minimum Brackets To Remove To Make Valid (Medium)

- Minimum Brackets To Remove To Make Valid Leetcode Question
- Code Solution Repl

Queues

Question #12 Implement Queue With Stacks (Easy)

- Implement Queue With Stacks Leetcode Question
- Code Solution Repl

Recursion

Sorting
Question #13 Kth Largest Element (Medium)
- Kth Largest Element Leetcode Question
- Quicksort Solution Repl
- Hoare's QuickSelect Solution Repl

Binary Search
Question #14 Start And End Of Target (Medium)
- Start And End Of Target Leetcode Question
- Code Solution Repl

Binary Trees

Question #15 Maximum Depth Of Binary Tree (Easy)
- Maximum Depth Of Binary Tree Leetcode Question
- Code Solution Repl

Question #16 Level Order Of Binary Tree (Medium)
- Level Order Of Binary Tree Leetcode Question
- Code Solution Repl

Question #17 Right Side View of Tree (Medium)
- Right Side View of Tree Leetcode Question
- BFS Solution Code Repl
- DFS Solution Code Repl

Full And Complete Binary Trees
Question #18 Number Of Nodes In Complete Tree (Medium)
- Number Of Nodes In Complete Tree Leetcode Question
- Code Solution Repl

Binary Search Trees
Question #19 Validate Binary Search Tree (Medium)
- Validate Binary Search Tree Leetcode Question
- Code Solution Repl

Heaps & Priority Queues

Max Heap/ Priority Queue
- Max Heap/ Priority Queue Code Repl

2D-Arrays

Traversals
DFS in 2D-Arrays
- DFS Code Repl

BFS in 2D-Arrays
- BFS Code Repl

Question #20 Number Of Islands (Medium)
- Number Of Islands Leetcode Question
- BFS Solution Code Repl
- DFS Solution Code Repl

Question #21 Rotting Oranges (Medium)
- Rotting Oranges Leetcode Question
- Code Solution Repl

Question #22 Walls And Gates (Medium)
- Walls And Gates Leetcode Question (Subscription Required)
- Code Solution Repl

Graphs

BFS Graph Traversal
- Adjacency List BFS Code Repl
- Adjacency Matrix BFS Code Repl

DFS Graph Traversals
- Adjacency List DFS Code Repl
- Adjacency Matrix DFS Code Repl

Question #23 Time Needed To Inform All Employees (Medium)
- Time Needed To Inform All Employees Leetcode Question
- Code Solution Repl

Question #24 Course Scheduler (Medium)

- Course Scheduler Leetcode Question
- Naive BFS Solution Code Repl
- Topological Sort Solution With Adjacency List Code Repl
- Optimal Topological Sort Solution (No Adjacency List) Code Repl
- Optimal Topological Sort Solution Modified To Return Order Code Repl

Question #25 Network Time Delay (Medium)

- Network Time Delay Leetcode Question
- Dijkstra's Algorithm Solution Code Repl
- Bellman-Ford Solution Code Repl

Dynamic Programming

Question #26 Minimum Cost Of Climbing Stairs (Easy)

- Minimum Cost Of Climbing Stairs Leetcode Question
- Top Down Recursive Solution Code Repl
- Top Down With Memoization Solution Code Repl
- Bottom Up Iterative Solution Code Repl
- Bottom Up Optimized Solution Code Repl

Question #27 Knight Probability In Chessboard (Medium)

- Knight Probability In Chessboard Leetcode Question
- Top Down Recursive Solution Code Repl
- Top Down With Memoization Solution Code Repl
- Bottom Up Iterative Solution Code Repl
- Bottom Up Optimized Solution Code Repl

Back Tracking

Question #28 Sudoku Solver (Hard)

- Sudoku Solver Leetcode Question
- Backtracking Solution Code Repl

Additional Backtracking Problems:
Palindrome Partitioning (Medium)

- Palindrome Partitioning Leetcode Question
- Backtracking Solution Code Repl

N-Queens (Hard)

- N-Queens Leetcode Question
- Backtracking Solution Code Repl

Interface Design

Question #29 Monarchy (Medium)

- Monarchy Implementation Code Repl

Tries

Question #30 Implement Prefix Trie (Medium)

- Implement Prefix Trie Leetcode Question
- Trie Class Implementation Code Repl