Array Problems

1. **Two Sum**
    - Commonly asked in beginner-level interviews.
    - Frequent Companies: Amazon, Google, Microsoft.
2. **Best Time to Buy and Sell Stock**
    - A good beginner-level problem to understand array traversal.
    - Frequent Companies: Facebook, Bloomberg.
3. **Contains Duplicate**
    - Simple and frequently asked to test hash table skills.
    - Frequent Companies: Apple, Yahoo.
4. **Product of Array Except Self**
    - Slightly tricky due to constraints of "no division" and optimizing space complexity.
    - Frequent Companies: Amazon, LinkedIn.

String Problems

1. **Valid Parentheses**
    - Often used to test stack operations and logical reasoning.
    - Frequent Companies: Facebook, Bloomberg.
2. **Implement strStr() / Find the index of the First Occurrence in a string**
    - A beginner-level problem to test substring search and string traversal.
    - Frequent Companies: Microsoft, Adobe.

Linked List Problems

- **Remove Duplicates from Sorted List**
    - Given the head of a sorted linked list, delete all duplicates so that each element appears only once.
    - **Frequent Companies**: Microsoft, Amazon.
- **Merge Two Sorted Lists**
    - Merge two sorted linked lists into one sorted list.
    - **Frequent Companies**: Facebook, Google.
- **Linked List Cycle**
    - Determine if a linked list contains a cycle.
    - **Frequent Companies**: Amazon, Bloomberg.
- **Add Two Numbers**
    - Given two non-empty linked lists representing non-negative integers, add the numbers and return the sum as a linked list.
    - **Frequent Companies**: Microsoft, Apple.
- **Remove Nth Node From End of List**
    - Remove the nth node from the end of the list and return the head.

- **Frequent Companies**: Facebook, LinkedIn.

Stack Problems

1. **Valid Parentheses**
   - Given a string containing just the characters `'('`, `')'`, `'{'`, `'}'`, `'['` and `']'`, determine if the input string is valid.
   - **Frequent Companies**: Facebook, Bloomberg, Amazon.

Queue Problems

1. **Implement Queue using Stacks**
   - Implement a queue using two stacks.
   - **Frequent Companies**: Amazon, Google.

More

Product of Array Except Self

- Slightly tricky due to constraints of "no division" and optimizing space complexity.
- Frequent Companies: Amazon, LinkedIn.

Maximum Subarray

- Involves dynamic programming (Kadane's Algorithm).
- Frequent Companies: Microsoft, Adobe.

Longest Substring Without Repeating Characters

- A bit tricky for beginners due to sliding window logic.
- Frequent Companies: Amazon, Google, Microsoft.

Reorder List

- Rearrange a given linked list by altering the order of its nodes (e.g., first, last, second, second last, etc.).
- **Frequent Companies**: Amazon, Google.

Merge k Sorted Lists

- Merge kkk sorted linked lists into one sorted list.
- **Frequent Companies**: Google, Amazon.

Reverse Nodes in k-Group

- Reverse the nodes of a linked list kkk at a time and return the modified list.
- **Frequent Companies**: Microsoft, Facebook.

Copy List with Random Pointer

- Create a deep copy of a linked list where each node contains an additional random pointer that can point to any node in the list or null.
- **Frequent Companies**: Amazon, Bloomberg.

Next Greater Element II

- Given a circular array, find the next greater number for each element.
- **Frequent Companies**: Google, Microsoft.

Evaluate Reverse Polish Notation

- Evaluate the value of an arithmetic expression in reverse Polish notation.
- **Frequent Companies**: Bloomberg, Amazon.

Largest Rectangle in Histogram

- Find the largest rectangle area in a histogram using a stack-based approach.
- **Frequent Companies**: Amazon, Bloomberg.

Daily Temperatures

- Given a list of temperatures, return a list where each element represents the number of days until a warmer temperature.
- **Frequent Companies**: Google, Microsoft.

Remove K Digits

- Given a number represented as a string, remove kkk digits to make it the smallest possible number.
- **Frequent Companies**: Facebook, Microsoft.

Basic Calculator II

- Implement a basic calculator to evaluate a simple string expression containing integers and the operators +,−,∗,/+, -, *, /+,−,∗,/.
- **Frequent Companies**: Amazon, Google.

Trapping Rain Water

- Given an elevation map, compute the amount of water that can be trapped after raining.
- **Frequent Companies**: Amazon, Facebook.

Design Circular Queue

- Design a circular queue with operations for enqueue, dequeue, checking if it's empty/full, etc.
- **Frequent Companies**: Facebook, Microsoft.

Sliding Window Maximum

- Find the maximum element in every sliding window of size kkk in an array.
- **Frequent Companies**: Google, Facebook.

Rotting Oranges

- Given a grid of oranges, determine the minimum time required for all oranges to rot.
- **Frequent Companies**: Amazon, Microsoft.

Course Schedule

Determine if you can finish all courses given prerequisites using a topological sort (queue-based BFS).

- **Frequent Companies**: Facebook, Amazon.

Task Scheduler

- Find the minimum time required to complete all tasks given cooldown periods between the same tasks.
- **Frequent Companies**: Microsoft, Google.

Perfect Squares

- Given an integer nnn, return the least number of perfect square numbers that sum to nnn.
- **Frequent Companies**: Google, Amazon.

Shortest Path in Binary Matrix

- Find the shortest path from the top-left to the bottom-right of a binary matrix using BFS.
- **Frequent Companies**: Microsoft, Google.

Design Front Middle Back Queue

- Implement a queue with operations to add or remove elements from the front, middle, or back of the queue.
- **Frequent Companies**: Facebook, Bloomberg.

String to Integer (atoi)

- Tests edge case handling and parsing strings.
- Frequent Companies: Amazon, LinkedIn.

Longest Palindromic Substring

- Requires understanding dynamic programming or expand-around-center techniques.
- Frequent Companies: Apple, Yahoo.

Number of Recent Calls (Moving Average)

- Implement a data structure to calculate the number of recent calls within a given time range.
- **Frequent Companies**: Amazon, Bloomberg.

Next Greater Element I

- Find the next greater number for every element in an array based on another array.
- **Frequent Companies**: Google, Apple.

Min Stack

- Design a stack that supports push, pop, top, and retrieving the minimum element in constant time.
- **Frequent Companies**: Microsoft, Google.