**ARRAY**

**1. 3Sum**

* **Problem:** Given an integer array nums, return all unique triplets [nums[i], nums[j], nums[k]] such that i != j != k and nums[i] + nums[j] + nums[k] == 0.
* **Difficulty:** Medium
* **Link:** 3Sum
* **Concepts Tested:** Sorting, Two-pointer technique, Hashing

**2. Subarray Sum Equals K**

* **Problem:** Given an array of integers nums and an integer k, return the total number of continuous subarrays whose sum equals to k.
* **Difficulty:** Medium
* **Link:** Subarray Sum Equals K
* **Concepts Tested:** Prefix Sum, HashMap, Sliding Window

**3. Product of Array Except Self**

* **Problem:** Given an array nums of n integers where n > 1, return an array such that each element at index i is the product of all the numbers in the array except the one at i.
* **Difficulty:** Medium
* **Link:** Product of Array Except Self
* **Concepts Tested:** Prefix and Suffix Arrays, Division (if allowed), Two-pass solution

**4. Maximum Subarray (Kadane's Algorithm)**

* **Problem:** Given an integer array nums, find the contiguous subarray (containing at least one number) which has the largest sum and return its sum.
* **Difficulty:** Medium
* **Link:** Maximum Subarray
* **Concepts Tested:** Dynamic Programming, Kadane's Algorithm

**5. Container With Most Water**

* **Problem:** Given n non-negative integers a1, a2, ..., an where each represents a point at coordinate (i, ai), find two lines that together with the x-axis form a container, such that the container contains the most water.
* **Difficulty:** Medium
* **Link:** Container With Most Water
* **Concepts Tested:** Two-pointer technique, Greedy Approach

**STRING**

**1. Longest Substring Without Repeating Characters**

* **Problem:** Given a string s, find the length of the longest substring without repeating characters.
* **Difficulty:** Medium
* **Link:** Longest Substring Without Repeating Characters
* **Concepts Tested:** Sliding window, HashMap, Two pointers

**2. Valid Anagram**

* **Problem:** Given two strings s and t, return true if t is an anagram of s and false otherwise.
* **Difficulty:** Medium
* **Link:** Valid Anagram
* **Concepts Tested:** HashMap, Sorting, Frequency count

**3. Group Anagrams**

* **Problem:** Given an array of strings, group the anagrams together. You can return the answer in any order.
* **Difficulty:** Medium
* **Link:** Group Anagrams
* **Concepts Tested:** Hashing, Sorting, HashMap

**4. Longest Palindromic Substring**

* **Problem:** Given a string s, return the longest palindromic substring in s.
* **Difficulty:** Medium
* **Link:** Longest Palindromic Substring
* **Concepts Tested:** Dynamic Programming, Expand Around Center, Sliding window

**5. String to Integer (atoi)**

* **Problem:** Implement the myAtoi(string s) function, which converts a string to a 32-bit signed integer, handling leading whitespace, sign, and numeric characters while ignoring non-numeric characters.
* **Difficulty:** Medium
* **Link:** String to Integer (atoi)
* **Concepts Tested:** String manipulation, Handling edge cases, Handling overflow and underflow