A close up of a sign

AI-generated content may be incorrect.

**Department of Computer Science and Engineering**

**Lab Name:** Coding Lab Practice **Semester:** III Sem

**Programming Language:** C, C++

**Course Objectives:**

1. Apply fundamental programming constructs such as loops, conditionals, and functions to solve basic computational problems.
2. Analyze problems involving numbers, arrays, strings, and matrices to develop structured and efficient logic.
3. Implement suitable problem-solving strategies using standard techniques like stack, queue, and two-pointer approaches.
4. Evaluate and improve the performance of code solutions through testing, debugging, and optimization techniques.

**Week-1: Bit Manipulation**

1. Reverse Integer  **Easy**

**Link:** https://leetcode.com/problems/reverse-bits/description/

1. Number of 1 bits **Easy**

**Link:** https://leetcode.com/problems/number-of-1-bits/description/

1. Counting Bits  **Easy**

**Link:** https://leetcode.com/problems/counting-bits/description/

1. Bitwise And of Numbers Range **Medium**

**Link:** <https://leetcode.com/problems/bitwise-and-of-numbers-range/description/>

**Week-2: Working with Numbers and Loops**

1. Self-Dividing Numbers **Easy**

**Link:** <https://leetcode.com/problems/self-dividing-numbers/description/>

1. Palindrome Number **Easy**

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

1. Fibonacci Number **Easy**

**Link:** https://leetcode.com/problems/fibonacci-number/description/

1. Reverse Integer **Medium**

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

**Week-3: Continuation…**

1. Find the Key of the Numbers  **Easy**

**Link:** <https://leetcode.com/problems/find-the-key-of-the-numbers/description/>

1. Closest Prime Numbers **Medium**

**Link:** https://leetcode.com/problems/closest-prime-numbers-in-range/description/

1. Count Numbers with Unique Digits **Medium**

**Link:** <https://leetcode.com/problems/count-numbers-with-unique-digits/description/>

**Week-4: Working with Arrays**

1. Sum of Good Numbers **Easy**

**Link:** <https://leetcode.com/problems/sum-of-good-numbers/description/>

1. Missing Number **Easy**

**Link:** <https://leetcode.com/problems/missing-number/description/>

1. Maximum Product of three numbers **Easy**

Link: <https://leetcode.com/problems/maximum-product-of-three-numbers/description/>

**Week-5: Continuation…**

1. Plus One **Easy**

**Link:** <https://leetcode.com/problems/plus-one/?envType=problem-list-v2&envId=array>

1. Finding 3 Digit Even Numbers **Easy**

**Link:** <https://leetcode.com/problems/finding-3-digit-even-numbers/description/>

1. Remove Duplicates from Sorted Array **Easy**

**Link:** <https://leetcode.com/problems/remove-duplicates-from-sorted-array/description/?envType=problem-list-v2&envId=array>

**Week-6: Working with Matrix**

1. Lucky Number in a Matrix **Easy**

**Link:** <https://leetcode.com/problems/lucky-numbers-in-a-matrix/description/>

1. Number of Islands **Hard**

**Link:** https://leetcode.com/problems/number-of-islands/description/?envType=problem-list-v2&envId=array

**Week-7: Working with String**

1. Find the index of the first occurrence in a String **Easy**

**Link:** <https://leetcode.com/problems/find-the-index-of-the-first-occurrence-in-a-string/description/?envType=problem-list-v2&envId=string>

1. Length of the Last Word **Easy**

**Link:** <https://leetcode.com/problems/length-of-last-word/description/?envType=problem-list-v2&envId=string>

1. Valid Palindrome **Easy**

**Link:** https://leetcode.com/problems/valid-palindrome/description/?envType=problem-list-v2&envId=string

**Week-8: Continuation…**

1. Reverse Vowels of a String **Easy**

**Link:** <https://leetcode.com/problems/reverse-vowels-of-a-string/description/?envType=problem-list-v2&envId=string>

1. Excel Sheet Column Number **Easy**

**Link:** <https://leetcode.com/problems/excel-sheet-column-number/description/?envType=problem-list-v2&envId=string>

1. Restore IP Address **Medium**

Link: <https://leetcode.com/problems/restore-ip-addresses/description/?envType=problem-list-v2&envId=string>

**Week-9: Continuation…**

1. Find First Unique Character in a String **Easy**

**Link:** <https://leetcode.com/problems/first-unique-character-in-a-string/description/?envType=problem-list-v2&envId=string>

1. Valid Anagram **Easy**

**Link:** <https://leetcode.com/problems/valid-anagram/description/?envType=problem-list-v2&envId=string>

1. Reverse Words in a String **Medium**

Link: https://leetcode.com/problems/reverse-words-in-a-string/description/?envType=problem-list-v2&envId=string

**Week-10: Working with Stack and Queue**

1. Number of Recent Calls **Easy**

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

calls/description/?envType=study-plan-v2&envId=leetcode-75

1. Remove Starts from a String **Medium**

Link: https://leetcode.com/problems/removing-stars-from-a-string/description/?envType=study-plan-v2&envId=leetcode-75

**Week-11: Prefix Sum**

1. Finding the Highest Altitude **Easy**

**Link:** <https://leetcode.com/problems/find-the-highest-altitude/description/?envType=study-plan-v2&envId=leetcode-75>

1. Find Pivot Index **Medium**

**Link:** https://leetcode.com/problems/find-pivot-index/description/?envType=study-plan-v2&envId=leetcode-75

**Week-12: Working Two Pointer**

1. Move Zeroes  **Easy**

**Link:** https://leetcode.com/problems/move-zeroes/description/?envType=study-plan-v2&envId=leetcode-75

1. Container with Most Water **Hard**

**Link:** <https://leetcode.com/problems/container-with-most-water/description/?envType=study-plan-v2&envId=leetcode-75>

**Problem Difficulty Level Distribution**

|  |  |  |  |
| --- | --- | --- | --- |
| **Easy** | **Medium** | **Hard** | **Total** |
| 24 | 8 | 2 | 34 |