

1. Convert a Roman Numeral to an Integer

Problem Statement:

Write a function that converts a Roman numeral string into an integer.

Example Inputs & Outputs:

1. Input: "XII" → Output: 12
2. Input: "IX" → Output: 9
3. Input: "MCMXCIV" → Output: 1994

Suggestions to Solve:

- Use a hash map (object) to store Roman numeral values.
 - Iterate through the string and compare the current character with the next one.
 - If the current value is smaller than the next, subtract it; otherwise, add it.
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2. Move All Zeros to the End of an Array

Problem Statement:

Write a function that moves all zeros in an array to the end while maintaining the order of non-zero elements.

Example Inputs & Outputs:

1. Input: [0, 1, 0, 3, 12] → Output: [1, 3, 12, 0, 0]
2. Input: [0, 0, 1, 0, 5] → Output: [1, 5, 0, 0, 0]
3. Input: [4, 2, 0, 0, 1] → Output: [4, 2, 1, 0, 0]

Suggestions to Solve:

- Use filter() to extract non-zero elements.
- Count the number of zeros and append them at the end.
- Alternatively, use a two-pointer approach to swap elements in place.

3. Generate All Substrings of a Given String

Problem Statement:

Write a function that generates all possible substrings of a given string.

Example Inputs & Outputs:

1. Input: "abc" → Output: ["a", "ab", "abc", "b", "bc", "c"]
2. Input: "dog" → Output: ["d", "do", "dog", "o", "og", "g"]
3. Input: "xy" → Output: ["x", "xy", "y"]

Suggestions to Solve:

- Use nested loops to generate substrings.
 - The outer loop picks the starting character, and the inner loop extends the substring.
 - Store each substring in an array and return it.
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React To-Do List Question (CRUD)

Question:

Create a simple To-Do List app using React that allows users to:

- **Add** a new to-do item
- **Edit** an existing to-do item
- **Delete** a to-do item

Requirements:

- Use React state (`useState`) to manage the list of to-dos.
- Implement a form to add new tasks.
- Each task should have an edit and delete button.
- Use conditional rendering to show an input field for editing when the user clicks "Edit".
- Ensure the UI updates when tasks are added, updated, or removed.