

## **Week 15- Day 4 : Coding Challenge**

(Maximum marks -15)

**Q-1 )** Minimum Moves to Equal Array Elements

<https://leetcode.com/problems/minimum-moves-to-equal-array-elements/>

**(5 marks)**

(Easy)

Given an integer array `nums` of size `n`, return *the minimum number of moves required to make all array elements equal*.

In one move, you can increment `n - 1` elements of the array by 1.

Example 1:

Input: `nums = [1,2,3]`

Output: 3

Explanation: Only three moves are needed (remember each move increments two elements):

`[1,2,3] => [2,3,3] => [3,4,3] => [4,4,4]`

**Q-2) Longest Substring Without Repeating Characters**

**(5 marks)**

<https://leetcode.com/problems/longest-substring-without-repeating-characters/>

(Medium)

Given a string `s`, find the length of the longest substring without repeating characters.

Example 1:

Input: `s = "abcabcbb"`

Output: 3

Explanation: The answer is "abc", with the length of 3.

Example 2:

Input: `s = "bbbbbb"`

Output: 1

Explanation: The answer is "b", with the length of 1.

### Q-3) Minimum Operations to Reduce X to Zero

(5 marks)

<https://leetcode.com/problems/minimum-operations-to-reduce-x-to-zero/>

(Medium)

You are given an integer array `nums` and an integer `x`. In one operation, you can either remove the leftmost or the rightmost element from the array `nums` and subtract its value from `x`. Note that this modifies the array for future operations.

Return the minimum number of operations to reduce  $x$  to exactly 0 if it is possible, otherwise, return -1.

Example 1:

Input:  $\text{nums} = [1, 1, 4, 2, 3]$ ,  $x = 5$

Output: 2

Explanation: The optimal solution is to remove the last two elements to reduce  $x$  to zero.

**Marks distribution:**

Question 1, 2 and 3 carry 5 marks each.