Week 10- Day 2 : Coding Challenge

(Maximum marks -15)

Q-1)Find the Duplicate Number:

https://leetcode.com/problems/find-the-duplicate-number/

(Solve the above using both the approaches discussed in class) and comment on time
complexity.

:(5 marks)

Given an array of integers `nums` containing `n + 1` integers where each integer is in the range `[1, n]` inclusive.

There is only one repeated number in `nums`, return *this repeated number*.

You must solve the problem without modifying the array `nums` and uses only constant extra space.

Example 1:

Input: nums = [1,3,4,2,2]
Output: 2

Q-2)Sum of Unique Elements:

https://leetcode.com/problems/sum-of-unique-elements/

(5 marks)

You are given an integer array `nums`. The unique elements of an array are the elements that appear exactly once in the array.

Return *the sum of all the unique elements of* `nums`.

Example 1:

Input: nums = [1,2,3,2]
Output: 4

Explanation: The unique elements are [1,3], and the sum is 4.

Q-3) Longest Common Prefix:
https://leetcode.com/problems/longest-common-prefix/submissions/
(5 marks)

Write a function to find the longest common prefix string amongst an array of strings.

If there is no common prefix, return an empty string `""`.

Example 1:

Input: strs = ["flower","flow","flight"]
Output: "fl"

Marks distribution:
Questions 1,2 and 3 carry 5 marks each.