Week 9- Day 3 : Coding Challenge

(Maximum marks -15)

Q-1) Intersection of Two Arrays

https://leetcode.com/problems/intersection-of-two-arrays/submissions/

(5 marks)

Given two integer arrays `nums1` and `nums2`, return *an array of their intersection*. Each element in the result must be unique and you may return the result in any order.

Example 1:

Input: nums1 = [1,2,2,1], nums2 = [2,2]
Output: [2]

Q-2) Merge Sorted Array

https://leetcode.com/problems/merge-sorted-array/

(5 marks)

You are given two integer arrays `nums1` and `nums2`, sorted in non-decreasing order, and two integers `m` and `n`, representing the number of elements in `nums1` and `nums2` respectively.

Merge `nums1` and `nums2` into a single array sorted in non-decreasing order.

The final sorted array should not be returned by the function, but instead be *stored inside the array* `nums1`. To accommodate this, `nums1` has a length of `m + n`, where the first `m` elements denote the elements that should be merged, and the last `n` elements are set to `0` and should be ignored. `nums2` has a length of `n`.

Example 1:

Input: nums1 = [1,2,3,0,0,0], m = 3, nums2 = [2,5,6], n = 3
Output: [1,2,2,3,5,6]
Explanation: The arrays we are merging are [1,2,3] and [2,5,6].
The result of the merge is [1,2,2,3,5,6] with the underlined elements coming from nums1.

Q-3) Sort Colors
https://leetcode.com/problems/sort-colors/submissions/
(5 marks)

Given an array `nums` with `n` objects colored red, white, or blue, sort them in-place so that objects of the same color are adjacent, with the colors in the order red, white, and blue.

We will use the integers `0`, `1`, and `2` to represent the color red, white, and blue, respectively.

You must solve this problem without using the library's sort function.

Example 1:

Input: nums = [2,0,2,1,1,0]
Output: [0,0,1,1,2,2]