Course Code: CSA0886	**Course Name:** Python Programming for Crafting Web Applications	
Branch: CSE	**Slot:** A	**Date:** 09/07/2024 (02.00 - 03.00)

Class Test 2

Q. No.	Question
1	Given an integer array nums, return the third distinct maximum number in this array. If the third maximum does not exist, return the maximum number. **Test Case 1:** **Input:** nums = [3,2,1] **Output:** 1 **Test Case 2:** **Input:** nums = [1,2] **Output:** 2
2	Given an array nums of n integers where nums[i] is in the range [1, n], return an array of all the integers in the range [1, n] that do not appear in nums. **Test Case 1:** **Input:** nums = [4,3,2,7,8,2,3,1] **Output:** [5,6] **Test Case 2:** **Input:** nums = [1,1] **Output:** [2]
3	The Hamming distance between two integers is the number of positions at which the corresponding bits differ. Given two integers x and y, return the Hamming distance between them. **Test Case 1:** **Input:** x = 1, y = 4 **Output:** 2 **Test Case 2:** **Input:** x = 3, y = 1 **Output:** 1
4	The complement of an integer is the integer you get when you flip all the 0's to 1's and all the 1's to 0's in its binary representation. Given an integer num, return its complement. **Test Case 1:** **Input:** num = 5 **Output:** 2 **Test Case 2:** **Input:** num = 1 **Output:** 0
5	Given a binary array nums, return the maximum number of consecutive 1's in the array. **Test Case 1:** **Input:** nums = [1,1,0,1,1,1] **Output:** 3 **Test Case 2:** **Input:** nums = [1,0,1,1,0,1] **Output:** 2