SAVEETHA
INSTITUTE OF MEDICAL AND TECHNICAL SCIENCES
(Declared as Deemed to be University under Section 3 of UGC Act 1956)

Course Code: CSA0886	**Course Name:** Python Programming for Crafting Web Applications	
Branch: CSE	**Slot:** A	**Date:** 17/07/2024

Session : 09.30 to 11.00

P. No.	Program
1	Given an integer array of nums and an integer value, remove all occurrences of val in nums in place. The order of the elements may be changed. Then, return the number of elements in nums that are not equal to value. Consider the number of elements in nums which are not equal to val be k, to get accepted, you need to do the following things: Change the array nums such that the first k elements of nums contain the elements which are not equal to val. The remaining elements of nums are not essential, nor is the size of nums. Return k. **Test Case 1:** **Input:** nums = [3,2,2,3], val = 3 **Output:** 2, nums = [2,2,_,_] **Test Case 2:** **Input:** nums = [0,1,2,2,3,0,4,2], val = 2 **Output:** 5, nums = [0,1,4,0,3,_,_,_]
2	Given two strings, needle and haystack, return the index of the first occurrence of needle in a haystack, or -1 if the needle is not part of the haystack. **Test Case 1:** **Input:** haystack = "sadbutsad", needle = "sad" **Output:** 0 **Test Case 2:** **Input:** haystack = "leetcode", needle = "leeto" **Output:** -1
3	Given a sorted array of distinct integers and a target value, return the index if the target is found. If not, return the index where it would be if inserted in order. You must write an algorithm with O(log n) runtime complexity. **Test Case 1:** **Input:** nums = [1,3,5,6], target = 5 **Output:** 2 **Test Case 2:** **Input:** nums = [1,3,5,6], target = 2 **Output:** 1
4	Given a string s consisting of words and spaces, return the length of the last word in the string. A word is a maximal substring consisting of non-space characters only. **Test Case 1:** **Input:** s = "Hello World" **Output:** 5 **Test Case 2:** **Input:** s = " fly me to the moon " **Output:** 4
5	You are given a large integer represented as an integer array of digits, where each digit [i] is the ith digit of the integer. The digits are ordered from most significant to least significant in left-to-right order. The large integer does not contain any leading 0s. Increment the large integer by one and return the resulting array of digits. **Test Case 1:** **Input:** digits = [1,2,3] **Output:** [1,2,4] **Test Case 2:** **Input:** digits = [4,3,2,1] **Output:** [4,3,2,2]