National University of Computer and Emerging Sciences, Lahore Campus

Course:	**PF Lab**	**Course Code:**	**CL1002**
Program:	**BS (Computer Science)**	**Semester:**	**Fall 2022**
Duration:	**120 minutes**	**Total Marks:**	**15**
Paper Date:	**15-Nov-22**	**Weight**	**3 %**
Section:	**1H**	**Page(s):**	**2**
Exam:	**Quiz 2**	**Reg. No.**	

Instruction/Notes: Honesty always gives fruit and Dishonesty is always harmful.

Question#1- [2+3 marks]

Write a function named **countCharacter** which takes three arguments i.e., a 1D char array named as Text, an integer named as Length, and a char named as Character. Your function should return the number of times that Character occurs in the array. You need to set these variables in main function and call **countCharacter** from there.

Sample Cases

Text**:**{'H', 'E', 'L', 'L', O'}

Length**:**5

Character:'E'

Output:

Occurrences of E are: 1

Question#2- [2+3 marks]

Write a function given an array of integers nums [] and an integer target, and display the **indices** of the two numbers such that they add up to target.

You may assume that each input would have exactly one solution, and you may not use the same element twice.

You can return the answer in any order.

voidtwoSum(int nums[], int target)

Example 1:

Input: nums = [2,7,11,15], target = 9

Output: [0,1]

Output: Because nums[0] + nums[1] == 9, we display [0, 1].

Example 2:

Input: nums = [3,2,4], target = 6

Output: [1,2]

Question#3- [2+3 marks]

Given two sorted arrays nums1 and nums2 of size m and n respectively, write a function that return **the median** of the two sorted arrays.

double findMedianSortedArrays(int nums1[], int nums2[]) {

Example 1:

Input: nums1 = [1,3], nums2 = [2]

Output: 2.00000

Explanation: merged array = [1,2,3] and median is 2.

Example 2:

Input: nums1 = [1,2], nums2 = [3,4]

Output: 2.50000

Explanation: merged array = [1,2,3,4] and median is 2.5.

Example 3:

Input: nums1 = [0,0], nums2 = [0,0]

Output: 0.00000