

# **CS101- Introduction to Computing and Programming**

## **Assignment No 4**

### **Topic: Arrays**

**Submission Deadline: 28-December-2021**

1. All the questions should be completed.
2. Plagiarized work will lead to zero marks or as directed in SOP of institute.
3. Follow the format which is shared with you.
4. Write your code on the IDE and share the code and screenshot of program output.
5. Submit your file as hard copy in office.
6. Your assignment will not be accepted after deadline.

**Write C++ program for the following tasks using arrays and functions.**

#### **Task 1 [10]:**

Write a program that asks the user to type 10 integers of an array. The program must compute and write how many integers are greater than or equal to 10.

#### **Task 2 [10]:**

Write a C++ function that multiplies two matrices using arrays. In this program, functions should be used. These two matrices should be taken from the user.

**Task 3 [10]:**

Write a program in C++ to find the transpose of a matrix. Functions and arrays are mandatory to use in this program.

**Task 4 [10]:**

Take an array of length n where all the numbers are nonnegative and unique. Find the element in the array possessing the highest value. Split the element into two parts where first part contains the next highest value in the array and second part hold the required additive entity to get the highest value. Print the array where the highest value gets splitted into those two parts.

Sample input: 4 8 6 3 2

Sample output: 4 6 2 6 3 2

**Task 5 [10]:**

Write a program to print sum, average of all numbers, smallest and largest element of an array. You are required to use separate functions for each part of the program like SUM, AVG, SMALL and LARGE.

**Good Luck!!!**