**Assignment 4**

**Functions**

1. Explain the difference between passing (Value type parameters) by value and by reference then write a suitable c# example.
2. Explain the difference between passing (Reference type parameters) by value and by reference then write a suitable c# example.
3. Write a c# Function that accept 4 parameters from user and return result of summation and subtracting of two numbers
4. Write a program in C# Sharp to create a function to calculate the sum of the individual digits of a given number.

Output should be like

Enter a number: 25

The sum of the digits of the number 25 is: 7

1. Create a function named "IsPrime", which receives an integer number and retuns true if it is prime, or false if it is not:
2. Create a function named MinMaxArray, to return the minimum and maximum values stored in an array, using reference parameters
3. Create an iterative (non-recursive) function to calculate the factorial of the number specified as parameter
4. Create a function named "ChangeChar" to modify a letter in a certain position (0 based) of a string, replacing it with a different letter
5. **. Write a program that prints an identity matrix using for loop, in other words takes a value n from the user and shows the identity table of size n \* n.**
6. **Write a program in C# Sharp to find the sum of all elements of the array.**
7. **21- Write a program in C# Sharp to merge two arrays of the same size sorted in ascending order.**
8. **Write a program in C# Sharp to count the frequency of each element of an array.**
9. **Write a program in C# Sharp to find maximum and minimum element in an array**
10. **Write a program in C# Sharp to find the second largest element in an array.**
11. **Consider an Array of Integer values with size N, having values as**

**in this Example**

| 7 | 0 0 | 0 | 0 | 5 | 6 | 7 | 5 | 0 | 7 | 5 | 3 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

write a program find the longest distance between Two equal cells. In this example. The distance is measured by the number Of cells- for example, the distance between the first and the fourth cell is 2 (cell 2 and cell 3).

In the example above, the longest distance is between the first 7 and the

10th 7, with a distance of 8 cells, i.e. the number of cells between the 1st

And the 10th 7s.

**Note:**

Array values will be taken from the user

If you have input like 1111111 then the distance is the number of

Cells between the first and the last cell.

1. **Given a list of space separated words, reverse the order of the words.**

Input: this is a test Output: test a is this

Input: all your base Output: base your all

Input: Word Output: Word

**Note :**

Check the **Split Function** (Member in String Class) Output will be a Single Console.WriteLine Statement

1. Write a program to create two multidimensional arrays of same size. Accept value from user and store them in first array. Now copy all the elements of first array on second array and print second array.
2. **Write a Program to Print One Dimensional Array in Reverse Order**