# PF Lab # 11
## Arrays & Loops

**NOTE:**

- **Outputs should be properly formatted.**
- **Only for loops are allowed.**
- **Use only do-while loop for input validation.**
- **Failing to follow submission guidelines will result in deduction of absolute 5 MARKS.**

## Problem 01

Declare a character array of size n (n >10) and store the read input in it. Then take a single character from the user and write a code that will display the count of the no. of times that character is repeated in the array.

## Problem 02

You need to declare two dynamic arrays. Input data into these two arrays from the users, both arrays must contain some similar items and some distinct items. Calculate and store the sizes of both the arrays in two different variables. Now, you should display all the elements of both the arrays such that the duplicated values must be printed once.

## Problem 03

Write a program that declares two 2D-Arrays of integers (matrices) having 5 rows and 5 columns.

```
matrix  =   [  -  -  -  -  -
               -  -  -  -  -
               -  -  -  -  -
               -  -  -  -  -
               -  -  -  -  -
            ]
```

● Read the values from the user into the declared matrices like

```
matrix  = [
          6   2  33  17   2
          3   8  31   2  11
```

```
    2   9   4   52  56
   11   8   2   12  22
    3  22   2   11  12
]
```

- Then perform the following operations on the matrices

  - (2 × matrixA) **+** matrixB
  - *transpose*(matrixA) × matrixB

Display the resultant matrices after performing above operations.