Lab – 5 (Arrays)

1. Write a C program to find the **sum and average** of elements in an array.
2. Write a C program to find the **largest and smallest** element in an array.
3. Write a program to **reverse an array**.
4. Write a C program to **sort an array in ascending order** using the Bubble Sort algorithm.
5. Write a C program to perform **matrix addition** using a **2D array**.
6. Write a C program to **find the transpose** of a matrix.
7. Write a C program to **store and display a string** using a character array.
8. Write a C program to count **the number of vowels and consonants** in a given string.
9. Write a C program to **read a string from the user and display it** using gets() and puts().
10. Write a program to **convert a given string to uppercase and lowercase**.
11. Write a C program to demonstrate the use of String library functions:
    1. Strlen()
    2. Strcpy()
    3. Strcat()
    4. Strcmp()
12. Write a C program to **multiply two matrices** and display the result.
13. Write a program to check whether a **given matrix is upper triangular** (all elements below the diagonal are zero).
14. Write a program to check whether a **given matrix is lower triangular** (all elements above the diagonal are zero).
15. Write a program to check whether a **given matrix is an identity matrix** (all diagonal elements are 1, and other elements are 0).
16. Write a program to **find the sum of each row and column** in a matrix.

Deadline = 2025-March-2, Sunday ( 2081-Falgun-18)