

**Department of Computer science and Technology,  
Indian Institute of Engineering, Science and Technology, Shibpur,  
Introduction To Computing Lab**

**Assignment - 4**

1. Write a C program that can store  $n$  elements in an one dimensional array and find the minimum and maximum elements from the set of data items.
2. Write a C program that can compare two input strings are similar or not without using strcmp().
3. Write a C program that takes a string as input and then prints the number of occurrence(s) of each vowel of the English alphabets in the string.
4. Write a c program to check whether a input string is palindrome or not.
5. Write a C program that can capitalize all the letters of a string.
6. write a C program to count number of words in a string.
7. Write a C program that can take two strings as input, concatenate these and store it in another character array and display it.
8. Write a C program that can add two matrices,  $A$  and  $B$  and store the result in another Matrix,  $C$ . Display the result.
9. Write a C program that first reads, row by row, a 2 Dimensional array of size  $n \times n$ , where  $n$  is an input parameter. The program should then determine whether the array just read falls into any of the following special cases:
  - (a) Symmetric,  $A_{ij} = A_{ji}$  for all  $i, j$ .
  - (b) Lower Triangular,  $A_{ij} = 0$  when  $i < j$ .
  - (c) Diagonal,  $A_{ij} = 0$  when  $i \neq j$ .

Also compute the sum of two diagonals