

**Programming using C++**  
**DUCS-MCA**  
**ASSIGNMENT 1**

1. Write a Program to design a class having static member function named showcount() which has the property of displaying the number of objects created of the class.
2. Write a Program using class to process Shopping List for a Departmental Store. The list include details such as the Code No and Price of each item and perform the operations like Adding, Deleting Items to the list and Printing the Total value of Order.
3. Write a Program which creates & uses array of object of a class. for eg. implementing the list of Managers of a Company having details such as Name, Age, etc...).
4. Write a Program to find Maximum out of Two Numbers using friend function.  
Note: Here one number is a member of one class and the other number is member of some other class.
5. Write a Program to swap private data members of classes named as class\_1, class\_2 using friend function.
6. Write a Program to design a class complex to represent complex numbers. The complex class should use an external function (use it as a friend function) to add two complex numbers. The function should return an object of type complex representing the sum of two complex numbers.
7. Write a Program using copy constructor to copy data of an object to another object.
8. Write a Program to allocate memory dynamically for an object of a given class using class's constructor.
9. Write a Program to design a class to represent a matrix. The class should have the functionality to insert and retrieve the elements of the matrix.
10. Write a program to design a class representing complex numbers and having the functionality of performing addition & multiplication of two complex numbers using operator.
11. Write a Program to overload operators like \*, <<, >> using friend function. The following overloaded operators should work for a class vector.
12. Write a program for developing a matrix class which can handle integer matrices of different dimensions. Also overload the operator for addition, multiplication & comparison of matrices.
13. Write a program in C to count the number of Lines, words and characters in a file.
14. Write a C++ program to search for a specific string in a text file and display its line number(s).
15. Write a C++ program to read a CSV file and display its contents in tabular form.