Lab Assignment No. 1

Problem Statement :-Develop an object oriented program in C++ to create a database of student information system containing the following information: Name, Roll number, Class, division, Date of Birth, Blood group, Contact address, telephone number, driving license no. etc Construct the database with suitable member functions viz, static member functions, friend class/ friend function, this pointer, inline code and dynamic memory allocation operators-new and delete. Implement all the keywords as mentioned in the problem statement.

Aim of Assignment:-​ To create an object oriented code for database of student information to understand the concepts of class, objects, friend function/class this pointer, inline ,dynamic memory allocation, static member functions, etc.

OOP Concepts Used :- 1) Class and Objects 2) Friend Class 3) Inline Function 4) Dynamic Memory Allocation(new and delete operators) 5)Static Members 6)this pointer

Other Functionality Used :- 1)getline function

Description :- ​In this program , we have created two arrays of objects of two different classes to store data of student. The object of one class can access the private members of the other class due to friend class functionality. The arrays of the object are been initialised dynamically by using new and delete operators. Default constructor and destructor is used for initialisation of object when it is created. Static members are used for counting the number of records created and the use of this pointer has also been made.

Conclusion :- In this Assignment we learned in depth the 1) use of class and array of objects, 2)use of friend class to access the private members of another class, 3)use of new and delete operators for dynamic memory allocation, 4)use of inline keyword 5)use of this pointer