**ASSIGNMENT NUMBER 1**

**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**:To create a student database by using Object oriented programming concepts.

**DESCRIPTION**:Create a class ‘student’ with friend functions to read and display information from database created .

**OOP CONCEPT USED**:

1. **Friend function**-:A friend function of a class is defined outside that class' scope but it has the right to access all private and protected members of the class.
2. **This pointer**-:In C++, this pointer is used to represent the address of an object inside a member function.
3. **Inline function**-:C++ provides an inline functions to reduce the function call overhead. Inline function is a function that is expanded in line when it is called.
4. **Dynamic memory allocation**-:Dynamic memory allocation in C/C++ refers to performing memory allocation manually by programmer.

C++ supports these functions and also has 2 operators ‘new’ and ‘delete’ that perform the task of allocating and freeing the memory in a better and easier way.

5. **Static Member Function** -:A static member function is a special member function, which is used to access only static data members, any other normal data member cannot be accessed through static member function..

**CONCLUSION**: In this following assignment, we learned the two major or important concept of Object oriented programming language that is use of friend functions and this pointer. We also learned the use of dynamic memory allocation.