**ASSIGNMENT NO:** 2

**PROBLEM STATEMENT:**

Implement a class Complex which represents the Complex Number data type. Implement the following operations: Constructor (including a default constructor which creates the complex number 0+0i), Overloaded operator + to add two complex numbers, Overloaded operator \* to multiply two complex operator, Overloaded << and >> to print and read Complex Numbers.

**AIM OF ASSIGNMENT:**

Program to Represent Complex Number to understand the concept of class and objects, Constructor and Overloaded Operator for addition, multiplication, print and read the Complex Numbers.

**DESCRIPTION:**

In this Program, a class of complex is created in which there is a default constructor to initialize the value of real and imaginary numbers to 0. Then operator overloading functions of input (>>) and output (<<) are created to take input from the user and display the required results. Operator Overloading functions of '+' and '\*' are also used to perform addition and multiplication of complex numbers. Complex Numbers is represented by x+yi, where x and y are any values and i denotes the imaginary part.

**OOP CONCEPT USED:**

* Use of class(private and public access specifiers)
* Member Functions include:

1. Use of Constructor(including Default Constructor)
2. Use of Overloaded Operators ‘+’ & ‘\*’
3. Use of friend ostream and friend istream for overloading the output(<<) and input(>>) operators

* Object Creation of Class

**CONCLUSION:**

Hence, we performed arithmetic operations (including addition and multiplication) on complex numbers and learnt the concept of Class, Objects, Constructor and Operator Overloading.