**ASSIGNMENT NO: 4 (Polymorphism)**

**Problem Statement: Define a class Complex consisting following:**

Data members:

1. real
2. imaginary part

Member Functions:

1. One default constructor
2. Function setComplex () to set the value of real and imaginary part.
3. Function printComplex() to display

and

Four overloaded operator member functions

i. Operator+ to add two complex numbers.

ii. Operator \* to multiply two complex numbers.

iii. Operator – to subtract two complex numbers .

iv. Operator / to divide two complex numbers.

**Objectives:**

1. To learn the concept of polymorphism
2. To learn Operator Overloading in C++
3. To learn Operator Overloading with Friend Function

**Theory:**

Explain following concepts

* + **Operator Overloading (Unary operator & Binary Operator)**
  + **Operator Overloading with Friend Function**

# Algorithm / Class Diagram / Implementation:

Write algorithm here.

# Platform: 64 –bit Open source Linux

**Input:** Any 2 complex numbers: (6+4i, 3+2i)

**Output:** Addition (9+8i) and Subtraction (3+2i) of 2 complex numbers, Multiplication and Division

**Conclusion:** Hence, learned to implement Operator Overloading in C++, Operator Overloading with Friend Function successfully.

**FAQs:** write answers

1. What are the rules for operator overloading in C++?
2. What is difference between Early Binding and Late Binding

### What are Unary Operators and Binary Operator overloading?