Don Bosco Institute of Technology, Kurla(W)
Department of Electronics and Tele-Communication Engineering
ECL304 - Skill Lab: C++ and Java Programming
Sem III
2021-22

Lab Number:	**5**
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Title:

To perform Operator Overloading using C++ for

- adding 2 complex numbers
- adding matrices

Learning Objective:

- Students will be able to perform user-defined overloading of built-in operators.

Learning Outcome:

- Understanding the overloading concept on built-in operators.

Course Outcome:

ECL304.2	Comprehend building blocks of OOPs language, inheritance, package and interfaces

Theory:

Explain about operator overloading with respect to:

- constructor,
- methods and
- operators.

SOLUTION:

Operator overloading in c++ is one of the best features that is used to overload most of the operators like “+” “–” “*” “/” “=” “.” “,” etc in c++. C++ allows us to specify more than one definition for a function name or an operator in the same scope, which is called function overloading and operator overloading, respectively. The process of selecting the most suitable overloaded function or operator is called overload resolution.

The process of having two or more functions with the same name but with different parameters (arguments) is called function overloading. The function is redefined by either using different types of arguments or a different number of arguments. It is only

through these differences that a compiler can differentiate between functions.

In C++, it can add special features to the functionality and behaviour of already existing operators like athematic and other operations. The mechanism of giving special meaning to an operator is known as operator overloading. For example, we can overload an operator '+' in a class like string to concatenate two strings by just using +.

Implementing of Operator overloading:

1. Member function: It is in the scope of the class in which it is declared.

2. Friend function: It is a non-member function of a class with permission to access both private and protected members.

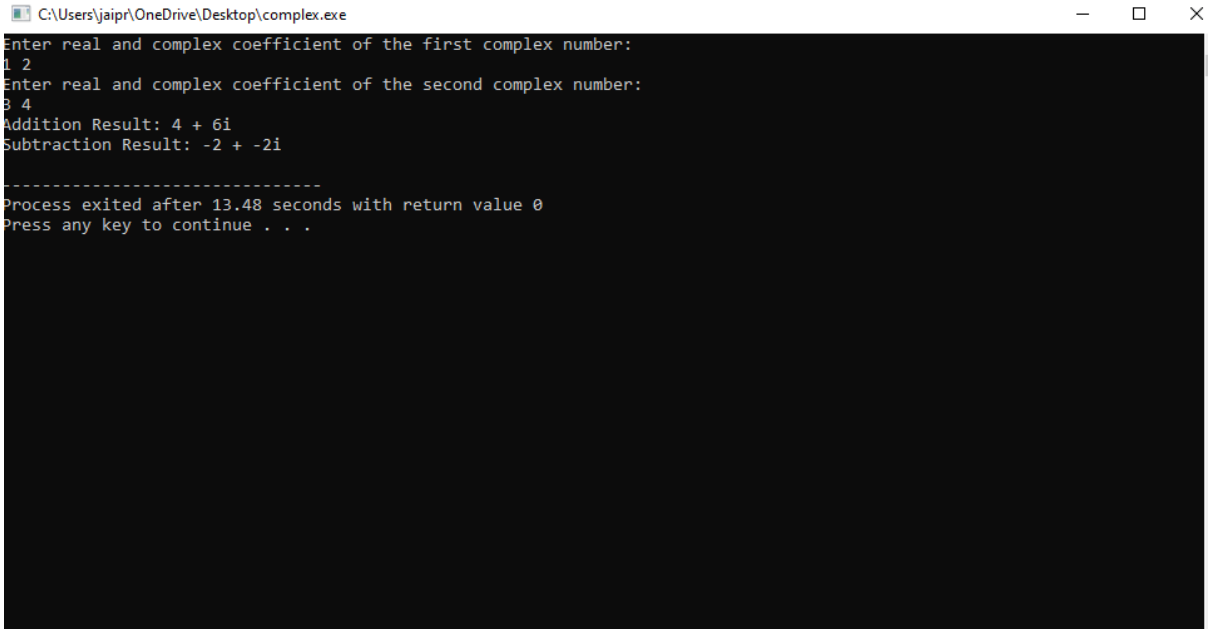
Rules for operator overloading?

1. To work, at least one of the operand must be a user-defined class object.
2. We can only overload the existing operators, Can't overload new operators.
3. Some operators cannot be overloaded using a friend function. However, such operators can be overloaded using the member function.

In operator overloading, any C++ existing operations can be overloaded, but some exceptions.

5.0- Input Given a= 1 2 b= 3 4

Output:-



5.1: Input Given- a= 1234, b=5678

Output: