

## Assignment No-01

Ref. No.: ' ①

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### Title :-

Design a class 'Complex' with data members of real and imaginary part. Provide default and parameterized constructors. Write a program to perform arithmetic operations of two complex numbers.

### Theory :-

#### JAVA CONSTRUCTOR

A constructor in java is a special method that is used to initialize objects. The constructor is called when an object of a class is created. It can be used to set initial values for object attributes.

#### Types of Java Constructor

- 1] Default Constructor
- 2] Parameterized Constructor.

#### 1] Default Constructor.

A constructor is called "Default Constructor" when it doesn't have any parameter.

#### Syntax For Default Constructor

```
<class_name>() { }
```



Ref. No.: 2

Date : / /

## 2) Parameterized constructor

A constructor which has a specific number of parameters is called a parameterized constructor.

The parameterized constructor is used to provide different values to distinct objects. However, you can provide the same values also.

### Rules of creating Java Constructor :

1. Constructor name must be the same as its class name.
2. A constructor must have no explicit return type.
3. A java constructor cannot be abstract, static, final and synchronized.

### Conclusion :

Hence we have successfully implement the program of arithmetic operation of two complex number.