

# Java Programming Lab Manual

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IIUM PRESS

INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

# **JAVA PROGRAMMING LAB MANUAL**

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**Editors**

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## Chapter 21

### Constructors

Dil Nawaz Hakro, Zeeshan Bhatti, Asadullah Shah

#### Abstract

In Java, an object is created and initialized through its constructor. A simple constructor is similar to a method but having no return type and its name must be the same as the name of class. A constructor is called using the 'new' keyword. In this experiment, the students will learn how to use the constructor along with its various operators.

#### 21.1 Constructors

Constructors are basically short procedures or methods for creating objects of a class and initialize the object's fields. Constructors have following key attributes:

- Always have the same name as the class name.
- A constructor is invoked with a call of the form 'new MyClass(arg1, arg2, ...);'
- A class may have several constructors that differ in the number and/or types of their parameters.
- Constructors have no return type i.e. **void className()** is a method and not a constructor.
- A constructor may take several parameters as shown in the Figure 21.1.
- It is usually a good idea to provide a so-called "no-argument" constructor that takes no parameters (arguments). If no constructors are supplied at all, then Java provides one default no-argument constructor that only allocates memory for the object and initializes its fields to default values (numbers to zero, Booleans to false, objects to null).