

St. Francis Institute of Technology, Mumbai-400 103

Department Of Information Technology

A.Y. 2023-24

Class: SE-ITA/B, Semester: III

Subject: **Java Labs**

Experiment 3

Aim: Write a program to demonstrate java Constructor

Theory:

Aim: Write Java code to demonstrate the following:

- a) Write a program to implement Constructor chaining.
- b) Write a program to print the area of a rectangle by creating a class named 'Area' having two methods. First method named as 'setDim' takes length and breadth of rectangle as parameters and the second method named as 'getArea' returns the area of the rectangle. Length and breadth of rectangle are entered through keyboard.

Prerequisite: Knowledge of classes and constructors.

Requirements: Personal Computer (PC), Windows Operating System, JDK 1.8 and above, online java compiler/IDE.

Pre-Experiment Exercise:

Theory:

a. Constructor :

Constructor is a block of codes similar to method.

It is called when an instance of object is created and memory is allocated for the object. It is a special type of method which is used to initialize the object.

It is not necessary to write a constructor for a class.

It is because java compiler creates a default constructor if your class doesn't have any.

Laboratory Exercise:

A. Procedure :

1. Write java code and save with .java extension
2. Compile program using javac filename.java
3. Run program using java filename

A. Extended Theory:

1. List the rules for declaring the constructor inside a class.
2. What are various types of Constructors. Explain with suitable syntax and example.

B. Questions/Programs:

Write a program to print the names of students by creating a Student class. If no name is passed while creating an object of Student class, then the name should be "Unknown", otherwise the name should be equal to the String value passed while creating object of Student class.

C. Conclusion:

1. Write what was performed in the experiment/program.
2. What is the significance of experiment/program?
3. Mention few applications of what was studied.

D. References

1. Balguruswamy, "Programming with java A primer", Fifth edition, Tata McGraw Hill Publication.
2. Learn to Master JAVA, from Star EDU solutions , by ScriptDemics.
3. www.programmingsimplified.com
4. www.javatpoint.com