Java Programming

Semester V	Subject Code: BC51701	Lectures: 60

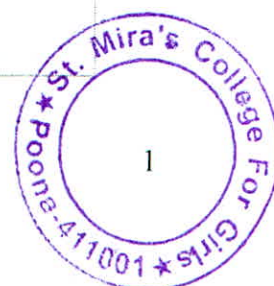| Objectives: |
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| The syllabus aims in equipping students with,
• Basic concept of Java Programming
• To understand how to use programming in day to day applications
• Knowledge of data base Programming in Java |

Unit 1: Introduction to Java	10
• Features of java • JDK Environment & tools like(java, javac, appletviewer, javadoc, jdb) 1.3 OOPs Concepts Class, Abstraction , Encapsulation, Inheritance, Polymorphism • Difference between C++ and JAVA • Structure of java program • Data types ,Variables ,Operators , Keywords ,Naming Convention • Decision Making (if, switch), Looping(for, while) • Type Casting • Array Creating an array Types of Array - One Dimensional arrays - Two Dimensional array • String - Arrays , Methods. - StringBuffer class	

Unit 2: Classes and Objects	12
• Creating Classes and objects • Memory allocation for objects • Constructor • Implementation of Inheritance Simple, Multilevel, Interfaces , user defined interfaces and system interfaces(Collection, List, Iterator, listiterator and ArrayListLinkedList classes) • Abstract classes and methods • Implementation of Polymorphism • Method Overloading, Method Overriding • Nested and Inner classes. • Modifiers and Access Control • Packages Packages Concept Creating user defined packages • Java Built in packages java.lang->math java.util->Random, Date, Hashtable Wrapper classes	

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Unit 3: JDBC	8
- The design of JDBC - Basic JDBC program Concept - Drivers - Architecture of JDBC - Making the Connection, Statement , ResultSet , PreparedStatement, CollableStatement - Executing SQL commands - Executing queries	

Unit 4: File and Exception Handling	06
Exception - Exception types - Using try catch and multiple catch Nested try, throw , throws and finally - Creating user defined Exceptions **File Handling** - Stream ByteStream Classes CharacterStream Classes - File IO basics - File operations Creating file Reading file(character, byte) Writing file (character, byte)	

Unit 5: Applet, AWT and Swing Programming	12
Applet - Introduction - Types applet - Applet Life cycle - Creating applet - Applet tag - Applet Classes - Color - Graphics - Font AWT - Components and container used in AWT - Layout managers - Listeners and Adapter classes - Event Delegation model Swing - Introduction to Swing Component and Container Classes	

*Contact hours – 12 hours

Recommended Text Book:

1. *Java Programming*, Success Publication
2. *Java Programming*, Vision Publication 2014

Reference Books:

1. E Balgurusamy, *Programming with JAVA*
2. Herbert Schildt, *The Complete Reference – JAVA*