Course Title: Advance Java
Course Code: SEC-302 (C)
Course Credit: 3
Session Per Week: 3
Total Teaching Hours: 40 Hours

AIM
To provide knowledge of advance concepts in Java programming like File IO, Swing and GUI Components, layout management in GUI, event handling, socket programming and database connectivity.

LEARNING OUTCOMES
On the completion of the course students will:
1. Understand the IO stream and learn about swing components.
2. Understand the Layout Management in GUI.
3. To design frames using swing componenets and evenet handling and layouts
4. To understand about netwroking concepts.
5. To understand the fundamental concept of database connectivity.

DETAIL SYLLABUS

Unit-1   **10 Hours**
Input and Output Classes
• IO Stream
• File class
• Byte Stream
    • Input Stream
    • Output Stream
• Disk File Handling
    • FileInput Stream
    • FileOutput Stream
• Filtered Byte Stream
    • DataInput Stream
    • DataOutput Stream
• ObjectOutputStream
• ObjectInput Stream
• Random Access File
• Character Stream
    • Reader
    • Writer

Unit-2   **10 Hours**
Swing and GUI Components
• The Origin of Swing
• Creating windows in Swing

- JButton
  - Creating JButtons
  - Creating JButtons on JFrame
- JLabel
  - Creating JLabel
  - Creating JLabel on JFrame
- JCheckBox
  - Creating JCheckBox
  - Creating JCheckBox on JFrame
  - Creating JCheckBox on JPanel
  - Using JCheckBox
- JRadioButton
  - Creating JRadioButton
  - Creating JRadioButton on JFrame
  - Using JRadioButton
Layout Managers
- BorderLayout
- FlowLayout
- GridLayout
- CardLayout

Unit-3   **10 Hours**
Event Handling
Delegation Event Model
Events
- ActionEvent class
- ItemEvent Class
- KeyEvent class
- TextEvent Class
Event Listeners
Registering Listener with source
Networking
o Overview of java.net package
o InetAddress
o Socket Programming (ServerSocket and Client Socket)
o Datagram (DatagramPacket and DatagramSocket)
o URL (URL class)

Unit-4   **10 Hours**
JDBC
Overview of JDBC and ODBC
- Types of Drivers
- Using a JDBC
- DriverManager- Creating Connection
- Connection Interfacer- Creating Statement
- Statement Interface -Executing Statements (insert, update , delete, select to/from table)
Note: Database should be any version of MS-Access

TEXTBOOK/S:
Programming in Java 2

Jaico publishing house
By Dr. K. Somasundaram

REFERENCE BOOKS:
1. Programming in Java
   Oxford Publication
   By Sachin Malhotra and Saurabh Choudhary
2. The Complete Reference Java2
   TMH Publication
    By Herbert Schildt

WEB RESOURCES:
1. docs.oracle.com/javaee/6/tutorial/doc/girgm.html
2. docs.oracle.com/javaee/6/tutorial/doc/bnagi.htm
3. www.javatpoint.com
4. www.tutorialspoint.com

REQUIRED SOFTWARE/S
1. Any editor of Windows or Linux/UNIX.
2. JVM version 1.8