CAP615:PROGRAMMING IN JAVA

L:3 T:0 P:0 Credits:3

Course Outcomes: Through this course students should be able to

CO1 :: understand the handling of strings and collection frameworks

CO2 :: apply multithreading for inter-process communication

CO3 :: analyze the use of swings and layouts for graphical design

CO4 :: develop applications using database connectivity and socket programming

Unit I

Introduction to Java : basic java concepts, JDK, JRE and JVM, wrapper classes, inner and nested classes, working with arrays and strings, String, StringBuffer and StringBuilder classes, access specifiers, inheritance

Unit II

Collection Framework : ArrayList class, ListIterator interface, Linkedlist class, TreeSet class, PriorityQueue class, comparable and comparator, Properties class, Lambda expressions

Unit III

Multithreading : implementing multithreading, life cycle of a thread, thread communication, suspending, resuming, deadlock and stopping threads, thread synchronization, handling exceptions during multithreading

Unit IV

Swings and Layouts : JButton class, JRadioButton class, JTextArea class, JComboBox class, JTable class, JColorChooser class, JProgressBar class, JSlider class, layout manager, Border Layout, Grid Layout, Flow Layout, Box Layout, Card Layout

Unit V

Managing data using JDBC : introduction to JDBC, connectivity with database, CRUD operations, Connection interface, Statement interface, ResultSet interface, PreparedStatement, ResultSetMetaData, DatabaseMetaData

Unit VI

Network Programming : java network terminology, socket classes, server socket classes, URL class, URL connection class, datagram socket class, java socket programming

Text Books:

1. JAVA: THE COMPLETE REFERENCE by HERBERT SCHILDT, Tata McGraw Hill, India

References:

1. INTRO TO JAVA PROGRAMMING (COMPREHENSIVE VERSION) by Y. DANIEL LIANG, Pearson Education India

2. PROGRAMMING WITH JAVA by E BALAGURUSAMY, Tata McGraw Hill, India