II Year MCA I Semester

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MC201   JAVA PROGRAMMING

Objective of the Course:
For a student who has a basic awareness in Object Oriented Programming, this course makes him/her to learn the Advanced OOP concepts through java frontend tool.

UNIT - I   **(12 Hrs)**
Basics to Java: Introduction to Java, Features of Java, Object oriented concepts, Data types, Variables, Arrays, Operators, Control statements, Classes, Objects, Constructors, Overloading method, Access control, Static and final methods, Inner Classes, Inheritance, Overriding methods, Using super abstract class, String class, String objects, String buffer, Char Array.

UNIT - II   **(12 Hrs)**
Packages, Interfaces & Threads: Packages - Access protection - Importing packages - Interfaces - Exception handling - Throw and throws - Thread - Synchronization - Messaging - Runnable interfaces - Inter thread communication - Deadlock - Suspending, Resuming and stopping threads – Multithreading.

UNIT - III   **(12 Hrs)**
HTML & JAVA Script: HTML Common tags- List, Tables, images, forms, Frames; Cascading Style sheets; Introduction to Java Scripts, Objects in Java Script, Dynamic HTML with Java Script.

UNIT - IV   **(12 Hrs)**
Applets & Swings: Java Utilities -Applets - Class, Event Handling, AWT Programming, Introduction to Swing: JApplet, Handling Swing Controls like Icons – Labels – Buttons – Text Boxes – Combo Boxes – Tabbed Panes – Scroll Panes – Trees – Table Differences between AWT Controls & Swing Controls Developing a Home page using Applet & Swing.

UNIT - V   **(12 Hrs)**
Java Servlets: Lifecycle of a servlets,JSDK The Servlet API,The javax.servlet Package,Reading Servlet and Initialization parameters,javax.servlet HTTP Package,Handling HTTP Request and Responses,Using Cookies, Session Tracking,Introduction to JSP.

Text Books:
1. Naughton and H.Schildt - **"Java 2 - The complete reference"** - 7/e edition.-2002.
2. Internet and World Wide Web – How to program by Dietel and Nieto Pearson Education Asia.

Reference Books:
1. S.Horstmann, Gary Cornell - "**Core Java 2 Volume I - Fundamentals**" - Addison Wesley – 2001
2. Arnold and J.Gosling - "The java programming language" - Second edition
3. Art Gittleman – "Ultimate Java Programming" –Wiley Publications-2002.