



MANIPAL UNIVERSITY JAIPUR

School of Computing and Information Technology

Department of Computer Science and Engineering
Course Hand-out

Object oriented programming using Java | CS 1304 | 4 Credits
Session: 2015-2016 | Faculty: Ankit Srivastava

Course Outcomes: At the end of the course, students will be able to

- [1304.1]. Understand and learn how to compile and execute a simple as well as complex Java Application using Command Based Interface as well as using Eclipse Tool.
- [1304.2]. Learn and apply the concepts of encapsulation and abstraction using class, objects and interfaces.
- [1304.3]. Describe and Implement various inheritance and polymorphism forms using Java Classes and Interfaces.
- [1304.4]. Learn and Implement various collection data structure such as linked lists, queues, stacks using Java's collection framework
- [1304.5]. Understand, Learn and finally implement the use of advanced programming constructs/features such as exception handling, multithreading and event handling in real-life programming domains and hence enhance employability skills.
- [1304.6]. Visualize a real world problem in the form of various collaborating classes and objects

A. SYLLABUS

The History and Evolution of java: The Creation of Java, how java changed the internet, Java's Magic, Servlets, The java Buzzwords; An Overview of Java, arrays; Introduction to classes: Class fundamentals, declaring objects, Assigning Object reference variables, Introduction to methods, Constructors, this keyword, Garbage collection, finalize() method, Overloading, objects as parameters, argument passing returning objects, recursion, access control, final, nested and inner classes, string class; I/O Basics: Reading Console Input, Writing Console Output, Files, Applet fundamentals; Inheritance: basics, super, multilevel hierarchy, overriding, abstract classes, final with inheritance; Packages and Interfaces, Exception Handling, Multithreaded programming; String Handling, Applet Class, Event Handling; Introduction to AWT: Classes, component, Container, Panel, Window, frame, Canvas, working with frame, working with Graphics, using AWT Controls.

B. TEXT BOOKS

1. Core Java Volume I—Fundamentals (10th Edition), By Cay Horstmann, Prentice Hall, ISBN-10:0134177304, ISBN-13: 978-0134177304, Year (2006)
2. Object-Oriented Programming in Java: A Graphical Approach (Preliminary Edition), By KE Sanders and AV Dam, Pearson Education, ISBN-10:0321245741, ISBN-13:978-0321245748, Year 2015
3. Java Concepts (4th Edition), Bt Cay horstmann, Wiley India, ISBN-10:0471697044, ISBN-13:978-0471697046, (Year:2005)

