

VEER NARMAD SOUTH GUJARAT UNIVERSITY – SURAT
Bachelor of Computer Application (B.C.A) 2nd Year
Syllabus (As Per CBCS)

S. Y. B. C. A. Semester 4
Effective From: June-2012

Paper No.: 403

Paper Title: JAVA PROGRAMMING LANGUAGE

1. Introduction to Java

- 1.1. Properties of Java
- 1.2. Comparison of java with C++

2. Java Developer's Kit (JDK) and its uses

- 2.1. Java Compiler
- 2.2. Java Interpreter
- 2.3. Java Debugger
- 2.4. Applet Viewer

3. Basic Concepts

- 3.1. Identifier, Literals , Operators , Variables
- 3.2. Keywords
- 3.3. Data Types

4. Control Structures

- 4.1. Branching: If – Else, Switch
- 4.2. Looping : While, Do-while , For

5. Classes and Objects

- 5.1. Simple Class
- 5.2. Fields
- 5.3. Access Controls
- 5.4. Object Creation
- 5.5. Construction and Initialization
- 5.6. Methods
- 5.7. This
- 5.8. Overloading Methods
- 5.9. The main Method

6. Interfaces

- 6.1. Introduction to Interfaces
- 6.2. Interface Declaration
- 6.3. Inheriting and Hiding Constants
- 6.4. Inheriting, Overloading and Overriding Methods
- 6.5. Interfaces Implementations

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7. Exceptions

- 7.1. Introduction to Exceptions
- 7.2. Creating Exception Types
- 7.3. Throw
- 7.4. Try, Catch and Finally

8. Threads

- 8.1. Introduction to Threads
- 8.2. Thread Model
- 8.3. Priority of Threads
- 8.4. Inter Thread Communication
- 8.5. Synchronization

9. Strings

- 9.1. Basic String Operations
- 9.2. String Comparison
- 9.3. String Buffer Class

10. Packages

- 10.1. Package Naming
- 10.2. Type Imports
- 10.3. Package Access
- 10.4. Package Contents
- 10.5. Package Object and Specification

11. The Applet Classes

- 11.1. Applet Basics
- 11.2. Applet Architecture
- 11.3. Applet skeleton
- 11.4. Applet Display Methods
- 11.5. HTML APPLET Tag (<APPLET>)
- 11.6. Passing Parameters to Applets

Reference Books:

1. Ken Arnold James Gosling, David Holmes – Java Programming Language Third Edition – Addition Wesley (Pearson Education)
2. Patrics Naughton – Java – The complete reference – Tata McGraw Hill
3. Samuel A. Rebelsky – Experiments in Java : An Introductory Lab Manuals – Addition Wesley (Pearson Education)
4. Steven Haines – Java 2 From Scratch PHI.
5. E-Balaguruswamy – Programming in Java
6. Java : How to Program – Deitel & Deitel - PHI