



# Java/J2EEE Course Content

## Chapter 1: Introduction to Java

- Introduction
- What is Java?
- Syntax
- First Program

## Chapter 2: Control flows

- Conditional statements
- Loops and switches
- Continue, Break and Returns
- Command Line Arguments

## Chapter 3: OOPS Concepts

- Inheritance
- Interface
- Classes
- Objects
- Polymorphism
- Function Overloading
- Overriding
- Access specifiers
- Packages

## Chapter 4: String Manipulations

- String class
- StringBuffer Class
- StringBuilder Class
- String Tokenizer
- Regular Expression
- String Application

## Chapter 5: Generics & Exceptions

- Collections and Mapping
- Utilities and Algorithms
- Parameterized types
- Handling Exceptions
- Throws and throw
- Effective Hierarchy

## Chapter 6: File IO

- File Managements
- File Streams
- Data Streams
- Stream Tokenization
- Random Access Files

## Chapter 7: Threads & Serializations

- The Thread Class
- Assigning priority
- Threads and Swing
- Synchronization

## Chapter 8: Swing GUI widgets

- Containers, Frames and Panes
- JFrame and JPanel
- Simple Dialog Boxes
- Label, Icon and Buttons
- Basic Event Listeners

## Chapter 9: Intermediate Swing

- Checkboxes

- Radio buttons
- Lists, Combo boxes&Spinners
- Text Fields & Passwords
- TextAreas

## Chapter 10: Advanced Swing

- Advanced Event Listener
- Model-View-Controller
- Menu bars & Tool bars
- Specialty Panes
- Table & Hierarchal trees
- Global Hotkeys
- Designing GUIs

## Chapter 11: Java Networking

- Networking Basics
- Internet Streams
- Socket Programming
- Remote Method Invocation

## Chapter 12: J2EE Basics

- The Birth of J2EE
- Databases
- The Maturing of Java
- Java Beans and Java Messaging Service

## Chapter 13: JDBC Objects

- The Concept of JDBC
- JDBC Driver Types
- JDBC Packages
- An overview of JDBC process
- Database Connection
- ResultSet
- Transaction Processing
- Metadata
- Inserting, Deleting and Updating data from tables
- Joining tables

## Chapter 14: Java Servlet Technology

- What is Servlet?
- The Example Servlets
- Servlet Life Cycle
- Sharing Information
- Initializing a Servlet
- Writing Service Method
- Filtering request and response
- Invoking other web resources
- Accessing the web content
- Maintaining client state
- Finalizing a Servlet

## • Chapter 15: JavaServer Pages Technology

- What Is a JSP Page?
- The Example JSP Pages
- The Life Cycle of a JSP Page
- Initializing and Finalizing a JSP Page
- Creating Static Content
- Creating Dynamic Content
- Including Content in a JSP Page
- Transferring Control to Another Web Component
- Including an Applet
- Extending the JSP language



## Chapter 16: Enterprise JavaBeans

- EJB Subelements for the <ejb-jar>elements
- EJB Subelements for <session> and <entity> elements
- EJB Subelements for <session>, <entity>sub? -<Message-Driven> elements
- EJB Session Bean
- EJB Message-Driven Bean
- EJB Entity Bean
- EJB Home
- EJB Metadata

## Chapter 17: JavaMail Reference

- JavaMail 1.3 Specification
- JavaMail Multipart Data Source
- JavaMail part
- JavaMail MIME Body Part
- JavaMail MIME message
- JavaMail MIME Multipart
- JavaMail Search

## Chapter 18: Java Remote Method Invocation

- Naming
- Registry
- Local Registry
- Remote Referencing
- Client Sockets
- Failure Handler
- Server Socket
- Server References
- Remote Object
- Remote Server
- Class Loader
- Sockets

## Chapter 19: Java Message Service

- JMS Message
- JMS Queue
- JMS Queue Sender
- JMS Topic Publisher
- JMS Topic Subscriber

## Chapter 20: Java Security

- Java Security Domain Combiner
- Java Security Guard
- Java Security Key
- Java Security Principal
- Java Security Privilege
- Java Security Access Control
- Java Security Algorithm Parameter
- Java Security Permissions
- Java Security Code Source
- Java Security Streams
- Java Security Message
- Java Security Domain Production
- Java Security Provider
- Java Security Secure Class loader
- Java Security Randomizer
- Java Security Signature

## Chapter 21: Simple Object Access Protocol

- Simple Object Access Protocol Detail
- Simple Object Access Protocol Name
- Simple Object Access Protocol Node
- Simple Object Access Protocol Body
- Simple Object Access Protocol Constants
- Simple Object Access Protocol Element
- Simple Object Access Protocol Envelope
- Simple Object Access Protocol Fault
- Simple Object Access Protocol Header
- Simple Object Access Protocol Text
- Simple Object Access Protocol Attachments
- Simple Object Access Protocol MIME Header

## Chapter 22: Connectors

- About Resource Adapters
- The Black Box Resource Adapters
- Resource Adapter Tutorial
- Common Client Interface
- JDBC API and Connectors
- Packaging and Deployment
- Connector Architecture and Enterprise Application Integration
- Integrating an EIS with Multiple Tools and Servers
- Business-to-Business Commerce Solution
- The Evolution of the Connector Architecture