

Advance JAVA

1. Java Database Connectivity (JDBC)

- a. Overview of RDBMS
- b. Introduction Call Level Interface(CLI)
- c. Introduction JDBC
- d. JDBC Architecture
- e. Types of JDBC Drivers
- f. Establishing a JDBC Connection
- g. Using Statement
- h. Using PreparedStatement
- i. Using CallableStatement
- j. Scrollable and Updatable ResultSet
- k. Inserting & Fetching from BLOB Columns
- l. Managing Transactions in JDBC
- m. New Features introduced in JDBC 3.0
- n. AutoIncrement Columns

2. eXtensible Markup Language (XML)

- a. Introduction tXML
- b. Document Object Model (DOM) using JAXP
- c. Understanding DOM
- d. Using DOM in Java
- e. StAX in Java
- f. Understanding StAX
- g. Programming with StAX

3. Common Gateway Interface

- a. Introduction tCGI
- b. Understanding Environment Variables
- c. Disadvantages and Limitations of CGI

4. Java Servlets

- a. Servlet as J2EE Web Component
- b. Servlet as an improved CGI
- c. Servlet Fundamentals / API
- d. What is a Web-Container
- e. Servlet Life Cycle / Architecture
- f. HTTP GET and POST Request Methods
- g. Processing Html Forms
- h. What is Name-Value pair
- i. Content Types and MIME
- j. Configuration of Web Application

5. Understanding the Deployment Descriptor (DD) / web.xml

- a. Specifying the Welcome file list
- b. Servlet URL Pattern Mapping
- c. Init Parameters
- d. State Management

6. Using HTTP Session

- a. Using Cookies
- b. Using Application
- c. JavaServer Pages (JSP)
- d. JSP Architecture
- e. JSP Standard / Implicit Objects
- f. request
- g. response
- h. out
- i. config
- j. application
- k. session
- l. page
- m. pageContext
- n. exception

- o. JSP Page Implementation Class
- p. JSP Basics & Syntax
- q. JSP Directive Tags
- r. Page Directive
- s. Include Directive
- t. Taglib Directive
- u. JSP Action Tags

7. Forward Action Tag

- a. Include Action Tag
- b. JSP Script related Tags
- c. Scriptlet Tag
- d. Expression Tag
- e. Declaration Tag
- f. Using Java Beans from JSP
- g. UseBean Tag
- h. setProperty Tag
- i. getProperty Tag
- j. JSP Custom Tag Library
- k. JSP 2.0 Tag Files
- l. JSP 2.0 Simple Tag
- m. Empty Tag
- n. Tag with Body Content
- o. (JSP Fragment)

8. JavaBeans

- a. JavaBean Architecture
- b. JavaBean Characteristics
- c. Providing Properties & Methods
- d. JSP Expression Language (EL)
- e. Syntax
- f. Operators
- g. Using different scope objects

- h. Calling Functions from EL
- i. JSP Standard Tag Library (JSTL)
- j. General Purpose Actions
- k. Conditional Actions
- l. Iterator Actions
- m. Filters in Web Application
- n. Filter Basics
- o. Filter Lifecycle
- p. Filter Chaining
- q. Filter Example

9. Web Application Security

- a. Introduction
- b. Declarative Security
- c. Programmatic Security
- d. Roles
- e. Authentication
- f. Basic Authentication
- g. Digest Authentication
- h. Form Based Authentication
- i. Standard Login Form

10. Security Constraints

- a. Web Resource Collection
- b. Authorization Constraint