

JAVA/J2EE COURSE CURRICULAM

CORE JAVA/J2EE

JAVA - Language Fundamentals-Object Oriented Programming-Inheritance-Packages and interfaces - Exception Handling - Multithreaded Programming - Enumerations, Autoboxing - Annotations - Applets - Generics - Java Library - Collections and Utility Classes - Java Beans and Swing.

SERVLETS & JSP & JDBC - Servlets and JSP Overview - Web Application Architecture - Servlet Basics - Request Object (Handling Form data and Request Headers) - Response Object (Headers and Status Codes) - Handling Cookies - Session Tracking- JSP Basics - MVC Architecture - Deploying Web Applications - JDBC - JDBC Result Sets - JDBC Drivers - Inserting , Deleting & updating records in the database using statements - Sample Project using Servlets, JSP, JDBC.

ENTERPRISE JAVA BEANS - Enterprise Java Application Architecture - Introduction to Enterprise Java Beans - Session Beans - Entity Beans - Message Driven Beans - Deploying and running Session and Entity Beans Using ANT build tool - Basics of EJB security and Transactions.

DESIGN PATTERNS - Creational Patterns (Abstract Factory, Builder, Factory Method, Prototype, Singleton) - Structural Patterns (Adapter, Bridge, Composite, Decorator, Façade, Flyweight, Proxy)

ADVANCED JAVA/J2EE

JAVASERVER PAGES STANDARD TAG LIBRARY (JSTL) - JSTL Expression language - Flow control with Loops and Conditions - Importing test - Selecting and Working with XML fragments - Database driven pages - Formatting and internationalization - Core Tags, XML Tags and SQL Tags.

JAVASERVER FACES (JSF) - Introducing Java Server Faces- JSF fundamentals - Building User Interfaces - Developing application logic in JSF environment - Internationalization - Validators - convertors - Writing Custom components - Integration JSF with existing applications or frameworks like Struts.

JAVA MESSAGING SERVICE (JMS) - Introducing Java Messaging Service - Message oriented Middleware (MOM) - Importance of Asynchronous messaging - Messaging Models - Publish / Subscribe Model - Point-to-Point Model - JMS API - JMS administered objects - JNDI lookup for Administered objects - Publish/Subscribe messaging (Durable / Non Durable) - Point to Point Messaging.

JAVA WEB SERVICES - Introduction to SOA - SOA Entities - SOA Characteristics - SOAP - WSDL - UDDI - Java Web Services Developer Pack - XML Schema- JAXP - JAX-RPC - JAXM - JAXR - JAXB - Developing Web Services using Apache Axis.

DESIGN PATTERNS - Behavioral Patterns (Chain of Responsibility, Command, Interpreter, Iterator, Mediator, Memento, Observer, State, Strategy, Template Method, Visitor)

JAVA / J2EE FRAMEWORKS

J2EE DESIGN PATTERNS – MVC (Model View Controller) - Business Delegate-Composite Entity - Data Access Object - Front Controller - Intercepting Filter - Service Locator-Transfer Object.

STRUTS – Introduction to Struts - Struts Architecture - Struts Sample Application - The Model Layer - The View Layer - The Controller Layer - Validators Framework - Tiles Framework - Struts Modules - Internationalizing Struts - Struts Exception Handling -Struts Tag Library.

HIBERNATE – Object/Relational Persistence - Introduction to Hibernate - Hibernate Architecture - Introduction to Mapping - Working with Persistent Objects - Transaction – Concurrency – Caching - Collections and Association - Persistent Enumerated Types - Custom Value Types - Criteria Queries - HQL -Sample Hibernate Application

SPRING – Introduction to Spring-Spring Architecture - Inversion of Control - Core Modules - Bean Wiring - Application Context - Aspect Oriented Program - Sample Spring Application.

LOG4J – Introduction to Log4J - Install Log4J - Logger-Appender – Layout - Basic Examples (Simple Layout and File Appender, HTML Layout and Writer Appender, Pattern Layout and Console Appender), Working with External Configuration Files