SENNOVATE
Service Innovation

J2EE Syllabus

(Duration: 40 hours)

Introduction to J2EE, RMI

- Why J2EE?
- J2EE architecture and APIs
- J2EE Containers
- J2EE Components
- Remote Method Invocation
- Identify features of Remote Method Invocation (RMI).
- Proxy pattern.
- Remote object application.

XML

- Introduction to XML
- Generating XML Data
- Attributes and Entities in the DTD
- Resolving a Naming Conflict
- Using Namespaces
- Designing an XML Data Structure
- Attributes and Elements
- Normalizing Data

Java Server Technologies - Servlet:

- Introduction to servlet
- Servlet life cycle
- Developing and Deploying Servlets
- Exploring Deployment Descriptor (web.xml).
- Handling Request and Response
- Initializing a Servlet
- Servlet Chaining
- Session Tracking & Management
- Dealing with cookies
- Transferring Request
- Accessing Web Context
- Passing INIT and CONTEXT Parameter
- Sharing information using scope object
- User Authentication
- Filtering Request and Response
- Filter Mapping / Servlet Listeners

Java Server Pages Technology (JSP)

- Basic JSP Architecture
- Life Cycle of JSP (Translation, compilation)
- JSP Tags and Expressions
- Role of JSP in MVC-2
- JSP Expression Language (EL)
- Using Custom Tag
- Session Management
- Directives
- JSP with Java Bean
- JSP Standard Tag Library
- JSP Expression Language
- Core Tags
- Formatting Tags
- Mixing JSTL, EL, Scripts and Actions

Struts Framework

- What is Struts?
- Struts Architecture
- Struts classes - ActionForward, ActionForm, ActionServlet
- Understanding struts-config.xml
- Understanding Action Mappings
- Struts Tiles Framework.
- Struts Validation Framework
- Internationalizing Struts Application
- Struts with Message Resources

Enterprise JAVA Beans

- Enterprise Bean overview
- Types of enterprise beans
- Advantages of enterprise beans
- Life Cycles of Enterprise Beans
- Working with Session Beans
- Statefull vs. Stateless Session Beans
- Working with Entity Beans
- Message Driven Beans

JMS (Java Message Service) and JNDI (Java Naming and Directory Interface)

- What Is the JMS API?
- Basic JMS API Concepts
- The JMS API Programming Model
- Creating Robust JMS Applications
- JNDI overview and JNDI API

Springs

- Spring Value Proposition
- The Spring Container
- Web Applications
- Persistence Support
- Aspect-Oriented Programming
- The Java EE Module(s)
- Integrating Other Frameworks
- JavaBeans, Reconsidered
- The Factory Pattern
- Inversion of Control
- XML View: Declaring Beans
- Java View: Using Beans
- Singletons and Prototypes

Hibernate

- Hibernate Architecture and API
- Configuring Hibernate
- The Hibernate Distribution
- Required Libraries
- Configuration Files
- Hibernate properties
- Programmatic Configuration
- Hibernate Persistence
- Object States
- The Session Interface
- Transactions
- The Data Access Object Pattern