4 Days

Java EE 6: Develop Business Components with JMS & EJBs

The Java EE 6: Develop Business Components with JMS and EJBs training imparts knowledge of the key functionalities required to build Java Messaging Services (JMS) & Enterprise JavaBeans (EJBs). This course deploys Enterprise JavaBeans (EJBs) version 3.1 technology to build and implement business-tier functions in JMS applications. Not only this, but participants learn the best tools and practices of EJB technology that simplify java applications and smoother communications.

Completion of this training course will enable candidates in

- Implementing business-tier functionality using EJB technology.
- Exploring the EJB technology coding experience of session beans and message drove beans in a JMS application.
- Assembling and deploying EJB technology business-tier components on an application server.
- Examining EJB design, best practices, transaction management, messaging fundamentals and security.
- Integrating an EJB technology-based application using the Java Messaging Service API.
- Integrating transactions and security into an enterprise application.
- Describing best practices and other advanced issues in business component development with EJB technology.
- Creating and implementing timer-based services.

Course Benefits:

- Attaining certification of this course will equip individuals in coding session beans, message-driven beans and using the JMS API. Participants will also evaluate the benefits of deploying EJB technology with respect to transaction management, messaging, and security in an enterprise application.

Course Details

Course Outline

1. Introducing the Course

- Review course objectives
- Discuss course format and LVC
- Discuss 4-day course schedule
- Get acquainted with other students
- Review the Java SE and Java EE Curriculum

2. Introducing Java EE

- Java™ Platform, Enterprise Edition
- Java EE container services
- Java EE application architecture
- EJB component types
- Comparison of Java EE application development and traditional enterprise application development

3. Implementing Session Beans

- Types of session beans
- Stateful Session beans
- Stateless Session beans
- Singleton Session beans
- Choosing a Session bean type
- Tasks of creating a Session bean
- Session Bean clients
- Packaging and deployment

4. Accessing Session Beans

- Use Naming Services
- JNDI API
- Develop Session Bean Clients
- Create a Session Facade

5. Advanced Session Bean Concepts

- EJB Containers and Components
- Session Bean Identity
- Session Bean Lifecycle
- Lifecycle Event Handlers
- Advanced Session Bean Configuration
- Asynchronous Communication

6. Developing Singleton Session Bean

- Singleton Session Bean
- Singleton Concurrency
- Singleton Session Bean Lifecycle

7. Using Context and Dependency Injections

- Introduction to CDI Named Beans
- Scopes, Qualifiers, and Alternatives

8. Using Java Persistence API

- What is JPA?
- Entity operations
- Queries
- Components of JPA architecture

9. Developing Java EE Applications Using

- Messaging Concepts, Destinations and Clients
- Creating a Queue
- Message Producer
- Queue Message Browser
- Create a Synchronous Queue Consumer

10. Developing Message-Driven Beans

- Introduction to Message-Driven Beans
- Life Cycle of a Message-Driven Bean
- Create JMS Message-Driven Beans
- Lifecycle Event Handlers
- Configure the Message-Driven Bean

11. Using Timer Services

- Create a timer callback notification
- Process a timer callback notification
- Describe timer services
- Manage timer objects

12. Implementing Interceptor Classes and Methods

- Introduction to Interceptors
- Interceptor class and methods
- Types of Interceptors
- Lifecycle callback interceptors

13. Implementing Transactions

- Bean managed transactions
- Transaction demarcation task

- Transaction policy
- Container-managed transactions
- Transaction in messaging

14. Implementing Security

- Authentication
- Authorization
- Java EE Platform Security Model
- Programmatic Security
- Declarative Security

15. Using EJB Technology Best Practices

- Java EE Application Design
- Exception Handling

16. Appendix A - Introducing Transactions

- Examine Transactions
- Types of Transactions
- Transaction-Related Concurrency Issues
- Handle Distributed Transactions
- Java Transaction API (JTA)

17. Introducing UML

- Basics of UML
- Types of UML Diagrams
- Elements of UML diagrams
- Illustrations of all UML diagrams

Who Should Attend

This course is ideal for those working with the profiles of:

- Java Developers
- Java EE Developers

Pre Requisite

Required:

- Developing Applications with Java EE 6 on WebLogic Server 12c
- Java SE 7 Programming

Suggested Prerequisites:

- Java SE 7: Develop Rich Client Applications
- Developing Applications for the Java EE 6 Platform

464, Udyog Vihar Phase V,Gurgaon (Delhi NCR)-122016,India	+91 8882 233 777	training@mercury.co.in	www.mercurysolutions.co

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