5 Days

Oracle Developing Applications for the Java EE 6 Platform

The Developing Applications for the Java EE 6 Platform training lays emphasis on building and deploying enterprise applications that adhere to Java Platform, and Enterprise Edition 6 technology standards.

This course will enable participants to create web services, user interfaces, understand enterprise components on the Java EE platform and suitable for Sun Certified Java technology programmers who are seeking to learn about enterprise applications that follow the Java EE platform standards.

Completion of this training course will enable candidates in:

- Describing the application model for the Java EE platform and the context for the model.
- Developing simple web services for the Java EE platform.
- Understand enterprise components and work with (JSP(TM)) technology.
- Developing expertise using Enterprise JavaBeans(TM) (EJB(TM)) technology.
- Creating web services using SOAP and RESTful techniques.
- To become familiar with the Java Persistence API.
- Creating user interfaces using servlets, JSP technology (JSP pages) and JavaServer Faces (JSF).
- Assembling and deploying an application into an application server (Java EE platform runtime environment).
- Understanding RESTful and SOAP web services and the Java technology clients who use them.

Course Benefits:

Attaining certification of this course will help to enhance communications and boost the productivity of your organization. By executing more efficient development techniques, learnings from this course will help you reduce the cost of application ownership that will provide you a competitive edge in the market adhering to the global standard for developing networked applications.

Course Details

Course Outline

1. Survey of Java EE Technologies

- Describing the different Java platforms and versions
- Describing the needs of enterprise applications
- Introduce the Java EE APIs and services

- Certifications Paths
- Introducing Applications Servers
- Enterprise Modules

2. Enterprise Application Architecture

- Design Patterns
- Model View Controller (MVC)
- Network Topologies and Clustering
- Synchronous and Asynchronous communication
- Layering (client, presentation, service, integration, persistence)

3. Web Technology Overview

- Describing the role of web components in a Java EE application
- Defining the HTTP request-response model
- Comparing Java servlets, JSP, and JSF
- Brief introduction to technologies not covered in detail

4. Developing Servlets

- Describing the servlet API
- Servlet configuration through annotations and deployment descriptors
- Using the request and response APIs
- Servlets as controllers

5. Developing with JavaServer Pages Technology

- Brief introduction to the JSTL and EL
- Evaluating the role of JSP technology as a presentation mechanism
- Author JSP pages
- Processing data received from servlets in a JSP page

6. JavaServer Faces

- The JSF model explained
- JSF Managed beans
- Using the JSF tag libraries
- JSF Conversion, Validation, and Error Handling
- Configuring JSF page navigation

7. EJB Overview

- EJB types: Session Beans

- EJB types: Message Driven beans
- Java Persistence API as a replacement for Entity EJBs
- Describing the role of EJBs in a Java EE application
- EJB lite

8. Implementing EJB 3.0 Session Beans

- Comparing stateless and stateful behavior
- Describing the operational characteristics of a stateless session bean
- Describing the operational characteristics of a stateful session bean
- Describing the operational characteristics of a singleton session bean
- Creating session beans
- Package and deploy session beans
- Creating session bean clients

9. The Java Persistence API

- Object Relational Mapping
- Entity class creation
- Persistent Units and Packaging
- Using the EntityManager API
- The role of the Java Persistence API in a Java EE application
- The life cycle and operational characteristics of Entity components

10. Implementing a Transaction Policy

- Description of transaction semantics
- Use the Java Transaction API (JTA) to scope transactions programmatically
- Compare programmatic and declarative transaction scoping
- Using transactions with the web profile
- Support optimistic locking with the versioning of entity components

11. Developing Asynchronous Java EE Applications and Messaging

- Introduction of JMS technology
- JMS administration and transactions
- The need for asynchronous execution
- List the capabilities and limitations of Java EE components as messaging producers and consumers

12. Developing Message-Driven Beans

- Describing the properties and life cycle of message-driven beans
- Creating a JMS message-driven bean

13. Web Service Model

- Describing the role of web services
- Web service models
- List the specifications used to make web services platform independent
- Describing the Java APIs used for XML processing and web services

14. Implementing Java EE Web Services with JAX-WS and JAX-RS

- Describing endpoints supported by the Java EE 6 platform
- Creating Web Service Clients with Java
- Developing Web Services with Java

15. Implementing a Security Policy

- Exploiting container-managed security
- Defining user roles and responsibilities
- Creating a role-based security policy
- Using the security API
- Configuring authentication in the web tier

Who Should Attend

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

- Java Developers
- J2EE Developer
- Java EE Developers

Pre Requisite

- Familiarity with the use of an IDE
- Experience with the Java programming language
- Knowledge of object serialization
- Understanding of Relational Database theory and the Structured Query Language (SQL)

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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