

5 Days

## Java EE 6: Develop Web Components with Servlets & JSPs

The Java EE 6: Develop Web Components with Servlets and JSPs training gives requisite knowledge and skills to effectively build web applications suited to any Java EE 6 application server using JSP and servlet technologies. This course has been designed for experienced developers of Java technology applications to develop the most apt web components.

Completion of this training course will enable candidates to:

- Construct and deploy small-to-medium scale web applications found in intranet and low-volume commercial sites by using JavaServer Page (JSP page) technology and servlets.
- Apply Model-View-Controller (MVC) architecture to projects in EE environments.
- Create servlet filters and listeners.
- Understand and managing HTTP sessions in a web application.
- Create easy-to-maintain JSP pages using Expression Language and the JSP Standard Tag Library (JSTL).
- Design, develop, Analyze, and deploy web applications with Java EE 6 SDK and the application server Oracle WebLogic Server 12c.

### Course Benefits:

Attaining certification of this course helps individuals acquire knowledge while experimenting with real code examples in each module. This training is an exceptional way to prepare individuals for the Java Enterprise Edition 6 Web Component Developer certification expert examination.

## Course Details

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### Course Outline

#### 1. Introducing the Course

- Review the Java SE and Java EE Curriculum
- Getting Acquainted with Other Students
- Review Course Objectives
- Discuss 5 Day Course Schedule
- Describe the Format that the Class will Use
- Introduce Web Application Technologies

- Describe the Java EE 6 Web Profile

## **2. Web Application Essentials**

- Describe Java Servlet Technology
- Describe JavaServer Pages Technology
- Understand the Model-View-Controller (MVC) Architecture
- Explain Java EE Containers and Java Application Servers
- Describe the Web Application Development Process
- Identify the Essential Structure of a WAR File

## **3. Developing a Servlet**

- Describe the HTTP Headers and Their Function
- Explain the Request and Response Processes
- Understand the Life Cycle of a Servlet
- List Injection and Lifecycle Method Annotations
- Understand the Threading Model of a Servlet
- Develop a Servlet to Respond to Requests from the Client Browser

## **4. Handling Form Requests in Servlets**

- Use HTML Forms to Collect Data from Users and Send it to a Servlet
- Understand How Form Data Is Sent in an HTTP Request
- Developing a Servlet that Retrieves Form Parameters
- Understand and Use HttpSession Objects
- Use Cookies for Session Management
- Use URL Rewriting for Session Management

## **5. Configuring Your Web Application**

- Describe the Purpose of Deployment Descriptors
- Create Servlet Mappings to Allow Invocation of a Servlet
- Create and Access Context and Init Parameters
- Use the @WebServlet and @WebInitParam Annotations
- Use the ServletContextListener Interface
- Describe the Different Scopes in a Web Application
- Handle Errors Use a Deployment Descriptor

## **6. Implementing an MVC Design**

- Implement the Controller Design Element Use a Servlet
- Implement the Model Design Element Use a POJO

- Implement the View Design Element Using a JSP and Expression Language (EL)
- Connect the model, View, and Controller Elements to Implement a Working MVC Solution
- Injecting a Service in a Controller

## **7. Developing Components with JavaServer Pages Technology**

- Describe JSP Page Technology
- Write JSP Code Using Scripting Elements
- Write JSP Code Using the Page Directive
- Write JSP Code Using Standard Tags
- Write JSP code using Expression Language
- Configure the JSP Page Environment in the web.xml File
- Write an Error Page by Using JSP

## **8. Developing JSP Pages by Using Custom Tags**

- Design JSP Pages with Custom Tag Libraries
- Use a Custom Tag Library in JSP Pages
- Describe JSTL Tags

## **9. Use Filters in Web Applications**

- Describe the Web Container Request Cycle
- Describe the Filter API
- Develop a Filter Class
- Configure a Filter in the web.xml File

## **10. More Servlet Features**

- Use the Asynchronous Servlet Mechanism
- Use JavaScript to Send an HTTP Request from a Client
- Processing an HTTP Response Entirely in JavaScript
- Combine These Techniques to Create the Effect of Server-push
- Handle Multipart Form Data

## **11. Implementing Security**

- Describe a Common Failure Mode in Security
- Require that a User Log in Before Accessing Specific Pages in Your Web Application
- Describe the Java EE Security Model
- Require SSL Encrypted Communication for Certain URLs or Servlets

## 12. Integrating Web Applications with Databases

- Understand the Nature of the Model as a Macro-pattern
- Implement Persistent Storage for Your Web Applications Using JDBC or Java Persistence API

## Who Should Attend

The Java EE 6: Develop Web Components with Servlets & JSPs course is ideal for:

- Application Developers
- Java Developers
- J2EE Developer
- Java EE Developers

## Pre Requisite

- Experience with Java EE 6 platform recommended
- Experience with Java programming
- Experience with HTML language recommended
- Developing Applications with Java EE 6 on WebLogic Server 12c
- Java SE 7 Programming

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