Java EE 6: Develop Web Components with Servlets & JSPs

Duration: 5 Days

What you will learn

This Java EE 6: Develop Web Components with Servlets and JSPs training is designed for experienced developers of Java technology applications. You'll gain the knowledge and skills to quickly build web applications suited to any Java EE 6 application server using JSP and servlet technologies.

Learn 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 manage HTTP sessions in a web application.
Create easy-to-maintain JSP pages using Expression Language and the JSP Standard Tag Library (JSTL).
Analyze, design, develop and deploy web applications with Java EE 6 SDK and the application server Oracle WebLogic Server 12c.

Benefits to You

Throughout this course, you’ll gain knowledge experimenting with real code examples in each topic. It's an excellent way to prepare for the Java Enterprise Edition 6 Web Component Developer certification expert examination.

Audience
Application Developers
J2EE Developer
Java Developers
Java EE Developers

Related Training

Required Prerequisites
Experience with HTML language recommended
Experience with Java EE 6 platform recommended
Experience with Java programming
Java SE 7 Programming
Developing Applications with Java EE 6 on WebLogic Server 12c
Course Objectives
Understand and manage HTTP sessions in a web application

Create servlet filters and listeners

Write pages created with JavaServer Pages technology (JSP pages)

Create easy-to-maintain JSP pages using the Expression Language and the JSP Standard Tag Library (JSTL)

Use integrated development environments (IDEs) and application servers for Java EE development and deployment

Write servlets using the Java programming language (Java servlets)

Course Topics

Introducing the Course
Reviewing the Java SE and Java EE Curriculum
Getting Acquainted with Other Students
Reviewing Course Objectives
Discussing 5 Day Course Schedule
Describing the Format that the Class will Use
Introducing Web Application Technologies
Describing the Java EE 6 Web Profile

Web Application Essentials
Describing Java Servlet Technology
Describing JavaServer Pages Technology
Understanding the Model-View-Controller (MVC) Architecture
Explaining Java EE Containers and Java Application Servers
Describing the Web Application Development Process
Identifying the Essential Structure of a WAR File

Developing a Servlet
Describing the HTTP Headers and Their Function
Explaining the Request and Response Processes
Understanding the Life Cycle of a Servlet
Listing Injection and Lifecycle Method Annotations
Understanding the Threading Model of a Servlet
Developing a Servlet to Respond to Requests from the Client Browser

Handling Form Requests in Servlets
Using HTML Forms To Collect Data From Users and Send it To a Servlet
Understanding How Form Data Is Sent in an HTTP Request
Developing a Servlet that Retrieves Form Parameters
Understanding and Using HttpSession Objects
Using Cookies for Session Management
Using URL Rewriting for Session Management

Configuring Your Web Application
Describing the Purpose of Deployment Descriptors
Creating Servlet Mappings to Allow Invocation of a Servlet
Creating and Access Context and Init Parameters
Using the @WebServlet and @WebInitParam Annotations
Using the ServletContextListener Interface
Describing the Different Scopes in a Web Application
Handling Errors Using a Deployment Descriptor

Implementing an MVC Design
Implementing the Controller Design Element Using a Servlet
Implementing the Model Design Element Using a POJO
Implementing the View Design Element Using a JSP and Expression Language (EL)
Connecting the model, View, and Controller Elements to Implement a Working MVC Solution
Injecting a Service in a Controller

Developing Components with JavaServer Pages Technology
Describing JSP Page Technology
Writing JSP Code Using Scripting Elements
Writing JSP Code Using the Page Directive
Writing JSP Code Using Standard Tags
Writing JSP code using Expression Language
Configuring the JSP Page Environment in the web.xml File
Writing an Error Page by Using JSP

Developing JSP Pages by Using Custom Tags
Designing JSP Pages with Custom Tag Libraries
Using a Custom Tag Library in JSP Pages
Describing JSTL Tags

Using Filters in Web Applications
Describing the Web Container Request Cycle
Describing the Filter API
Developing a Filter Class
Configuring a Filter in the web.xml File

More Servlet Features
Using the Asynchronous Servlet Mechanism
Using JavaScript to Send an HTTP Request from a Client
Processing an HTTP Response Entirely in JavaScript
Combining These Techniques to Create the Effect of Server-push
Handling Multipart Form Data

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

Integrating Web Applications with Databases
Understanding the Nature of the Model as a Macro-pattern
Implementing Persistent Storage for Your Web Applications Using JDBC or Java Persistence API