

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

Developer

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