Web Component Development With Servlet and JSP Technologies

Duration: 5 Days

What you will learn

JavaServer Pages (JSP page) technology and servlets are the key web-tier technologies defined in the Java Platform, Enterprise Edition (Java EE platform). The Web Component Development With Servlet and JSP Technologies course provides experienced developers of Java technology applications the knowledge and skills to quickly build web applications from JSP page and servlet technologies using the Sun Java System Application Server, and the Apache Struts framework. Students are exposed to the current methods for analyzing, designing, developing,and deploying web applications with Java technologies. Lab exercises provide students with experience in constructing and deploying the small-to-medium scale web applications found in intranet and low-volume commercial sites. The course features the Java EE 5 technology, and uses the Java EE 5 SDK. The students perform the lab exercises using the NetBeans Integrated Development Environment (IDE).

This course is presented using Sun's web-based Live Virtual Class (LVC). The LVC is a dynamic and fully interactive online learning environment that features live teaching collaboration, and instructor-assisted activities. The downloadable labs will be made available to students prior to the class for download and installation to their personal machine. All other required software for downloable labs will be made available for download after you enroll for this course.

Students who can benefit from this course:

Developers experienced with HTML and Javascript that wish to create web components with servlets and custom tags
Developers preparing for the Oracle Certified Professional, Java EE 5 Web Component Developer certification examination

 A Live Virtual Class (LVC) is exclusively for registered students; unregistered individuals may not view an LVC at any time. Registered students must view the class from the country listed in the registration form. Unauthorized recording, copying, or transmission of LVC content may not be made.

Prerequisites
Required Prerequisites
Java Programming Language (VC-SL-275-SE6)

Developing Applications for Java EE Platform (VC-FJ-310-EE5)

Write Java technology applications, demonstrating significant programming ability

Functionally describe the benefits of an n-tier architecture

Integrate existing Java code (for example, reuse existing classes created by other team members)

Develop a web page using Hypertext Markup Language (HTML)

Design Java technology applications

Develop a web page using JavaScript(TM) technology

Course Objectives

Write servlets using the Java programming language (Java servlets)
Create robust web applications using Struts, session management, filters, and database integration
Write JSP pages
Create easy to maintain JSP pages using the Expression Language, JSP Standard Tag Library (JSTL), and the Struts Til
Create robust web applications that integrate Struts and JSP pages

Course Topics

Introduction to Web Application Technologies

Describe web applications
Describe Java Platform, Enterprise Edition 5 (Java EE 5)
Describe Java servlet technology
Describe JavaServer Pages technology
Define three-tier architecture
Define Model-View-Controller (MVC) architecture

Developing a View Component

Design a view component
Describe the Hypertext Transfer Protocol
Describe the web container behavior
Develop a simple HTTP servlet
Configure and deploy a servlet

Developing a Controller Component

Design a controller component
Create an HTML form
Describe how HTML form data is sent in an HTTP request
Develop a controller servlet
Dispatch from a controller servlet to a view servlet

Developing Dynamic Forms

Describe the servlet life cycle
Customize a servlet with initialization parameters
Explain error reporting within the web form
Repopulating the web form

Sharing Application Resources Using the Servlet Context

Describe the purpose and features of the servlet context
Develop a servlet context listener to initialize a shared application resource

Designing the Business Tier

Describe the Analysis model
Design entity components
Design service components

Developing a Web Application Using Struts

Design a web application using the Struts MVC framework
Develop a Struts action class
Configure the Struts action mappings

Developing Web Applications Using Session Management
Describe the purpose of session management
Design a web application that uses session management
Develop servlets using session management
Describe the cookies implementation of session management
Describe the URL-rewriting implementation of session management

Using 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

Integrating Web Applications With Databases
Map sample data structure into database entities
Design a web application to integrate with a DBMS
Configuring a DataSource and Java Naming and Directory Interface (JNDI) API

Developing JSP Pages
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 the Expression Language (EL)
Configure the JSP page environment in the web.xml file

Developing JSP Pages Using Custom Tags
Describe the Java EE job roles involved in web application development
Design a web application using custom tags
Use JSTL tags in a JSP page

Developing Web Applications Using Struts Action Forms
Describe the components in a Struts application
Develop an ActionForm class
Develop a JSP page for a View form
Configure the View forms

Building Reusable Web Presentation Components
Describe how to build web page layouts from reusable presentation components
Include JSP segments
Develop layouts using the Struts Tiles framework

Related Courses

Web Component Development With Servlet & JSPs, Java EE 5, Self-Study Course