

Web Component Development With Servlet and JSP Technologies (WJB-314A)

JavaServer Pages (JSP) and servlets are the key web tier technologies defined in the Java 2 Platform, Enterprise Edition (J2EE platform). The Web Component Development With Servlet and JSP Technologies course provides experienced Java developers a way to obtain the knowledge and skills necessary to quickly build web applications from JSP and servlet technologies using the Tomcat web container and the Struts framework.

Students are exposed to the current methods for analyzing, designing, developing, and deploying web applications with Java technologies. Real-world 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.

This course also is an ideal method for preparing for the revised Sun Certified Web Component Developer (SCWCD) for J2EE 1.4 certification examination. However, an SCWCD candidate should also spend six months building real-world web applications using the JSP and servlet technologies before taking the exam.

Who Can Benefit

Java programming language developers, with skills equivalent to a Sun Certified Developer for Java Platform, who are creating web components (such as servlets and custom tags) used in the assembly and generation of dynamic web content. This is not a course for web page designers using Hypertext Markup Language (HTML), JavaScript technology, or other web presentation technologies.

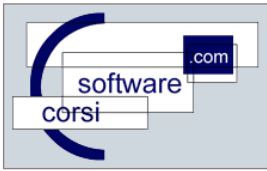


Prerequisites

To succeed fully in this course, students should be able to:

- Write Java applications, demonstrating significant programming ability
- Integrate existing Java code (for example, reuse existing classes created by other team members)
- Design Java applications
- Functionally describe the benefits of an n-tier architecture
- Write a web page using HTML
- Use a World Wide Web (WWW) browser such as Netscape Navigator





Skills Gained

Upon completion of this course, students will be able to:

- Write 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 Tiles framework
- Create robust web applications that integrate Struts and JSP pages



Related Courses

Before:

- [Java Programming Language \(SL-275\)](#)
- [Java Programming Language \(WJB-275A\)](#)
- [Java Programming Language Workshop \(SL-285\)](#)
- [Java 2 Platform, Enterprise Edition \(J2EE\) Platform Overview for Managers \(WJTB-310\)](#) (Optional)
- [Developing Applications for the J2EE Platform \(FJ-310\)](#) (Optional)
- [Developing Applications for the J2EE Platform \(WJB-310A\)](#) (Optional)



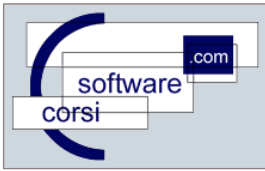
Course Content

Module 1 - Introduction to Web Application Technologies

- Describe Internet services
- Describe the World Wide Web
- Distinguish between web applications and web sites
- Describe Java servlet technology and list three benefits of this technology compared to traditional Common Gateway Interface (CGI) scripting
- Describe JavaServer Pages technology and list three benefits of JSP technology over rival template page technologies
- Describe the Java 2 Platform, Enterprise Edition (J2EE platform)

Module 2 - Developing a View Component

- Design a view component
- Describe the Hypertext Transfer Protocol
- Describe the web container behavior



Develop a view servlet
Configure and deploy a servlet

Module 3 - Developing a Controller Component

Design a controller component
Create an HTML form
Describe how HTML form data is sent in the Hypertext Transfer Protocol (HTTP) request
Develop a controller servlet
Dispatch from a controller servlet to a view servlet

Module 4 - Developing Dynamic Forms

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

Module 5 - 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

Module 6 - Designing the Business Tier

Describe the Analysis model
Design entity components
Design service components

Module 7 - Developing Web Applications Using Struts

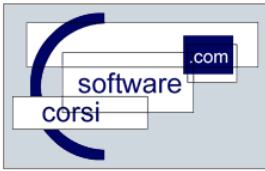
Design a web application using the Struts Model View Controller (MVC) framework
Develop a Struts action class
Configure the Struts action mappings

Module 8 - 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 Uniform Resource Locator (URL)-rewriting implementation of session management

Module 9 - 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

Module 10 - Integrating Web Applications With Databases

Understand what a database management system (DBMS) does
Design a web application to integrate with a DBMS
Configure a DataSource and Java Naming and Directory Interface (JNDI) API

Module 11 - Developing JSP Pages

Describe JSP 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 environment in the web.xml file

Module 12 - Developing JSP Pages Using Custom Tags

Understand the job roles involved in web application development
Understand the rationale in using custom tags
Develop a JSP page using an existing custom tag library

Module 13 - 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

Module 14 - 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