

Building JEE Web Applications Using Struts

Duration:	2 days
Type:	intermediate

Description

This course enables JEE Web Application developers to incorporate the Struts Framework into their designs. All aspects of Struts development are covered including the core architecture, error handling, validation and Tiles.

This is a workshop based course with delegates spending the majority of their time implementing new web applications and enhancing existing ones.

Prerequisites

Delegates attending this workshop should be competent Java programmers with a good understand of standard Web Application development using JSP's and Servlets

List of Modules

Review of J2EE Web Application Design

- The lifecycle of a Java Servlet
- The lifecycle of a Java Server Page
- Creating and deploying Web Archives
- Request dispatching and state management
- Using JSP 2.0 Expression Language
- The Model2 design for Web Applications

The Struts MVC Architecture

- The *ActionServlet* Front Controller
- The *RequestProcessor* Application Controller
- Control components and the *Action* class
- Model components and the *ActionForm* class
- View components and the Tag Libraries
- The Struts deployment descriptor

The Struts Tag Libraries

- Using HTML Tags to build a client view
- Encapsulating conditionals and iteration using the Logic Tag Library
- Creating and manipulating JavaBeans using the Beans Tag Library
- Nesting the Struts JSP Tags
- Overlap between Struts and the JSTL
- Integrating the JSTL using Struts EL

Creating a Struts Based Application

- Configuring the *ActionServlet* in *web.xml*
- Creating a Struts deployment descriptor
- Coding *Action* and *ActionForm* classes
- Writing the input and output JSP's
- Deploying and testing the application
- Introducing Dynamic ActionForms

Exception Handling in Struts

- Default exception handling behavior
- Declaring global exception handlers
- Declaring local exception handlers
- Using *ActionMessage* objects
- Adding errors in *Action* classes
- Presenting error information in JSP pages
- Storing error text in resource bundles

Advanced Struts Development

- Mapping multiple requests to a single controller using *DispatchAction*
- Mapping multiple URL's to a single controller using *MappingDispatchAction*
- Pre-built actions for request dispatching
- Using Dynamic Action Forms to avoid manually creating *ActionForm* classes
- Creating Struts plug-in components
- Customizing Struts by extending the *RequestProcessor* class

Using Tiles to Create Template Views

- Introducing template based layouts
- Using the Tiles Framework with Struts
- Creating a Tile based layout
- Inserting content into a layout

The Struts Validator

- The history of the Validator project
- Using the Validator with Struts
- Configuring *validation-rules.xml*
- Configuring *validation.xml*
- Using validation in ActionForms
- Adding new validation rules

Possible Successors to Struts

- The JavaServer Faces (JSF) Architecture
- WebWork and the Struts 2 framework
- Spring MVC and WebFlow