

Building J2EE Applications using Servlets/JSP and Struts 2.0 (TT6262)

Duration: 5 days

Course Description: Servlets and JavaServer Pages are key server-side Java technologies for building web applications. Servlets are programs that run on a web server; they can respond to client requests and create dynamic content. Java Servlets allow flexible generation of dynamic content without the limitations of CGI-based applications or those created in a web server-specific manner. The JavaServer Pages (JSP) technology allows one to separate static from dynamic content while harnessing the power of Java Servlets.

Audience: This is an intermediate level J2EE developer course. It is designed for experienced Java developers new to J2EE that need to extend their skills in web development and Struts.

Prerequisites: Attendees should have an extensive working knowledge in developing basic Java applications. A working knowledge in or attendance of TT4000 Understanding Internet Architectures and TT2100 Core Java Programming Fundamentals is required.

Topics:

J2EE APPLICATION ARCHITECTURE

- Technical Overview of J2EE
- J2EE Application Architectures (Web based)

WEB APPLICATIONS

- Understanding Web Applications
- Configuring Web Applications

WRITING HTTP SERVLETS

- Introduction to Servlets
- Processing Input Data
- Server-side Control
- Client-side Control
- Maintaining Client State - Sessions
- Application and Session Events

FILTERS

- Overview of Filters
- Filtering the Request and Response
- Annotations
- Dependency Injection and Filters

WRITING JSP PAGES

- Introduction to JSP
- Implicit Objects
- Actions, JavaBeans, and Custom Tags

- Common Expression Language
- JTSL

GETTING STARTED WITH STRUTS 2.0

- Jakarta Struts Project
- MVC and Struts
- Review Filters, Servlets, JSP and Web Applications
- Struts Architecture
- Struts Components: FilterDispatcher, Interceptors, Actions, and Results

YOUR FIRST STRUTS APPLICATION

- Struts 2.0 components
- Configuring web.xml
- Configuring struts.xml: package, results, exceptions, and actions
- Action implementation
- Adding basic view components

VALIDATION AND INTERCEPTORS

- XWork validation framework
- Implementing validation
- Type conversion
- Interceptor role
- Using interceptors

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MAPPING THE MODEL TO THE VIEW

- Review using Custom Tags
- Introducing Struts Tags
- Generic Tags
- UI Tags
- Themes and Templates
- Tag Reference
- Ajax Tags
- ValueStack technology
- OGNL for type conversion

LOCALIZATION AND I18N

- Locales
- Formatting Messages
- Resource Bundles
- Internationalization
- Tags
- I18n Interceptor

PUTTING IT ALL TOGETHER

- Create the Application
- Actions
- Searching
- Prepopulating Forms
- Validating forms
- Showing and Editing Error Messages
- Handling Exceptions
- Add/Edit/Delete Listing