

Introduction to Struts using RAD Course Outline

1. Overview of Web Applications

- Objectives
- Tiered Software Architecture
- Tiered Runtime Environment
- Tiered Architectures
- Presentation Layer
- Web Presentation Layer
- Business Logic Tier
- Tier Integration
- Java Web Applications
- Java Web Application Architecture
- J2EE Architecture
- Web Application Programming Model - MVC
- Model View Controller
- A Scenario of Using MVC

2. Introduction to Struts

- Objectives
- What is Struts?
- Why Struts?
- Struts Components
- The Controller Layer
- The View Layer
- The Form Bean
- A Simple Action
- Struts Configuration
- Define HelloAction
- Invoking HelloAction
- Finding Information About Struts

3. Struts Project Configuration

- Introduction
- Creating a Project
- Downloading Struts Distribution
- Struts Files
- The web.xml File
- Struts Configuration Basics
- Creating Sub-modules
- Implications of Sub-modules
- Advanced Sub-module Issues

4. Basic Struts Programming

- The Action Class
- Action Life Cycle
- The ActionServlet Class

- The execute() Method
- Registering an Action
- The ActionMapping Class
- Accessing User Input
- Form Bean
- Registering Form Bean
- Form Bean Life Cycle
- HTML Form Example
- Accessing User Input
- Bean Scope
- Invoking Business Logic
- Passing Data to Model
- Using Separate DTO Classes
- Controlling Page Flow
- Redirecting the Browser

5. Basic View Development

- Basic Form Validation
- From Validation Pattern
- Validation Logic
- Validation Failure Scenario
- Example validate() Method
- Configure Validation
- Error Messages
- Show Error Messages
- Pre-fill Form Fields
- Basic Steps in Pre-filling
- Example Form
- Form Render Scenario
- Pre-filling After Form Validation Error
- Pre-filling an Editor Form
- Example Form Display Action
- Basic Input Fields

6. Struts Tag Libraries

- Struts Tag Libraries
- Commonality among the Struts Tags
- HTML Tags

7. JSP Expression Language and Standard Tag Library

- JSP Expression Language (EL)
- Basic Usage
- Built-in Objects
- Working With Arrays and Maps
- Operators
- Full Example
- JSP Standard Tag Library (JSTL)
- Run Time Version
- Basic Tags
- Condition Tags
- Iterator Tags
- Internationalization (I18N)
- Setting Preferred Locale
- Specifying Resource Bundle
- Display Translated Text
- Display Number
- Display Date
- JDBC Tags
- Specify Data Source
- Performing a Query
- Display Result
- Pagination Example

8. Advanced Programming

- Error Handling
- Application Error
- Role of the Action
- Role of the View
- Show Data in Error Message
- Declarative Exception Handling
- Syntax of Declarative Exception Handling
- HashMap Property
- Array Property
- Sub-beans
- Dynamic Form Bean
- Avoid JSP File Name in Links
- Link to a Forward

9. Struts Techniques

- Working With Check Boxes
- The reset() Scenario
- Example Check Box Handling
- Dynamic List Box
- Form Cancellation
- Prevent Duplicate Form Submission
- Multi-Page Flow
- Multi-Page Flow Approaches
- Basic Technique
- Example Action

- The Previous Button Handling
- Form Validation
- Preventing Action Proliferation
- DispatchAction Approach
- LookupDispatchAction Approach
- Uploading Files
- The FormFile Interface
- Saving File in Database

10. The Validator Package

- The Validator Package
- Enable the Package
- Validator Configuration Files
- A sample rule in the file validator-rules.xml
- validation.xml file
- Basic Configuration
- Rule Variables
- Error Message
- Common Validation Rules
- Basic Validation
- Range Check
- Length Check
- Special Types
- Advanced Rules
- Client Side Validation
- Writing Custom Validators
- Validator Class Example

11. Tiles Framework

- The Problem
- A Basic JSP Page
- Centralized Content
- Layout Using CSS2
- Dreamweaver Template
- Tiles Framework
- Template Mechanism
- Create the Template
- Create Individual Pages
- Configure Tiles
- Composite Pages
- Use the Pages
- Change Management
- Overriding Content
- Template as a Generic Container
- Specify the Module List
- Render the Module List from a Template
- Enable Tiles Framework