

Oracle Java Advance Frameworks Corporate Training

Struts Architecture and Overview

- Introduction to Struts
- Objectives
- Review: MVC model
- What is Struts?
- Struts flow
- Components in Struts?
 - The Model
 - The View
 - The Controller
- struts-config.xml
 - The element
 - The element
 - The element
 - The element
 - Sample
- The role of web.xml for the application
- Configuring Struts in web.xml
 - web.xml content
 - Steps to configuring Struts in web.xml
 - Sample
- Summary

A Simple Struts Application

- The Goal of the Application
- The input form • The struts-config.xml
- The Form Bean class
- The Action class
- The result page

Struts Features in Eclipse

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- Objectives
- Struts binary distribution
- Directory structure of Struts application
 - Example
- Eclipse support for Struts
- Developing a web application using Eclipse features of Struts

Struts Development Cycle

- Objectives
- Struts development cycle
- Gathering requirements
- Defining screen requirements
 - Data vs. FormBean
 - Define FormBean
- Determining the screen flow
- Defining the ActionMappings in struts-config.xml
- Developing the FormBean
- The reset () method
- Form validation using the validate () method
- ActionError
- Define message key
- Developing Action Class
- Action and Action Class
- The execute() method
- ActionForward
- ActionMapping class
- execute() example
- Example execute() method
- Developing business logic - EJB
- Developing JSPs
- Configuring struts-config.xml and web.xml
- Build, pack and deploy

Struts Plugin, Internationalization and Error Handling

- Objectives
- Struts plugins
 - Creating a plugin
 - Configuring a plugin
- Internationalization
 - Struts Internationalization Mechanisms
 - Adding internationalization to the example application
 - Formatting messages
- Error Handling
 - Struts Error Handling Mechanisms
 - ActionError and ActionErrors
 - Error handling from a form bean
 - Error handling from an action
 - Formatting error messages
 - Struts exception handling
 - Adding error handling to the example application

Miscellaneous Advanced Features

- Objectives
- HTTP Redirection
- Dealing with check boxes
- Context sensitive form validation
- DispatchAction
- BeanUtils package
- Digester package
- DynaActionForms
- Multi-application support
- Validators

Database Programming

- Configuring and using a Struts Data Source
- Using a J2EE Data Source
- Transaction management from an action

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- Sharing a connection with the model classes
- Pre-populating a form for editing data
- Paginated listing of large amounts of data

Database Programming

- Objectives
- Struts Templates
- Template tags - insert, get and put
- Struts 1.1 tiles support
- Inheritance in tiles definitions
- JSTL overview
- JSTL and Struts

Unit Testing Struts Applications – Struts Test Case

- Objectives
- What is JUnit?
- A sample JUnit test case
- A simple StrutsTest test case
- Executing a StrutsTest test
- Testing strategies

JSTL

- Objectives
- The future of Struts Tags
- JSTL - What does it provide?
- JSTL actions
 - Core JSTL tags
 - Formatting tags
 - Database tags
 - XML tags
- JSTL Expression Language
- JSTL Implicit Objects

Hibernate 3.0/4.0

Introduction

- What is Hibernate?
- Object Relational Mapping
- JDBC v/s Hibernate
- Installing Hibernate
- Using Hibernate with an IDE

Getting Started

- POJOs and Persistence
- Creating Hibernate Mappings
- Configuration
- Session Factory
- Session
- Working with Entities
- Transactions
- Queries
- Tying Everything Together

Mapping with Annotations

- Introduction to Annotations
- Annotation Pros and Cons
- Using Annotations in Your Application
- Mapping Entities and Tables
- Mapping Columns and Data Types
- Mapping Associations
- Mapping Collections

Mapping with XML

- Mapping Entities and Tables
- Mapping Columns and Data Types
- Mapping Associations
- Mapping Collections

Working with Persistent Objects

- Object states in Hibernate
- Common Hibernate Methods
- Working with Entities
- Working with Bidirectional Associations
- Flushing the Session
- Cascading Operations
- Orphans
- Lazy Associations

Querying with HQL

- The Hibernate Query Language
- Retrieving Data
- Using Operators
- Sorting Results
- Using Aggregate Functions
- Grouping Results
- Using Joins
- Using Parameters

Transactions

- Hibernate and Thread-Safety
- Introducing the Hibernate Util Class
- Committing and Rolling Back Transactions