

Introduction to JavaServer Faces (JSF) Using RAD Course Content

1. Introduction to JavaServer Faces

- What is JavaServer Faces (JSF)?
- Why Use JSF?
- Nature of a JSF Application
- The Sun Reference Implementation (RI)
- JSF and MVC
- Faces Servlet
- Managed Bean
- The View
- A Simple JSF Application
- The Input Form: form.jsp
- The Result: thanks.jsp
- The Controller: AddressBean
- Page Flow or Navigation Rule
- How Does the Application Work?
- Under the Covers: The Rendered Form HTML
- Under the Covers: The Layout Tree

2. Managed Bean

- What is a Managed Bean?
- Why Do You Need Managed Beans?
- Managed Bean As a Controller
- Registering a Managed Bean
- Lifecycle of a Managed Bean
- Initializing a Managed Bean
- What Scope to Use?
- Value Binding
- Property Data Conversion
- Advanced Property Types
- Component Binding
- Other Binding Types
- Basic Input Processing
- Advanced Input Processing
- JSF Expression Language
- Language Basics
- Use of Expression in JSF
- Basic Expression
- Property Access Expression
- Map Access Expression
- Complex Access Expression
- Predefined Objects
- Operators

3. User Interface Components

- JSF UI Components
- JSF Component Tag Libraries
- Using the Tag Libraries
- HTML Tag Library
- Identifying Components
- Component Identifier
- Client Identifier
- Form Input Field Names
- Labels and Images
- Create a Form
- Buttons
- Links
- Adding Parameters to Links
- Text Input
- Simple Check Box
- Check Box Group
- Check Box Group Example
- Radio Button
- List Boxes
- Dynamic List Box
- Example
- Another Example
- JSF Core Library
- JSF Core Library - Components
- JSF Component Model
- Base Class Hierarchy
- Useful Base Classes
- Useful HTML Classes

4. JSF Event Handling

- Objectives
- Request Processing Phases
- Action Request Processing Phases
- JSF Event & Listener Model
- JSF Event Classes
- Event Classes
- Event Classes: Hierarchy
- Action Event Handling
- Action Event: Example
- Action Listener
- Value Change Event
- Value Change Event Handler
- Listener Classes
- Listener Interfaces
- Listener Classes: Hierarchy
- Action Listener Class
- Value Change Listener Class

- Phase Event Listener
- Request Processing Lifecycle
- Phase Identifiers

5. JSF Navigation

- Objectives
- JSF Navigation
- Example Action Listener
- faces-config.xml File
- JSF Navigation
- Navigation Rules: Example
- Choosing Between Redirect & Direct Rendering
- Navigation: Scenarios

6. Validation

- Objectives
- Introduction
- Validation
- Standard Validators
- <f:validateLength>
- <f:validateDoubleRange>
- <f:validateLongRange>
- Checking for Required Values
- Showing Validation Error Messages
- Customizing Standard Error Messages
- Standard Validation Error Messages
- Validation Process
- Sequence Diagram
- Bypassing Validation
- Immediate Command Components
- Immediate Input Component
- Accessing User Input
- Immediate Example
- Advanced Error Handling

7. Advanced GUI Components

- Objectives
- HTML Panel
- Applying Styles
- Grouping Components
- Data Table
- Using a Data Table
- Data Table Model
- Using a Data Table
- Displaying a Header and Footer Row
- Applying Styles
- Adding Links to a Row

- Using Component Binding
- Handling Action
- Using the Data Table Model
- Handling Action

8. JSF Techniques

- A Typical Application
- The Create Form
- Create Action Method
- Listing Items
- Editing an Item
- Adding the Edit Link
- The Edit Form
- Update Item
- Things to Keep in Mind

9. Using Java Standard Template Library JSTL with JSF

- Objectives
- Introduction to JSTL
- Using JSTL with JSF
- The <c:out> Tag
- The <c:if> Tag
- The <c:choose> Tag
- The <c:forEach> Tag
- International Text Display Tags

10. Custom Components

- Custom Components
- Requirements To Develop Custom Components
- Packages Useful for Custom Component Developer
- javax.faces.component.UIComponent
- Decoding
- javax.faces.component.UIComponent
- UIComponentTag
- Implementing Custom Component Tags
- FacesContext
- javax.faces.application.Application
-
- javax.faces.context.ResponseWriter
-
- javax.faces.component.UIComponent
- javax.faces.component.EditableValueHolder
- Tag Library: TLD
- Faces configuration file: faces-config.xml
- faces-config.xml
- Sample.jsp: Example Showing the Relationship Between the JSF Artifacts
- External Renderer

- Render Defined in faces-config File
- Implementing the Renderer
- Event Listeners
- Using ActionListener in JSP
- ActionListener in the Java Code
- ActionListeners in JSF
- Create Input Form
- Input Form (Code)
- Update faces-config.xml
- ActionEvent Handling
- Summary

11. Data Conversion Model

- Conversion Overview
- Different Viewpoints of Data
- Process of Conversion
- Why Local Values?
- Types of Standard Converters
- Standard Converters with JSF
- Three Ways to Use Standard Converters
- Bind UI Component to Backing Bean Property
- Use converter Attribute on the UI Component
- Use <f:converter> Tag with ConverterId Attribute
- Usage of Standard Converters
- Output of Using Standard Converters
- Converter Attribute
- Standard Converters to Display Output
- Standard Converters: Screen Shot
- Conversion Errors
- Displaying Error Messages
- Conversion Tag
- Conversion Error: Display
- Conversion Error
- Custom Converter
- Custom Converter
- Registering the Converter
- Using the Registered Converter
- Conversion Errors
- Summary