

Java Server Faces 3.0 Course Content

1. Overview

- Java EE and Web Applications
- Perspectives: Servlets and JSP
- Perspectives: MVC Frameworks
- Perspectives: AWT and JFC
- JSF Value Proposition
- JSF Configuration
- Issues with JSP and JSF
- Facelets

2. Lifecycle

- The JSF Request/Response Cycle
- Lifecycle Phases
- Phase Listeners
- The FacesContext Class
- Who Does What
- Partial Request Cycles

3. UI Components

- The UIComponent Class
- Behavioral Interfaces

- The Core and HTML Tag Libraries
- Relationship to CSS
- ID, Client ID, and Label
- UISelectItem(s)
- Navigating the UI Tree
- The binding Attribute

4. Page Navigation

- View Selection
- Navigation Rules
- Implicit Navigation
- Problems with POSTback
- Post/Redirect/Get
- Support for HTTP GET
- Conditional Navigation

5. Managed Beans

- JavaBeans and JSF
- Backing Beans
- Configuring Managed Beans
- @ManagedBean and Related Annotations
- The Unified Expression Language
- Value and Method Expressions

- Implicit Objects

6. Scopes

- Managed-Bean Scopes
- Lifecycle Annotations
- View Parameters
- The Flash

7. Dependency Injection

- Managed Properties
- Values, Lists, and Maps
- Using Dynamic Expressions
- Dependencies and Bean Scopes
- The @ManagedProperty Annotation

8. Facelets

- Migrating from JSP
- View Definition Languages
- Facelets
- Tag Libraries
- Writing and Using Custom Tags

9. Events and Listeners

- JSF Event Model
- Event Types and Timing

- Event Queueing
- ActionEvent and ActionListener
- Action Methods
- Connecting Controllers to Beans
- ValueChangeEvent and ValueChangeListener
- Deferring Event Processing
- Limitations of FacesListeners

10. Lists and Tables

- Working with Collections
- Why We Don't Use <c:anything> <c:anyMore>
- <ui:repeat> vs. <c:forEach>
- <h:dataTable>
- Defining Columns and Facets
- One Command Per Row
- Reading the Row Number
- Pseudo-Maps
- Working with Persistent Data
- Concurrency and Caching
- Limiting the Scope of Queries
- Paging

11. Converters

- The Converter Interface
- Life of a Datum
- Standard Converters
- Custom Converters
- The @FacesConverter Annotation
- Timing of Conversion
- Representing Persistent Objects by ID

12. Validators

- The Validator Interface
- Standard Validators
- Using Regular Expressions
- Producing Error Messages
- Message Keys
- Presenting Error Messages
- Posting Error Messages from Anywhere
- Custom Validators
- The @FacesValidator Annotation
- Validating Multiple Inputs
- JSR-303 Support: "Bean Validation"

13. Resources

- Resource Libraries

- Deploying Images, Scripts, and Stylesheets
- Addressing Resources

14. Composites

- Limitations of Custom Tags
- Composite Components
- Encapsulation
- Deploying and Using Composites
- Interface and Implementation
- Impact on the UI Tree
- Attributes
- Retargeting

15. Ajax

- What is Ajax?
- The XMLHttpRequest Object
- Ajax and the JSF Lifecycle
- Using <f:ajax>
- execute and render Attributes
- Ajax Listeners

16. The JSF JavaScript API

- The JSF JavaScript API
- Triggering Ajax Requests

- Refining <f:ajax> with Callbacks
- onevent and onerror Attributes
- The Ajax Request/Response Process
- Using Hidden Inputs
- Other JavaScript Functions