



## JSF Training Overview

**SUMMARY:** Sun's JavaServer Faces (JSF) technology simplifies the creation of user interfaces for Java web applications. In this hands-on class, attendees learn how to rapidly build JSF applications.

**AUDIENCE( Prerequisites):-** attendee should have a solid foundation in Java programming and prior hands-on experience developing JavaServer Pages. Beyond this, the class can be customized to any level of Java and JSP familiarity.

### JSF Training Objectives

- To understand the purpose and scope of the JSF architecture
- To build Web applications using JSF's FacesServlet, faces-config.xml, and the JSF request/response lifecycle.
- To use the JSF custom tag libraries to build JSF views as JSPs.
- To use managed beans to encapsulate not only server-side form handling but also client-side presentation logic.
- To implement control logic as JSF event listeners or action methods.

To use validators and converters to implement a validation phase for a JSF application.

### JSF Training Outline

- Overview
  - Java EE and Web Applications
  - Perspectives: Servlets and JSP
  - The Model/View/Controller Pattern
  - Perspectives: MVC Frameworks
  - The Command Pattern
  - Perspectives: AWT and JFC
  - JSF Value Proposition
  - JSF Configuration
- Lifecycle and Page Navigation
  - The JSF Request/Response Cycle
  - Lifecycle Phases
  - The FacesContext Class
  - Who Does What



- View Selection
- Navigation Rules
- Outcomes
- User Interface Components
  - The Composite View Pattern
  - The UIComponent Class
  - Behavioral Interfaces
  - The Core and HTML Tag Libraries
  - Relationship to CSS
  - ID, Client ID, and Label
  - The UISelectItem(s) Class
  - Navigating the UI Tree
- Managed Beans
  - JavaBeans and JSF
  - Backing Beans
  - The Factory Pattern
  - Managed Beans
  - Coarse-Grained Beans
  - The Unified Expression Language
  - Value Expressions
  - Dependency Injection
  - Bean Scopes
- Events and Controllers
  - The Observer Pattern
  - JSF Event Model
  - Event Types and Timing
  - Event Queueing
  - ActionEvent and ActionListener
  - Action Methods
  - Connecting Controllers to Beans
  - Dynamic Outcomes
  - ValueChangeEvent and ValueChangeListener
  - Limitations of FacesListeners
- Converters
  - The Adapter Pattern
  - The Converter Interface
  - Standard Converters
  - Working with Enumerated Types
  - Timing of Conversion
  - Custom Converters
  - Configuring Converters
- Validators
  - Validating Input



- The Validator Interface
- Standard Validators
- Producing Error Messages
- Message Keys
- Presenting Error Messages
- Custom Validators
- Validating Multiple Inputs
- Using a PhaseListener
- Data Tables
  - Managing Tabular Data
  - The JSF Data Table
  - Columns
  - Facets
  - Limitations and Strategies