Java EE 6: Develop Web Applications with JSF

Duration: 4 Days

What you will learn

JavaServer™ Faces technology, the server-side component framework designed to simplify the development of user interfaces for Java EE applications, has been simplified and improved - especially in the area of page authoring. Explore Facelets, a powerful but lightweight page declaration language, to design JavaServer Faces views using HTML style templates and build component trees.

Learn To:

Develop JSF pages, page templates, custom and composite components using Facelets.
Develop CDI named beans.
Process data conversion and validation.
Handle events in JSF web applications.
Design JavaServer Faces (JSF) web applications.
Use AJAX and create custom components and composite components.

Benefits to You

Enrolling in this course will teach you how to simplify web application development. Facelets will enable you to reuse code through templates. You will also significantly reduce the time needed to develop and deploy user interfaces. Included in Java EE 6, the JSF 2.0 standard further simplifies web application development. Facelets also enable code reuse through templating and reduce the time to develop and deploy user interfaces.

Students Who Can Benefits from this Course

Java developers responsible for developing and deploying JavaServer Faces (JSF) based web applications
Java developers pursuing the Oracle Certified Professional, Java Platform, Enterprise Edition 6 JavaServer Faces Developer examination

Audience

Developer
J2EE Developer
Java Developer
Java EE Developer

Related Training

Required Prerequisites

Developing Applications for the Java EE 6 Platform

Java SE 7 Programming

Suggested Prerequisites
Java EE 6: Develop Web Components with Servlets & JSPs

Course Objectives

Configure JSF within the Web Container

Design views using JSF and EL

Design custom components using Facelets

Implement templates

Design and develop the model using beans or Pojos

Integrate external resources such as JPA within Web Application

Design web applications using standard architectures, protocols, technologies and components

Integrate navigation flow/ redirection

Integrate models and views using events

Validate application data

Use application data conversion

Apply AJAX in a JSF page

Use HTML5 in JSF applications

Configure and secure JSF applications

Use third party libraries

Course Topics

Introducing the Course
Review course objectives
Review the Java SE and Java EE Curriculum
Discuss 4 day course schedule
Get acquainted with other students

Introducing JavaServer Faces (JSF) Technology
List common requirements for web applications
Describe the JavaServer Faces (JSF) framework
Describe the architecture of JSF web applications
Describe the development view of a JSF application
Walk through a simple JSF web application
Review the life cycle of a JSF application
Create, deploy, and run a simple JSF application

Creating JSF Pages Using Facelets
Describe the hierarchy of UI components
Evaluate the structure of JSF pages
List the tag libraries supported in Facelets
Describe the HTML render kit tag library
List common attributes of the HTML tags
Describe the JSF core tag library
Use common UI components to design Facelets pages

Developing CDI Named Beans
Define a managed bean
Use the JSR-299: Context and Dependency Injection (CDI) annotations
Bind UI components with CDI beans
Use the unified Expression Language (EL)
Use the faces-config.xml configuration file
Use CDI bean scopes

Working with Navigation
Use static and dynamic navigation
Define implicit navigation in JSF pages
Configure navigation rules and cases
Describe the navigation evaluation process
Create a bookmarkable view

Creating and Adding Message Bundles
Create a message bundle for multiple languages
Use a message bundle to simplify localization
Localize an application

Using JSF Templates
Create a template and apply it to multiple pages
Describe how to use a decorator
Use debugging to identify issues

Converting and Validating Data
Describe the data conversion and validation process
Use standard data converters and validators
Configure default validators
Develop and use custom converters and validators
Work with data conversion and validation error messages
Use Bean Validation (JSR-303)

Working with Data Tables

Use a Data Table component
Use column headers, footers and captions
Apply styles to Data Table elements
Customize a data table with a scroll bar
Enhance a data table with a sort table class
Add a pager component to the table.

Handling Events
Describe the JSF Event Model
Use action and value Change Events
Register event listeners
Capture and respond to lifecycle events

Using AJAX and Composite Components with JSF
Define Asynchronous JavaScript and XML (AJAX)
Describe how JSF Components can be enhanced with AJAX
Use the tag
Describe how AJAX request integrates with the JSF
Define a composite component
Create a JSF composite component

Creating Custom Components
Choose when to use custom component
Choose when to use a custom renderer
List the steps for creating a custom component

Working with HTML5 and JSF 2.0
Examine HTML 5 features
Leverage HTML 5 JavaScript APIs
Develop JSF 2.0 Composite Components With HTML 5

Configuring and Securing JSF Applications
Describe JSF Web application stages
Configure the state maintenance method
Describe the application configuration loading process
Describe container managed security
Declare user roles and responsibilities
Configure security for JSF Web Applications
Use the security API

Using Third Party Library for JSF Development
List the third party libraries available
Examine and apply the PrimeFaces library
Examine the Trinidad library
Configure and apply Trinidad library
Develop Mobile ready web applications with Trinidad