Java EE 6: Develop Web Applications with JSF

Duration: 4 days (32 hrs)

Description course

This Developing Web Applications Using JSF, Java EE 6 Technologies training will introduce you to the features and functions of the JSF 2.0 technology. By combining expert instruction with participation in hands-on labs, you'll solidify your understanding while expanding your overall skill set.

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 Pojo
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

Prerrequsites

- Have a good understanding of the Java Programming Language
- Understand the fundamentals of web applications and HTTP protocol

Audience

End User

Course outline

Introducing the Course

- Review course objectives
- Review the Java SE and Java EE Curriculum
- 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