

# Developing Web Applications using JSF Technologies

Course Code: 5 days



IT HR Development

## Prerequisites:

### Required Prerequisites:

- Have a good understanding of the Java Programming Language
- Understand the fundamentals of web applications and HTTP protocol
- Java Programming Language, Java SE 6 (SL-275-SE6)
- Developing Applications for the Java EE 6 Platform (FJ-310-EE6)
- Object-Oriented Analysis and Design Using UML (OO-226)

## Course Objectives:

- Design web applications using standard architectures, protocols, technologies and components
- Configure JSF within the Web Container
- Design views using JSF and EL
- Design custom components using Facelets
- Design and develop the model using JavaBeans or Pojos
- Integrate external resources such as JPA within Web Application
- Integrate navigation flow/ redirection
- Integrate models and views using events
- Validate application data
- Application data conversion
- Identify, Capture, and Resolve Errors
- Integrate Security
- Test, package and deploy applications

# Developing Web Applications using JSF Technologies

Course Code: 5 days



IT HR Development

## Course Topics:

### Getting Started with JavaServer Faces

- Understand common requirements for Web Applications
- Describe the JSF Web Application framework
- Describe the architecture of the JSF Web Applications
- Describe the View Description Language (VDL)
- Understand the role and structure of Managed Beans
- Describe navigation rules and cases
- Walk through a simple JSF web application

### Designing JSF Pages Using Facelets

- Understand the structure of Facelet pages
- Use Tag libraries in Facelet Pages
- Describe the tag libraries supported in Facelets
- Understand the JSF Core Tag Library
- Understand the HTML RenderKit Tag Library
- Understand common attributes of the HTML tags

### Using Managed Beans

- Define bean properties and bean scopes
- Declare beans using annotations
- Bind UI Components with Managed Beans
- Understand the Unified Expression Language (EL)
- Work with beans using Expression Language
- Understand the faces-config.xml Configuration File
- Configure beans in the faces-config.xml file
- Use Java EE Resources in Managed Beans

### Designing Navigations

- Understand the implicit navigation rules in JSF 2.0
- Understand static and dynamic navigations
- Configure navigation rules and cases
- Understand the navigation rule declaration syntax
- Understand the navigation evaluation process

# Developing Web Applications using JSF Technologies

Course Code: 5 days



IT HR Development

## Validating and Converting Data

- Understand the data conversion and validating process
- Use standard data converters and standard data validators
- Configure default validators
- Use JSR-303 Bean Validation
- Work with conversion and validation messages
- Use Error Messages
- Use Resource Bundles in JSF Pages
- Develop custom validators and converters

## Developing Complex Facelet Pages

- Use the DataTable Component
- Use the Facelets AJAX tag
- Understand the Facelets UI Tag Library
- Understand Facelet Templating
- Use ui:insert to define templates
- Use ui:composition to specify the template page
- Use ut:define to populate the template

## Developing Composite UI Components

- Understand the concept of composite UI components
- Understand the elements of a composite component
- Understand JSF application resource libraries
- Design composite components
- Store composite components as resources
- Use Composite components

## Working with Events

- Understand the life cycle of JSF request processing
- Understand life cycle events in JSF
- Understand value change events
- Use action events
- Register event listeners
- Understand the event model enhancements in JSF 2.0

# Developing Web Applications using JSF Technologies

Course Code: 5 days



IT HR Development

## Configuring and Deploying JSF Applications

- Understand JSF Web Application Stages
- Configure the state maintenance method
- Understand the application configuration loading process
- Install and upgrade JSF for a web container
- Deploy JSF web applications to the web container
- Test and verify the JSF application
- Configure security for JSF Web Applications