Oracle Fusion Middleware 11g: Build Applications with ADF I Ed 2

Duration: 5 Days

What you will learn
This course is aimed at developers who want to build Java EE applications using Oracle ADF. Learn to use Oracle JDeveloper 11g Release 1 Patch Set 1 to build, test and deploy an end-to-end web application. Learn To: Build end-to-end web applications. Develop Java EE components with Oracle ADF. Build rich user interfaces with ADF Faces. Use the new capabilities of Oracle JDeveloper 11g Release 1 Patch Set 1. Benefits to You: Simplify application development in your organization to increase productivity. Become more efficient at building Java EE applications using Oracle ADF (innovative yet mature Java EE development framework) and deploy an end-to-end web application. Build & Deploy The data model is built with ADF Business Components and the user interface with ADF Faces. During this course, you'll learn to build each part of the application with the Fusion technology stack and then deploy it to WebLogic Server. Java EE Java EE is a standard, robust, scalable and secure platform that forms the basis for many of today’s enterprise applications. Oracle Application Development Framework (Oracle ADF) is an innovative, yet mature Java EE development framework that is directly supported and enabled by Oracle JDeveloper 11g. Oracle ADF simplifies Java EE development by minimizing the need to write code that implements the application’s infrastructure, allowing developers to focus on the features of the actual application.

Audience
Developer

Related Training

Suggested Prerequisites
Familiarity with JDeveloper
Familiarity with XML concepts
Familiarity with basic Java

Course Objectives

Expose the data model in a web application with a rich ADF Faces user interface

Create JSF pages

Use rich client components in JSF pages

Add validation to ADF applications
Secure Web applications

Build and customize a data model by using ADF Business Components

Course Topics

**Introduction to Fusion and ADF**
- Describing Fusion architecture
- Explaining how ADF fits into the Fusion architecture
- Describing the ADF technology stack (MVC)

**Getting Started with JDeveloper**
- Listing JDeveloper benefits for application development
- Using the features of the JDeveloper IDE
- Defining IDE preferences
- Creating applications, projects, and connections in JDeveloper

**Building a Data Model with ADF Business Components**
- Introducing ADF Business Components
- Creating Business Components from tables
- Testing the data model

**Querying and Persisting Data**
- Using view objects
- Using entity objects to persist data
- Synchronizing entity objects with database table changes
- Creating associations
- Creating updateable view objects
- Creating master-detail relationships
- Refactoring

**Exposing Data**
- Creating application modules
- Using master-detail view objects in application modules
- Managing Business Components transactions
- Abstractioning business services with ADF Model

**Declaratively Customizing Data Services**
- Internationalizing the data model
- Editing business components
- Modifying default behavior of entity objects
- Changing the locking behavior of an application module

**Programmatically Customizing Data Services**
Generating Java classes
Programmatically modifying the behavior of entity objects
Programmatically modifying the behavior of view objects
Adding service methods to an application module
Using client APIs

Validating User Input
Understanding validation options: Database, Data Model, or UI
Triggering validation execution
Handling validation errors
Using Groovy expressions in validation
Using programmatic validation

Troubleshooting ADF BC Applications
Troubleshooting the business service
Troubleshooting the UI
Using logging and diagnostics
Using the JDeveloper debugger

Understanding UI Technologies
Describing the use of Web browsers and HTML
Describing the function of Servlets and JSPs
Defining JavaServer Faces
Explaining the JSF component architecture and JSF component types
Explaining the purpose of backing beans and managed beans
Describing the JSF life cycle
Explaining how ADF Faces augments the JSF life cycle

Binding UI Components to Data
Creating a JSF page
Adding UI components to a page
Describing the ADF Model layer
Using Expression Language in data bindings
Using a Page Definition file
Examining data binding objects and metadata files
Binding existing components to data
Running and testing the page

Planning the User Interface
Describing the Model-View-Controller design pattern
Differentiating between bounded and unbounded task flows
Creating and converting task flows
Defining control flows
Defining global navigation
Creating routers for conditional navigation
Calling methods and other task flows
Implementing validation in the user interface

Adding Functionality to Pages
Internationalizing the user interface
Using component facets
Displaying tabular data in tables
Displaying hierarchical data in trees
Displaying text or media with icons and images
Defining search forms and display results
Displaying data graphically

**Implementing Navigation on Pages**
Using ADF Faces navigation components
Using buttons and links
Using menus for navigation
Using breadcrumbs
Using a train component

**Achieving the Required Layout**
Using complex layout components
Explaining how to use ADF Faces skins
Using dynamic page layout

**Ensuring Reusability**
Designing for reuse
Using task flow templates
Creating and using page templates
Creating and using declarative components
Creating and using page fragments
Deciding which type of reusable component to use

**Passing Values Between UI Elements**
Defining the data model to reduce the need to pass values
Using a managed bean to hold values
Using page parameters
Using task flow parameters
Passing values from containing pages to regions

**Responding to Application Events**
Using managed beans
Coordinating JSF and ADF lifecycles
Using phase and event listeners
Using action listeners and methods
Understanding additional AJAX events

**Implementing Transactional Capabilities**
Handling transactions with ADF BC
Using task flows to control transactions
Sharing data controls
Handling transaction exceptions
Defining response to the Back button

**Implementing Security in ADF BC Applications**
Exploring ADF Application security options
Understanding ADF security framework
Enabling users to access resources
Implementing a Login page
Understanding ADF controller authorization