

Oracle Middleware 12c: Build Rich Client Applications with ADF Ed 1

Duration: 5 Days

What you will learn

This Oracle Middleware 12c: Build Rich Client Applications with ADF Ed 1 training teaches you how to use the powerful, declarative features of ADF Business Components to build and test reusable business services, which you then expose in the user interface using ADF Faces client components. Each ADF Faces component offers complete customization, skinning and support for internationalization and accessibility, as well as a rich set of visualization components capable of rendering dynamic charts, graphs, gauges and other graphics that provide real-time updates.

Learn To:

Build end-to-end web applications.

Build rich user interfaces with ADF Faces.

Develop Java EE components with Oracle ADF.

Use the new capabilities of Oracle JDeveloper 12c.

Benefits to You

By taking this course, you will simplify application development in your organization to increase productivity. You'll become more efficient at building Java EE applications using Oracle ADF (innovative yet mature Java EE development framework) and deploying an end-to-end web application.

Build Complex Navigation between Pages

Working with expert Oracle University instructors, you'll also learn how to quickly build complex navigation between pages, define validation logic and secure the application. After using the Fusion technology stack to build and test each part of your application, you'll get a chance to deploy the application to an Integrated WebLogic Server.

Audience

Developer

Related Training

Suggested Prerequisites

Basic experience with Oracle JDeveloper

Java SE 8 Fundamentals

Course Objectives

Build and customize a business service by using ADF Business Components

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

Test

debug

and deploy the ADF Business Components and the web application

Course Topics

Introduction to Oracle ADF and JDeveloper

About Oracle Fusion Middleware architecture

How ADF fits into the architecture?

Discussing ADF technology stack

Explaining benefits that JDeveloper provides for application development

About main windows and editors in the JDeveloper IDE

Creating applications, projects, and database connections

Building a Business Model with ADF Business Components

About ADF Business Components

Creating entity objects and associations from database tables

Creating view objects and view links

Defining master-detail relationships between view objects

Creating application modules

Testing applications

Refactoring business components

Creating Data-Bound UI Components

About dynamic webpage technologies

- Explaining JavaServer Faces and the JSF component architecture
- Describing standard JSF components
- Discussing ADF Faces rich client components
- Creating JSF pages
- Adding data-bound components to JSF pages

Defining Task Flows and Adding Navigation

- How ADF extends the JSF controller?
- Creating task flows
- Discussing ADF Faces navigation components

Declaratively Customizing ADF Business Components

- Editing business components
- Modifying the default behavior of entity objects, view objects, and application modules
- Creating lists of values (LOVs)
- Creating nested application modules

Validating User Input

- Understanding validation options: Database, Data Model, or UI
- Triggering validation execution
- Handling validation errors
- Writing Groovy expressions to use in validation
- Internationalizing messages

Modifying Data Bindings Between the UI and the Data Model

- Reviewing Oracle ADF model layer
- Creating and using ADF data controls
- Discussing expression Language (EL) and data bindings
- Creating and editing data bindings
- Examining data binding objects and metadata files

Adding Functionality to Pages

- Displaying a selection list of values
- Displaying tabular data in tables
- Displaying hierarchical data in trees
- Defining and using search forms and displaying the results
- Displaying data graphically
- Creating and configuring a backing bean

Adding Advanced Features to Task Flows and Page Navigation

- Creating bounded and unbounded task flows
- Creating routers for conditional navigation
- Calling methods and other task flows
- Creating menu items, menu bars, pop-up menus, context menus, and navigation panes
- Defining breadcrumbs and trains
- Creating and using page fragments
- Adding a bounded task flow as a region

Passing Values Between UI Elements

- Defining the data model to reduce the need to pass values
- Creating a managed bean to hold values
- Storing values in memory-scoped attributes

Passing values by using parameters

Responding to Application Events

Discussing JSF and ADF life cycle phases

Implementing partial page rendering (PPR)

Working with value change event listeners

Working with action event listeners

Understanding additional ADF Faces server events

Programmatically Implementing Business Service Functionality

Deciding where to add custom code

Overview of the framework classes

Generating Java classes for business components

Overriding class methods

Implementing programmatic modifications

Adding service methods to an application module

Calling business component client APIs

Accessing ADF bindings programmatically

Implementing Transactional Capabilities

Handling transactions with ADF BC

Specifying transaction control in task flows

Sharing data controls

Handling transaction exceptions

Defining response to the Back button

Building Reusability into Pages

Designing pages for reuse

Creating and using page templates

Creating and using page fragments

Packaging reusable components into libraries

Achieving the Required Layout

Defining and using component facets

Defining and using complex layout components

Defining and using dynamic page layout

Adding a custom look by using ADF Faces skins

Debugging ADF Applications

Troubleshooting techniques

Configuring logging and diagnostics

Debugging business services by using the Oracle ADF Model Tester

Debugging an application in JDeveloper

Developing regression tests with JUnit

Implementing Security in ADF Applications

Benefits of securing web applications

Understanding the ADF security framework

Implementing ADF security

Enabling users to access resources

Implementing a login page

Accessing security information programmatically

Extending security capabilities by using Expression Language

Deploying ADF BC Applications

Understanding the deployment steps

Creating deployment profiles and configuring deployment options

Changing the context root for an application

Deploying an application from JDeveloper

Building files for deployment by using ojdeploy