

Fusion Middleware 11g: Build ADF Faces Clients for EJB and JPA

Duration: 5 Days

What you will learn

This course is designed for Java EE developers who need to build web applications based on a JPA/EJB data model.

The course focuses on Java EE 5 technologies, such as Java Server Pages (JSP), JavaServer Faces(JSF), and ADF Faces with EJB 3.0 as the application model. Weblogic Server 10.3 is used as the application execution environment, and Oracle JDeveloper 11g is used as the development tool for the course.

To build their web application, students utilize Oracle ADF, including page design, task flow analysis and security implementation. Topics also include transaction management with Session Beans, Message-Driven beans, handling application events, and deploying and troubleshooting applications.

Learn to:

- Map web components to your EJB model
- Utilize sophisticated components with ADF Faces
- Develop and test Java EE-compliant clients
- Map web components to your EJB model
- Utilize sophisticated components with ADF Faces

Audience

- Application Developers
- Java EE Developer
- Technical Consultant

Related Training

Required Prerequisites

Java Programming Language, Java SE 6

Course Objectives

Design Java EE applications by using the Model-View-Controller (MVC) architecture and Session Facade pattern

Build the Web tier by using the JavaServer Faces (JSF) framework

Incorporate ADF Faces components and task flows into the web application

Secure the Java EE application with Java Authentication and Authorization Service (JAAS) & ADF Security

Deploy and troubleshoot the application

Course Topics

Java EE Fundamentals

- Java EE Overview
- Java EE Components
- Client tier components
- WebLogic Server

Designing Java EE Applications

- Java EE design patterns
- MVC Architecture
- Configuring Data Sources
- Creating, Modifying, and Deleting a Data Source in WebLogic Server Console

Exploring the JDeveloper IDE

- Navigators
- Code editor
- Code Assist
- Code Templates
- Debugger

Examining the EJB Model

- Session Beans
- Stateless and Stateful Session Beans
- Local and Remote Interfaces
- What are JPA Entities?
- Managing Persistence of Entities
- JNDI
- Manipulating Data with the EntityManager API
- Using test clients

Asynchronous Communication with Message-Driven Beans

- Java Message Services (JMS)
- Creating a Message-Driven Bean
- Working with Interceptor Methods and Classes
- Creating a JMS/MDB Client

Managing Transactions with Session and Message-Driven Beans

- Selecting the Type of Transaction Management
- Demarcating Transactions
- Managing Transactions using a Session Façade
- Setting the Transaction Attribute
- Propagating Transactions
- Configuring the Transaction Manager in WebLogic Server

Developing a Web Application Using Servlets

- Servlet LifeCycle
- Servlet Methods
- Transaction Handling
- Data Sources

Developing a Web application Using JavaServer Pages

Business logic versus presentation logic

JSP Lifecycle

Basic JSP elements

JSP and JavaBeans

JSP fragments

Designing the Web Tier Using JSF

Configuration of a JSF application

faces-config.xml

JSF Lifecycle

UI Component Model

Validator and Converter Overview

Using JSF components

Using Expression Language

Using managed beans

Developing JSF Pages using ADF Faces

Compare ADF Faces components to JSF base components

Layout your page

Input components

List components

Dates

Table and tree components

Output components

Query components

Enriching Applications using ADF Faces

Operation Components

Partial Page Refresh

ADF Faces JavaScript API

Data Visualization Components

ADF Binding to ADF Faces RC

ADF Data Binding: A Deeper Dive

ADF Model binding

Page definition file

Binding Types

Data control and EJB

JDBC

Mastering Task Flows

Compare JSF Controller and ADFc basics

ADF Controller

Transactions

Navigation Components

Task Flows

Exceptions

Trains

Navigation and Other Operations in JSF

Navigation Components: buttons, links

Access Keys

Menus
breadcrumbs
Operational components

Responding to Events

JSF Lifecycle and Events
Event Types
ADF Faces Event Handling
Validation and Exceptions
Listeners
Contextual Events

Securing Java EE Applications

What is JAAS?
Working with Security Annotations
Configuring Web Application Security
Managing EJB Component Security
Controlling Client Access to EJB Components
Working with a Directory Server

Implementing Security in ADF Applications

ADF Security Framework
LDAP
OID
XML-based
Form-Based Authentication
Identity Store
Implicit and Explicit Authentication

Packaging and Deploying Java EE Applications

Packaging Business-Tier Components
The EJB-JAR file contents
The Persistence Archive (Persistence.xml file) contents
WebLogic Server Deployment Descriptor
Packaging Data Sources used by an Application (application.xml)
Creating a JDeveloper deployment profile
Deploying an Application using JDeveloper and WebLogic Server Console
Creating an EAR File using Command Line Tools

Troubleshooting the Application

Test harnesses
Java logging and Diagnostics
Debugging
Requesting help