

Oracle Mobile Application Framework 2.1: Develop Mobile Apps **NEW**

Duration: 3 Days

What you will learn

This Oracle Mobile Application Framework 2.1: Develop Mobile Apps training teaches you how to design and develop mobile applications using JDeveloper and the Mobile Application Framework extension. Expert Oracle University instructors will deep dive into the key design considerations with mobile applications, as well as how to develop, deploy, secure, and debug mobile applications for iOS or Android.

Learn to:

- Design, build and deploy mobile applications
- Provide and persist data for mobile applications
- Leverage on-device features in a mobile application
- Add access control and authentication functionality to mobile applications
- Test, debug and determine the type of deployment before releasing your application

Benefits to You

By taking this course, you'll expand your mobile application development skills using JDeveloper. You'll leave this course with the knowledge and skills to build fully-functioning mobile applications for Android or iOS platforms that are capable of displaying and persisting data, leveraging device features such as SMS and camera, and utilizing best practices in mobile UI design. You'll understand how to secure mobile applications and be able to debug mobile applications, regardless of their deployment platform.

Audience

Application Developers
Java Developers

Related Training

Suggested Prerequisites

Conceptual knowledge of mobile application development

Course Objectives

Use features and task flows to define entry points to your application

Develop a user interface with MAF components

Add business logic to a mobile application

Deploy and test MAF applications

Use Web Services to communicate with remote servers

Read and write data to a local database

Describe the architecture of a MAF application and the MAF runtime

Use data visualization UI components

Invoke device-specific features

Use best practices for creating responsive mobile applications

Add security to your mobile application

Course Topics

Mobile Development and Mobile Application Framework: Introduction

Mobile challenges and enterprise concerns

Designing for mobile

Hybrid mobile applications

HTML5, Java, and JavaScript

Device native user experience

Framework features

MAF Extension for JDeveloper or OEPE

Android SDK tools, Xcode

Designing Mobile Applications with Mobile Application Framework

Default projects and contents

Application configuration file

Application resources

Project and application properties

Building Features in a MAF Application

Features, feature content, and constraints

Views and control flows

Accessing user, device, and hardware properties

Features at design time; constraints level: feature or content

Springboard, Navigation bar

Device access

Remote URL

HTML content

Developing a Simple Mobile User Interface

Facets, including header, primary, secondary, and footer

Component framework

AMX tags

Data controls

Output text and input text

Layout components, including panel splitter, table layout, row layout, and cell layout
Command buttons and links

A Closer Look at Developing a MAF UI

Managed beans
Configuration files
Bean Scope, including application, page flow, and view
Expression Language in code and properties
Pop-ups
Popup component and Show Popup Behavior operation
Navigation transition

Binding Data to Pages with Data Controls

Data controls and bindings
Collections, attributes, methods, and operations
Declarative configuration
DCX files, CPX files, and UI Hints
Page definitions
Prebuilt data controls for device access

Displaying Complex Data with Visualization Components

Charts
Gauges
Geographic maps
Thematic maps
Map types
Custom maps

Working with Remote and Local Data

mechanisms that are used to create data controls from web services
Consuming SOAP and REST web services
Accessing data in an on-device SQLite database
Using POJOs to indirectly access web services and exposing them as data controls

Improving the UI with Devices Services

Enhancing mobile applications by incorporating device services, such as camera, email, and bar code readers
Identifying device properties to determine feature functionality
Employing declarative and programmatic techniques for accessing device services
Using device services to allow end users to control aspects of how the mobile application runs

Using Non-Declarative Programming Techniques

Identifying non-declarative programming scenarios in MAF
Working with framework utility classes and common programming use cases
Refreshes to the user interface using provider and property change events
Invoking the binding layer from Java

Securing MAF Applications

Security features available in MAF
Supported security scenarios
Enabling authentication security for the application
Configuring user authorization inside an application
How Oracle Access Manager supports Mobile Services and Social Identity

Using a whitelist to establish which URLs open in the application's embedded browser or in the default browser of the device

Implementing Standards by Reusing Application Artifacts

Constructing and reusing template-like fragment components for a consistent look and feel across MAF applications

Designing and developing a page fragment that includes both static and dynamic content

Consuming a page fragment in a page, using attribute values as parameters to the page

Classifying and defining common features, and then archiving and consuming them

Archiving applications for redistribution

Deploying and Debugging MAF Applications

Options for archiving an application

Creating and modifying deployment profiles for both device platforms

Deploying applications to Android and iOS platforms

Using logging APIs to diagnosis and fix application problems

Running the application in debug mode and debugging Java code from the JDeveloper IDE

Debugging JavaScript, HTML, and style sheets