

R12.x Extend Oracle Applications: Building OA Framework Applications

Oracle E-Business Suite

DURATION

5 Days

MODULES

14 Lectures

COURSE CODE

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Course Overview

This R12.X Framework Applications training teaches you methods & tools that E-Business Suite developers use to create OA Framework-based pages. Complete a full-featured application that queries, inserts, updates & deletes data from an instance.

What You Will Learn

Module 1: OA Framework Fundamentals & Architecture

- Purpose: Build foundational understanding of OA Framework, Java, and MVC.
- Introduction to OA Framework
- R12.x Extend Oracle Applications Overview
- Important Terminology
- Personalization vs. Extension
- Architectural Components of OA Framework
- Why Java?
- Foundations of Java Programming
- Java Tech Stack for OA Framework
- Oracle JDeveloper 10g Overview
- MVC Design Pattern
- Why MVC?
- OA Framework Architecture
- BC4J, UIX, AOLJ
- Metadata Services
- Additional Resources
- Summary

Module 2: MVC Concepts & OA Framework Page Lifecycle

- Purpose: Understand how OA Framework implements MVC and page rendering.

- MVC Design Pattern Concepts
- JSP Pages and Components
- Runtime Processing
- OA Framework Page Lifecycle
- Logical Components of an OA Page
- Model, View, Controller Responsibilities
- OA Framework MVC Summary
- Summary

Module 3: Model Layer - BC4J Fundamentals

- Purpose: Master business logic and database interaction.
- BC4J Object Overview
- Reuse Onion & Encapsulation
- Build & Naming Standards
- Application Modules (AM)
- Transaction Objects
- Entity Objects (EO)
- EO Creation Standards & Features
- View Objects (VO)
- VO Creation Methods
- Expert Mode VOs
- EO/VO Merge
- Associations & View Links
- Entity Experts
- Validation AMs & VOs
- Summary

Module 4: View Layer - OA Pages & UI Components

- Purpose: Build and manage OA Framework UI pages.
- View Layer Terminology
- Workspaces & Projects
- Page Creation in JDeveloper
- Page Structure & Hierarchy
- Regions, Subregions & Items
- Attribute Sets
- Templates (Tables, Buttons, Headers)
- CSS & Styling
- LOVs (List of Values)
- Data Binding (Read/Write)
- Naming Standards
- View Layer Standards
- Summary

Module 5: Controller Layer & Event Handling

- Purpose: Control UI behavior and user interactions.
- Controller Basics
- When to Use a Controller
- Coding Best Practices
- Handling Queries
- Dynamic WHERE Clauses
- Processing Button Actions
- Parameter Handling
- Search Page Implementation
- Page Navigation
- GET & POST Event Flows
- UI Rendering Lifecycle
- Summary

Module 6: Development Environment Setup

- Purpose: Prepare a complete OA Framework development environment.
- Installing JDeveloper 10g
- Environment Variables
- DBC File Configuration
- E-Business Suite User Setup
- Database Connections
- Project Configuration
- Testing Environment
- Summary

Module 7: OA Framework State Management

- Purpose: Understand session, caching, and scalability.
- Session & Cookie Architecture
- JVM Architecture
- OA State Caches
- Root Application Modules
- AM Retention & Pooling
- Page Context & Requests
- Parameter Passing
- Passivation
- Connection Pooling
- Back Button Behavior
- Summary

Module 8: JDeveloper 10g with OA Extension

- Purpose: Efficient development using JDeveloper tools.
- JDeveloper OA Extension Overview

- Workspaces & Projects
- Database Connectivity
- Directory Structure
- Wizards & UI Objects
- Debugging Tools
- Profiling & Code Coach
- Refactoring
- Debugging BC4J
- Summary

Module 9: Implementing Query & Drilldown Pages

- Purpose: Build search-driven OA pages.
- Query Page Design
- Search Execution
- LOV Integration
- Drilldown-to-Details Pages
- Summary

Module 10: Implementing Create Pages

- Purpose: Enable data creation workflows.
- Poplists
- Shared Regions
- Creating & Initializing Rows
- VO Initialization
- Saving Data
- Partial Page Rendering
- Labs
- Summary

Module 11: Implementing Delete Pages & Error Handling

- Purpose: Handle deletions and user feedback.
- Exception Types
- Message Dictionary
- Attribute & Row-level Exceptions
- Messaging Flows
- Dialog Pages
- Table Content Switchers
- Confirmation & Warning Dialogs
- Summary

Module 12: Implementing Update Pages & Navigation

- Purpose: Support record updates and navigation.
- Breadcrumbs
- Page Navigators

- Record Navigators
- Trains
- Single & Multi-Page Updates
- Confirmation Pages
- Summary

Module 13: OA Framework Development Standards

- Purpose: Enforce Oracle and OA coding standards.
- Coding Terminology
- Java & OA Standards
- BLAF Standards
- File Naming & Packaging
- Model/View/Controller Standards
- Summary

Module 14: Deployment & Personalization

- Purpose: Deploy extensions and manage personalizations.
- Personalization Storage
- MDS Repository
- Import/Export Tools
- Functional Administrator UI
- XMLImporter / Exporter
- Page Extensions
- BC4J Extensions
- Production Deployment
- Summary