R12.x Extend Oracle Applications: Customizing OA Framework Applications

Oracle E-Business Suite

DURATION	MODULES	COURSE CODE
5 Days	**10 Lectures**	**—**

Course Overview

Customizing the E-Business Suite is the process of modifying the base install to suit the needs of your installation. Customizing can be as simple as setting a single profile option, or as complex as writing a new application for your instance. This course is intended to teach the range of customizations available in the E-Business Suite

What You Will Learn

- Module 1 – Introduction to OA Framework Customizing
- Introduction to Customizing
- R12 Customizing OA Framework Applications
- Course Objectives
- Lesson Objectives
- Agenda (Day 1 – Day 5)
- Important Terminology
- Personalization vs. Extension
- Real World Benefits
- Architectural Components of OA Framework
- Why Java?
- Foundations of Java Programming
- Java Tech Stack for OA Framework
- Oracle JDeveloper 10g
- Oracle JDeveloper 10g Components
- OA Framework Technology Stack Overview
- BC4J
- UIX
- AOL/J
- OA Framework
- Metadata Services
- Additional Resources
- Summary

- Module 2 – OA Framework Architecture & MVC
- MVC Design Pattern Overview
- MVC Conceptual Flow
- Why MVC?
- OA Framework Architecture
- Concepts of MVC Design Pattern
- JSP Pages
- Key JSP Components
- Runtime Page Flow in OAF
- EBS Session Initialization
- Menus and Responsibilities
- Oracle Forms vs OAF Pages
- Rendering an OAF Page
- Logical Components of an OAF Page
- MVC Roles in OAF
- View
- Controller
- Model
- OA Framework MVC Page Rendering Summary
- Summary
- Module 3 – Model Layer (BC4J Fundamentals)
- Basics of the Model
- Model-layer BC4J Objects
- Encapsulation & Reuse Onion
- Reuse Rules & Build Approach
- BC4J Package Structure & Naming Standards
- Application Modules (AM)
- Transaction Management
- Entity Objects (EO)
- EO Standards, Features, and Files
- View Objects (VO)
- VO Creation Methods
- Expert Mode VOs
- VO–EO Relationships
- VO Rows & Java Files
- Database Interaction via BC4J
- EO/VO Merge Process
- Associations
- Reference
- Composition
- View Links
- Entity Experts
- Validation AMs & VOs
- Summary
- Module 4 – View Layer (UI Development)
- Basics of the View

- View-layer Terminology
- Recommended Build Approach
- Workspaces & Projects
- Creating OAF Pages in JDeveloper
- Page Structure & Hierarchy
- Regions and Subregions
- Items & Item Styles
- Named vs Indexed Children
- Shared Regions
- Attribute Sets
- Attribute Set Standards & Naming
- Templates
- Table
- Button
- Region Header
- CSS Styles
- Destinations & Links
- LOVs (List of Values)
- Reading & Writing Model Data
- Binding UI Items
- Naming Rules & Standards
- Summary
- Module 5 – Hands-on Lab
- Lab: Learning More About the Page
- Login to E-Business Suite
- About This Page
- Solution Walkthrough
- Module 6 – JDeveloper 10g with OA Extension
- Introduction to JDeveloper 10g
- OA Extension Overview
- Applications, Workspaces & Projects
- Creating JDeveloper Items
- Database Connections
- Project Properties
- Directory Structure
- Exploring Java & UI Objects
- Code Navigation & Refactoring
- Profiler & Code Coach
- Debugger Basics
- Breakpoints & Exception Handling
- Debugging Declarative Applications
- BC4J Interaction Debugging
- Summary
- Module 7 – Development Environment Setup
- Installing JDeveloper
- Environment Variables

- DBC File Configuration
- EBS User Assignment
- Workspace Setup
- Testing Connections
- Summary
- Module 8 – Controller Layer
- Basics of the Controller
- When You Need a Controller
- Controller Responsibilities
- Common Coding Patterns
- Handling Queries
- initQuery & Dynamic WHERE Clauses
- Processing Button Actions
- Request Parameters
- Search Page Example
- Page Navigation & Forwarding
- Message Dictionary Usage
- GET & POST Event Flows
- processRequest vs processFormRequest
- Summary
- Module 9 – Introduction to Personalizations
- Personalization Concepts
- Pages, Regions, Items
- Personalization Examples
- User vs Administrator Personalizations
- Configurable Pages
- Flexfields
- Look-and-Feel Customizations
- Personalizations vs Extensions
- Benefits
- Summary
- Module 10 – Personalization Architecture & Concepts
- System Personalization Capabilities
- Menus & Responsibilities
- Messages & Lookups
- Branding
- Page Personalizations
- Personalization Levels & Layers
- Summary
- Module 11 – User-Level Personalizations
- User-Level Personalization Features
- Views, Sorting & Filtering
- Column Management
- Multiple Views
- Default & Seeded Views
- Admin-Seeded User Views

- Summary
- Module 12 – Administrator-Level Personalizations
- Admin Personalization Capabilities
- Profile Options
- Personalization Context & Scope
- Personalization UI
- Modifying Properties
- SPEL Expressions
- Creating New Items
- Connecting Items to Data
- Managing Personalizations
- Troubleshooting
- SQL & Diagnostic Tools
- Personalization Document Manager
- Summary
- Module 13 – Configurable Pages
- R12 Customizing OA Framework Applications
- Objectives
- Concept of Configurable Pages
- Preparing for Personalization
- Personalizing a Configurable Page
- Personalization Levels
- Layout Options
- Horizontal Layout
- Vertical Layout
- Content Management
- Page
- Add Content
- Reorder Content
- Personalizing Object Properties
- Before & After Personalization Examples
- Summary
- Module 14 – Advanced Personalization Features
- Advanced Personalization Concepts
- Adding Descriptive Flexfields (DFFs)
- Enabling Existing DFFs
- Analyze
- Freeze
- Find
- Enable
- Container & Display
- Adding DFFs to the UI
- Creating New DFF Regions
- Adding New Regions with Custom Content
- URL Includes
- Summary

- Module 15 – Extending OA Framework Applications
- Extension Overview
- Four Types of Extensions
- Adding New Attributes
- Defaulting Attribute Values
- Validating Attribute Values
- New Development Extensions
- Common Extension Tasks
- Deploying Extensions
- BC4J Substitutions
- Deploying BC4J Substitutions
- JDeveloper Deployment
- Middle Tier Deployment
- Summary
- Module 16 – Assembling OA Framework Components
- Assembly Process Overview
- Page Analysis
- Gathering Components
- Model Layer
- View Layer
- Controller Layer
- Moving Components
- Workspace & Project Creation
- Runtime Connection (DBC) Setup
- Project Properties
- Connection Configuration Steps
- Page Testing
- Summary
- Module 17 – Development Considerations
- Prime Development Considerations
- Coding Principles
- E-Business Suite Development Model
- Development Environment Setup
- OA Framework Build Approach
- Integration with Other Technologies
- PL/SQL
- Oracle Forms
- AK
- JTT
- JTF
- JSP
- Summary
- Module 18 – Deploying OA Framework Applications
- Personalization Storage
- Directory Structures & Layering
- Deployment Toolsets

- Functional Administrator UI
- XML Export / Import
- JPX Importer
- JDR_UTILS Utilities
- Inspecting MDS Repository
- Deploying Personalizations
- Deploying OA Page Extensions
- Deploying BC4J Extensions
- Summary
- Module 19 – Translations
- Translation Concepts
- Pages & Content to Translate
- XLIFF Tools
- Extract
- Import
- Translation Workflows
- Translating Personalizations Inline
- Translating Using UI Tools
- Translating New Pages
- Importing Translations into MDS
- Summary
- Module 20 – OA Framework Development Standards
- Coding Standards
- Terminology
- OA Framework Standards
- E-Business Suite Standards
- Database Object Standards
- BLAF Standards
- Java Standards
- File & Package Naming Standards
- Model, View & Controller Standards
- Summary
- Module 21 – Appendix: E-Business Suite Architecture Overview
- Oracle E-Business Suite Overview
- HTML & Forms Interfaces
- Concurrent Processing
- Technology Stack (R12)
- Rapid Install
- Product Families & Registration
- Vision Demo Database
- Summary
- Module 22 – Appendix: E-Business Suite Architecture Components
- Multi-Tier Architecture
- Desktop, Application & Database Tiers
- Oracle Applications Framework Internals
- Concurrent Processing Architecture

- Oracle Applications Utilities
- Workflow, Alerts, XML Publisher
- Applications Manager (OAM)
- R12 Technology Stack Changes
- Summary
- Module 23 – Appendix: Database Architecture
- Oracle Applications Database Objects
- Schemas & APPS Schema
- Multi-Org Architecture
- Reporting Currencies
- Performance & Scalability Features
- Monitoring & Diagnostics
- RAC & BI Features
- Summary
- Module 24 – Appendix: File System Architecture
- INST_TOP
- Database Tier File System
- Application Tier File System
- APPL_TOP Structure
- Product & Language Directories
- Admin, AD, AU Directories
- Java & Technology Stack Directories
- Summary
- Module 25 – Appendix: Basic Administration
- Environment Files
- Context Files
- Server Control Scripts
- Languages & Character Sets
- NLS Configuration
- Translation Patches
- Summary
- Module 26 – Appendix: AD Utilities
- AD Utilities Overview
- Environment Setup
- Running AD Utilities
- Command-Line Arguments & Flags
- Parallel Processing
- Distributed AD
- Logs & Restart Files
- Maintenance Mode
- Summary
- Module 27 – Appendix: Security in OA Framework
- E-Business Suite Security Model
- Function Security
- Data Security
- RBAC

- Menus & Responsibilities
- Navigation Structures
- Data Security Policies
- Grants & Permissions
- Summary
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