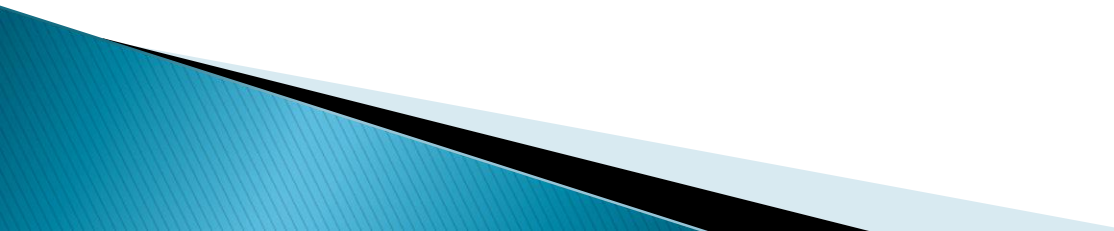


Oracle Applications Framework

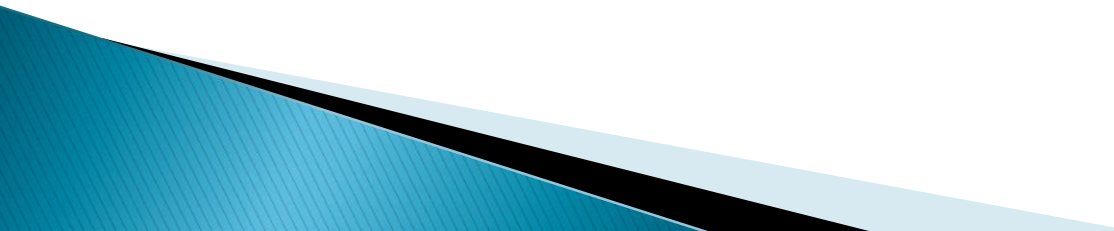
OAF Basics

By
Mahendra

Index:

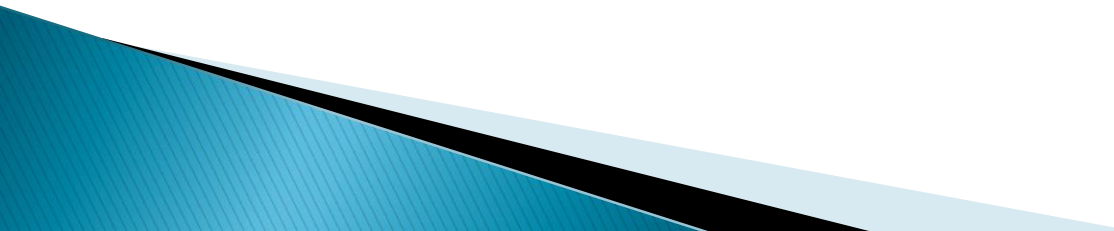
- ▶ What is OA Framework
 - ▶ Why OA Framework
 - ▶ OAF Vs FORMS
 - ▶ OA Framework Architecture
 - ▶ MVC Architecture and its Components
 - ▶ Profile Options
 - ▶ JDeveloper Structure
 - ▶ Naming Standards
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What is OA Framework

- ▶ Oracle Application Framework(OA Framework) is a proprietary framework developed by Oracle Corporation for application development within the Oracle E-Business Suite.
 - ▶ Available to customers for personalization, customizations and custom-application development.
 - ▶ The OA Framework is a Model-view-controller (MVC) framework built using J2EE (Java 2 Platform, Enterprise Edition) technologies.
- 

Why OA Framework

Advantages :

- ▶ Enterprise-Grade Performance and Scalability
 - ▶ Improved End User Productivity
 - ▶ Highly extensible architecture
 - ▶ Browser Look and Feel (BLAF terminology) for all applications
 - ▶ Open industry Standards such as XML, HTML, Java, JSP,
 - ▶ SQL and Web Services.
- 

OAF-FORMS

Using Oracle Forms	OA Framework
<p>With Oracle Forms I can create custom Apps modules and modify seeded Apps Forms.</p>	<p>JDeveloper is the development tool for creating custom Apps web pages <i>and</i> modifying seeded Apps web pages.</p>
<p>I use SQL and PL/SQL in Oracle Forms</p>	<p>We will still use SQL statements, specifically in View Objects. We can execute PL/SQL, but within Java code. If your Java skills are nil or weak, now might be a good time to plan a training program. See What To Do Next for more information.</p>

<p>An Oracle Forms file (.fmb) contains screen design and custom procedures and functions.</p>	<p>Reusable code, that is the mantra for JDeveloper and OA Framework. In Oracle Forms a data block references a table or view, and that definition is contained within the .fmb. With JDeveloper, we create view objects or entity objects that can be reused by other web pages.</p>
<p>In Forms, I can reuse forms, libraries, and menus by referencing.</p>	<p>OA Framework is an assembly of reusable objects.</p>
<p>I use TEMPLATE.fmb as the starting point for any custom Apps forms. TEMPLATE.fmb contains references to libraries, property settings, and menus that will help make custom forms look-and-feel like Oracle-provided forms.</p>	<p>OA Framework is a development and deployment platform presented through JDeveloper. The seeded objects and settings give custom web pages the same look-and-feel as Oracle-provided web pages</p>

In Forms I create and use canvases:

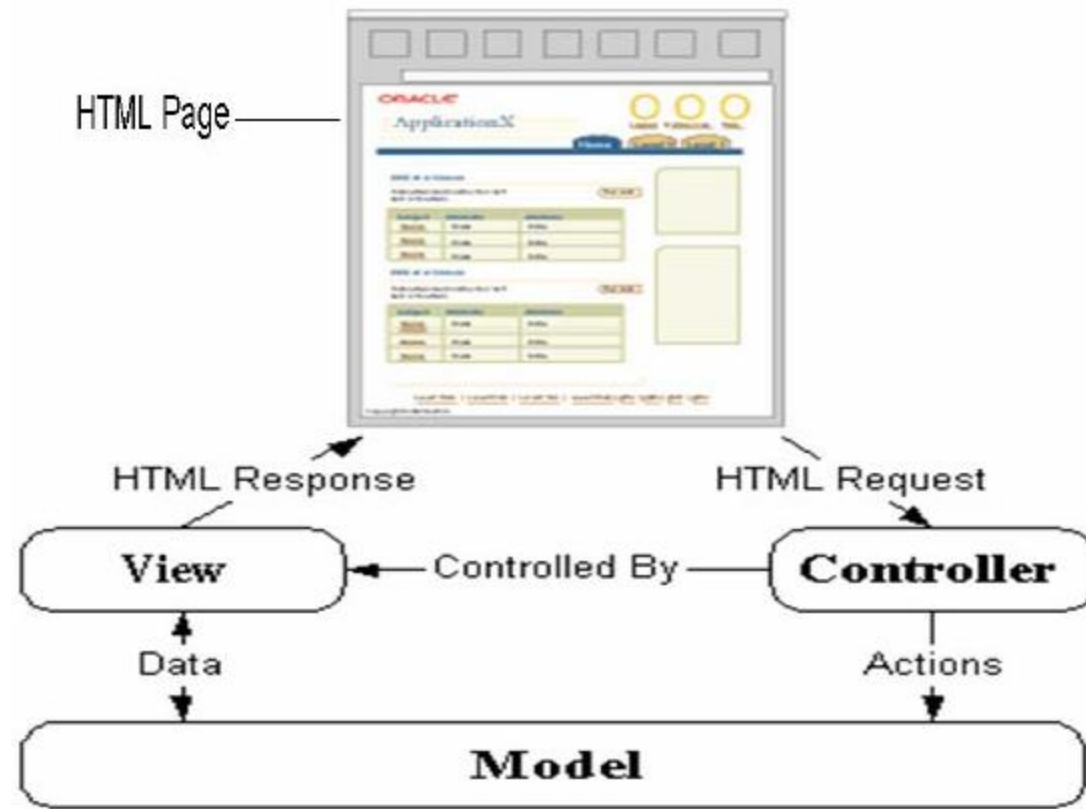
- Forms requires a root canvas
- I use stacked canvases for controlling access to groups of items
- Fields and buttons appear on a canvas
- Properties control the appearance of canvases and items

In OA Framework we use the concept of a region:

- *A web page requires a root region
- *Regions can be nested
- *Widgets (fields, buttons, images, etc) appear in a region
- * Properties control the appearance of widgets

OA Framework Architecture

OA Framework architecture is based on Model-View-Controller(MVC) design pattern.



Components of MVC Architecture

Model:

- Data
- Implemented using Oracle Business Components for Java (BC4J).
 1. EO (Entity Object)
 2. VO (View Object)
 3. AM (Application Module)

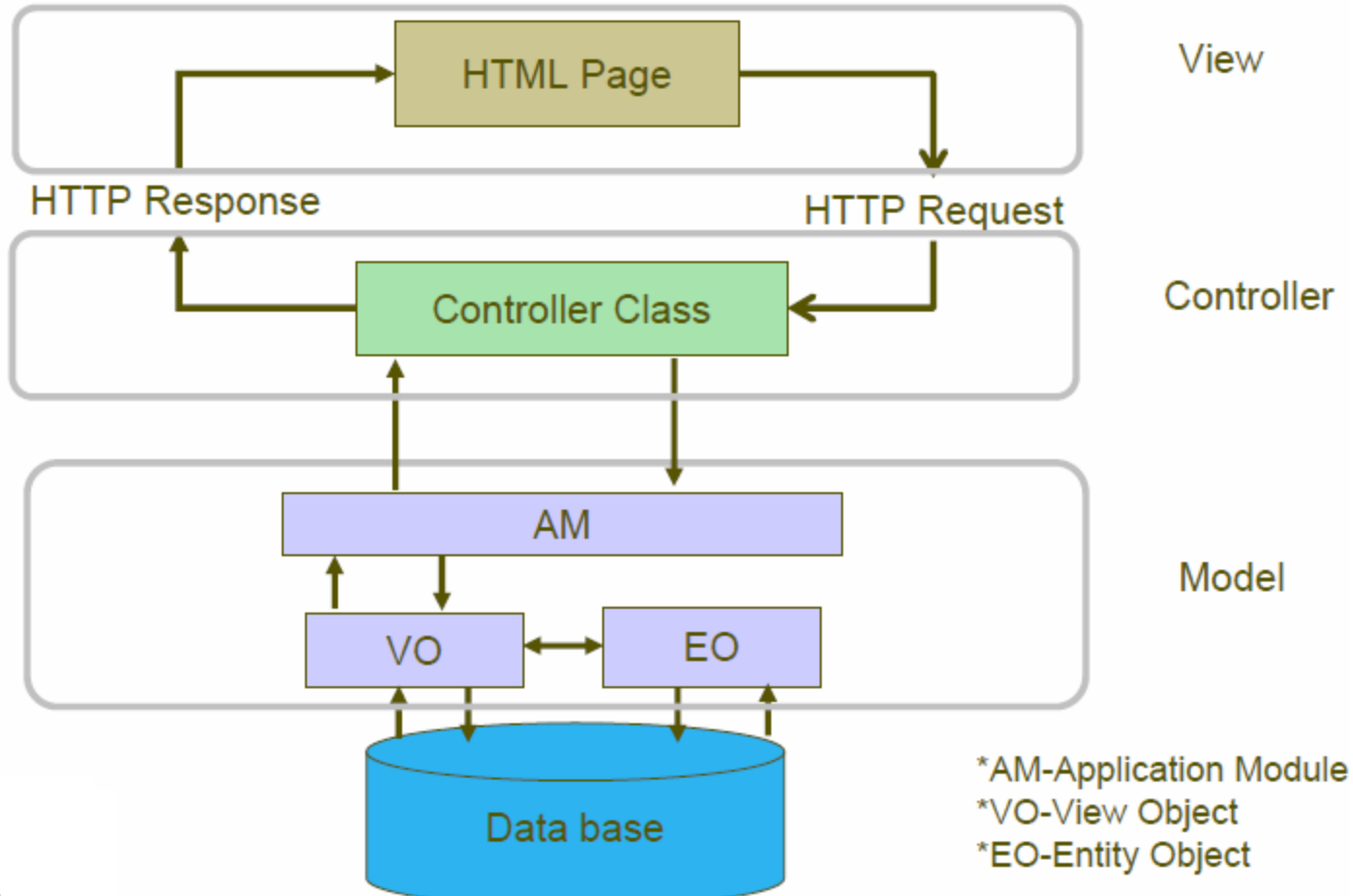
View:

- User Interface.
- Implemented using an Oracle technology called UIX.
(UIX = User Interface XML).

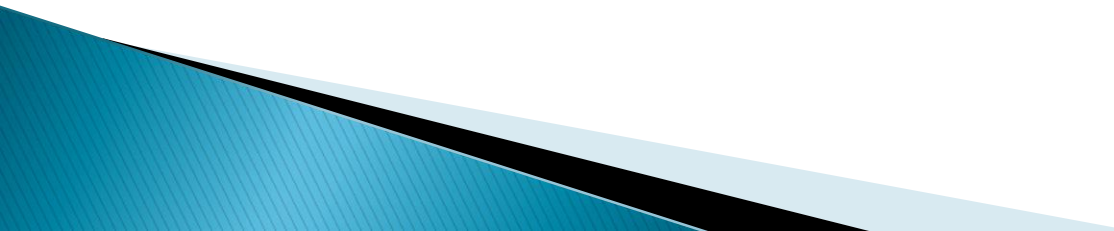
Controller:

- Code
- User actions are handled by the OA Controller.
(Ex: Clicking SUBMIT button)

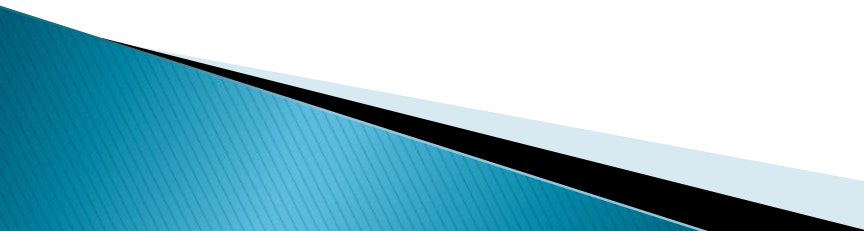
Interaction between model, view and controller



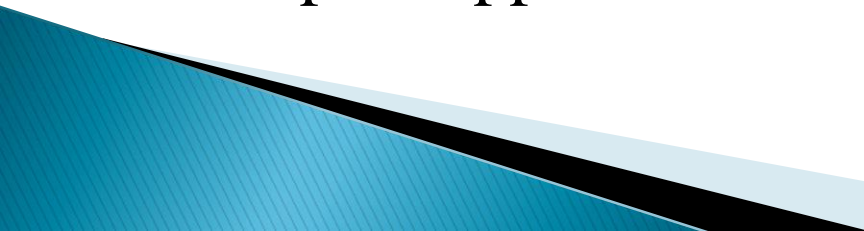
Entity Object (EO)

- ▶ Entity Object is based on database table or other data source.
 - ▶ Entity Object contains attributes which represent database columns.
 - ▶ All insert/update/delete (DML Operations) transactions go through EO to database.
- 

View Object (VO)

- ▶ Two types
 1. SQL based
 2. EO based
 - ▶ Represents a query result.
 - ▶ Is used for joining, filtering, projecting, and sorting your business data.
 - ▶ Can be based on any number of entity objects (EOs) and provides access to EOs.
- 

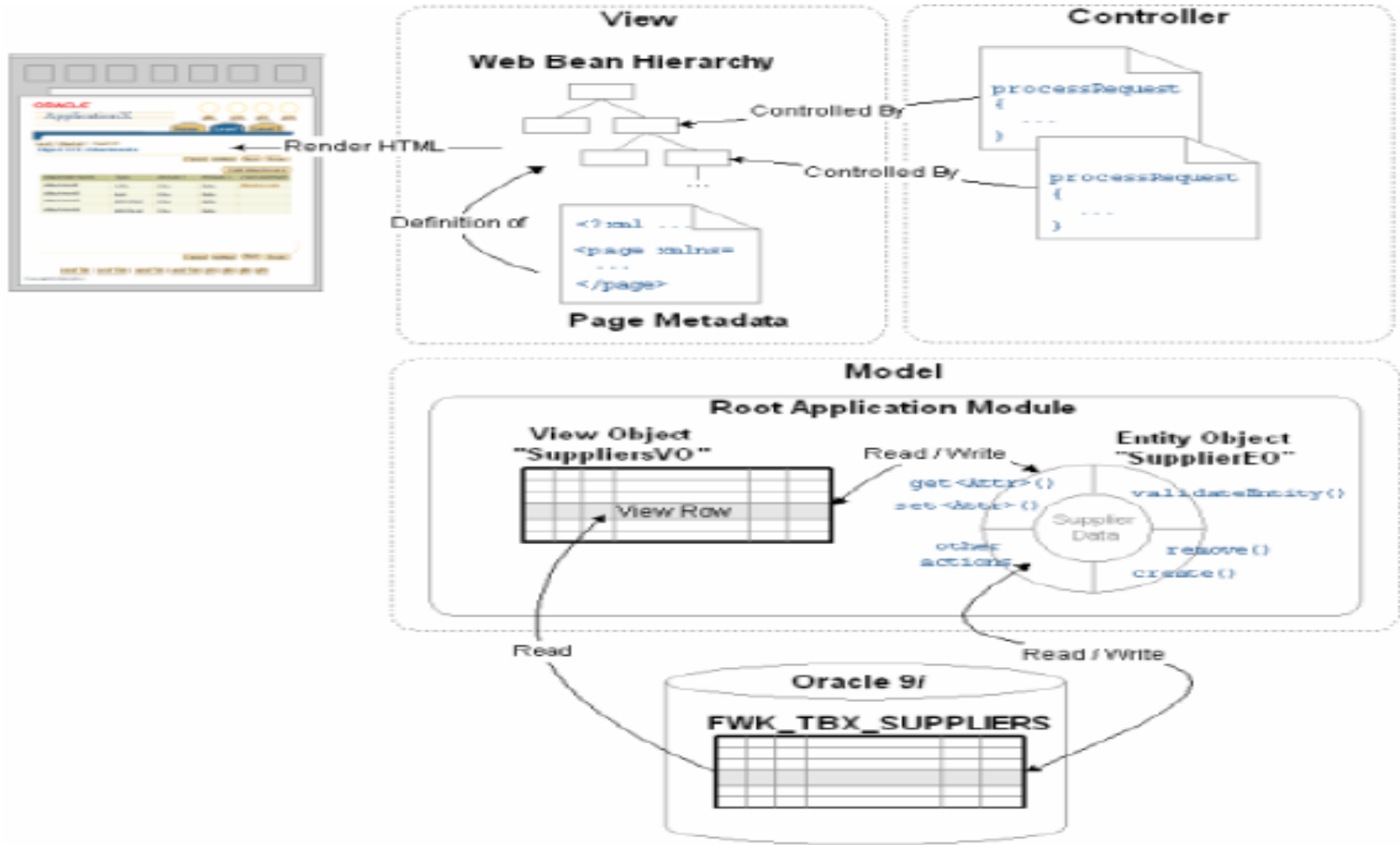
Application Module (AM)

- ▶ Every page must have a root application module.
 - ▶ Handles transactions.
 - ▶ Application Modules serve as containers for related BC4J Objects.
 - ▶ The objects are related by participating in the same task (for example, a multi-page UI for creating purchase orders)
 - ▶ Application Modules provide transaction context
 - ▶ Application Modules establish database connections
 - ▶ Application Modules may be nested to provide more complex application modules
- 

Controller (CO) in MVC Architecture

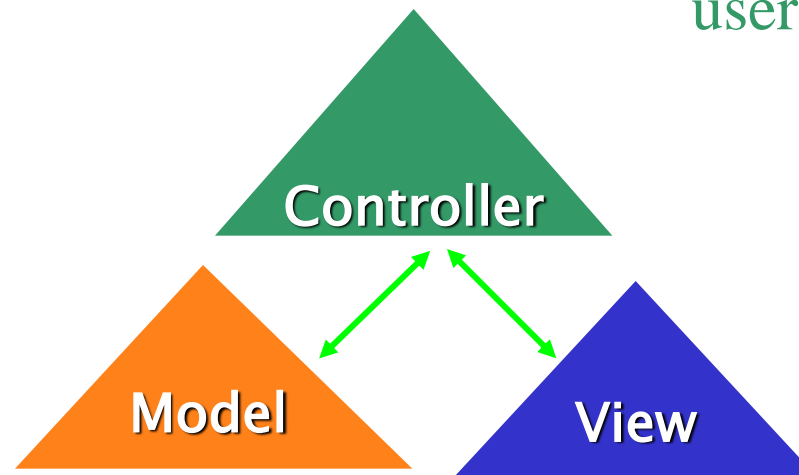
- ▶ Responds to user actions and directs application flow.
- ▶ Model objects like EO and VO can't be accessed directly from the Controller Class, except AM.
- ▶ Contains methods such as
 1. ProcessRequest: Fires when OAF page loads for the first time.
 2. ProcessFormRequest: Fires when user submits the page.
(Ex: clicking GO button)

MVC Architecture



Model-View-Controller (MVC) Design Pattern

The *controller* responds to user actions and directs application flow



The *model* encapsulates underlying data and business logic of the application

The *view* formats and presents data from a model to the user

Profile Options

To Enable the “about this page” link on the page set the below profile option as “yes”

FND: Diagnostics : Yes

To Enable the “personalize page” link on the page set the below profile options as “yes”

Personalize Self-Service Defn : Yes

FND: Personalization Region Link Enabled : Yes

Jdeveloper Structure

Level :1

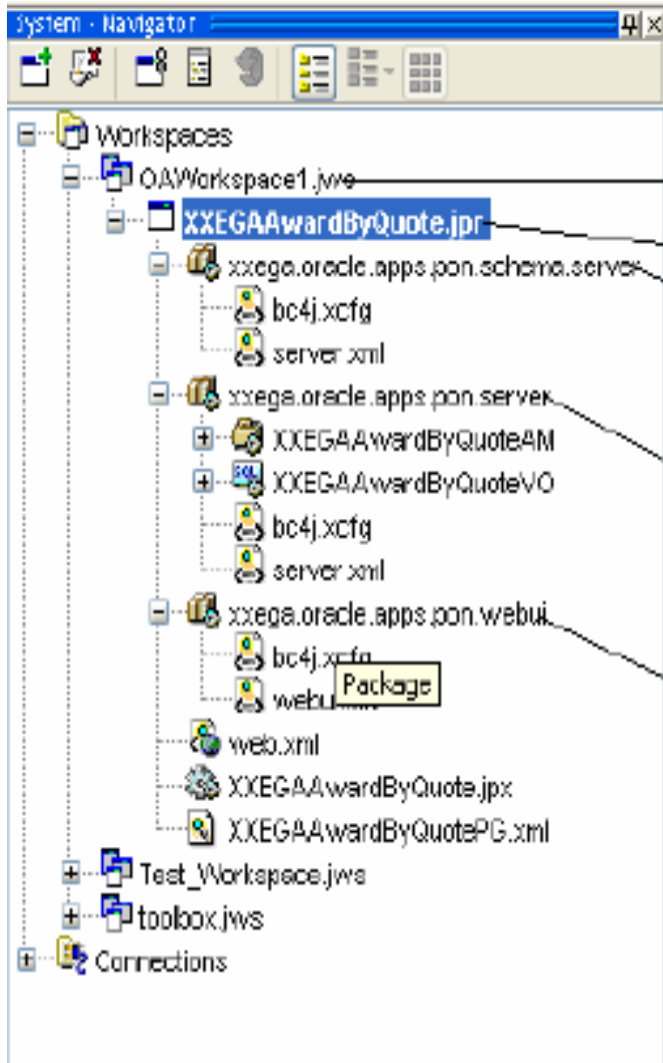
OAWorkspace.jws

Level: 2

OAProject1.jpr
OAProject2.jpr
.

Level: 3

<CUSTOM_TOP>.oracle.apps.<APPL_TOP_NAME>.schema.server
EO1
EO2
<CUSTOM_TOP>.oracle.apps.< APPL_TOP_NAME >.server
VO
AM
<CUSTOM_TOP>.oracle.apps.< APPL_TOP_NAME >.webui
PG



Workspace

Project

Schema.server which contains EOs

Server which contains VO and AM

Webui contains Page

Naming Standards

- ▶ Page Name Ends with PG/PAGE
 - ▶ Region name ends with RN
 - ▶ Entity Object Name ends with EO
 - ▶ View Object ends with VO
 - ▶ Application Module Name Ends with AM
 - ▶ Controller Name ends with CO
- 