

ITSE 1077

Course Syllabus

1. Name of Course: Oracle ADF for Forms 4GL Developers

2. Number of Clock Hours: 48 hours

3. Course Description:

This course teaches students to build applications by using ADF Business Components (ADF BC), ADF Faces, and ADF databinding using Oracle JDeveloper 10g Release 3 (10.1.3). Students explore ADF Business components and will learn to develop entity objects and simple pages with ADF Faces. Students learn how to build the pages to support a multi-page transaction and then deploy the application to Oracle Application Server 10g R3 (10.1.3.0.0). This course also introduces students to web services and how they are used in Business Component applications. Students learn how to call and make use of web services from their ADF applications.

4. Prerequisites

Basic knowledge of SQL queries and data manipulation and [Oracle 10g: Java Programming](#)

5. Course Objectives

At the end of this course, students will be able to:

- ◆ Build and customize the backend of an application with ADF BC
- ◆ Apply best practices for organizing Business Component projects
- ◆ Test business components using JDeveloper 10g Release 3
- ◆ Develop web pages using JSF and ADF Faces
- ◆ Expose ADF BC applications as a web service
- ◆ Deploy applications to Oracle Application Server 10g

6. Rationale:

Upon completion of this course, students will have a better understanding of Oracle ADF, a powerful and popular database application system.

7. Required Materials:

Oracle Official Curriculum included.

8. Evaluation

Those who participate in class discussions, complete course lab work, and miss no more than three class meetings will be awarded 4.8 continuing education units.

9. Course Outline

Oracle ADF Introduction and JDeveloper

- ADF architecture and its MVC relationship
- ADF Business Components: characteristics
- ADF Faces: characteristics
- ADF data binding

Defining the Application Pageflow

- The role of JSF and ADF Faces
- Creating JSF Pages
- Adding JSF navigation cases to the diagram
- Including notes and attachments to the diagram

Using ADF Faces Components

- UI components
- Page structure
- Rich Internet components
- UIResources file

Exploring ADF Business Components

- Using Database connections
- Creating applications, projects and applications
- Entity Objects
- View Objects
- Application Modules
- The ADF BC Browser (tester)
- Debugging business components using the tester
- Customize EO for Security

Developing Entity Objects

- Creating the data model using entity objects
- Defining attribute default values
- Refining the associations between entities
- Incorporating Validation in the data model
- Using custom properties
- Creating a Container to hold the data model (application module)
- Determining EO to table relationships – best practices

Presenting and Packaging the Data Model with View Objects

- Declaratively creating view objects
- Creating view objects using SQL statements
- Customizing Attribute Definitions
- Linking view objects
- Creating and passing parameter values

Managing Applications with Application Modules

- Components of an application module
- Nesting application modules
- Creating and exposing custom methods
- Modeling relationship types
- Renaming views and associations
- Expose Business Components as data controls
- Building efficient AMs and view objects – best practices

Binding UI Components to Data Sources

- Adding lookup view objects to the application module
- Utilizing ADF databinding
- Binding data using ADF
- Binding Editor
- Creating custom data controls

Developing a Simple Page with ADF Faces

- Creating the Page Outline
- Adding UI Components to the Page
- Creating the Edit and View Buttons
- Adding Command Buttons to the Page
- Running and Testing the Page

Creating a Master-Detail Page

- Creating the Data View
- Developing the Basic UI
- Adding the Master component as a Form
- Adding the Notes Panel
- Adding the Detail component as a Table
- Linking the Page to the Application

Implementing Transactional Capabilities

- Custom method to the application module
- Set a date when the user is assigned
- Create the Data View components
- Develop the Create Page
- Develop the Confirmation Page
- Develop the Done Page
- Pass values in a two page create transaction
- Add a create button to Search page

Passing Values within a Page

- Defining the search method view object
- Creating a search form to enter the search criteria
- Using the page definition to bind LOV values
- Set LOV values to be dynamic or static
- Creating a table to display the returned records

Creating Application Events in JSF

- JSF Lifecycle events
- Creating event listeners
- Validating JSF components
- Converting data
- Action Listeners

Deploying ADF Applications

- Deployment options for an ADF application
- Deploy an ADF application
- Export methods from view objects and application modules
- Deploy an application module to Oracle Application Server 10g

Using Web Services with ADF Applications

- Service Oriented Architecture
- Web services
- Calling a web service from an ADF application
- Exposing an application module as a web service

Troubleshooting

- Troubleshooting basics
- Logging and diagnostics

- Test clients
- Tools and utilities