

## Advanced Application Express (APEX) v3.1

### Course Summary

#### Description

Application Express is Oracle's lightweight database-centric web development tool that can be used to easily create small, simple web applications. It provides great functionality for managing the database structures and actual data within an Oracle database. This course is designed to address a number of the more advanced topics concerning Application Express. Each topic will be presented individually and will not build on each other. Time will be available to explore and research additional topics of interest as well.

#### Objectives

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

- Work at a more advanced level in Application Express
- Explore in depth the new topics introduced

#### Topics

- PDF Printing/BI Publisher
- Javascript/Ajax
- Upload/Download Files
- Apex and External Tables
- Apex and CSS
- Advanced Charting in Apex
- Apex APIs
- Setting up the Developer Environment
- Debugging techniques
- Application Extensions
- Advanced Tabular Forms
- Hacking an Apex Application
- Apex and SQL Developer
- Apex Data Dictionary
- Migration from Access
- Customizing Themes and Templates

#### Audience

This course is ideally suited for the developer coming from the Oracle Forms/Reports world that wants to learn to develop a web application from scratch. It is equally useful for data managers that would like to move their data (and applications) from a single user environment such as a spreadsheet or Microsoft Access application to database repository.

#### Prerequisites

Students should have taken the Introduction to Application Express v3.1 course or have equivalent experience.

#### Duration

Three days

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### Course Outline

- I. PDF Printing/BI Publisher**
  - A. Printing a Standard Report with Derived Output
  - B. Creating a PDF Report with Multiple Queries
  - C. Including Dynamic Images in your Report
  - D. Creating a Report with a Custom XML and XSL
  - E. Sending a Report as an Email Attachment
  - F. Creating a Report with a Dynamic Layout Selection
- II. Javascript/Ajax**
  - A. Incorporating some JavaScript examples into your APEX Application
  - B. Incorporating some AJAX examples into your APEX Application
- III. Upload/Download Files**
- IV. Apex and External Tables**
- V. Apex and CSS**
- VI. Advanced Charting in Apex**
- VII. Apex APIs**
- VIII. Setting up the Developer Environment**
- IX. Debugging techniques**
- X. Application Extensions**
  - A. Emailing
  - B. Web Services
  - C. Adding BLOB Data to your Application
- XI. Advanced Tabular Forms**
  - A. Build a Custom Tabular Form
  - B. Add Validations to your Tabular Form
  - C. Manage Changes to the Tabular Form using Collections
- XII. Hacking an Apex Application**
  - A. Preventing SQL Injection Attacks
  - B. Preventing Cross-Site Scripting
  - C. Using Session State Protection
- XIII. Apex and SQL Developer**
  - A. Apex Data Dictionary
  - B. Migration from Access
- XIV. Customizing Themes and Templates**
  - A. Copying and modifying a template
  - B. Creating and modifying a theme
  - C. Using a variety of styles in a template