

**Advanced Oracle Application Express**

**Course Number:** ORC-394
**Duration:** 3 days

**Overview**

This Advanced Oracle Application Express (APEX) training teaches attendees how to fine-tune their applications to meet pixel perfect visual requirements. Students learn how to manually process standard and tabular forms and discuss error management and explore debugging techniques using SQL/Developer integration. Attendees also build and consume RESTful web services using the declarative framework provided by APEX. Finally, this course examines performance concerns, common pitfalls, and how to avoid them.

**Note:** This Apex class is taught using the latest version, however, earlier versions may be used upon request.

**Prerequisites**

This APEX course is intended for seasoned APEX developers who can very easily navigate the environment and component attributes. Students should have taken Accelebrate's [Intermediate Oracle Application Express](file:////training/oracle-application-express-intermediate) class or have the equivalent experience.

**Materials**

All Oracle APEX training students receive comprehensive courseware.

**Software Needed on Each Student PC**

* Oracle Application Express 5, 2018, or later
* Each student computer will need a web browser and Oracle SQL Developer installed
* Please contact us for detailed setup instructions if you have purchased this class

**Objectives**

* Customize APEX templates
* Build themes from sample sites and modulate a design into components
* Make your site responsive to accommodate a wide range of screens and capabilities
* Build manual forms with PL/SQL
* Manually create tabular forms and implement validation for those forms
* Trap and log errors
* Debug APEX applications
* Improve performance
* Troubleshoot production issues
* Publish and consume RESTful services

**Outline**

* Introduction
* Customizing APEX Templates
	+ Create Custom Templates
	+ Use Subscriptions
* Responsive Web Design
	+ Allow applications to resize to any device
	+ Brief CSS overview
	+ How do media queries work?
	+ Using print media query
* APEX Collections
	+ Create and use a collection.
	+ Build an event application using a collection
	+ Discuss collection limitations
	+ Wrap collections in a database view
* Manual Forms with PL/SQL
	+ How to convert a declarative form to a manual form
	+ Understand row locking in a web environment
	+ Discuss MD5 hash and row versioning
	+ Detect if row-level updates are needed
* Manual Tabular forms
	+ Manually Creating Tabular Forms
	+ Validation in Tabular Forms
	+ Working with Collections
* Error Handling
	+ Brief discussion on the interface injection design pattern
	+ How to catch errors raised within APEX and PL/SQL
	+ Map constraints and errors to friendly messages
* Debugging
	+ How to use the apex\_debug API
	+ How to approach locating a bug
	+ Understand the sequence of events that happen on a page
	+ Integrate SQL developer line by line debugger
* SQL Developer & APEX Integration
	+ Custom views and reports
	+ Managing apex environment
	+ Deploying applications
* Performance
	+ Settings which impact application performance
	+ Fixing report pagination
	+ How to use a dynamic report source
* Production Issues
	+ How to deploy an application
	+ Discuss deployment strategies
	+ Manage database objects, apex objects, and developer files
	+ Deployment workflow
* Intro to Mobile Development
	+ Build a simple app using list views
	+ Link the mobile app to the desktop version
	+ Understand different user interfaces
* REST services - Publish
	+ Discuss ORDS(Oracle Restful Data Services) requirements
	+ Create declarative services to expose data for disparate systems
* REST services - Consume
	+ WEB Source Modules
	+ APEX\_EXEC API
	+ Read web service data from PL/SQL
	+ Perform AJAX operations to retrieve data
	+ apex.process javascript object
* Conclusion