

Introduction to Oracle APEX Training (5 Days)

Course Overview

Welcome to Introduction to Oracle APEX Training, a course crafted to equip your team with the knowledge and skills to effectively utilize Oracle Application Express (APEX). APEX allows for rapid development of secure and scalable applications with a minimal amount of coding, which is why it's widely used for building modern web-based applications. In this course, we'll explore what makes APEX an essential tool for organizations and how it can streamline your development processes.

We start our journey with the **Introduction to APEX** lesson, where you'll gain insights into Oracle Application Express, its history, and the unique advantages it offers. We'll explore the APEX architecture, examine the primary programming languages used, and discover the various roles users can assume within the APEX ecosystem. You'll also learn about deployment options and engage in an interactive exercise logging into the APEX workspace.

The **SQL Workshop** session introduces you to the components of the SQL Workshop, focusing on the Query Builder. You'll learn to select data from individual tables and join tables, with exercises designed to enhance your practical understanding of creating queries both from graphical representations and reports.

In the lesson on **Applications**, you'll navigate through the App Builder, exploring diverse options for creating applications. By practicing building an Oracle data model, you'll learn best practices that enhance application development within your organization.

With the **Pages** lesson, you'll get familiar with Page Designer using the left, right, and central panes. This session includes building an "About Us" page while mastering layout techniques and navigation through breadcrumbs, reinforced with hands-on design exercises.

In **Regions**, you'll learn to work with regions on a page. Through exercises, we'll guide you in creating and manipulating regions effectively, ensuring your applications are both functional and visually appealing.

Our exploration of **Classic Reports** provides comprehensive insights into their attributes and creation. We'll guide you in developing classic report pages and exploring alternative methods to achieve optimal reporting solutions.

The **Forms** lesson uncovers the basic functionalities of forms, such as browsing records within tables. You'll engage in exercises focused on creating forms to browse employee data, equipping your team with the ability to efficiently manipulate and display data.

Dive into **Interactive Reports** as you experiment with the unique features they offer. You'll create reports with drill-down capabilities, enhancing your ability to manage complex data structures with ease.

As we focus on **Items**, you'll grasp the essentials of item properties, layout configurations, and creating dynamic filtering systems using forms and checkboxes, all through structured exercises designed for practical learning.

Moving to **Buttons and Sessions**, you'll learn to manage button actions and session states, which are necessary for maintaining efficient workflows in APEX applications. Practical exercises will guide you through session management and redirection techniques.

Through **Computations**, you'll differentiate between application and page computations while practicing benefit calculations and computation creation exercises to build robust, dynamic applications.

Validations will teach you to implement essential checks during page submissions through exercises demonstrating the creation of validations and the sequence of submission events.

Understand the functionality of **Processes** within APEX, distinguishing between application and page-level processes as you practice creating typical insert and delete processes.

In **Branches**, you'll explore branching mechanisms within APEX applications, cementing your understanding with exercises on creating department-specific branches.

The **Using Plug-ins** lesson guides you in integrating and leveraging plug-ins effectively. You'll participate in exercises that emphasize the importance of choosing appropriate plug-ins to enhance functionality.

Explore the features of **Calendars** in APEX as you work with calendar integrations through exercises like setting employee hire dates, ensuring your team can manage and display time-based data efficiently.

Dynamic Actions take center stage as you explore different action types through exercises focused on creating dynamic user interactions, like adding check/uncheck all buttons.

A thorough understanding of **Security** measures will be imparted, including session state protection and authorization schemes. Exercises on creating authentication measures ensure your applications maintain robust security standards.

The **Deployment** session provides an understanding of best practices and strategies for deploying applications, including practical exercises on exporting and importing applications to maximize your deployment success rates.

We conclude with **Team Development**, emphasizing collaborative development through tools like issue tracking. You'll practice creating team issues, fostering a consistent and integrated development approach across your team.

By completing this course, your team will be well-versed in using Oracle APEX to streamline and enhance your application development process. The skills acquired will ensure your applications are efficient, secure, and scalable.

Course Benefits

- Gain a solid understanding of Oracle Application Express (APEX) and its architecture.
- Learn to build and deploy web applications quickly and efficiently using APEX.
- Acquire practical experience through hands-on exercises and real-world scenarios.
- Understand the use of SQL Workshop for data manipulation and query building.
- Master the design and development of application pages and user interfaces.
- Explore dynamic actions and interactive reports to enhance application functionality.
- Develop skills in managing security, session states, and user authentication in APEX applications.
- Learn best practices for application development, deployment, and team collaboration.

Course Outline

Introduction to APEX

What is Oracle Application Express (APEX)?
History of APEX
Why Use APEX?
Architecture and Components
Main Programming Languages in APEX
User Roles in the APEX Ecosystem
APEX Deployment Options
The APEX Hierarchy
Log in to the APEX Workspace (Exercise)

SQL Workshop

Components of SQL Workshop
Query Builder
Selecting Data from a Single Table
Joining Tables
Creating Queries in Query Builder from Graphical Representation (Exercise)
Creating Queries in Query Builder from Report (Exercise)

Applications

App Builder Areas
Creating An Application (Exercise)

Options for Creating an Application
Best Practice: Create the Oracle Data Model

Pages

Page Designer Overview
Create An About Us Page (Exercise)
Page Designer: Left Pane
Page Designer: Right Pane
Page Designer: Central Pane
Breadcrumbs and Navigation
Understanding Layout
Designing the About Us Page (Exercise)

Regions

Working with Regions
Creating Regions on a Page (Exercise)

Classic Reports

Classic Reports Overview
Creating A Classic Report (Exercise)
Classic Report Attributes
Alternative for Creating a Classic Report Page

Forms

Basic Functionality of a Form
Browsing Records in a Table
Create a Form to Browse Employees (Exercise)

Interactive Reports

Features of Interactive Reports
Create Departments Interactive Report (Exercise)
Using Drill Downs (Exercise)

Items

The ABCs of Items
Layout Properties
Building a Dynamic Countries Form with APEX Items (Exercise)
Dynamic Department Filtering with APEX Checkboxes (Exercise)

Buttons and Sessions

- Button Actions
- Session State Management
- Exploring Session Management and Redirection in APEX (Exercise)

Computations

- Application Computations vs. Page Computations
- Calculate Employee Benefits Contribution
- Create a Computation (Exercise)

Validations

- Validations Overview
- The Sequence of Events During Page Submission
- Create Validations (Exercise)

Processes

- Application Processes vs. Page Processes
- Page Processes
- Creating Insert and Delete Processes (Exercise)

Branches

- Understanding Branches in Oracle APEX
- Create Departments in Country Branch (Exercise)

Using Plug-ins

- Plug-in Basics
- Using a Plug-In (Exercise)
- Best Practice: Choose Your Plug-ins Wisely

Calendars

- APEX Calendar Features
- Using a Calendar For Employee Hire Date (Exercise)

Dynamic Actions

- Types of Dynamic Actions
- Creating and Using Dynamic Actions (Exercise)
- Adding Check and Uncheck All Buttons (Exercise)

Security

- Session State Protection
- Understanding Authorization Schemes

Hashing

Creating Authentication and Authorization Schemes (Exercise)

Best Practice: Build to be Secure

Deployment

What is Deployment?

Deployment Strategies

Exporting and Importing Applications

Exporting and Importing an Application (Exercise)

Team Development

Team Development Overview

Creating an Issue in Team Development (Exercise)