Application Development Foundations – Course Description

Overview

This course of study introduces students to the techniques and tools required to develop database driven web applications. The course teaches students how to design, develop and deploy beautiful, responsive, database-driven web applications using Oracle APEX. Oracle APEX is utilized to provide practical, hands-on, engaging activities. Leveraging project-based learning techniques, students will create and work with projects which challenge them to design, implement, and demonstrate a database-driven web application solution for a business or organization.

Oracle APEX on an Autonomous Database (Cloud) or an apex.oracle.com account is required for successful completion of this course.

Available Curriculum Languages:

- English

Duration

- Recommended total course time: 90 hours*
- Professional education credit hours for educators who complete Oracle Academy training: 30
  Course time includes instruction, self-study/homework, practices, projects, and assessment

Target Audiences

Educators

- Technical, vocational and 2- and 4- year college and university faculty members who teach computer science, information communications technology (ICT), data science, business or a related subject
- Secondary and vocational school teachers who teach computer science, ICT, or a related subject

Students

- Students who wish to learn to learn the techniques and tools to design, build and deploy database driven web applications
- Students who possess existing SQL and PL/SQL skills
- Students who possess Novice programming skills
- Students who possess an understanding of web applications as an end user or creator

Prerequisites

Required

- Oracle Academy – Database Foundations

Suggested

- Oracle Academy - Database Design
- Oracle Academy – Database Programming with SQL
- Oracle Academy – Database Programming with PL/SQL

Lesson-by-Lesson Topics

Introduction

- What is Oracle APEX
- Getting Started with Oracle APEX

Create a Basic Database Application

- Using SQL Workshop
- Creating a Database Application – Part 1
- Creating a Database Application – Part 2

Pages, Reports, and Grids

- Managing Pages in Page Designer
- Developing Reports
- Managing and Customizing Interactive Reports
- Managing and Customizing Interactive Grids

Forms and Page Controls

- Creating and Using Forms
- Creating Application Page Controls
- Adding Computations, Processes and Validations
- Managing Cards, Faceted Search, and Smart Filters

Navigation, Themes and Security

- Implementing Navigation and Search in your Applications
- Using Themes and Theme Styles
- Implementing Security in your Application

Managing Application Data

- Understanding Data Load and Collections
- Managing REST Enabled SQL References and Data Sources

Adding to and Migrating an Application

- Adding Additional Pages to your Application
- Creating and using Dynamic Actions
- Extending Application Capabilities – Part 1
- Extending Application Capabilities – Part 2
- Migrating Application Development between Environments