
Oracle: SQL, PL/SQL, and SQL*Plus:

Course Length: 5 Days

Course Description

This course introduces students to data server technology and explores the concepts of relational databases, the SQL*Plus interface tool, and the powerful SQL and PL/SQL programming languages. Students will learn and practice how to create and maintain database objects. The students will also learn to store, retrieve, and manipulate data. Finally, the students will learn how to create PL/SQL blocks of application code that can be used in Oracle® forms, reports, and other Oracle applications. This course will help the student to prepare for Oracle's exam, Introduction to Oracle SQL (1ZO-007).

Prerequisites: Before taking this course, students should have taken the following course or have equivalent knowledge:

- *Introduction to Oracle*

Delivery Method: This course is designed for instructor-led, group paced classroom-delivery, providing students with structured hands-on activities.

Performance-Based Objectives

- Use SQL, PL/SQL, and SQL*Plus.
- Use SQL*Plus commands.
- Filter and sort data.
- Use built-in SQL functions.
- Work with multiple tables.
- Create and modify tables and constraints.
- Create and use other database objects.
- Build a PL/SQL block.
- Use PL/SQL control structures.
- Process cursors in PL/SQL.
- Handle runtime exceptions.
- Develop procedures and functions.
- Develop Oracle packages.
- Create Oracle triggers.
- Work with collections of data.

Course Content

Lesson 1: Introduction to Oracle: SQL, PL/SQL, and SQL*Plus

- Topic 1A: Introduction to SQL*Plus and iSQL*Plus
- Topic 1B: Introduction to SQL
- Topic 1C: Introduction to PL/SQL

Lesson 2: SQL*Plus Commands

- Topic 2A: Using SQL*Plus for Editing
- Topic 2B: Using SQL*Plus to Work with Files
- Topic 2C: Using SQL*Plus for Formatting Output
- Topic 2D: Using SQL*Plus Variables

Lesson 3: Filtering and Sorting Data

- Topic 3A: WHERE Clause
- Topic 3B: ORDER BY Clause

Lesson 4: SQL Functions

- Topic 4A: Expressions in a SELECT Statement
- Topic 4B: Single Row Functions
- Topic 4C: Group Functions

Lesson 5: Working with Multiple Tables

- Topic 5A: Joins
- Topic 5B: Subqueries
- Topic 5C: Set Operators

Lesson 6: Tables and Constraints

- Topic 6A: Creating and Modifying Tables
- Topic 6B: Integrity Constraints
- Topic 6C: Managing Data in Tables
- Topic 6D: Transaction Control Language Statements

Lesson 7: Other Database Schema Objects

- Topic 7A: Sequences, Synonyms, and Indexes
- Topic 7B: Views
- Topic 7C: Database Object Security

Lesson 8: Building PL/SQL Blocks

- Topic 8A: Creating PL/SQL Blocks
- Topic 8B: Manipulating Data in PL/SQL

Lesson 9: PL/SQL Control Structures

- Topic 9A: Conditional Control Structures
- Topic 9B: Iterative Control Structures

Lesson 10: Cursors

- Topic 10A: Introduction to Cursors
- Topic 10B: Implicit Cursors
- Topic 10C: Explicit Cursors
- Topic 10D: Cursor Loops

Lesson 11: Exception Handling

Topic 11A: Introduction to Exception Handling

Topic 11B: Types of Exceptions

Lesson 12: Procedures and Functions

Topic 12A: Developing Procedures and Functions

Topic 12B: Passing Parameters

Lesson 13: Oracle Packages

Topic 13A: Developing Packages

Topic 13B: Oracle-supplied Packages

Lesson 14: Oracle Triggers

Topic 14A: Building a Trigger

Topic 14B: Trigger Restrictions

Lesson 15: PL/SQL Collections

Topic 15A: Defining and Using Collections

Topic 15B: Collection Methods

Appendix A: Tables Used in the Course

Structure of the TablesTopic