



Oracle Database 12c: PL/SQL I - Introduction



ora12c120-ver2

Learning Resources Available From The Sideris Training Portal

2-3 Days

General Description

This textbook introduces one to Oracle database programming using the PL/SQL programming language. One will learn the syntax, structure and features of the language. This textbook will also lay the foundation for the entire Sideris Oracle PL/SQL programming series, allowing one to progress from introductory topics to advanced application design and programming and finally onto writing complex high-performance applications.

PL/SQL may be considered as one of the basic skill sets required for any Oracle professional, nearly as important as the SQL language itself.

The target audience for this textbook is all Oracle professionals. Among the specific groups for whom this textbook will be helpful are:

Target Audience

- Application designers and database developers
- Database administrators
- Web server administrators

About Series

This textbook is part of the Sideris Oracle PL/SQL Database Developer series, which in turn is one of the learning paths from the Sideris Oracle Database 12c: SQL & PL/SQL Programming curriculum.

Prerequisites

Either of the Sideris textbooks Oracle Database 12c: SQL Fundamentals (Levels I & II) or Oracle Database 12c: SQL Complete Library (Levels I, II, & III) are recommended prerequisites for this textbook.

Certification

This textbook considers subjects applicable to certification as both an Oracle PL/SQL Developer Certified Associate (OCA) and an Oracle Advanced PL/SQL Developer Certified Professional (OCP). The topics considered are included within "Exam 1Z0-144: Program With PL/SQL".

Content Summary

Volumes: 1
Pages: 423
Workshops: 8
Exercises: 37

Training Suggestions

This textbook may be used as one module within a Sideris textbook kit entitled Oracle Database 12c: SQL Fundamentals (Levels I & II). When delivered in this format as an intensive instructor-led training (ILT) or live virtual training session at an accelerated pace, the suggested presentation length of the modules included in this kit is 5 days. The sequence in which the modules should be considered is:

- Oracle Database 12c: PL/SQL I – Introduction
- Oracle Database 12c: PL/SQL II – Intermediate: Develop Program Units

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Objectives

This textbook may also be used either as a standalone course or as one module assembled with others in a customized training course.

When delivered as a standalone instructor-led training (ILT) or live virtual training session, the suggested length of this module is 3 days. This allows sufficient time to explore all the topics in their entirety and for students to complete all the workshop exercises.

This textbook begins with an explanation of the intent and usage of the PL/SQL programming language for database applications. Important reasons why one should incorporate PL/SQL modules within the application architecture right from the initial design and planning phase are presented. Next one learns how to begin building executable PL/SQL program units. One learns about each of the major segments of a working program and how these interact with each other during program execution, including the important error or exception handling capabilities of the language. The final section goes beyond the basics and begins to explore advanced topics that will be useful later in the Sideris Oracle PL/SQL developer textbook series. One learns techniques and features that allow modular and reusable programs to be developed, increasing productivity and maintainability of database applications.

Contents

Selection & Setup Of The Database Interface

- Considering Available Tools
- Selecting The Appropriate Tool
- Oracle NET Database Connections
- Oracle PAAS Database Connections
- Setup SQL Developer
- Setup SQL*PLUS
- Setup JDeveloper

About BIND & SUBSTITUTION Variables

- Using SQL Developer
- Using SQL*PLUS

Choosing A Database Programming Language

- What Is Database Programming?
- PL/SQL Performance Advantages
- Integration With Other Languages

PL/SQL Language Fundamentals

- PL/SQL Program Structure
- Language Syntax Rules
- Embedding SQL
- Writing Readable Code
- Generating Database Output
- SQL*PLUS Input Of A Program Block

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DECLARE Section

- About The DECLARE Section
- DECLARE Primitive Types
- Declaration Options
- NOT NULL
- CONSTANT
- Data Dictionary Integration
- %TYPE
- Declare Simple User-Defined Types
- TYPE ... TABLE
- TYPE ... RECORD
- Extended User-Defined Types

- FOR UPDATE OF Clause
- WHERE CURRENT OF Clause
- Using FOR...LOOP Cursors

Beyond The Basics: Nested Blocks

Beyond The Basics: DECLARED Subprograms

- Using DECLARED Subprograms
- DECLARED Procedure
- DECLARED Function

BEGIN Section

- About The BEGIN Section
- Manipulating Program Data
- Logic Control & Branching
- GOTO
- LOOP
- IF-THEN-ELSE
- CASE

Exception Section

- About The EXCEPTION Section
- Isolating The Specific EXCEPTION
- PRAGMA EXCEPTION_INIT
- SQLCODE & SQLERRM Example
- SQL%ROWCOUNT & SELECT...INTO

Beyond The Basics: Explicit Cursors

- About Explicit Cursors
- Extended Cursor Techniques

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