Szkolenie: Oracle
Oracle Database: Develop PL/SQL Program Units

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<th>MATERIAŁY SZKOLENIOWE</th>
<th>CENA</th>
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*Lokalizacje*

Kraków - ul. Tatarska 5, II piętro, godz. 9:00 - 16:00
Warszawa - ul. Bielska 17, godz. 9:00 - 16:00

**Cel szkolenia:**

This Oracle Database: Develop PL/SQL Program Units course is designed for developers with basic PL/SQL and SQL language skills. You will learn to develop, execute and manage PL/SQL stored program units, which include: procedures, functions, packages and database triggers.

**Plan szkolenia:**

- Introduction
  - Course Objectives, Course Agenda and Appendixes Used in this Course
  - Describe the full Human Resources (HR) Schema
  - Review the online Oracle Database 12c SQL and PL/SQL documentation and the additional available resources
  - List the PL/SQL development environments Available in this course
  - Use the SQL Worksheet
  - Execute SQL Statements
  - Work With Script Files
  - Create and Execute Anonymous Blocks

- Creating Stored Procedures
  - Describe PL/SQL blocks and subprograms
  - Describe the uses and benefits of procedures
  - Create, call, and remove procedures
- Use formal and actual parameters
- Identify the available parameter-passing modes
- Pass parameters using the positional, named, or combination techniques
- Handle exceptions in procedures
- View the procedure information

- Creating Functions and Debugging Subprograms
  - Creating Stored Functions
  - The Difference Between Procedures and Functions
  - Developing Functions
  - Creating and Executing and Removing Functions
  - Identifying the Advantages of Using Stored Functions in SQL Statements
  - Using User-Defined Functions in SQL Statements
  - Using a PL/SQL Function in the SQL WITH Clause
  - Restrictions When Calling Functions from SQL statements

- Creating Packages
  - Using PL/SQL Packages
  - The Components of a PL/SQL Package
  - The Visibility of a Package’s Components
  - Developing a PL/SQL Package
  - Creating the Package Specification and Package Body
  - Invoking the Package Constructs
  - Creating and Using Bodiless Packages
  - Removing a Package

- Working With Packages
  - Overloading Subprograms
  - Using Forward Declarations to Solve Illegal Procedure Reference
  - Initializing Packages
  - Using Package Functions in SQL and Restrictions
  - Controlling Side Effects of PL/SQL Subprograms
  - Persistent State of Packages
  - Persistent State of Package Variables and Cursors
  - Using PL/SQL Tables of Records in Packages

- Using Oracle-Supplied Packages in Application Development
  - Using Oracle-Supplied Packages
  - Examples of Some of the Oracle-Supplied Packages
  - How Does the DBMS_OUTPUT Package Work?
- Using the UTL_FILE Package to Interact With Operating System Files
- Using the UTL_MAIL Package
- Using Dynamic SQL
  - The Execution Flow of SQL
  - Working With Dynamic SQL
  - When Do You Need Dynamic SQL?
  - Using Native Dynamic SQL (NDS)
  - Declaring Cursor Variables
  - Executing a PL/SQL Block Dynamically
  - Using Native Dynamic SQL to Compile PL/SQL Code
- Design Considerations for PL/SQL Code
  - Standardize constants with a constant package
  - Standardize exceptions with an exception package
  - Write PL/SQL code that uses local subprograms
  - Grant Roles to PL/SQL Packages and Standalone Stored Subprograms
  - Use the NOCOPY compiler hint to pass parameters by reference
  - Use the PARALLEL ENABLE hint for optimization
  - Use the AUTONOMOUS TRANSACTION pragma to run independent transactions within a single transaction
  - Describe the differences between invoker rights and definer rights
- Creating Triggers
  - Describe different types of triggers
  - Describe database triggers and their use
  - Create database triggers
  - Describe database trigger firing rules
  - Remove database triggers
- Creating Compound, DDL, and Event Database Triggers
  - Describe compound triggers
  - Describe mutating tables
  - Create triggers on DDL statements
  - Create triggers on system events
  - Display information about triggers
- Using PL/SQL compiler
  - Using the PL/SQL Compiler
  - Using the Initialization Parameters for PL/SQL Compilation
  - Using the PL/SQL Compile Time Warnings
  - Viewing the Current Setting of PLSQL_WARNINGS
  - Viewing the Compiler Warnings: Using SQL Developer, SQL*Plus, or the Data Dictionary
Views

- Guidelines for Using PLSQL_WARNINGS
- Managing Dependencies
  - Describe dependent and referenced objects
  - Track procedural dependencies with dictionary views
  - Predict the effect of changing a database object upon stored procedures and functions
  - Manage local and remote procedural dependencies

Wymagania:

Wymagane prerekwizyty:

- Basic Knowledge of PL/SQL
- Familiarity with programming languages
- Oracle Database 12c: Introduction to SQL Ed 1.1
- Oracle Database: PL/SQL Fundamentals

Sugerowane prerekwizyty:

- Oracle SQL Tuning for Developers Workshop

Poziom trudności

Certyfikaty:

Uczestnicy szkoleń otrzymują zaświadczenia o ukończeniu kursu sygnowane przez firmę Oracle.

Prowadzący:

Autorzowany wykładowca Oracle.