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## Oracle PL/SQL Stored Program Units

**Duración: 3 Días**    **Código del Curso: OSPU**

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### Temario:

#### Oracle PL/SQL Stored Program Units Course Overview

**English - Please note this course is only available in English.**

Español - Por favor, tenga en cuenta que esta formación solo está disponible en inglés.

The Oracle PL/SQL Stored Program Units course provides practical experience in developing and writing triggers, functions, procedure

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### Dirigido a:

#### Who will the Course Benefit?

Oracle database administrators and software development personnel who need to write new or maintain existing, PL/SQL triggers, program units and packages.

Practical experience of Oracle SQL and of using SQL\*Plus or SQL Developer and a good working knowledge of the fundamentals of the Oracle PL/SQL programming language are required.

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### Objetivos:

- Course Objectives
  - To provide the skills needed to develop, write and maintain triggers, stored program units and packages.
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### Prerequisitos:

- Practical experience of Oracle SQL\*Plus or SQL Developer and a good working knowledge of the fundamentals of the Oracle PL/SQL programming language is required. This can be gained by attendance on the pre-requisite courses.
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### Siguientes cursos recomendados:

#### Further Learning

- Oracle Advanced PL/SQL
  - Oracle Database 19c Administration
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## Contenido:

Oracle PL/SQL Stored Program Units Training Course Course Contents - DAY 1

Course Introduction

- Administration and Course Materials
- Course Structure and Agenda
- Delegate and Trainer Introductions

Session 1: TRIGGERS

- DML Triggers
- The CREATE TRIGGER Statement
- Writing Trigger Code
- INSTEAD OF Triggers
- Calling Procedures from Triggers
- Coding Restrictions
- System Event and DDL Triggers
- Attribute Functions
- Compound Triggers
- Create Trigger Follows Clause
- Managing Triggers
- Privileges Required for Triggers
- Dictionary Information Concerning Triggers

Session 2: PROCEDURES

- What is a Procedure?
- The CREATE PROCEDURE Statement
- Procedure Parameters
- Invoking Procedures
- Local Subprograms
- Named Association Parameter Passing
- Definer's Rights and Invoker's Rights
- Autonomous Transactions
- Managing Procedures
- Privileges Required for Procedures
- Dictionary Information Concerning Procedures
- The Call Statement

Session 3: FUNCTIONS

- What is a Function?
- The CREATE FUNCTION Statement
- Executing Functions
- Invoker's Rights
- Autonomous Transactions
- DBMS\_OUTPUT
- Using Functions in SQL Statements
- Deterministic and Parallel-Enabled Functions
- Function Result Cache
- Managing Functions
- Privileges Required for Functions
- Dictionary Information Concerning Functions Oracle PL/SQL Stored Program Units Training Course Course Contents - DAY 2

Session 4: PACKAGES

- What is a Package?
- Public and Private Components
- Creating a Package
- Example Package
- Persistent States
- One-time-only Procedures
- Overloading
- Purity Level Checking
- Forward Declarations
- Wrapping Packages
- Managing Packages
- Privileges Required for Packages
- Dictionary Information Concerning Packages

Session 5: USING PL/SQL RECORDS AND TABLES IN PACKAGES

- Overview of PL/SQL Records, Index-by Tables and Associative Arrays
- Using PL/SQL Records and Tables in Packages
- Table Built-in Functions
- The NOCOPY Hint
- Bulk Collection
- Bulk Binding DML Statements

Session 6: CURSOR VARIABLES (REF CURSORS)

- Declare Cursor Variables
- Use Cursor Variables
- Open and Close Cursor Variables
- Fetch Rows
- Cursor Variable Attributes
- Pass Cursor Variables as Parameters
- Refcursor Datatype

Session 7: MANAGING DEPENDENCIES

- Dependent and Referenced Objects
- Invalidation and Recompilation
- Local and Remote Dependencies
- Recompilation Considerations Oracle PL/SQL Stored Program Units Training Course Course Contents - DAY 3

Session 8: NATIVE COMPILATION AND COMPILE-TIME WARNINGS

- Introduction
- Native Compilation
- Automatic Recompilation
- Automatic Program Sublining
- WHEN OTHERS ... THEN NULL
- Data Dictionary Information
- Compiler Warning Categories
- Using the DBMS\_WARNING Package

Session 9: ORACLE-SUPPLIED PACKAGES

- Overview of Oracle-Supplied Packages
- Using the DBMS\_SQL Package
- Using Native Dynamic SQL
- The DBMS\_METADATA Package
- The UTL\_MAIL Package
- The DBMS\_APPLICATION\_INFO Package
- The DBMS\_UTILITY Package
- Scheduling Jobs using the DBMS\_SCHEDULER Package

Session 10: PL/SQL DESIGN CONSIDERATIONS

- Invoker versus Definer, Rights
- Grant Roles to PL/SQL Packages and Programs
- Programming Standards for Variables, Parameters and Constants
- Standardise Constants with a Package
- Standardise Exceptions with a Package
- Write PL/SQL Code using Local Subprograms
- Use NOCOPY Compiler Hint
- Optimise Code with the PARALLEL ENABLE hint
- Use the AUTONOMOUS TRANSACTION Pragma

## Más información:

Para más información o para reservar tu plaza llámanos al (34) 91 425 06 60

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