

## Oracle Database 12c: Program with PL/SQL

- **Formato do curso:** Presencial e Live Training
- **Localidade:** Porto
- **Data:** 14 Fev. 2022 a 18 Fev. 2022
- **Preço:** 2550€
- **Horário:** Laboral - das 9h30 às 16h30
- **Nível:** Intermédio
- **Duração:** 30 horas

This Database Program with PL/SQL training shows you how to develop stored procedures, functions, packages and database triggers. You'll learn to manage PL/SQL program units and dependencies, while using of some of the Oracle-supplied packages.

This Oracle Database: Program with PL/SQL training starts with an introduction to PL/SQL and then explores the benefits of this powerful programming language. Through hands-on instruction from expert Oracle instructors, you'll learn to develop stored procedures, functions, packages and more.

### Learn To:

- Conditionally control code flow (loops, control structures).
- Create stored procedures and functions.
- Use PL/SQL packages to group and contain related constructs.
- Create triggers to solve business challenges.
- Use some of the Oracle supplied PL/SQL packages to generate screen output and file output.
- Create custom packages for applications.
- Write Dynamic SQL code for applications.

### Benefits to You

Ensure fast, reliable, secure and easy to manage performance. Optimize database workloads, lower IT costs and deliver a higher quality of service by enabling consolidation onto database clouds.

### Use Oracle SQL Developer

You will use Oracle SQL Developer to develop these program units. SQL\*Plus is introduced in this course as optional tools.

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## Destinatários

- Database Administrator
  - Developer
  - Implementer
  - Systems Administrator
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## Pré-requisitos

### Suggested Prerequisite

- Previous programming experience

### Required Prerequisite

- or [Oracle Database: Introduction to SQL](#)
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## Objetivos

- Use conditional compilation to customize the functionality in a PL/SQL application without removing any source code
  - Design PL/SQL packages to group related constructs
  - Create overloaded package subprograms for more flexibility
  - Design PL/SQL anonymous blocks that execute efficiently
  - Use the Oracle supplied PL/SQL packages to generate screen output, file output and mail output
  - Write dynamic SQL for more coding flexibility
  - Describe the features and syntax of PL/SQL
  - Create and debug stored procedures and functions
  - Use PL/SQL programming constructs and conditionally control code flow (loops, control structures, and explicit cursors)
  - Manage dependencies between PL/SQL subprograms
  - Handle runtime errors
  - Create triggers to solve business challenges
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## Programa

### Introduction

- Course Objectives
- Course Agenda
- Describe the Human Resources (HR) Schema
- PL/SQL development environments available in this course

- Introduction to SQL Developer

## **Introduction to PL/SQL**

- Overview of PL/SQL
- Identify the benefits of PL/SQL Subprograms
- Overview of the types of PL/SQL blocks
- Create a Simple Anonymous Block
- How to generate output from a PL/SQL Block?

## **Declare PL/SQL Identifiers**

- List the different Types of Identifiers in a PL/SQL subprogram
- Usage of the Declarative Section to Define Identifiers
- Use variables to store data
- Identify Scalar Data Types
- The %TYPE Attribute
- What are Bind Variables?
- Sequences in PL/SQL Expressions

## **Write Executable Statements**

- Describe Basic PL/SQL Block Syntax Guidelines
- Learn to Comment the Code
- Deployment of SQL Functions in PL/SQL
- How to convert Data Types?
- Describe Nested Blocks
- Identify the Operators in PL/SQL

## **Interaction with the Oracle Server**

- Invoke SELECT Statements in PL/SQL
- Retrieve Data in PL/SQL
- SQL Cursor concept
- Avoid Errors by using Naming Conventions when using Retrieval and DML Statements
- Data Manipulation in the Server using PL/SQL
- Understand the SQL Cursor concept
- Use SQL Cursor Attributes to Obtain Feedback on DML
- Save and Discard Transactions

## **Control Structures**

- Conditional processing using IF Statements
- Conditional processing using CASE Statements
- Describe simple Loop Statement

- Describe While Loop Statement
- Describe For Loop Statement
- Use the Continue Statement

## **Composite Data Types**

- Use PL/SQL Records
- The %ROWTYPE Attribute
- Insert and Update with PL/SQL Records
- INDEX BY Tables
- Examine INDEX BY Table Methods
- Use INDEX BY Table of Records

## **Explicit Cursors**

- What are Explicit Cursors?
- Declare the Cursor
- Open the Cursor
- Fetch data from the Cursor
- Close the Cursor
- Cursor FOR loop
- The %NOTFOUND and %ROWCOUNT Attributes
- Describe the FOR UPDATE Clause and WHERE CURRENT Clause

## **Exception Handling**

- Understand Exceptions
- Handle Exceptions with PL/SQL
- Trap Predefined Oracle Server Errors
- Trap Non-Predefined Oracle Server Errors
- Trap User-Defined Exceptions
- Propagate Exceptions
- RAISE\_APPLICATION\_ERROR Procedure

## **Stored Procedures**

- Create a Modularized and Layered Subprogram Design
- Modularize Development With PL/SQL Blocks
- Understand the PL/SQL Execution Environment
- List the benefits of using PL/SQL Subprograms
- List the differences between Anonymous Blocks and Subprograms
- Create, Call, and Remove Stored Procedures
- Implement Procedures Parameters and Parameters Modes
- View Procedure Information

## Manage Dependencies