# Oracle Database 12c/18c/19c Advanced PL/SQL

## **Course information**

Days: 2

Total lessons: 10

Suggested Prerequisites:

Oracle Database : Develop PL/SQL Program Units

Previous programming experience

Training includes:

Experienced trainer(s)

Pre-test and Post-test

· Practices and solutions

### **Course details**

#### Day 1

Lesson 1: Introduction

Lesson 2: PL/SQL Review

Lesson 3: Designing PL/SQL Code

Lesson 4: Working with Collections

#### Day 2

Lesson 4: Working with Collections

Lesson 5: Using Advanced Interface Methods

Lesson 6: Implementing Fine-Grained Access Control for VPD

Lesson 7: Manipulating Large Objects

Lesson 8: Administering SecureFile LOBs

Lesson 9: Performance and Tuning

### **Lesson details**

### **Lesson 1: Introduction**

- Previewing the course agenda
- Describing the development environments
- Using SQL Developer
- Using SQL\*Plus
- · Identifying the tables, data, and tools used in this course

#### Lesson 2: PL/SQL Review

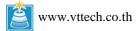
- Describe PL/SQL basics
- List restrictions on calling functions from SQL expressions
- Identify how explicit cursors are processed
- Handle exceptions
- Use the raise\_application\_error procedure
- Manage dependencies
- Use Oracle-supplied packages

#### Lesson 3: Designing PL/SQL Code

- · Identify guidelines for cursor design
- Use cursor variables
- Create subtypes based on the existing types for an application

#### **Lesson 4: Working with Collections**

- Create collections
  - Nested table, varray
  - Associative arrays/PLSQL tables
- Integer indexed



- String indexed
- Use collections methods
- Manipulate collections
- Distinguish between the different types of collections and when to use them

### **Lesson 5: Using Advanced Interface Methods**

- Execute external C programs from PL/SQL
- Execute Java programs from PL/SQL

### **Lesson 6: Implementing Fine-Grained Access Control for VPD**

- Describe the process of fine-grained access control
- · Implement and test fine-grained access control

### **Lesson 7: Manipulating Large Objects**

- Compare and contrast LONG and large object (LOB) data types
- Create and maintain LOB data types
- Differentiate between internal and external LOBs
- Use the DBMS\_LOB PL/SQL package
- Describe the use of temporary LOBs

#### **Lesson 8: Administering SecureFile LOBs**

- Describe SecureFile LOB features
- Enable SecureFile LOB deduplication, compression, and encryption
- Migrate BasicFile LOBs to the SecureFile LOB format
- Analyze the performance of LOBs

#### **Lesson 9: Performance and Tuning**

- Understand and influence the compiler
- Tune PL/SQL code
- Enable intraunit inlining

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