

O022 – Oracle 10g Advanced PL/SQL

Course Objectives

By the end of this advanced course for Oracle 11g PL/SQL users, delegates will have learned how to:

- Design PL/SQL packages and program units that execute efficiently.
- Create PL/SQL applications that use collections.
- Write and tune PL/SQL code effectively to maximize performance.
- Implement a virtual private database with fine-grained access control.
- Perform code analysis to find program ambiguities, test, trace, and profile PL/SQL code.

This course is suitable for users of 9i, 10g and 11g PL/SQL who want to gain a greater understanding of the techniques, enhancements and programming concepts of PL/SQL.

Who Should Attend	Prerequisites	Duration
PL/SQL Developer Technical Consultant Database Designers	Oracle 9i/10g/11g PL/SQL Understanding of HTML syntax	3 Days

Course Contents

Overview

Course objectives
Course agenda

PL/SQL Programming Concepts Review

Identify PL/SQL block structure
Create procedures
Create functions
Create packages
Use cursors
Handle exceptions
Understand dependencies
Identify the Oracle supplied packages.

Design Considerations

List the different guidelines for cursor design.
Describe cursor variables
Pass cursor variables as program parameters.
Compare cursor variables to static cursors.
Describe the predefined data types.
Create subtypes based on existing types for an application.

Collections

Describe and use nested tables
Describe and use varrays
Describe and use associative arrays.
Describe and use string indexed collections.
Describe and use nested collections.
Write PL/SQL programs that use collections.
Describe the common collection exceptions and how to code for them.
Compare associative arrays to collections.
PL/SQL Collections
Associated Arrays
Nested Tables
Bulk Binds
Bulk Collect
Bulk Exceptions
Caching Data

Web PL/SQL

Describe and use Web PL/SQL.
Write code and content for Web PL/SQL pages.
Run Web PL/SQL via a URL.

Dynamic SQL

Methods
Performing Dynamic SQL with DBMS_SQL Package
Native Dynamic SQL

Fine Grained Access Control

Understand how fine-grained access control works.
Describe the features of fine-grained access control.
Describe an application context.
Set up a logon trigger
View the results
Query the dictionary views holding information on fine-grained access.

Performance and Tuning

Tune PL/SQL code
Write smaller executable sections of code.
Compare SQL to PL/SQL on performance.
Understand how bulk binds can improve performance.
Handle exceptions with the FORALL syntax.
Identify data type and constraint issues.
Recognize network issues
Ref Cursors



Analyzing PL/SQL Code

Use the supplied packages and dictionary views to find coding information.

DBMS_DESCRIBE supplied package.

Use supplied packages to find error information.

Trace PL/SQL programs using the DBMS_TRACE supplied package.

Read and interpret trace information.

Profile PL/SQL using DBMS_PROFILER supplied package.

Read and interpret profiler information.



Document Control

Document History

Date	Version	Issue	Author	Notes
1007	1	1	SG	Release

Document Control

Issue	Classification	Approved	Circulation List (for "Restricted" and above)
1	Release	KD	iTrain and Associates

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