



Oracle PL/SQL for Beginner's

Course Description:

This PL/SQL course is designed for new bees in Database programming world. This course covers writing PL/SQL code in real world. The training is designed to cover the basic concept to writing PL/SQL Code to writing professional PL/SQL code for complex business problems. The course also talks about writing optimized PL/SQL Code. The course is going to cover many real time case studies in various scenarios. Implementing the PL/SQL code for business rules, Data Quality Checks, working in enterprise Data Warehousing and data transformation rules.

Course Duration: 30 hours.

Take Away: Student Guide, Lab Guide and case studies.

Class Delivery: On-Line (Interactive Web Based)

PL/SQL Course contents

1. Brief Introduction to PL/SQL
 - What is PL/SQL
 - SQL Versus PL/SQL
 - PL/SQL Architecture
 - Advantages of PL/SQL
2. Writing PL/SQL blocks using tools
 - PL/SQL Developers
 - Toad
 - SQL Plus
 - SQL Developers etc.
3. Language fundamentals
 - identifiers
 - literals
 - Executable and Non Executable statement
 - Anonymous Block Structure
 - Nested Block
 - Named Block
 - PRAGMA
 - Scope & Visibility of variables
4. Working with different type of Data types
 - Date, Time and Interval Types
 - Boolean Types
 - Characters, String and National Character Types
 - Number Types
 - LOB Types
 - Composite data types

5. Control Structures

- IF-THEN-ELSE Statement
- Case Statement
- GOTO Statement
- NULL Statement

6. Different types of loops

- Simple Loop
- WHILE- Loop
- FOR- Loop
- Labels in Loop
- Scope Rules
- Exit Statement

7. Exception Handler

- What is Exception Handling
- How to Handle Exception
- Structure of Exception Handling
- Types of Exception Handling
- SAVE Exception in Bulk Collect
- PRAGMA init Exception

8. Working with Objects & Collection

- Describing Object
- Constructor method on objects
- Nested Table
- VARRAY
- Associative Array
- Collection Methods
- Manipulate Collection
- Distinguish between the different types of collections and when to use them

9. Working with Records

- Declaring Records
- Benefit of using record
- Passing Values To and From Record
- Comparing two records

10. Cursors in PL/SQL

- Why cursor is used
- Declaring Cursors
- Different Types of cursor
- Cursor Attributes
- Sending parameter to cursor
- Different ways of using cursor
- Cursor Variable (Reference Cursor)
- Advantage of using cursor variable over normal cursor

- Passing Cursor variable as parameter
 - Restriction on cursor Variables
11. Dynamic SQL and PL/SQL
- When to use
 - Declaring dynamic SQL and PL/SQL by using DBMS_SQL package
 - Declaring dynamic SQL and PL/SQL by using Execute Immediate
 - Using Dynamic SQL in FORALL statement
 - Dynamic statement using binding variables
 - Advantage of using Dynamic SQL and PL/SQL
12. Bulk processing of data using Bulk Collect
- What is Bulk collect operation
 - How does it impact performance
 - Declaring BULK COLLECT operation with simple select statement
 - BULK COLLECT with cursors
 - BULK COLLECT using FORALL statement
 - Catching exception in Bulk collect using SAVE EXCEPTION
13. Working with Procedures, Functions and Packages
- Basic of stored procedure
 - Basics of functions
 - Basics of packages
 - Advantage of using procedures , function and packages
 - Passing cursor variables to procedures , function and packages
 - Recompiling functions and stored procedures
 - Forward declaration
 - Declaring and using persistent global variables in packages
 - Creating table Function
 - Function overloading
 - Restrict Reference Pragma
 - Pinning packages in the SGA with dbms_shared_pool.keep
14. Debugging and Error tracking of PL/SQL code
- Using Error log message tables
 - Using some built in packages
 - Using tools like PL/SQL developers
15. Working with Triggers.
- Describe Triggers
 - Identify the Trigger Event Types and Body
 - Business Application Scenarios for Implementing Triggers
 - Create DML Triggers using the CREATE TRIGGER Statement
 - Identify the Trigger Event Types, Body, and Firing (Timing)
 - Differences between Statement Level Triggers and Row Level Triggers
 - Create Instead of and Disabled Triggers
 - How to Manage, Test and Remove Triggers?

16. Overview of some advanced PL/SQL topics

- Table Function
- Pipelined table function
- Error log tables
- Hints in PL/SQL

17. Tuning of PL/SQL program

18. Case Studies

- a. Implement Data Transformation Using PL/SQL code Part I
- b. Implement Data Transformation Using PL/SQL code Part II
- c. Implement Data Transformation Using PL/SQL code Part III
- d. Enforce Data Quality Check with PL/SQL Code I
- e. Enforce Data Quality Check with PL/SQL Code II

