

Oracle – PL/SQL

Introduction

- Course Objectives
- Lesson Agenda
- Sample Schemas
- Login into Oracle database from Unix/Windows Environment
- Tools – SQL Developer and Quest Toad
- Configuring Client/Server using Netca
- What is tnsnames.ora



Introduction to PL/SQL

- Structure Of PL/SQL
- The PLSQL Development Environments
- Executing SQL Statements
- Creating PLSQL Blocks
- Save to SQL Scripts
- Executing from SQL Scripts
- Creating Anonymous Blocks
- Generate Output from a PL/SQL Block

Declaring PLSQL variables

- Use of variables
- What are Identifiers
- Declaring PLSQL Variables
- Types of Variables
- Data types
- %TYPE Attribute
- Bind Variables
- Printing Bind variables
- Substitution Variables
- Using Define for variables

Writing PLSQL Codes

- PLSQL Block Syntax
- SQL Functions in PLSQL
- Nesting Functions
- Data type Conversion
- Nested Blocks

- Operators
- Commenting Codes

Interacting with database

- SELECT statements in PLSQL
- DMLs using PLSQL Code
- SQL Cursor
- Implicit Cursors Attributes

Control Statements

- Controlling flow of execution
- Types of IF Statements
- CASE Statements
- Handling Nulls
- Interactive Control Statements

LOOP

- FOR Loop
- WHILE Loops
- GOTO Statements
- CONTINUE Statements
- Nested Loops and Labels

Composite Data types

- PLSQL records
- %ROWTYPE Attribute
- DMLs using %ROWTYPE
- Associative Arrays
- Using INDEX BY table Structure
- INDEX BY table of records

Explicit Cursors

- Cursors
- Controlling explicit Cursors
- Fetching data from cursors
- Cursors and records
- Closing cursors

- Cursor FOR loop
- Cursor Attributes
- Parameterized cursors
- For Update
- Cursor with sub queries
- Where CURRENT of

Exceptions

- What is Exception?
- Handling Exceptions
- Types of Exception
- Predefined Errors
- Non-predefined Exceptions
- User Defined Exceptions
- RAISE_APPLICATION_ERROR
- Handling Exceptions in block
- SQLCODE and SQLERRM in PLSQL

Database Triggers

- Types of triggers
- Creating DML Triggers
- Statement Vs Rows Level triggers
- Using OLD and NEW Qualifiers
- INSTEAD OF Triggers
- AUTONOMOUS Transaction
- Enabling and Disabling triggers
- Compiling Triggers
- Dropping Triggers
- System Level Triggers
- LOGON and LOGOFF triggers

Procedures and Functions

- Creating procedures
- IN , OUT, IN OUT Parameters
- Passing parameters to functions
- Calling Functions from PLSQL
- Invoking procedures in PLSQL
- Viewing Codes using Views
- Viewing USER_SOURCE
- Viewing USER_ERRORS

- Viewing SHOW ERRORS
- Viewing USER_OBJECTS
- Compiling invalid Objects

Create Packages

- Structures of Package
- What is STANDARD Package
- Public and Private Constructs
- Creating Package Specification
- Creating package Body
- Removing package
- Granting and Revoking permissions
- PLSQL Tables and records in packages

Oracle Supplied packages

- Native Dynamic SQL
- EXECUTE IMMEDIATE
- EXECUTE IMMEDIATE using variables
- DBMS_JOBS
- DBMS_SCHEDULERS
- Running / Breaking Jobs
- UTL_FILE
- Creating Directory

Using DDLS in PLSQL

- Dynamic SQL
- EXECUTE IMMEDIATE
- EXECUTE IMMEDIATE using variables
- DBMS_JOBS
- Running / Breaking Jobs
- UTL_FILE
- Creating Directory