

Oracle PL\SQL Course content

Duration: (Mon to Fri (U.S.A) and Tue to Sat (IST): 1 Hour Each Day)

No. Of Hours: 25 – 30 Hrs.

Demo-Session

- PL\SQL Trainer Introduction.
- Students Introduction with discussion on the Expectations from the training.
- Introduction to the world of Oracle.

PL-SQL (Procedure Language – SQL):

- Introduction to Programming Languages
- Introduction to PL/SQL
- The Advantages of PL/SQL
- PL/SQL Architecture
- PL/SQL Data types
- Variable and Constants
- Using Built-in Functions
- Conditional and Unconditional Statements
- Simple if, if... else, nested if. Else, if. Else Ladder
- Selection Case, Simple Case, GOTO Label and EXIT
- Iterations in PL/SQL
- Simple LOOP, WHILE LOOP, FOR LOOP and NESTED LOOPS
- SQL within PL/SQL
- Composite Data types (Complete)
- Cursor Management in PL/SQL
- Implicit Cursors
- Explicit Cursors
- Cursor Attributes
- Cursor with Parameters
- Cursors with LOOPS Nested Cursors
- Cursors with Sub Queries
- Ref. Cursors
- Record and PL/SQL Table Types

Advanced PL/SQL

- Procedures in PL/SQL :
- STORED PROCEDURES
- PROCEDURE with Parameters (IN,OUT and IN OUT)
- POSITIONAL Notation and NAMED Notation
- Procedure with Cursors
- Dropping a Procedure
- Functions in PL/SQL
- Difference between Procedures and Functions
- User Defined Functions
- Nested Functions
- Using stored function in SQL statements
- Packages in PL/SQL
- Creating PACKAGE Specification and PACKAGE Body
- Private and Public Objects in PACKAGE

EXCEPTIONS in PL/SQL:

- Types of exceptions
- User Defined Exceptions
- Pre-Defined Exceptions
- RAISE_APPLICATION_ERROR
- PRAGMA_AUTONOMOUS_TRANSACTION
- SQL Error Code Values

Database Triggers in PL/SQL:

- Types of Triggers
- Row Level Triggers
- Statement Level Triggers
- DDL Triggers
- Trigger Auditing

File Input/output:

- PL/SQL file I/O (Input/Output)
- Using UTL_FILE Package

Implementing Object Technology

- What is Object Technology?
- OOPS-Object Instances

- Creation of objects
- Creating User Defined Data Types
- Creating Object Tables
- Inserting rows in a table using Objects
- Retrieving data from Object based Tables
- Calling a Method
- Indexing Abstract Data type Attributes

Using LOBS

- Large Objects (LOBs)
- Creating Tables-LOB
- Working with LOB values
- Inserting, Updating & Deleting Values in LOBs
- Populating LOBs DBMS_LOB Routines
- Using B-FILE

Using Collections

- Advantages of collection
- Ref cursor (Dynamic Cursor)
- Weak ref cursor
- Strong ref cursor
- Nested Tables VARRAYS or VARYING arrays
- Creating tables using nested tables
- Inserting, updating & deleting Nested
- Table records
- Nested table in PL/SQL

Oracle Database Architecture

- Introduction to Oracle Database Architecture
- Physical structures Logical structures
- DB Memory Structures Background Process

Advanced Features

- 9i Joins
- New Date function
- Rename column
- Inner Join/Natural Join
- Left Outer Join/Right Outer Join
- Full Outer Join
- Multiple Inserts
- Insert All Command
- Merge statement
- NVL2(), NULLIF(), COALESCE()

- CASE expression of Select Command
- Temporary Tables/Global Tables
- New Function EXTRACT()
- Autonomous Tracton
- Pragma _ Autonomous_ Transaction()
- Bulk Collect
- About Flash Back Queries
- Dynamic SQL
- New data types, Flash back Command
- Purge Command, Recycle in
- Regular expressions, DML Error Logging
- Data Pump, Virtual Columns
- Read only tables, Cross tab Views using
- Pivot/Unpivot operators, Follows Clause
- Compound triggers, New data types

DBA CONCEPTS

- Database
- Tablespace
- Types of Tablespaces
- Data files