

## PL SQL Course Content

### 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 Nest ed 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 Proce ures 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 Lobis 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
- ) 2 Tier, 3 Tier, N-Tier Architecture

#### **Advanced Features**

- ) 9i Joines
- ) 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 Transaction
- ) Pragma \_ Autonomous\_ Transaction()
- ) Bulk Collect
- ) About Flash Back Queries
- ) Dynamic SQL
- ) New data types, Flash back Command
- ) Purge Command, Recyclebin
- ) 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 /Se

