

PL-SQL

- Introduction to programming languages
- Introduction to PL/SQL
- PL/SQL Architecture
- PL/SQL Data types
- Variable and constants
- Using built-in functions
- Conditional and unconditional statements

- Simple IF, ELSIF, ELSE...IF
- 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
 - 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

Data base 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 rown 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
- Returning into clause
- Bulk collect
- About flash back queries
- Dynamic SQL
- New 11g features

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 data base architecture

- Introduction to oracle database architecture
- Physical structures logical structures
- DB Memory structures background process
- 2tire, 3tire, N-tier architecture

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 traction
- Pragma_autonomous_transaction()

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