

This course introduces the Oracle 11g PL/SQL procedural language for SQL. Students cover how to insert, update and delete data, control data sharing and locking, debug and use error report procedures, and develop database triggers, stored procedures and functions for future reuse.

*Prerequisites: SQL Basics & SQL*Plus or Equivalent experience..*

Minimum software requirements: Windows Server 2003, Windows XP Pro or Vista Pro; Oracle 11g.

Minimum hardware requirements for all machines: Minimum 512 MB RAM (2 GB preferred); 20 GB of free space on hard drive (before installation). Machines need static IP addresses.

Microsoft PowerPoint and Internet access on instructor's workstation for presentation purposes.

Module 1: PL/SQL Basics

- SQL and PL/SQL
- PL/SQL Anonymous Block Structure and Datatypes
- Variable Declaration
- Object Naming Rules
- Executable Statements
- Operators in PL/SQL
- Repetition Control
- LOOP Statements - Basic LOOP, WHILE, FOR
- CASE Expressions and Statements
- Nested Blocks
- Labels and Block Identification
- Basic Coding Standards
- SQL*PLUS Development Environment

Module 2: Working with Database Data

- SELECT Statements in PL/SQL
- Selecting Single and Multiple Rows
- Referencing Other Variables or a Database Column's Datatypes
- Modifying Database Data (DML)
- Transaction Control Commands
- Selecting Data into PL/SQL Variables
- Explicit Cursors
- Transaction Control Commands
- Referencing Other Structures Datatypes
- Using the Cursor FOR LOOP
- FOR UPDATE/WHERE CURRENT OF

Module 3: Exception Handling

- Writing an Exception Handler Section
- Handling Predefined and User-Defined Exceptions
- Controlling Exception Processing
- Preventing Unhandled Exceptions
- RAISE_APPLICATION_ERROR
- Using SQLCODE and SQLERRM

Module 4: Stored PL/SQL Objects

- Introduction to Procedures and Functions Stored in the Database
- Creating Stored PL/SQL Objects
- Passing Values with Parameters
- Creating Procedures, Functions, Packages, Package Bodies
- Introduction to Database Triggers
- Viewing and Recompiling Stored Code