

ORACLE 12c DATABASE DEVELOPER

Oracle Database 12c : Introduction to SQL

Introduction

- Retrieving Data using the SQL SELECT Statement
- Restricting and Sorting Data
- Using Single-Row Functions to Customize Output
- Using Conversion Functions and Conditional Expressions
- Reporting Aggregated Data Using the Group Functions
- Displaying Data from Multiple Tables Using Joins
- Using Subqueries to Solve Queries
- Using the SET Operators
- Managing Tables using DML statements
- Introduction to Data Definition Language
- Introduction to Data Dictionary Views
- Creating Sequences, Synonyms, Indexes
- Creating Views
- Managing Schema Objects
- Retrieving Data by Using Subqueries
- Manipulating Data by Using Subqueries
- Controlling User Access
- Manipulating Data
- Managing Data in Different Time Zones

Oracle Database 11g : Program with PL/SQL

Introduction

- Course Objectives
- Course Agenda
- Describe the Human Resources (HR) Schema
- PL/SQL development environments available in this course
- Introduction to SQL Developer

Introduction to PL/SQL

- Overview of PL/SQL
- Identify the benefits of PL/SQL Subprograms
- Overview of the types of PL/SQL blocks
- Create a Simple Anonymous Block
- How to generate output from a PL/SQL Block?

Declare PL/SQL Identifiers

- List the different Types of Identifiers in a PL/SQL subprogram
- Usage of the Declarative Section to Define Identifiers
- Use variables to store data
- Identify Scalar Data Types
- The %TYPE Attribute
- What are Bind Variables?
- Sequences in PL/SQL Expressions

Write Executable Statements

- Describe Basic PL/SQL Block Syntax Guidelines
- Learn to Comment the Code
- Deployment of SQL Functions in PL/SQL
- How to convert Data Types?
- Describe Nested Blocks
- Identify the Operators in PL/SQL

Interaction with the Oracle Server

- Invoke SELECT Statements in PL/SQL

- Retrieve Data in PL/SQL
- SQL Cursor concept
- Avoid Errors by using Naming Conventions when using Retrieval and DML Statements
- Data Manipulation in the Server using PL/SQL
- Understand the SQL Cursor concept
- Use SQL Cursor Attributes to Obtain Feedback on DML
- Save and Discard Transactions

Control Structures

- Conditional processing using IF Statements
- Conditional processing using CASE Statements
- Describe simple Loop Statement
- Describe While Loop Statement
- Describe For Loop Statement
- Use the Continue Statement

Composite Data Types

- Use PL/SQL Records
- The %ROWTYPE Attribute
- Insert and Update with PL/SQL Records
- INDEX BY Tables
- Examine INDEX BY Table Methods
- Use INDEX BY Table of Records
- Explicit Cursors
- What are Explicit Cursors?
- Declare the Cursor
- Open the Cursor
- Fetch data from the Cursor
- Close the Cursor
- Cursor FOR loop
- The %NOTFOUND and %ROWCOUNT Attributes
- Describe the FOR UPDATE Clause and WHERE CURRENT Clause

Exception Handling

- Understand Exceptions

- Handle Exceptions with PL/SQL
- Trap Predefined Oracle Server Errors
- Trap Non-Predefined Oracle Server Errors
- Trap User-Defined Exceptions
- Propagate Exceptions
- RAISE_APPLICATION_ERROR Procedure

Stored Procedures

- Create a Modularized and Layered Subprogram Design
- Modularize Development With PL/SQL Blocks
- Understand the PL/SQL Execution Environment
- List the benefits of using PL/SQL Subprograms
- List the differences between Anonymous Blocks and Subprograms
- Create, Call, and Remove Stored Procedures
- Implement Procedures Parameters and Parameters Modes
- View Procedure Information

Stored Functions and Debugging Subprograms

- Packages
- Deploying Packages

Implement Oracle-Supplied Packages in Application Development

- Dynamic SQL
- Design Considerations for PL/SQL Code
- Triggers
- Creating Compound, DDL, and Event Database Triggers

PL/SQL Compiler

- Manage Dependencies