Introduction
   List the Oracle Database 10g Main Features
   An Overview of: components, internet platform, apps server and developer suite
   Describe Relational and Object Relational Database Designs
   Review the System Development Life Cycle
   Define the term Data Models
   Describe different means of Sorting Data
   Show how Multiple Tables can be related
   Describe how SQL Communicates to the Database
   Writing SQL SELECT Statements
   Define projection, selection, and join terminology
   Review the basic SQL SELECT statement syntax
   Select all columns using a wildcard notation from a table
   State simple rules and guidelines for writing SQL statements
   Write a query containing the arithmetic operators
   Create a character expression with the concatenation operator
   Using the iSQL*Plus Environment
   SQL statements versus iSQL*Plus commands

Restricting and Sorting Data
   Limit rows using a selection
   Using the WHERE clause to retrieve specific rows
   Using the comparison conditions in the WHERE clause
   Use the LIKE condition to compare literal values
   List the logical conditions AND, OR, NOT
   Describe the rules of precedence for the conditions
   Sort rows with the ORDER BY clause
   Use ampersand substitution in iSQL*Plus to restrict and sort output at run time

Using Single-Row Functions to Customize Output
   Show the differences between single row and multiple row SQL functions
   Categorize the character functions into case manipulation and character manipulation types
   Use the character manipulation functions in the SELECT and WHERE clauses
   Explain and use the DATE and numeric functions
   Use the SYSDATE function to retrieve the current date in the default format
   Introduce the DUAL table as a means to view function results
   List the rules for applying the arithmetic operators on dates
   Use the arithmetic operators with dates in the SELECT clause

Reporting Aggregated Data Using the Group Functions
   Describe and categorize the group functions
   Use the group functions
   Utilize the DISTINCT keyword with the group functions
   Describe how nulls are handled with the group functions
   Create groups of data with the GROUP BY clause

Group data by more than one column
 Avoid illegal queries with the group functions
 Exclude groups of data with the HAVING clause

Displaying Data From Multiple Tables
 Identify Types of Joins
 Retrieve Records with Natural Joins
 Use Table Aliases to write shorter code and explicitly identify columns from multiple tables
 Create a Join with the USING clause to identify specific columns between tables
 Use the ON clause to specify arbitrary conditions or specify columns to Join
 Create a Three-way join with the ON clause to retrieve information from 3 tables
 List the Types of Outer Joins LEFT, RIGHT, and FULL
 Generating a Cartesian Product

Using Sub Queries to solve Queries
 List the syntax for sub queries in a SELECT statements WHERE clause
 List the guidelines for using sub queries
 Describe the types of sub queries
 Execute single row sub queries and use the group functions in a sub query
 Identify illegal statements with sub queries
 Execute multiple row sub queries
 Analyze how the ANY and ALL operators work in multiple row sub queries

Using the SET Operators
 Use the UNION operator to return all rows from multiple tables and eliminate any duplicate rows
 Use the UNION ALL operator to return all rows from multiple tables
 Describe the INTERSECT operator
 Use the INTERSECT operator
 Explain the MINUS operator
 Use the MINUS operator
 List the SET operator guidelines
 Order results when using the UNION operator

Manipulating Data
 Write INSERT statements to add rows to a table
 Copy rows from another table
 Create UPDATE statements to change data in a table
 Generate DELETE statements to remove rows from a table
 Use a script to manipulate data
 Save and discard changes to a table through transaction processing
 Show how read consistency works
 Describe the TRUNCATE statement

Using DLL Statement to create and Manage Tables
 List the main database objects and describe the naming rules for database objects
 Introduce the schema concept
 Display the basic syntax for creating a table and show the DEFAULT option
 Explain the different types of constraints
 Show resulting exceptions when constraints are violated with DML statements
 Create a table with a sub query
 Describe the ALTER TABLE functionality
 Remove a table with the DROP statement and Rename a table

Creating the Schema Objects
 Categorize simple and complex views and compare them
 Create a view
 Retrieve data from a view
 Explain a read-only view
 List the rules for performing DML on complex views
 Create a sequence
 List the basic rules for when to create and not create an index
 Create a synonym

Managing Objects with Data Dictionary Views
 Describe the structure of each of the dictionary views
 List the purpose of each of the dictionary views
 Write queries that retrieve information from the dictionary views on the schema objects
 Use the COMMENT command to document objects

Controlling User Access
 Controlling User Access
 System versus Objects Privileges
 Using Roles to define user groups
 Changing Your Password
 Granting Object Privileges
 Confirming Privileges Granted
 Revoking Object Privileges
 Using Database Links

Manage Schema Objects
 Using the ALTER TABLE statement
 Adding a Column
 Modifying a Column
 Dropping a Column, Set Column UNUSED
 Adding, Enabling and Disabling Constraints
 Creating Function-Based Indexes
 Performing FLASHBACK operations
 External Tables

Manipulating Large Data Sets
 Using the MERGE Statement
 Performing DML with Sub queries
 Performing DML with a RETURNING Clause
 Overview of Multi-table INSERT Statements
 Tracking Changes in DML

Generating Reports by Grouping Related Data
 Overview of GROUP BY Clause
 Overview of Having Clause
 Aggregating data with ROLLUP and CUBE Operators
 Determine subtotal groups using GROUPING Functions
 Compute multiple groupings with GROUPING SETS
 Define levels of aggregation with Composite Columns
 Create combinations with Concatenated Groupings

Managing Data From Diffrent Time Zone
 Time Zones
 Using date and time functions

Identifying TIMESTAMP Data Types
Differentiating between DATE and TIMESTAMP
Performing Conversion Operations

Hierarchical Retrieval
Sample Data from the EMPLOYEES Table
The Tree Structure of Employee data
Hierarchical Queries
Ranking Rows with LEVEL
Formatting Hierarchical Reports Using LEVEL and LPAD
Pruning Branches with the WHERE and CONNECT BY clauses

Regular Expression Support
Regular Expression Support Overview
Describing simple and complex patterns for searching and manipulating data

Searching Data Using Advanced Sub Queries
Sub query Overview
Using a Sub query
Comparing several columns using Multiple-Column Sub queries
Defining a Data source Using a Sub query in the FROM Clause
Returning one Value using Scalar Sub query Expressions
Performing ROW by-row processing with Correlated Sub queries
Reusing query blocks using the WITH Claus

Course Details
Program with PL/SQL
What you will learn?

This course introduces students to PL/SQL and helps them understand the benefits of this powerful programming language. In the class, students learn to create PL/SQL blocks of application code that can be shared by multiple forms, reports, and data management applications. Students learn to create procedures, functions, packages, and database triggers. Students use iSQL*Plus to develop these program units. Students also learn to manage PL/SQL program units and database triggers, to manage dependencies, to manipulate large objects, and to use some of the Oracle-supplied packages

Prerequisites

Working with iSQL*Plus

Course Topics

Introduction

Describing PL/SQL
Describing the Use of PL/SQL for the Developer and the Database Administrator
Explaining the Benefits of PL/SQL
PL/SQL program constructs
PL/SQL anonymous block structure
Subprogram block structure
Course objectives and overview

Declaring Variables
 Recognizing the Basic PL /SQL Block and Its Sections
 Describing the Significance of Variables in PL/SQL
 Distinguishing Between PL/SQL and Non-PL/SQL Variables
 Declaring Variables and Constants
 Executing a PL/SQL Block
 Writing Executable Statements
 Recognizing the Significance of the Executable Section
 Writing Statements Within the Executable Section
 Describing the Rules of Nested Blocks
 Executing and Testing a PL/SQL Block
 Using Coding Conventions

Interacting with the Oracle Server
 Writing a Successful SELECT Statement in PL/SQL
 Declaring the Data type and Size of a PL/SQL Variable Dynamically
 Writing Data Manipulation Language (DML) Statements in PL/SQL
 Controlling Transactions in PL/SQL
 Determining the Outcome of SQL DML Statements

Writing Control Structures
 Identifying the Uses and Types of Control Structures
 Constructing an IF Statement
 Constructing and Identifying Different Loop Statements
 Controlling Block Flow Using Nested Loops and Labels
 Using Logic Tables

Working with Composite Data types
 Creating User-Defined PL/SQL Records
 Creating a PL/SQL Table
 Creating a PL/SQL Table of Records
 Differentiating Among Records, Tables, and Tables of Records

Writing Explicit Cursors
 Using a PL/SQL Record Variable
 Distinguishing Between the Implicit and Explicit Cursor
 Writing a Cursor FOR Loop

Advanced Explicit Cursor Concepts
 Writing a Cursor that Uses Parameters
 Determining When a FOR UPDATE Clause in a Cursor Is Required
 Using a PL/SQL Table Variable
 Using a PL/SQL Table of Records

Handling Exceptions
 Defining PL/SQL Exceptions
 Recognizing Unhandled Exceptions
 Listing and Using Different Types of PL/SQL Exception Handlers
 Trapping Unanticipated Errors
 Describing the Effect of Exception Propagation in Nested Blocks
 Customizing PL/SQL Exception Messages

Creating Procedures
 Describe the uses of procedures
 Create procedures.

Create procedures with arguments
Invoke a procedure
Remove a procedure

Creating Functions
Describe the uses of functions
Create a function
Invoke a function
Remove a function
Differentiate between a procedure and a function

Managing Subprograms
Describe system privilege requirements
Describe object privilege requirements
Query the relevant data dictionary views
Debug subprograms

Creating Packages
Describe packages and list their possible components
Create packages that include public and private subprograms, as well as global and local variables
Invoke objects in a package
Remove packages

More Package Concepts
Write packages that use the overloading feature of PL/SQL
Avoid errors with mutually referential subprograms
Initialize variables with a one-time-only procedure
Specify the purity level of packaged functions
Describe the persistent state of packaged variables, cursors, tables, and records
Query the relevant data dictionary views

Using Oracle-Supplied Packages
Overview of Oracle-supplied packages
View examples of some supplied packages
Write dynamic SQL

Creating Database Triggers
Describe different types of triggers
Describe database triggers and their use
Create database triggers
Describe database trigger firing rules
Drop database triggers

More Trigger Concepts
Create triggers that fire when certain database actions occur
List some of the limitations of database triggers
Determine when to use database triggers or Oracle Server features
Create triggers by using alternative events (notINSERT/UPDATE/DELETE)
Create triggers by using alternative levels (not STATEMENT/ROW)
Query the relevant data dictionary views

Managing Dependencies
Overview of object dependencies
Manage PL/SQL objects for recompilation

Manipulating Large Objects
Compare and contrast LONG/RAW/LONG RAW with large objects (LOBs)
Understand LOBs
Manage binary large file objects (BFILEs)
Use PL/SQL with an LOB
Create a table with LOB columns
Manipulate LOBs
Use DBMS_LOB Oracle-supplied packages
Create a temporary LOB

Oracle Forms - Building Internet App
Duration:40 hrs

1.Running forms Developer application
2.working in the forms developer environment
3.Creating form Module
4.Working with datablocks and frames
5.Working with Text Items
6.Craeting LOVs and Editors
7.Creating Additional Input Items
8.Creating Non Input Items
9.Creating Windows and Content Canvaes
10.Working with other canvase type
11.Producing and debugging to treiggers
12.Adding functionality to Items
13.Run time Messages and alerts
14.Query Triggers,validation,Navigation
15.Transaction processing'
16.writing flexible code
17.Sharing Objects and code.