

Oracle SQL Course Content

This course will help you understand the advanced features of SQL. Learning these features will help you query and manipulate data within the database.

Learn To:

- Understand the basic concepts of relational databases ensure refined code by developers.
- Create reports of sorted and restricted data.
- Control database access to specific objects.
- Manage objects with data dictionary views.
- Etc.

Prerequisite

No prerequisite

Oracle SQL Training Course Content

Introduction

- Course Objectives, Course Agenda and Appendixes Used in this Course
- Overview of Oracle Database 12c and Related Products
- Overview of relational database management concepts and terminologies
- Introduction to SQL and its development environments
- What is Oracle SQL Developer?
- Starting SQL*Plus from Oracle SQL Developer
- The Human Resource (HR) Schema
- Tables used in the Course

Retrieving Data using the SQL SELECT Statement

- Capabilities of the SELECT statement
- Arithmetic expressions and NULL values in the SELECT statement
- Column aliases
- Use of concatenation operator, literal character strings, alternative quote operator, and the DISTINCT keyword
- Use of the DESCRIBE command

Restricting and Sorting Data

- Limiting the Rows
- Rules of precedence for operators in an expression
- Substitution Variables
- Using the DEFINE and VERIFY command

Using Single-Row Functions to Customize Output

- Describe the differences between single row and multiple row functions
- Manipulate strings with character function in the SELECT and WHERE clauses
- Manipulate numbers with the ROUND, TRUNC and MOD functions
- Perform arithmetic with date data
- Manipulate dates with the date functions

Using Conversion Functions and Conditional Expressions

- Describe implicit and explicit data type conversion
- Use the TO_CHAR, TO_NUMBER, and TO_DATE conversion functions
- Nest multiple functions
- Apply the NVL, NULLIF, and COALESCE functions to data
- Use conditional IF THEN ELSE logic in a SELECT statement

Reporting Aggregated Data Using the Group Functions

- Group Functions
- Creating Groups of Data
- Restricting Group Results

Displaying Data from Multiple Tables Using Joins

- Introduction to JOINS
- Types of Joins
- Natural join
- Self-join
- Non equijoins
- OUTER join

Using Subqueries to Solve Queries

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- Introduction to Subqueries
- Single Row Subqueries
- Multiple Row Subqueries

Using the SET Operators

- Set Operators
- UNION and UNION ALL operator
- INTERSECT operator
- MINUS operator
- Matching the SELECT statements
- Using ORDER BY clause in set operations

Managing Tables using DML statements

- Data Manipulation Language
- Database Transactions

Introduction to Data Definition Language

- Data Definition Language

Introduction to Data Dictionary Views

- Introduction to Data Dictionary
- Describe the Data Dictionary Structure
- Using the Data Dictionary views
- Querying the Data Dictionary Views

Creating Sequences, Synonyms, Indexes

- Overview of sequences
- Overview of synonyms
- Overview of indexes

Creating Views

- Overview of views

Managing Schema Objects

- Managing constraints
- Creating and using temporary tables
- Creating and using external tables

Retrieving Data by Using Subqueries

- Retrieving Data by Using a Subquery as Source

- Working with Multiple-Column subqueries
- Using Scalar subqueries in SQL
- Correlated Subqueries
- Working with the WITH clause

Manipulating Data by Using Subqueries

- Using Subqueries to Manipulate Data
- Inserting by Using a Subquery as a Target
- Using the WITH CHECK OPTION Keyword on DML Statements
- Using Correlated Subqueries to Update and Delete rows

Controlling User Access

- System privileges
- Creating a role
- Object privileges
- Revoking object privileges

Manipulating Data

- Overview of the Explicit Default Feature
- Using multitable INSERTs
- Using the MERGE statement
- Performing flashback operations
- Tracking Changes in Data

Managing Data in Different Time Zones

- Working with CURRENT_DATE, CURRENT_TIMESTAMP, and LOCALTIMESTAMP
- Working with INTERVAL data types