

## Oracle Database: SQL Fundamentals II

**Duration:** 2 Days

### What you will learn

This Oracle Database: SQL Fundamentals II training is designed for application developers with basic SQL language skills. Expert instructors will teach you how to add new users with different levels of access privileges, use scalar and correlated subqueries and more.

### Learn To:

Control privileges at the object and system level.

Create indexes, constraints and alter existing schema objects.

Create and query external tables and use the advanced features of SQL to query and manipulate data within the database.

Use the dictionary views to retrieve metadata and create reports about their schema objects.

Write SQL statements that include the new functions introduced in Oracle Database 11g to enhance regular expression support functionality.

Use Oracle SQL Developer as the main tool; SQL\*Plus is available as an optional tool.

Control database access to specific objects.

Manage schema objects.

Manipulate large data sets in the Oracle database by using subqueries.

Manage data in different time zones.

Retrieve data by using advanced subqueries.

Use the regular expression support in SQL to search, match, and replace strings in terms of regular expressions.

### Benefits to You

Gain expertise in relational database data management as you learn how to effectively use SQL commands against your business data. These features will help you query and manipulate data within the database, use the dictionary views to retrieve metadata and create reports about their schema objects.

### Participate in Hands-On Practices

Whether you choose to enroll in Classroom Training or elect to take a Self-Study course, this material will help you take your understanding of the Oracle database to the next level. Choose a format that best fits your learning style.

This course is appropriate for a 10g and 11g audience, as there are minor changes between 10g and 11g features in SQL.

### Audience

Application Developers

Business Intelligence Developer  
Database Administrators  
Forms Developer  
Portal Developer  
Reports Developer  
System Analysts  
Technical Consultant

## Related Training

### *Required Prerequisites*

Oracle Database: SQL Fundamentals I

Oracle Database: SQL Fundamentals I

## Course Objectives

Manage schema objects.

Manage objects with data dictionary views.

Manipulate large data sets in the Oracle database by using subqueries.

Manage data in different time zones.

Write multiple-column subqueries.

Use scalar and correlated subqueries.

Use the regular expression support in SQL.

Add new users with different levels of access privileges.

Control database access to specific objects.

## Course Topics

### **Introduction**

Course Prerequisites

Course Agenda

Human Resources (HR) Schema

Review of Using Oracle SQL Developer

SQL Statements in SQL\*Plus

Review of some basic concepts of SQL

### **Control User Access**

Identify the System and Object Privileges

Create Users

- Grant System Privileges
- Create and Grant Privileges to a Role
- Change Your Password
- Grant Object Privileges
- How to Pass On Your Privileges?
- Revoke Object Privileges

### **Management of Schema Objects**

- Add, Modify, and Drop a Column
- Add, Drop, and Defer a Constraint
- Enable and Disable a Constraint
- Create and Remove Indexes
- Create a Function-Based Index
- Perform Flashback Operations
- Create an External Table by Using ORACLE\_LOADER and by Using ORACLE\_DATAPUMP
- Query External Tables

### **Manage Objects with Data Dictionary Views**

- What is the Data Dictionary?
- How to Use the Dictionary Views?
- USER\_OBJECTS and ALL\_OBJECTS Views
- View Table and Column Information
- Query the dictionary views for constraint information
- Query the dictionary views for view, sequence, index and synonym information
- Add a comment to a table
- Query the dictionary views for comment information

### **Manipulate Large Data Sets**

- Use Subqueries to Manipulate Data
- Retrieve Data Using a Subquery as Source
- Insert data Using a Subquery as a Target
- Use the WITH CHECK OPTION Keyword on DML Statements
- List the types of Multitable INSERT Statements
- Identify Multitable INSERT Statements
- Merge rows in a table
- How to track Changes in Data over a period of time?

### **Data Management in Different Time Zones**

- What are Time Zones?
- The CURRENT\_DATE, CURRENT\_TIMESTAMP, and LOCALTIMESTAMP functions
- Compare Date and Time in a Session's Time Zone
- Describe DBTIMEZONE and SESSIONTIMEZONE
- List the differences between DATE and TIMESTAMP
- Identify the INTERVAL Data Types
- Usage of EXTRACT, TZ\_OFFSET and FROM\_TZ functions
- Use TO\_TIMESTAMP, TO\_YMINTERVAL, and TO\_DSINTERVAL

### **Retrieve Data Using Subqueries**

- Multiple-Column Subqueries
- Pairwise and Nonpairwise Comparison
- Usage of Scalar Subquery Expressions
- Solve problems with Correlated Subqueries

Update and Delete Rows Using Correlated Subqueries

Use the EXISTS and NOT EXISTS operators

Use the WITH clause

Use Recursive WITH clause

### **Regular Expression Support**

Invoke Regular Expressions Functions and Conditions in SQL

Implement Meta Characters with Regular Expressions

Perform a Basic Search using the REGEXP\_LIKE function

Find patterns using the REGEXP\_INSTR function

Extract Substrings using the REGEXP\_SUBSTR function

Replace Patterns Using the REGEXP\_REPLACE function

How to use Sub-Expressions with Regular Expression Support?

The REGEXP\_COUNT function

### **Related Courses**

Oracle Database 11g: SQL Fundamentals II Self-Study Course