Oracle Database 11g: SQL Fundamentals I

Duration: 3 Days   Course Code: O11GF1

Overview:

This course is designed for application developers with basic SQL language skills. In this course, students learn to control privileges at the object and system level. This course covers creating indexes and constraints, and altering existing schema objects. Students also learn to create and query external tables and use the advanced features of SQL to query and manipulate data within the database.

Students learn to use the dictionary views to retrieve metadata and create reports about their schema objects. Students learn some of the date time functions available in the Oracle 11g Database and use the regular expression support in SQL.

In this course, students use Oracle SQL Developer as the main tool and SQL*Plus is introduced as an optional tool.

This course counts towards the Hands-on course requirement for the Oracle Database 11g Administrator Certification. Only instructor-led inclass or instructor-led online formats of this course will meet the Certification Hands-on Requirement. Self Study CD-Rom and Knowledge Center courses DO NOT meet the Hands-on Requirement.

This is appropriate for a 10g audience too. There are few minor changes between 10g and 11g features.

Learn To: Control database access to specific objects Manage schema objects and use data dictionary views 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

Target Audience:

Application Developers Business Intelligence Developer Database Administrators Developer Forms Developer PL/SQL Developer Support Engineer System Analysts

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

Prerequisites:

- Basic Knowledge of SQL
- Familiarity with Oracle SQL Developer and SQL*Plus
- Oracle Database 11g: SQL Fundamentals I

Content:

Introduction

- The Human Resources (HR) Schema
- Review of Using Oracle SQL Developer
- Review of some basic concepts of SQL

Controlling User Access

- System versus Object Privileges
- Creating Users
- Granting System Privileges
- Creating and Granting Privileges to a Role
- Changing Your Password
- Granting Object Privileges
- Passing On Your Privileges
- Revoking Object Privileges

Managing Schema Objects

- Adding, Modifying and Dropping a Column
- Adding, Dropping and Deferring a Constraint
- Enabling and Disabling a Constraint
- Creating and Removing Indexes
- Creating a Function-Based Index
- Performing Flashback Operations
- Creating an External Table by Using ORACLE_LOADER and by Using ORACLE_DATAPUMP
- Querying External Tables

Managing Objects with Data Dictionary Views

- The Data Dictionary
- How to Use the Dictionary Views
- USER_OBJECTS and ALL_OBJECTS Views
- Table and Column Information
- Querying the dictionary views for constraint information
- Querying the dictionary views for view, sequence, index and synonym information
- Adding a comment to a table
- Querying the dictionary views for comment information

Manipulating Large Data Sets

- Using Subqueries to Manipulate Data
- Retrieving Data Using a Subquery as Source
- Inserting Using a Subquery as a Target
- Using the WITH CHECK OPTION Keyword on DML Statements
- Types of Multitable INSERT Statements
- Using Multitable INSERT Statements
- Merging rows in a table
- Tracking Changes in Data over a period of time

Managing Data in Different Time Zones

- Time Zones
- CURRENT_DATE, CURRENT_TIMESTAMP, and LOCALTIMESTAMP
- Comparing Date and Time in a Session's Time Zone
- DBTIMEZONE and SESSIONTIMEZONE
- Difference between DATE and TIMESTAMP
- INTERVAL Data Types
- Using EXTRACT, TZ_OFFSET and FROM_TZ
- Using TO_TIMESTAMP,TO_YMINTERVAL and TO_DSINTERVAL

Retrieving Data Using Subqueries

- Multiple-Column Subqueries
- Pairwise and Nonpairwise Comparison
- Using Scalar Subquery Expressions
- Solving problems with Correlated Subqueries
- Updating and Deleting Rows Using Correlated Subqueries
- Using the EXISTS and NOT EXISTS operators
- Using the WITH clause

Regular Expression Support

- Using the Regular Expressions Functions and Conditions in SQL
- Using Meta Characters with Regular Expressions
- Performing a Basic Search using the REGEXP_LIKE function
- Finding patterns using the REGEXP_INSTR function
- Extracting Substrings using the REGEXP_SUBSTR function
- Replacing Patterns Using the REGEXP_REPLACE function
- Using Sub-Expressions with Regular Expression Support
- Using the REGEXP_COUNT function

Further Information:

For More information, or to book your course, please call us on 00 20 (0) 2 2269 1982 or 16142

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