

Introduction to SQL (DM200)

16 Hours

Outline

Learning the SQL language is one of the most basic tasks required for the use of a relational database. SQL proficiency is essential for business users, database developers, database administrators and any other database professional. This course introduces the basics of the SQL language and the Oracle Relational Database Management System (RDBMS). One will become acquainted with the differences in the working environment between a traditional on-premise database installation and the Oracle database service cloud-computing platform.

Target Audience

The target audience for this course is all Oracle professionals, both business In addition, systems professionals. Among the specific groups for whom this course will be helpful are:

- Business and non-IT professionals
- Application designers and database developers
- Business Intelligence (BI) analysts and consumers
- Database administrators
- Web server administrators

Objectives

The first portion of this course considers the logical models upon which a relational database is based and the various configurations and environments in which you may work with the Oracle database. The next segment focuses on the actual SQL syntax for writing database queries. You will begin with the simplest of queries and then proceed onto moderately complex query scenarios. Finally, this course covers the DDL, DML and transaction control portions of the SQL language that allow one to create, maintain and manipulate application database objects and application data.

Contents

Relational Databases & Data Models

- About Data Models
- About the Relational Model
- The Electronics Data Model
- About the Relational DBMS

Selection & Setup of the Database Interface

- Considering Available Tools
- Selecting the Appropriate Tool
- Oracle NET Database Connections
- Oracle PAAS Database Connections
- Setup SQL Developer
- Setup SQL*PLUS
- Setup JDeveloper

Using the Database Interface

- About BIND & SUBSTITUTION Variables
- Using SQL Developer
- Using SQL*PLUS

Introduction to the SQL Language

- About the SQL Language
- Characteristics of SQL
- Introducing SQL Using SELECT
- SQL Rules

The SELECT Statement

- The SELECT Statement
- DISTINCT / UNIQUE Keyword
- Using ALIAS Names

Restricting Results with the WHERE Clause

- About Logical Operators
- EQUALITY Operator
- Boolean Operators
- REGEXP_LIKE ()
- IN Operator

Sorting Data with the ORDER BY Clause

- About the ORDER BY Clause
- Multiple Column Sorts
- Specify the Sort Sequence
- About NULL Values within Sorts
- Using COLUMN Aliases