

O010 - Oracle 9i SQL

Course Objectives

This course gives a complete introduction to Oracle 9i's version of SQL, covering the SQL*Plus toolkit and Oracle 9i RDBMS contextual operating environment.

It is an essential building block for all users of Oracle's full technology range, including database technology, development tools, and web technologies.

The course comprehensively introduces the ANSI standard features of the Oracle 9i SQL implementation.

Who Should Attend	Prerequisites	Duration
Oracle Analyst Programmers Oracle Technicians Oracle DBA's Oracle Developers ANSI SQL Users	PC fundamentals	5 Days

Course Contents

Oracle Overview

Introducing Oracle
 The Elements of the Oracle System
 Relational Concepts

SQL*Plus and SQL

Introduction
 Logging on to SQL*Plus and Leaving SQL*Plus
 Choosing and Describing Tables
 Elements of the SQL Query
 The SQL Buffer and Query Layout
 Editing SQL Statements
 The System Dummy Table
 Selecting Columns
 Duplicate Information (DISTINCT)
 Sorting Information

SQL Functions

The Concatenation Operator
 Elements of the SQL Query:
 Arithmetic
 Column Aliases
 String Functions
 Arithmetic Functions
 Date Functions
 Mixed Functions

Advanced SQL Functions

Nesting Different Functions
 SQL Bar Charts

Decode Crosstab
 Decode with ">", "<" & "="
 Select with Minus Union and Intersect
 Connect By Prior

Filtering Data Using Where

Where Operators
 Where with Keywords
 Where and Logical Operators
 Where and Soundex

Retrieving Data from Multiple Tables

Joining Tables (Equi-Joins)
 Aliases for Table Names
 Thinking Behind Creating Joins
 Joining Tables (Non-Equi-Joins)
 Joining Tables (Outer Joins)
 Joining Tables (Inner Joins)

Group By and Group By Functions

Group Function Examples
 Group Function with Having

Object Support

Object - relational database
 Oracle Object Type definition
 Nested objects
 Object constructors
 Objects as NULL/ attributes as NULL
 Object Tables

Type Hierarchy and Inheritance
 Abstract and Final Types
 Object Evolution
 Propagation of Changes

Sub-Queries

Basic Subqueries
 Multiple Column Subqueries
 Subqueries with Having
 Correlated Subqueries
 Subquery Rules and Suggestions

Data Definition Language (DDL)

Create, Drop Alter Keywords
 Tables/Partitioning/Column Views/Synonyms/Sequences

Integrity Constraints

Types of Constraint
 Referential Integrity
 Defining Constraints
 Integrity Constraints and Data Dictionary
 Alter table

Indexes

Create Index
 Unique Option
 When and What to Index
 Drop Index
 Validate Index
 Index Type Overview

Data Manipulation Language (DML)

Insert /Update/Delete
OPS Commands (Commit, Rollback and Savepoints)

Data Control Language (DCL)

Data Security
Grant and Revoke

Oracle 9i SQL Features

The Returning clause
Drop column
Function based indexes
Temporary tables
Default Column Value enhancements
Overview of Constraint enhancements
For update wait Clause
Constraints on views
External Tables
Multitable Insert Statements
Conditional Insert
Pivoting Insert
Merge Statement
Grouping Sets
WITH Clause
Analytical Functions

LOBs

LOB Migration
LOB SQL Features

Data warehousing and OLAP

Materialised views
Dimensions
ROLLUP functions
The ROLLUP operator
The CUBE operator
Client side caching

SQL*Plus Reporting

Introducing SQL*Plus for Reporting
Using SQL*Plus
Using the System Editor for SQL*Plus
SQL*Plus Command Variables
Building SQL*Plus Reports
Titles and Headings
Using NEW_VALUE and OLD_VALUE

ANSI Standardisation

Oracle 9i Joins
Case Expressions
SQL NULLIF and COALESCE
Scalar Subqueries

Date Datatype

TIMESTAMP Datatype
INTERVAL Datatypes
CURRENT_DATE