

DB50

5-Day

Oracle 10g / PL-SQL SQL Training

This tailored course presents the SQL language, as implemented via SQL*PLUS by Oracle, together with PL/SQL programming tools and techniques, and Oracle DBA topics, including tuning, database backup and recovery, and performance monitoring. Delegates will learn how to design and declare tables and how to write effective SQL statements to query, update, delete and insert records into a relational database. The creation and test of Stored procedures and Triggers, using PL/SQL is presented and supported by numerous exercises. Techniques for analysing the efficiency of Queries are described and attendees will also see how to use MS Access to front-end to Oracle for user-friendly support. Oracle 9i architecture and DBA functions including user management, backup and recovery, database cloning and monitoring are also covered in depth.

Course Objectives

On completing this course, delegates will be able to:

- Perform ER analysis and design leading to effective RDBMS implementation
- Show how RDBMS are an integral part of distributed systems.
- Explain the reasons for SQL
- Understand relational databases, in theory and practice
- Write SQL statements to query relational databases
- Write SQL statements to insert, modify or delete records
- Understand how to join multiple tables and why this is necessary.
- Be familiar with the various forms of the SQL Query
- Be able to create and debug Stored Procedures in PL/SQL
- Understand the use of Data Control Language
- Develop Triggers in PL/SQL and use them for maintaining database integrity.

- Be able to define Views
- Use Access to connect to RDBMS.
- Understand how to monitor the performance of Queries
- Understand the architecture of Oracle and its current features
- Be familiar with the tools and utilities of Oracle
- Manage Users and Roles and effectively
- Be able to create, maintain and configure a database
- Understand the data backup / recovery strategy of Oracle
- Understand how to use SQL*PLUS
- Understand Oracle Listener and how to configure and debug it
- Understand Oracle storage management systems
- Be able to tune and analyze SQL statements

Prerequisites

- The need to access data from a relational database
- Experience with accurate entry of information into PCs.
- The course is designed to take users with some existing database experience to a competent level of SQL and Oracle database knowledge.

Timetable

Register at 09:00 for 09:30 start.
Finish at 17:00.

Presentation Style

Lectures, demonstrations, hands-on exercises with Oracle9i, and group discussions.

Dates and Venues

Refer to *Course Schedules*.

<p>The course covers:</p> <ul style="list-style-type: none"> 📁 Introduction to Systems Design Environment 📁 RDBMS and Evolution of Distributed Processing 📁 Data Warehousing and data mining 📁 ER Design 📁 Entity Relationship Diagrams 📁 Entities, Attributes, relationships, Degree, Optionality, Resolving many to many relationships 📁 Structure Charts 📁 RDBMS and SQL 📁 Background to SQL 📁 Components of SQL 📁 Versions of SQL 📁 Structure of Relational Databases 📁 SQL Query statements statements 📁 SQL Functions and their use 📁 SQL data modification 📁 Overview of relational Databases. 📁 Components of relational databases 	<ul style="list-style-type: none"> 📁 Primary and foreign keys 📁 Principles of relational table design 📁 SQL table create / modify statements 📁 Transactions, locking and concurrent operations 📁 SQL used to filter, modify, sort and group query data 📁 Views, what they are and how to create them 📁 When to use and how to create Stored Procedures 📁 Triggers and how to use them (with reference to RI and other topics) 📁 Data Control Language, to manage privileges, access rights and schemas. 📁 User management, backup and recovery, user authorizations, security 📁 Optimisation and Tuning techniques for SQL statements 📁 Use of Access to work with relational databases such as Oracle 📁 Oracle Processes, Files, 📁 Tablespaces, SGA, PGA, Core Structures, Control Files, Synonyms, Links, Users, Privileges and Roles 📁 Oracle Directory Structure Special System users 📁 Oracle Distributed Architecture 	<ul style="list-style-type: none"> 📁 Building interactive SQL 📁 Introduction to PL/SQL 📁 PL/SQL Structure 📁 PL/SQL Stored Procedures & Triggers 📁 PL/SQL entry via SQL*PLUS 📁 DBA Functions and Tools - How To ... 📁 Get HELP, query system information, control an instance 📁 Control User Processes, read LOGs and Trace files 📁 Enlarge / reallocate tablespace, system files 📁 Create / manage Rollback segments 📁 Monitor instance health via logs and traces and space usage 📁 Cold vs. Hot backup 📁 Backup and Recovery strategies 📁 Complete or partial Recovery 📁 Database cloning (instance creation) 📁 Recovery Manager
--	---	--