

SQL in Oracle database

Overview

This course is for people without much experience with SQL.

Audience

Students who can benefit from this course are individuals who have basic mathematical, logical, and analytical problem-solving skills and who want to begin learning to use SQL.

Prerequisites

Familiarity with any text editor and operating system.

Course Format

This is a hands-on course. We apply a powerful learning cycle of short lecture, examples and labs on each topic. Each student gets lab code and the entire course content printed out (organized in a ring binder).

Course Duration

Two days (14 hours), 9:00 AM-5:00 PM (1h lunch break); typically ends by 4:00 PM on the last day.

Course Details

1. Introduction to databases
2. Relational databases
3. Data types and NULL values
4. SQL basics
 - CRUD model
 - DCL, DDL, DML, DQL and TCL languages
 - tables and their normalization
 - primary keys
 - foreign keys
 - sequences
 - synonyms
 - views
5. DCL (Data Control Language)

- GRANT
- REVOKE
- 6. DDL (Data Definition Language)
 - CREATE
 - DROP
 - TRUNCATE
 - ALTER
- 7. DML (Data Modification Language)
 - DELETE
 - INSERT
 - UPDATE
- 8. DQL (Data Query Language)
 - SELECT
 - WHERE
 - aggregate functions: COUNT, SUM, AVG, MIN, MAX
 - data grouping GROUP BY
 - data grouping HAVING
 - predicate LIKE
 - arithmetic, logical and concatenation operators
 - dates, text and numbers
 - UNION, UNION ALL, INTERSECT, MINUS
 - nested subqueries
 - ALL and ANY operators
 - predicate JOIN
 - INNER JOIN vs OUTER JOIN
- 9. TCL (Transaction Control Language)
 - COMMIT
 - ROLLBACK
 - SAVEPOINT
- 10. Constraints
 - NULL and NOT NULL
 - CONSTRAINT, DEFAULT clause
 - condition CHECK
 - condition PRIMARY KEY, UNIQUE, FOREIGN KEY
- 11. Appendix A - Training database