

PRACTICAL SQL PATH IN A WORLD OF AUTOMATION & AI

Comprehensive Course Outline

PART ONE: Where Does the Data Reside?

- **Introduction to Core SQL Standard and Various DBMS Implementations**

- MySQL, PostgreSQL, Microsoft SQL Server (T-SQL)
- Oracle DB (PL/SQL), MariaDB

- **SQL Setup for Different Database Environments**

- Local / On-premise
- Cloud-Based Self-Managed
- Containerized Docker Setup

- **SQL Client Tools (Interface to Write and Run Queries)**

- MySQL Workbench, Adminer, phpMyAdmin
- pgAdmin, TablePlus, DBeaver

PART TWO: Writing Practical SQL Queries

- **Working with Important SQL Statements**

- Data Definition Statements**

- ALTER, CREATE, DROP, RENAME, TRUNCATE

- Data Manipulation Statements**

- SELECT, INSERT, UPDATE, DELETE, JOIN, UNION
 - INTO, TABLE FROM, WHERE, EXCEPT, WITH, VALUES
 - IMPORT, REPLACE, DO, CALL, LOAD DATA

- Compound Statements**

- BEGIN, END, DECLARE, CASE, IF, WHILE
 - ITERATE, REPEAT, RETURN, LEAVE

- Database Administration Statements**

- ALTER USER, CREATE ROLE, CREATE USER, DROP ROLE
 - GRANT, SET ROLE, SET PASSWORD, REPAIR TABLE
 - SHOW, KILL, FLUSH, SHUTDOWN, RESTART

- Utility Statements**

- USE, DESCRIBE, EXPLAIN, HELP

- **Hands-On Practical Modules**

- Creating and Using a Database
- Create Tables, Load Data, Retrieve Data
- Analyzing Information from Databases and Tables
- Real-World Exercises with Analytic Tasks and Query Solutions

- **Integration with Business Intelligence Tools**

- Connecting Tableau to External DBMS Data Sources
- Writing SQL Commands in Tableau to Query the DBMS

Ready to master SQL? Let's get started!