

SQL: Fundamentals of Querying (Fourth Edition)

Course Specifications

Course number: 085071

Course length: 1.0 day(s)

Course Description

Course Objective: You will compose SQL queries to retrieve desired information from a database.

Target Student: Individuals with basic computer skills, familiar with concepts related to database structure and terminology, and who want to use SQL to query databases.

Prerequisites: Basic end-user computer skills and some familiarity with database terminology and structure are required. The following Element K courses or equivalent knowledge and skills are highly recommended:

- *Windows XP Professional: Level 1*
- *Windows XP Professional: Level 2*
- *Microsoft Windows Vista: Level 1*
- *Microsoft Windows Vista: Level 2*
- *Relational Databases Design (Second Edition)*
- *Access 2003: Designing a Database*

Course Objectives

Upon successful completion of this course, students will be able to:

- connect to the SQL Server database and execute a simple query.
- include a search condition in a simple query.
- use various functions to perform calculations on data.
- organize data obtained from a query before it is displayed on-screen.
- retrieve data from tables.
- format an output, save a result, and generate a report.

Course Content

Lesson 1: Executing a Simple Query

Topic 1A: Connect to the SQL Database

Topic 1B: Query a Database

Topic 1C: Save a Query

Topic 1D: Modify a Query

Topic 1E: Execute a Saved Query

Lesson 2: Performing a Conditional Search

Topic 2A: Search Using a Simple Condition

- Topic 2B:** Compare Column Values
- Topic 2C:** Search Using Multiple Conditions
- Topic 2D:** Search for a Range of Values and Null Values
- Topic 2E:** Retrieve Data Based on Patterns

Lesson 3: Working with Functions

- Topic 3A:** Perform Date Calculations
- Topic 3B:** Calculate Data Using Aggregate Functions
- Topic 3C:** Manipulate String Values

Lesson 4: Organizing Data

- Topic 4A:** Sort Data
- Topic 4B:** Rank Data
- Topic 4C:** Group Data
- Topic 4D:** Filter Grouped Data
- Topic 4E:** Summarize Grouped Data
- Topic 4F:** Use PIVOT and UNPIVOT Operators

Lesson 5: Retrieving Data from Tables

- Topic 5A:** Combine Results of Two Queries
- Topic 5B:** Compare the Results of Two Queries
- Topic 5C:** Retrieve Data by Joining Tables
- Topic 5D:** Check for Unmatched Records
- Topic 5E:** Retrieve Information from a Single Table Using Joins

Lesson 6: Presenting Query Results

- Topic 6A:** Save the Query Result
 - Topic 6B:** Generate an XML Report
- Appendix A: The OGCBooks Database**