

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 Data 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