

# **SQL: Advanced Querying (Fourth Edition)**

## **Course Specifications**

**Course number:** 085072

**Course length:** 1.0 day(s)

## **Course Description**

**Course Objective:** You will work with advanced queries to manipulate and index tables. You will also create transactions so that you can choose to save or cancel data entry process.

**Target Student:** Students should have basic computer skills, SQL skills, and be familiar with concepts related to database structure and terminology.

**Prerequisites:** To ensure your success, we recommend you first take the following Element K courses, or have equivalent skills and knowledge:

- **SQL: Fundamentals of Querying (Fourth Edition)**
- **Windows XP Professional: Level 1 and Windows XP Professional: Level 2 or Windows XP: Introduction**

## **Course Objectives**

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

- use subqueries to generate query output.
- manipulate table data by inserting and updating records in a table and deleting records from a table.
- manipulate the table structure.
- create views, manipulate data through views, modify the view structure, and drop views.
- create indices on table columns and drop inefficient indices.
- mark the beginning of a transaction, create a savepoint within a transaction, rollback a transaction, and commit a transaction.

## **Course Content**

### **Lesson 1: Using Subqueries to Perform Advanced Querying**

**Topic 1A: Search Based on Unknown Values**

**Topic 1B: Compare a Value with Unknown Values**

**Topic 1C: Search Based on the Existence of Records**

**Topic 1D: Generate Output Using Correlated Subqueries**

**Topic 1E: Filter Grouped Data Within Subqueries**

**Topic 1F: Perform Multiple-Level Subqueries**

### **Lesson 2: Manipulating Table Data**

**Topic 2A: Insert Data**

**Topic 2B: Modify and Delete Data**

### **Lesson 3: Manipulating the Table Structure**

**Topic 3A: Create a Table**

**Topic 3B: Create a Table with Constraints**

**Topic 3C: Add and Drop Table Columns**

**Topic 3D: Add and Drop Constraints**  
**Topic 3E: Modify the Column Definition**  
**Topic 3F: Back Up Tables**  
**Topic 3G: Delete Tables**  
**Lesson 4: Working with Views**  
**Topic 4A: Create a View**  
**Topic 4B: Manipulate Data in Views**  
**Topic 4C: Create Aliases**  
**Topic 4D: Modify and Drop Views**  
**Lesson 5: Indexing Data**  
**Topic 5A: Create Indices**  
**Topic 5B: Drop Indices**  
**Lesson 6: Managing Transactions**  
**Topic 6A: Create Transactions**  
**Topic 6B: Commit Transactions**  
**Appendix A: Structure of the Bookstore Database**