

## SQL Introduction to Querying

2 day course

### Overview

Students will learn what SQL is and how it can help them query a database to answer business questions.

### Prerequisites

Windows Introduction or equivalent knowledge.

### Benefits

Students will learn how to use SQL statements to query a database.

### Target student

Students should be familiar with the components that make up the PC, including input, output, and storage devices. They should also be familiar with concepts related to database structure and terminology.

## Course Content

### Introduction to databases and SQL

- o Database concepts
- o Understanding SQL concepts

### Introduction to the SELECT statement

- o An overview of the SELECT statement
- o Syntax rules you'll want to know

### Calculating data

- o Aggregate functions
- o Column aliases
- o Performing calculations
- o Date functions

### Selecting specific rows

- o The WHERE clause
- o The ORDER BY clause

### Working with other operators

- o Searching for text
- o Logical operators
- o NULLs

### Grouping data

- o The GROUP BY clause
- o The HAVING clause
- o Comparing the WHERE and HAVING clauses

### Multi-table queries

- o Joins
- o Joining tables
- o Outer joins

### Querying a database using Access

- o Connecting to a database
- o Querying a database
- o Generating a report of the data

### Querying with unions and advanced joins

- o Querying multiple tables with unions
- o Advanced Joins
- o Calculating with COMPUTE

### Querying with subqueries

- o Subqueries

### Adding data

- o Inserting data

- o SELECT INTO

#### **Updating and removing data**

- o Updating records
- o Deleting records
- o Deleting the contents of tables

#### **Manipulating tables and views**

- o Creating tables
- o Modifying tables
- o Deleting tables
- o Adding and removing views

#### **Manipulating indexes**

- o Adding and removing indexes

#### **Ensuring data integrity with transactions**

- o Transactions

#### **Creating databases**

- o Creating a database with SQL
- o Deleting a database