

## **Querying Data with Microsoft Transact-SQL**

**Duration: 2 Days** 

#### **Course Description:**

This course will teach the basics of Microsoft's dialect of the standard SQL language: Transact-SQL. Topics include both querying and modifying data in relational databases that are hosted in Microsoft SQL Server-based database systems, including: Microsoft SQL Server, Azure SQL Database and, Azure Synapse Analytics.

#### **Intended Audience:**

This course can be valuable for anyone who needs to write basic SQL or Transact-SQL queries. This includes anyone working with data as a data analyst, a data engineer, a data scientist, a database administrator or a database developer. It can also be useful for others peripherally involved with data, or wanting to learn more about working with data such as solution architects, students and technology managers.

#### **Course Outline:**

### **Introduction to Transact-SQL**

- > Introduction
- Work with schemas
- > Explore the structure of SQL statements
- > Examine the SELECT statement
- Work with data types
- ➤ Handle NULLs

#### Sort and filter results in T-SQL

- > Introduction
- Sort your results
- > Limit the sorted results
- Page results
- > Remove duplicates
- > Filter data with predicates

## Combine multiple tables with JOINs in T-SQL

- > Introduction
- Understand joins concepts and syntax
- > Use inner joins
- Use outer joins
- Use cross joins
- Use self joins

## Write Subqueries in T-SQL

- > Introduction
- Understand subqueries
- > Use scalar or multi-valued subqueries
- > Use self-contained or correlated subqueries

# Use built-in functions and GROUP BY in Transact-SQL

- > Introduction
- > Categorize built-in functions
- Use scalar functions
- Use ranking and rowset functions
- > Use aggregate functions
- > Summarize data with GROUP BY
- > Filter groups with HAVING

#### **Modify data with T-SQL**

- > Introduction
- > Insert data
- > Generate automatic values
- Update data
- Delete data
- Merge data based on multiple tables