

# Get Started Querying with Transact-SQL

**Course Duration: 16 hrs**

**Course Code:DP-080**

## Course Overview

The *Get Started Querying with Transact-SQL (DP-080)* course provides a comprehensive introduction to T-SQL, focusing on fundamental querying techniques, schema management, and data manipulation. Participants will learn how to structure SQL statements, retrieve and filter data efficiently, utilize joins to combine tables, and implement subqueries for complex data retrieval. Additionally, the course covers built-in functions, GROUP BY operations, and modifying data using T-SQL commands such as INSERT, UPDATE, DELETE, and MERGE.

## What you'll learn?

- Understand SQL schemas and database structures
- Write effective SELECT statements and handle different data types
- Sort, filter, and remove duplicate results in queries
- Use different types of JOINS to combine tables
- Implement subqueries for advanced data retrieval
- Utilize built-in functions, ranking functions, and aggregate functions
- Modify data using T-SQL commands (INSERT, UPDATE, DELETE, MERGE)

## Target Audience

This course is designed for beginners in database management, aspiring data analysts, developers, and IT professionals who want to enhance their SQL querying skills. It is particularly beneficial for individuals preparing for the DP-080 certification or those working with Microsoft SQL Server databases.

## Pre-Requisites

Basic knowledge of databases and familiarity with relational database concepts is recommended but not mandatory. No prior experience with SQL is required, making this course ideal for beginners.

## Course content

### 1. Introduction to Transact-SQL

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

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

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

### 3. Combine multiple tables with JOINS in T-SQL

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

#### 4. Write Subqueries in T-SQL

- Understand subqueries
- Use scalar or multi-valued subqueries
- Use self-contained or correlated subqueries
- Exercise - Use subqueries

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

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

#### 6. Modify data with T-SQL

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