MS-DP080T00: QUERYING DATA WITH MICROSOFT TRANSACT-SQL

Microsoft

DURATION	LEVEL	TECHNOLOGY	DELIVERY METHOD	TRAINING CREDITS
2 Days	Beginner	Azure	Instructor-led	NA

INTRODUCTION

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.

AUDIENCE PROFILE

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.

PREREQUISITES

Familiarity with working with tables of data, for example in a spreadsheet.

COURSE OBJECTIVES

After completing this course, students will be able to:

– Use SQL Server query tools
– Write SELECT statements to retrieve columns from one or more tables
– Sort and filter selected data

COURSE CONTENT

Module 1: Introduction to Transact-SQL
This module provides an introduction to relational databases, the SQL language and Transact-SQL. You'll learn what kinds of statements make up the SQL language and look at the SELECT statement in detail.
Lessons
– Introduction
– Work with schemas
– Explore the structure of SQL statements
– Examine the SELECT statement
– Work with data types
– Handle NULLs
– Exercise - Work with SELECT statements
– Knowledge check
– Summary
After completing this module, students will be able to:
– Understand what SQL is for
– Identify database objects in schemas
– Identify SQL statement types
– Use the SELECT statement

– Work with data types
– Handle NULLs

Module 2: Sort and filter results in T-SQL
Learn how to sort and filter query results
Lessons
– Introduction
– Sort your results
– Limit the sorted results
– Page results
– Remove duplicates
– Filter data with predicates
– Exercise - Sort and filter query results
– Knowledge check
– Summary
After completing this module, students will be able to:
– Sort your results
– Limit the sorted results
– Return paged results
– Remove duplicates
– Filter data with predicates

Module 3: Combine multiple tables with JOINs in T-SQL

Explore T-SQL queries accessing data from multiple tables with various kinds of JOIN operations.
Lessons
– Introduction
– Understand joins concepts and syntax
– Use inner joins
– Use outer joins
– Use cross joins
– Use self joins
– Exercise - Query multiple tables with joins
– Knowledge check
– Summary
After completing this module, students will be able to:
– Describe join concepts and syntax
– Write queries that use inner and outer joins
– Write queries that use cross joins
– Write queries that use self joins

Module 4: Write Subqueries in T-SQL

Learn how to use subqueries to combine multiple SELECT statements and compose nested queries.

Lessons

- Introduction
- Understand subqueries
- Use scalar or multi-valued subqueries
- Use self-contained or correlated subqueries
- Exercise - Use subqueries
- Knowledge check
- Summary

After completing this module, students will be able to:

- Understand what subqueries are
- Use scalar or multi-valued subqueries
- Use self-contained or correlated subqueries

Module 5: Use built-in functions and GROUP BY in Transact-SQL

Learn how to use functions in Transact-SQL, and how to group aggregated results.

Lessons

- 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
- Exercise - Use built-in functions
- Knowledge check
- Summary

After completing this module, students will be able to:

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

Module 6: Modify data with T-SQL

Learn how to use Transact-SQL to insert, update, and delete data in a database.

- Lessons
- Introduction
- Insert data
- Generate automatic values
- Update data
- Delete data
- Merge data based on multiple tables
- Exercise - Modify data
- Knowledge check
- Summary

After completing this module, students will be able to:

- Insert data into a table
- Generate automatic values
- Update data in a table
- Delete data from a tableMerge data based on multiple tables

ASSOCIATED CERTIFICATIONS & EXAM

This course has no Associated Certification or Exam.