

**Module 1: Introduction to Transact-SQL**

The following topics are covered in this module:

- The Transact-SQL Programming Language
- Types of Transact-SQL Statements
- Transact-SQL Syntax Elements
- Using SQL Server Books Online

After completing this module, you will be able to:

- Differentiate between Transact-SQL and ANSI-SQL.
- Describe the basic types of Transact-SQL.
- Describe the syntax elements of Transact-SQL.

**Module 2: Using Transact-SQL Querying Tools**

The following topics are covered in this module:

- SQL Query Analyzer
- Using the Object Browser Tool in SQL Query Analyzer
- Using the osql Utility
- Executing Transact-SQL Statements
- Creating and Executing Transact-SQL Scripts

After completing this module, you will be able to:

- Describe the basic functions of SQL Query Analyzer.
- Describe how to use the Object Browser tool in SQL Query Analyzer.
- Describe how to use the templates in SQL Query Analyzer.
- Describe how to use the osql command-line utility.
- Execute Transact-SQL statements in various ways.

**Module 3: Retrieving Data**

The following topics are covered in this module:

- Retrieving Data by Using the SELECT Statement
- Filtering Data
- Formatting Result Sets
- How Queries Are Processed
- Performance Considerations
- Retrieving Data and Manipulating Result Sets

After completing this module, you will be able to:

- Retrieve data from tables by using the SELECT statement.
- Filter data by using different search conditions to use with the WHERE clause.
- Format result sets.
- Describe how queries are processed.
- Describe performance considerations that affect retrieving data.

**Module 4: Grouping and Summarizing Data**

The following topics are covered in this module:

- Listing the TOP n Values
- Using Aggregate Functions
- GROUP BY Fundamentals

- Generating Aggregate Values Within Result Sets
- Using the COMPUTE and COMPUTE BY Clauses
- Grouping and Summarizing Data

After completing this module, you will be able to:

- Use the TOP n keyword to retrieve a list of the specified top values in a table.
- Generate a single summary value by using aggregate functions.
- Organize summary data for a column by using aggregate functions with the GROUP BY and HAVING clauses.
- Generate summary data for a table by using aggregate functions with the GROUP BY clause and the ROLLUP or CUBE operator.
- Generate control-break reports by using the COMPUTE and COMPUTE BY clauses.

### **Module 5: Joining Multiple Tables**

The following topics are covered in this module:

- Using Aliases for Table Names
- Combining Data from Multiple Tables
- Combining Multiple Result Sets
- Querying Multiple Tables

After completing this module, you will be able to:

- Use aliases for table names.
- Combine data from two or more tables by using joins.
- Combine multiple result sets into one result set by using the UNION operator.

### **Module 6: Working with Subqueries**

The following topics are covered in this module:

- Introduction to Subqueries
- Using a Subquery as a Derived Table
- Using a Subquery as an Expression
- Using a Subquery to Correlate Data
- Using the EXISTS and NOT EXISTS Clauses
- Working with Subqueries

After completing this module, you will be able to:

- Describe when and how to use a subquery.
- Use subqueries to break down and perform complex queries.

### **Module 7: Modifying Data**

The following topics are covered in this module:

- Using Transactions
- Inserting Data
- Deleting Data
- Updating Data
- Performance Considerations
- Modifying Data

After completing this module, you will be able to:

- Describe how transactions work.
- Write INSERT, DELETE, and UPDATE statements to modify data in tables.
- Describe performance considerations related to modifying data.

### **Module 8: Querying Full-Text Indexes**

The following topics are covered in this module:

- Introduction to Microsoft Search Service
- Microsoft Search Service Components
- Getting Information About Full-Text Indexes
- Writing Full-Text Queries
- Querying Full-Text Indexes

After completing this module, you will be able to:

- Describe Microsoft Search service function and components.
- Write full-text queries.
- Get information about full-text indexes.

### **Module 9: Introduction to Programming Objects**

The following topics are covered in this module:

- Displaying the Text of a Programming Object
- Introduction to Views
- Advantages of Views
- Creating Views
- Introduction to Stored Procedures
- Introduction to Triggers
- Introduction to User-defined Functions
- Working with Views

After completing this module, you will be able to:

- Display the text of a programming object.
- Describe the concepts of views.
- List the advantages of views.
- Describe stored procedures.
- Describe triggers.
- Describe user defined functions.

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