

MS-SQL

Curriculum

Chapter 1: SQL SERVER OVERVIEW (32 min)

1. Understanding Client Server Architecture
2. Introducing the Tools
3. Selecting an Edition
4. Creating Sample Databases

Chapter 2: USING MANAGEMENT STUDIO (23 min)

1. Arranging the Workspace
2. Registering Servers
3. Explaining Items in the Object Explorer
4. Explaining the Database Properties Dialog
5. Explaining the Columns Properties Dialog
6. Continuing with Object Explorer Items
7. Using the Query Editor

Chapter 3: DESIGNING RELATIONAL DATABASES (35 min)

1. Understanding Normalization
2. Discovering Patterns
3. Avoiding Over Complexity
4. Managing Optional Data
5. Creating Physical Keys
6. Using the Database Diagrammer Tool
7. Final Comments

Part/Disc 2: Selecting Data

Chapter 1: WORKING WITH SINGLE TABLE QUERIES (42 min)

1. Understanding Query Flow
2. Filtering Data with the Where Clause
3. Columns, Expressions & Scalar Functions
4. Using Case Expressions
5. Working with Nulls & Coalesce
6. Selecting Environment Functions
7. Working with Dates & Times
8. Parsing Strings
9. Converting Data
10. Sorting Data
11. Topping Off the Query with Predicates

Chapter 2: MERGING DATA WITH JOINS & UNIONS (25 min)

1. Working with Inner Joins
2. Using Left Outer Joins
3. Multiplying Data with Cross Joins
4. Referencing Self-Joins
5. Working with Complex Joins
6. Finding the Set Difference
7. Stacking Data with Unions

Chapter 3: WORKING WITH SUBQUERIES (19 min)

1. Using Subqueries as Expressions
2. Including Subqueries as Lists
3. Adding Subqueries as Derived Tables
4. Working with Correlated Subqueries
5. Solving for X with Relations Division

Chapter 4: AGGREGATING DATA (35 min)

1. Using the New Windowing Functions
2. Using Aggregate Functions
3. Grouping a Data Set
4. Nesting Aggregations
5. Filtering Groups & Adding Grand Totals
6. Generating Cross Tab Tables (Pivot)
7. Calculating Cumulative Sums

Chapter 5: USING FULL-TEXT SEARCH (14 min)

1. Creating a Full-Text Index
2. Searching for Words
3. Using a Fuzzy Search to Search for Phrases

Chapter 6: SELECTING DATA THROUGH VIEWS (11 min)

1. Creating Views
2. Preventing Disappearing Rows
3. Protecting from Schema Changes
4. Nesting Views

Chapter 7: DISTRIBUTED QUERIES (18 min)

1. Linking to External Data Sources
2. Executing Distributed Queries
3. Looking at Where the Work Takes Place
4. Using Pass Through Queries
5. Controlling Distributed Transactions

Chapter 8: MODIFYING DATA (29 min)

1. Inserting Data
2. Updating Data
3. Deleting Data
4. Using the Output Clause
5. Final Comments & Credits

Part/Disc 3: Developing Solutions

Chapter 1: T-SQL & STORED PROCEDURES (68 min)

1. Introducing T-SQL
2. Working with Variables
3. Controlling Procedural Flow
4. Examining SQL Server with Code
5. Using Temp Tables
6. Developing Dynamic SQL
7. Introducing Stored Procedures
8. Passing Parameters
9. Returning Parameters
10. Working with a Cursor
11. Handling Errors
12. Explaining the Raise Error
13. Controlling Transactions

Chapter 2: TRIGGERS & AUDIT TRAILS (31 min)

1. Introducing After Triggers
2. Using "Instead of" Trigger
3. Disabling Triggers
4. Using the Update () Function
5. Selecting Transaction Data
6. Nesting & Recursion
7. Enforcing Complex RI
8. Auditing Data Changes

Chapter 3: USER-DEFINED FUNCTIONS (27 min)

1. Creating Scalar Functions
2. Working with Inline Table-Valued Functions
3. Using Multi-Statement Table-Valued UDFs
4. Navigating a Hierarchy
5. Having Fun with Apply
6. Exploring Functions in Nordic

Chapter 4: INDEXING FOR PERFORMANCE (32 min)

1. Introducing Indexes
2. Creating Indexes
3. Examining Query Execution Plans, Pt. 1
4. Examining Query Execution Plans, Pt. 2

Chapter 5: TRANSACTIONS, LOCKING & BLOCKING (33 min)

1. Introducing ACID
2. Understanding Transactional Faults
3. Stepping through a Transaction
4. Exploring Locks
5. Working with Locks
6. Viewing Deadlocks
7. Using Snapshot Isolation

Chapter 6: INTRODUCTION TO OPTIMIZATION THEORY (22 min)

1. Deconstructing the Database System
2. Walking through Optimization Theory
3. Optimization Theory Continued
4. Final Comments & Credits