

## **Microsoft Secure Database Administration with Development**

### **Introduction TO SQL Database and Architecture**

#### **Working with databases**

- Lesson 1: Introduction to Data Storage with SQL Server
- Lesson 2: Managing Storage for System Databases
- Lesson 3: Managing Storage for User Databases

#### **SQL Server Security**

- Lesson 1: Authenticating Connections to SQL Server 1-2
- Lesson 2: Authorizing Logins to Connect to Databases 1-12
- Lesson 3: Authorization Across Servers

#### **Assigning Server and Database Roles**

- Lesson 1: Working with Server Roles
- Lesson 2: Working with Fixed Database Roles
- Lesson 3: User-Defined Database Roles

#### **Authorizing Users to Access Resources**

- Lesson 1: Authorizing User Access to Objects
- Lesson 2: Authorizing Users to Execute Code
- Lesson 3: Configuring Permissions at the Schema Level

#### **Protecting Data with Encryption and Auditing**

- Lesson 1: Options for Auditing Data Access in SQL Server
- Lesson 2: Implementing SQL Server Audit
- Lesson 3: Managing SQL Server Audit
- Lesson 4: Protecting Data with Encryption

#### **Ensuring Data Integrity Through Constraints**

- Lesson 1: Enforcing Data Integrity
- Lesson 2: Implementing Data Domain Integrity
- Lesson 3: Implementing Entity and Referential Integrity

## **Introduction to Indexes**

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Lesson 2: Data Types and Indexes  
Lesson 3: Heaps, Clustered, and Non clustered Indexes

## **Designing and Implementing Stored Procedures**

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Lesson 2: Working with Stored Procedures  
Lesson 3: Implementing Parameterized Stored Procedures

## **Designing and Implementing User-Defined Functions**

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Lesson 2: Designing and Implementing Scalar Functions  
Lesson 3: Designing and Implementing Table-Valued Functions  
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## **Restoring SQL Server Databases**

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Lesson 4: Point-in-time Recovery

## **Monitoring SQL Server with Alerts and Notifications**

Lesson 1: Monitoring SQL Server Errors  
Lesson 2: Configuring Database Mail  
Lesson 3: Operators, Alerts, and Notifications

## **Tracing Access to SQL Server with Extended Events**

Lesson 1: Extended Events Core Concepts  
Lesson 2: Working with Extended Events

## **Troubleshooting SQL Server**

Lesson 1: A Troubleshooting Methodology for SQL Server  
Lesson 2: Resolving Service-Related Issues  
Lesson 3: Resolving Connectivity and Login Issues