
DBM032 : SQL Server 2016 Programming and Implementation**หลักการและเหตุผล :**

This course provides the knowledge and skills to develop and implement a Microsoft SQL Server 2016 database. The course focuses on teaching individuals how to use SQL Server 2016 product features and tools related to implementing a database.

วัตถุประสงค์ :

After completing this course, students will be able to

- Create databases and database files.
- Determine appropriate data types when designing table, convert data between data types, and create alias data types.
- Be aware of good design practices regarding SQL Server tables and be able to create tables using T-SQL.
- Determine appropriate single column and composite indexes strategies.
- Create tables as heaps and tables with clustered indexes. Also consider the design of a table and suggest an appropriate structure.
- Design effective non-clustered indexes.
- Implement PRIMARY KEY, FOREIGN KEY, DEFAULT, CHECK and UNIQUE constraints, and investigate cascading FOREIGN KEY constraints.
- Design and implement DML triggers
- Design and implement views
- Design and implement stored procedures.
- Use both traditional T-SQL error handling code and structured exception handling.
- Design and implement functions, both scalar and table-valued. (Also describe where they can lead to performance issues). Implement managed code in the database.
- Learn appropriate uses for SQL CLR integration and implement an existing .NET assembly within SQL Server.
- Perform basic investigation of a deadlock situation and learn how transaction isolation levels affect application concurrency.

หลักสูตรนี้เหมาะสำหรับ :

This course is intended for IT Professionals who want to become skilled on SQL Server 2016 product features and technologies for implementing a database. To be successful in this course, the student should have knowledge of basic relational database concepts and writing T-SQL queries.

ความรู้พื้นฐาน :

- Basic knowledge of the Microsoft Windows operating system and its core functionality.
- Working knowledge of Transact-SQL.
- Working knowledge of relational databases.
- Some experience with database design

เนื้อหาการอบรม :**Module 1: Creating Databases and Database Files**

- Creating Databases
- Creating Filegroups
- Creating Schemas
- Creating Database Snapshots

Module 2: Working with Data Types and Tables

- Using Data Types
- Create User Defined Data Types
- Designing Tables
- Creating and Altering Tables
- Creating Partitioned Tables

Module 3: Implementing Indexes

- SQL Server Table Structures
- Core Indexing Concept
- Implementing Clustered Indexes
- Implementing NonClustered Indexes
- Using Execution Plans
- Using the Databases Engine Tuning Advisor
- Maintenance Index with Rebuild and Reorganize
- Using Query Store

Module 4: Ensuring Data Integrity through Constraints

- Enforcing Data Integrity
- Implementing Domain Integrity
- Implementing Entity and Referential Integrity
- Implementing DML Triggers

Module 5: Implementing Views

- Introduction to Views
- Creating and Managing Views
- Optimizing Performance by Using Views

Module 6: Implementing Stored Procedures

- Introduction to Stored Procedures
- Working with Store Procedures
- Implementing Parameterized Store Procedures
- Controlling Execution Context
- Implementing Error Handling

Module 7: Implementing User-Defined Functions

- Overview of Functions
- Implementing Scalar Functions
- Implementing Table-Values Functions
- Implementation Considerations for Functions
- Alternatives to Functions

Module 8: Implementing Managed Code in SQL Server 2016

- Introduction to the SQL Server CLR Integration
- Importing and Configuring Assemblies
- Implementing SQL CLR Integration

Module 9: Creating Highly Concurrent SQL Server 2016 Applications

- Overview of Transactions and Locks
- Managing Transactions
- Understanding SQL Server Locking Architecture
- Managing Locks
- Transaction Isolation Levels

วิทยากร :

อาจารย์สุรัตน์ เกษมบุญศิริ (surath@born2learn.net)

- NCS L.3, CompTIA Security+, ITIL Foundation v.3, CCNA
- MCT, MCITP Enterprise, MCSE +Security +Messaging

จำนวนชั่วโมงในการฝึกอบรม: 5 วัน (30 ชั่วโมง)

ช่วงเวลาฝึกอบรม: 9.00 - 16.00 น.

สถานที่ฝึกอบรม :

สถาบันวิทยาการ สวทช.
เลขที่ 73/1 อาคารสำนักงานพัฒนาวิทยาศาสตร์และเทคโนโลยีแห่งชาติ (สวทช.)
ถนนพระรามที่ 6 แขวงทุ่งพญาไท เขตราชเทวี กรุงเทพฯ 10400

วิธีการสำรองที่นั่ง :

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