
Designing Microsoft SQL Server 2005 Databases

Duration: 2 Days **Course Code: M2782**

Overview:

This two-day instructor-led course provides students with the knowledge and skills to design databases for Microsoft® SQL Server™ 2005 using business requirements to guide their decisions (beyond structured third normal form [3NF] modeling techniques). Students will also learn to incorporate security requirements throughout their design.

Target Audience:

This course is intended for current professional database developers who have three or more years of on-the-job experience developing SQL Server database solutions in an enterprise environment.

Objectives:

- Approach database design from a systematic perspective, gather database requirements, and formulate a conceptual design.
 - Analyze and evaluate a logical database design.
 - Apply best practices for creating a physical database design.
 - Apply best practices when designing for database scalability.
 - Design a database access strategy.
 - Use best practices to model database dependencies.
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Prerequisites:

Before attending this course, students must:

- Have experience reading user requirements and business-need documents. For example, development project vision/mission statements or business analysis reports.
- Have experience reading and drawing business process flow charts.
- Have experience reading and drawing entity relationship (ER) diagrams.
- Understand Transact-SQL syntax and programming logic.
- Be able to design a database to 3NF and know the trade offs when backing out of the fully normalized design (denormalization) and designing for performance and business requirements in addition to being familiar with design models, such as Star and Snowflake schemas.
- Have basic monitoring and troubleshooting skills.
- Have basic knowledge of the operating system and platform. That is, how the operating system integrates with the database, what the platform or operating system can do, and how interaction between the operating system and the database works.
- Have basic knowledge of application architecture. That is, how applications can be designed in three layers, what applications can do, how interaction between the application and the database works, and how the interaction between the database and the platform or operating system works.
- Know how to use a data modeling tool.
- Be familiar with SQL Server 2005 features, tools, and technologies.
- Have a Microsoft® Certified Technology Specialist: Microsoft SQL Server 2005 credential - or equivalent experience.

In addition, it is recommended, but not required, that students have completed:

Testing and Certification

This course prepares delegates for the following exam(s):

- 70-441 Designing Database Solutions by Using Microsoft SQL Server 2005

- M2778, Writing Queries Using Microsoft SQL Server 2005 Transact-SQL.
- M2779, Implementing a Microsoft SQL Server 2005 Database.
- M2780, Maintaining a Microsoft SQL Server 2005 Database.

Follow-on-Courses:

- M2783 Designing the Data Tier for MS SQL Server 2005

Content:

Approaching Database Design Systematically

- Overview of Database Design
- Gathering Database Requirements
- Creating a Conceptual Database
 - DesignModeling a Database at the Logical Level
- Building a Logical Database Model
- Designing for OLTP Activity
- Designing for Data Warehousing
- Evaluating Logical ModelsModeling a Database at the Physical Level
- Designing Physical Database Objects
- Designing Constraints
- Designing for Database Security
- Designing Server and Database Options
- Evaluating the Physical ModelDesigning for Database Performance
- Designing Indexes
- Planning for Table Optimization
- Planning for Database OptimizationDesigning a Database Access Strategy
- Designing for Secure Data Access
- Designing User-Defined Functions
- Designing Stored ProceduresModeling Database Dependencies
- Modeling Local Database Dependencies
- Modeling Remote Database Dependencies

Further Information:

For More information, or to book your course, please call us on 00 20 (0) 2 2269 1982 or 16142

training@globalknowledge.com.eg

www.globalknowledge.com.eg

Global Knowledge, 16 Moustafa Refaat St. Block 1137, Sheraton Buildings, Heliopolis, Cairo, Egypt