
Introduction to SQL Databases

Duration: 3 Days **Course Code: M10985** **Version: C** **Delivery Method: Virtual Learning**

Overview:

This three-day instructor-led course is aimed at people looking to move into a database professional role or whose job role is expanding to encompass database elements. The course describes fundamental database concepts including database types, database languages, and database designs.

Virtual Learning

This interactive training can be taken from any location, your office or home and is delivered by a trainer. This training does not have any delegates in the class with the instructor, since all delegates are virtually connected. Virtual delegates do not travel to this course, Global Knowledge will send you all the information needed before the start of the course and you can test the logins.

Target Audience:

The primary audience for this course is people who are moving into a database role, or whose role has expanded to include database technologies.

Objectives:

- After completing this course, students will be able to:
 - Describe key database concepts in the context of SQL Server 2016
 - Describe database languages used in SQL Server 2016
 - Describe data modelling techniques
 - Describe normalization and denormalization techniques
 - Describe relationship types and effects in database design
 - Describe the effects of database design on performance
 - Describe commonly used database objects
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Prerequisites:

This is a foundation level course and therefore only requires general computer literacy.

Follow-on-Courses:

M20761 Querying Data with Transact-SQL

Content:

Module 1: Introduction to databases

This module introduces key database concepts in the context of SQL Server 2016.

- Introduction to relational databases
- Other types of database
- Data analysis
- Database languagesLab : Querying SQL Server

After completing this module, you will be able to:

- Describe what a database is
- Understand basic relational aspects
- Describe database languages used in SQL Server 2016
- Describe data analytics
- Describe database languages used in SQL Server 2016
- Describe normalization benefits and notation
- Describe important normalization terms
- Describe the normalization levels
- Describe the role of denormalization
- Describe relationship types
- Describe the use, types, and effects of referential integrity
- Discuss the performance effects of indexing
- Describe the performance effects of join and search types
- Describe the performance effects of concurrency
- Describe the use of tables in SQL Server 2016
- Describe the use of views in SQL Server 2016
- Describe the use of stored procedures in SQL Server 2016
- Describe other database objects commonly used in SQL Server 2016

Module 2: Data Modelling

This module describes data modelling techniques.

- Data modelling
- ANSI/SPARC database model
- Entity relationship modelling

Lab : Entity relationship modellingAfter completing this module, you will be able to:

- Understand the common data modelling techniques
- Describe the ANSI/SPARC database model
- Describe entity relationship modelling

Module 3: Normalization

This module describes normalization and denormalization techniques.

- Why normalize data?
- Normalization terms
- Levels of normalization
- DenormalizationLab : Normalizing raw data

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Module 4: Relationships

This module describes relationship types and effects in database design.

- Schema mapping
- Referential integrityLab : Designing relationships

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- Describe data analytics
- Describe database languages used in

Module 5: Performance

This module introduces the effects of database design on performance.

- Indexing
- Query performance
- ConcurrencyLab : Query performance

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Module 6: Database Objects

This module introduces commonly used database objects.

- Tables
- Views
- Stored procedures
- Other database objectsLab : Using SQL Server in a hybrid cloud

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- Describe database languages used in SQL

SQL Server 2016

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Further Information:

For More information, or to book your course, please call us on 353-1-814 8200

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