Introduction to SQL Databases Training

Duration: **3 Day**

BILGINÇ IT Academy
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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.

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.

This course provides an in-depth understanding of the design and structure of SQL databases and database objects. Delegates who are looking for a more practical course with a focus on searching and managing data in SQL databases are advised to look at our QATSQL 'Querying SQL Databases using T-SQL' and 'Advanced Querying SQL Databases using T-SQL' QATSQLPLUS or Microsoft official curriculum M20761 'Querying Data with Transact-SQL' courses

Prerequisites

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

What You Will Learn

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

Outline

Module 1: Introduction to databases

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

Lessons

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- Introduction to relational databases
- Other types of database
- Data analysis
- Database languages

Lab : Querying SQL Server

Module 2: Data Modelling

This module describes data modelling techniques.

Lessons

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

Lab : Entity relationship modelling

Module 3: Normalization

This module describes normalization and denormalization techniques.

Lessons

- Why normalize data?
- Normalization terms
- Levels of normalization
- Denormalization

Lab : Normalizing raw data

Module 4: Relationships

This module describes relationship types and effects in database design.

Lessons

- Schema mapping
- Referential integrity

Lab : Designing relationships

Module 5: Performance

This module introduces the effects of database design on performance.

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Lessons

- Indexing
- Query performance
- Concurrency

Lab : Query performance

Module 6: Database Objects

This module introduces commonly used database objects.

Lessons

- Tables
- Views
- Stored procedures
- Other database objects

Lab : Using SQL Server in a hybrid cloud