3 Days

10985: Introduction to SQL Databases SQL Server 2016

Introduction to SQL Databases SQL Server 2016 training is a three-day that is designed for professionals aspiring to acquire knowledge and skills for SQL Server 2016. This course will qualify individuals to seek a role as database professionals and also beneficial for those whose job role is expanding to encompass database elements.

This course describes the fundamental database concepts including database types, database languages, and database designs.

Completion of this course will equip participants with the following skill set and knowledge base:

- Key database concepts in the context of SQL server 2016
- Database languages used in SQL server 2016
- Data modeling techniques
- Normalization and denormalization techniques
- Relationship types and effects in database design
- The effects of database design on performance
- Commonly used database objects

Course Details

Course Outline

Module 1: Introduction to databases

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

Lessons

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

Lab: Querying SQL Server

- Describe what a database is
- Understand basic relational aspects
- Describe database languages used in SQL Server 2016
- Describe data analytics

Module 2: Data Modelling

This module lays emphasis on data modelling techniques.

Lessons

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

Lab: Entity relationship modelling

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

Module 3: Normalization

This module describes normalization and de-normalization techniques.

Lessons

- Why normalize data?
- Normalization terms
- Levels of normalization
- What is De-normalization?

Lab: Normalizing raw data

- Describe normalization benefits and notation
- Describe important normalization terms
- Describe the normalization levels
- Describe the role of de-normalization

Module 4: Relationships

This module describes relationship types and effects in database design.

Lessons

- Schema mapping
- Referential integrity

Lab: Designing relationships

- Describe relationship types

- Describe the use, types, and effects of referential integrity

Module 5: Performance

This module introduces the effects of database design on performance.

Lessons

- Indexing
- Query performance
- Concurrency

Lab: Query performance

- Discuss the performance effects of indexing
- Describe the performance effects of join and search types
- Describe the performance effects of concurrency

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

- Describe the use of tables in SQL Server 2016
- Describe the use of views in SQL Server 2016
- Describe other database objects commonly used in SQL Server 2016
- Describe the use of stored procedures in SQL Server 2016

Who Should Attend

The individuals who are seeking a role in database management, or whose role has expanded to include database technologies.

Pre Requisite

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

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