

10985 Introduction to SQL Databases

Overview

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 design

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.

Course 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 de-normalization techniques
- Describe relationship types and effects in database design
- Describe the effects of database design on performance
- Describe commonly used database objects

Course Outline

1 - Introduction to databases

Introduction to relational databases
Other types of database
Data analysis
Database languages
Lab : Querying SQ Server

2 - Data Modelling

Data modelling
ANSI/SPARC database model
Entity relationship modelling
Lab : Entity relationship modelling

3 - Normalization

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

4 - Relationships

Schema mapping
Referential integrity
Lab : Designing relationships

5 - Performance

Indexing
Query performance
Concurrency
Lab : Query performance

6 - Database Objects

Tables
Views
Stored Procedures, Triggers and Functions
Lab : Using SQL Server
