



SQL Server

Course 20768C: Developing SQL Data Models

About this course:

The focus of this 3-day instructor-led course is on creating managed enterprise BI solutions. It describes how to implement both multidimensional and tabular data models and how to create cubes, dimensions, measures, and measure groups. This course helps you prepare for the Exam 70-768.

Audience Profile:

The primary audience for this course are database professionals who need to fulfil BI Developer role to create enterprise BI solutions. Primary responsibilities will include:

- » Implementing multidimensional databases by using SQL Server Analysis Services.
- » Creating tabular semantic data models for analysis by using SQL Server Analysis Services.

Duration: 24 hours

Prerequisites:

- » Basic knowledge of the Microsoft Windows operating system and its core functionality.
- » Working knowledge of relational databases.
- » Some experience with database design.
- » Experience of querying data using Transact-SQL

After completing this course, students will be able to:

- » Describe the components, architecture, and nature of a BI solution.
- » Create a multidimensional database with Analysis Services.
- » Implement dimensions in a cube.
- » Implement measures and measure groups in a cube.
- » Use MDX syntax.
- » Customize a cube.
- » Implement a tabular database.
- » Use DAX to query a tabular model.
- » Use data mining for predictive analysis.

1

Module 1: Introduction to Business Intelligence and Data Modeling

This module introduces key BI concepts and the Microsoft BI product suite.

Lessons

- » Introduction to Business Intelligence
- » The Microsoft business intelligence platform

Lab : Exploring a BI Solution

2

Module 2: Creating Multidimensional Databases

This module describes how to create multidimensional databases using SQL Server Analysis Services.

Lessons

- » Introduction to Multidimensional Analysis
- » Data Sources and Data Source Views
- » Cubes
- » Overview of Cube Security
- » Configure SSAS
- » Monitoring SSAS

Lab : Creating a multidimensional databasez

3	<p>Module 3: Working with Cubes and Dimensions This module describes how to implement dimensions in a cube.</p> <p>Lessons</p> <ul style="list-style-type: none"> » Configuring Dimensions » Defining Attribute Hierarchies » Implementing Sorting and Grouping Attributes » Slowly Changing Dimensions <p>Lab : Working with Cubes and Dimensions</p>
4	<p>Module 4: Working with Measures and Measure Groups This module describes how to implement measures and measure groups in a cube.</p> <p>Lessons</p> <ul style="list-style-type: none"> » Working with Measures » Working with Measure Groups <p>Lab : Configuring Measures and Measure Groups</p>
5	<p>Module 5: Introduction to MDX This module describes the MDX syntax and how to use MDX.</p> <p>Lessons</p> <ul style="list-style-type: none"> » MDX fundamentals » Adding Calculations to a Cube » Using MDX to Query a Cube <p>Lab : Using MDX</p>
6	<p>Module 6: Customizing Cube Functionality This module describes how to customize a cube.</p> <p>Lessons</p> <ul style="list-style-type: none"> » Implementing Key Performance Indicators » Implementing Actions » Implementing Perspectives » Implementing Translations <p>Lab : Customizing a Cube</p>
7	<p>Module 7: Implementing a Tabular Data Model by Using Analysis Services This module describes how to implement a tabular data model in Power Pivot.</p> <p>Lessons</p> <ul style="list-style-type: none"> » Introduction to Tabular Data Models » Creating a Tabular Data Model » Using an Analysis Services Tabular Data Model in an Enterprise BI Solution <p>Lab : Working with an Analysis Services Tabular Data Model</p>
8	<p>Module 8: Introduction to Data Analysis Expression (DAX) This module describes how to use DAX to create measures and calculated columns in a tabular data model.</p> <p>Lessons</p> <ul style="list-style-type: none"> » DAX Fundamentals

» Using DAX to Create Calculated Columns and Measures in a Tabular Data Model
Lab : Creating Calculated Columns and Measures by using DAX

Module 9: Performing Predictive Analysis with Data Mining

This module describes how to use data mining for predictive analysis.

Lessons

9

- » Overview of Data Mining
- » Creating a Custom Data Mining Solution
- » Validating a Data Mining Model
- » Using the Data Mining add-in for Excel

Lab : Using Data Mining