
Developing SQL Data Models

Duration: 3 Days **Course Code: M20768** **Version: C**

Overview:

EOL - 30/12/21

This three-day instructor-led course is aimed at database professionals who fulfil a Business Intelligence (BI) developer role. This course looks at implementing multidimensional databases by using SQL Server Analysis Services (SSAS), and at creating tabular semantic data models for analysis with SSAS.

Target Audience:

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
The secondary audiences for this course are 'power' information workers/data analysts.

Objectives:

- 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
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Prerequisites:

- Basic knowledge of the Microsoft Windows operating system and its core functionality.
 - Working knowledge of Transact-SQL.
 - Working knowledge of relational databases.
- These prerequisites can be met by attending course M20767, Implementing a SQL Data Warehouse

Testing and Certification

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Content:

Module 1: Introduction to Business Intelligence and Data Modeling

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

- Introduction to Business Intelligence
- The Microsoft business intelligence platformLab : Exploring a Data Warehouse

After completing this module, you will be able to:

- Describe the concept of business intelligence
- Describe the Microsoft business intelligence platform
- Use multidimensional analysis
- Create data sources and data source views
- Create a cube
- Describe cube security
- Configure dimensions
- Define attribute hierarchies.
- Sort and group attributes
- Work with measures
- Work with measure groups
- Describe the fundamentals of MDX
- Add calculations to a cube
- Query a cube using MDX
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- Describe tabular data models
- Create a tabular data model
- Be able to use an analysis services tabular data model in an enterprise BI solution
- Describe the fundamentals of DAX
- Use DAX to create calculated columns and measures in a tabular data model
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- Use the data mining add-in for Excel
- Create a custom data mining solution
- Validate a data mining solution
- Connect to and consume a data mining solution

Module 2: Creating Multidimensional Databases

This module describes the steps required to create a multidimensional database with analysis services.

- Introduction to multidimensional analysis
- Creating data sources and data source views
- Creating a cube
- Overview of cube securityLab : Creating a multidimensional database

Module 4: Working with Measures and Measure Groups

This module describes how to implement measures and measure groups in a cube.

- Working with measures
- Working with measure groups Lab : Configuring Measures and Measure Groups

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Module 5: Introduction to MDX

This module describes the MDX syntax and how to use MDX.

- MDX fundamentals
- Adding calculations to a cube
- Using MDX to query a cubeLab : Using MDX

After completing this module, you will be able

Module 7: Implementing a Tabular Data Model by Using Analysis Services

This module describes how to implement a tabular data model in PowerPivot.

- Introduction to tabular data models
- Creating a tabular data model
- Using an analysis services tabular model in an enterprise BI solutionLab : Working with an Analysis services tabular data model

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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.

- DAX fundamentals
- Using DAX to create calculated columns and measures in a tabular data modelLab :

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Module 3: Working with Cubes and Dimensions

This module describes how to implement dimensions in a cube.

- Configuring dimensions
- Define attribute hierarchies
- Sorting and grouping attributesLab : Working with Cubes and Dimensions

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- Sort and group attributes
- Work with measures
- Work with measure groups
- Describe the fundamentals of MDX

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Module 6: Customizing Cube Functionality

This module describes how to customize a cube.

- Implementing key performance indicators
- Implementing actions
- Implementing perspectives
- Implementing translationsLab : Customizing a Cube

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Creating Calculated Columns and Measures by using DAX

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Module 9: Performing Predictive Analysis with Data Mining

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

- Overview of data mining
- Using the data mining add-in for Excel
- Creating a custom data mining solution
- Validating a data mining model
- Connecting to and consuming a data mining modelLab : Perform Predictive Analysis with Data Mining

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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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