

20768: Developing SQL Data Models SQL Server (SQL Server 2016)

Course Details

Course Outline

1. Introduction to Business Intelligence and Data Modeling

- Introduction to Business Intelligence
- The Microsoft business intelligence platform
- **Lab : Exploring a BI Solution**
- Exploring a Data Warehouse
- Exploring a data model

2. Creating Multidimensional Databases

- Introduction to Multidimensional Analysis
- Data Sources and Data Source Views
- Cubes
- Overview of Cube Security
- Configure SSAS
- Monitoring SSAS
- **Lab : Creating a multidimensional database**
- Creating a Data Source
- Creating and Configuring a data Source View
- Creating and Configuring a Cube
- Adding a Dimension to a Cube

3. Working with Cubes and Dimensions

- Configuring Dimensions
- Defining Attribute Hierarchies
- Implementing Sorting and Grouping Attributes
- Slowly Changing Dimensions
- **Lab : Working with Cubes and Dimensions**
- Configuring Dimensions
- Defining Relationships and Hierarchies
- Sorting and Grouping Dimension Attributes

4. Working with Measures and Measure Groups

- Working with Measures

- Working with Measure Groups
- **Lab : Configuring Measures and Measure Groups**
- Configuring Measures
- Defining Regular Relationships
- Configuring Measure Group Storage

5. Introduction to MDX

- MDX fundamentals
- Adding Calculations to a Cube
- Using MDX to Query a Cube
- **Lab : Using MDX**
- Querying a cube using MDX
- Adding a Calculated Member

6. Customizing Cube Functionality

- Implementing Key Performance Indicators
- Implementing Actions
- Implementing Perspectives
- Implementing Translations
- **Lab : Customizing a Cube**
- Implementing an action
- Implementing a perspective
- Implementing a translation

7. Implementing a Tabular Data Model by Using Analysis Services

- Introduction to Tabular Data Models
- Creating a Tabular Data Model
- Using an Analysis Services Tabular Data Model in an Enterprise BI Solution
- **Lab : Working with an Analysis Services Tabular Data Model**
- Creating an Analysis Services Tabular Data Model
- Configure Relationships and Attributes
- Configuring Data Model for an Enterprise BI Solution

8. Introduction to Data Analysis Expression (DAX)

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

- Creating Measures
- Creating a KPI
- Creating a Parent – Child Hierarchy

9. Performing Predictive Analysis with Data Mining

- Overview of Data Mining
- Creating a Custom Data Mining Solution
- Validating a Data Mining Model
- Connecting to and Consuming a Data-Mining Model
- Using the Data Mining add-in for Excel
- **Lab : Using Data Mining**
- Creating a Data Mining Structure and Model
- Exploring Data Mining Models
- Validating Data Mining Models
- Consuming a Data Mining Model
- Using the Excel Data Mining add-in