20768: Developing SQL Data Models SQL Server (SQL Server 2017)

Course Details

Course Outline

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

2. **Creating Multidimensional Databases**
   - Introduction to Multidimensional Analysis
   - Creating Data Sources and Data Source Views
   - Creating a Cube
   - Overview of Cube Security
   - Configure SSAS
   - Monitoring SSAS
   - o **Lab : Creating a multidimensional database**
   - Creating a Data Source
   - Creating and Modifying a data Source View
   - Creating and Modifying a Cube

3. **Working with Cubes and Dimensions**
   - Configuring Dimensions
   - Defining Attribute Hierarchies
   - Sorting and Grouping Attributes
   - Slowly Changing Dimensions
   - o **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

- o **Lab : Configuring Measures and Measure Groups**

- Configuring Measures

- Defining Dimension Usage and Relationships

- Configuring Measure Group Storage

5. **Introduction to MDX**

- MDX fundamentals

- Adding Calculations to a Cube

- Using MDX to Query a Cube

- o **Lab : Using MDX**

- Querying a cube using MDX

- Creating a Calculated Member

6. **Customizing Cube Functionality**

- Introduction to Business Intelligence

- The Implementing Key Performance Indicators

- Implementing Actions

- Implementing Perspectives

- Implementing Translations

- o **Lab : Customizing a Cube**

- Implementing a KPI

- 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

- o **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
- o **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
- o **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