Introduction To MDX Queries

Description

This two day class provides an introduction to Multi-Dimensional Expression (MDX) queries will provide students with the foundation needed to write MDX queries and expressions. This class is designed for both the report writer and the cube designer who needs to be able to write and/or edit MDX code. Although the support course materials are designed for SQL Server 2008, this class will benefit anyone with SQL Server 2005 or later. In SQL Server 2012, MDX can be used to access both multi-dimensional and tabular SSAS models.

By taking this class, you will learn and practice using the topics most critical to understanding MDX such as; dimension terminology, members, tuples, sets, and functions.

Outline

Module 1: Welcome to MDX

Presents MDX as a means to deliver business value. This module is critical to establishing the concepts and vocabulary employed throughout.

- The Business Intelligence Landscape
- The Dimensional Model
- Implementing the Dimensional Model
- The MDX Language

Module 2: Using the MDX Query Editor

Introduces the practical aspects of constructing and executing an MDX query using the MDX Query Editor.

- SQL Server Management Studio
- The MDX Query Editor
- Building a Simple MDX Query
- Exploring the Step-by-Step Cube
- Building a More Complex Query

Module 3: Understanding Topics

Presents the concept of tuples. Understanding tuples is key to the successful use of the MDX language.
Module 4: Working with Sets

Expands the concept of tuples to include sets. With knowledge of tuples and sets, the MDX SELECT statement is explored.

- Set Basics
- Understanding the SELECT Statement
- Building Sets with Functions
- Limiting Sets

Module 5: Working with Expressions

Introduces MDX expressions. Using calculated members, explore expressions as a means for deriving values through Analysis Services.

- Expression Basics
- Calculated Members
- Building Dynamic Expressions
- Resolving Contextual Conflicts
- Building Complex Expressions

MDX Functions

Module 6: Building Complex Sets

Assembly of complex sets using a variety of MDX functions. (Building just the right set is critical to retrieving the data you need from your cubes.)

- Assembling Ordered Sets
- Retrieving the First or Last Tuples of a Set
- Filtering Sets
- Combining Sets
- Performing Advanced Set Construction

Module 7: Performing Aggregation

Explains the appropriate use of the MDX aggregation functions. Thoughtful application of these functions provides access to insightful metrics.
• Performing Summation
• Calculating Averages
• Identifying Minimum and Maximum Values
• Counting Tuples in Sets

Module 8: Navigating Hierarchies

Explores the positioning of members in hierarchies and how this can be exploited using the navigation functions.

• Accessing Immediate Relatives
• Accessing Extended Relatives
• Navigating within a Level

Module 9: Working with Time

Introduces you to the time-based MDX functions, through which critical business metrics can be derived.

• Understanding the Time Dimension
• Calculating an Accumulating Total
• Performing Period-over-Period Analysis
• Combining Time-Based Metrics

MDX Applications

Module 10: Enhancing the Cube

• Understanding the MDX Script
• Constructing Calculated Members
• Assembling Named Sets

Chapter 11: Implementing Dynamic Security

• Understanding Dynamic Security
• Implementing Attribute-Hierarchy Restrictions
• Implementing Cell-Level Restrictions

Chapter 12: Building Reports

• Getting Started
• Connecting to Analysis Services
• Designing the Dataset
• Adding Parameters to the Dataset
• Presenting the Data in the Report
PreRequisites

Students should have an understanding of and experience with SQL Server Multi-dimensional Analysis Services and general cube concepts or attendance in a Microsoft 6234 or 10778 class.

Audience

Anyone who needs to write MDX queries to develop advanced datasets in Reporting Services, or anyone who needs to create custom calculations, KPIs, actions, or security in SQL Server Analysis Service’s Cubes.

$995.00 List Price

2 Days Course

Class Dates

Request a Date or a Private Class below.

$ MAX Educ. Savings

Tags: MDX Query, SQL Server