# SSAS 2012, Part 07 of 10: MDX



**Meet the expert:** Using Microsoft SQL Server started for Thomas with a Laboratory Information System in version 6.5. The Analysis Service (also called SSAS) option in version 7 got him excited about Data Warehousing, but before he used a production version of SSAS, he became a Database Administrator for versions 6.5 through 2005 while working at a paper mill and home health agency. After writing reports as an application developer for 10 years, he rediscovered Online Analytical Processing (OLAP) implemented into Data Warehouses. Since 2009, he has become a speaker in the SQL Server community and a voice for Microsoft Business Intelligence (MSBI) for enterprises. His transition from Sr. DBA to a Business Intelligence Architect has been a great career path. Thomas has certifications MCP, MCDBA and MCITP in Database Administration and Business Intelligence.

**Prerequisites:** This course assumes that students have working experience with SQL Server; basic relational database concepts (e.g., tables, queries, and indexing); data transformation services.

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**Course description:** What is MDX? MDX or Multi Dimensional Expression Language is a query language for relational databases. This course will explain the power of MDX Members, functions, and structures allowing end users to slice and dice data quickly and easily by business rules. It will also show how MDX integrates with reporting services to populate charts and reports.

**Course outline:**

**Structure**
- Introduction
- What Is MDX?
- Cube Structure
- Demo: Dimension Structure
- Demo: Queries
- Members, Tuples, and Sets
- Member Data
- Tuple
- Set
- MDX Functions
- Members Function
- Members Showing All
- Members Not Showing All
- Non Empty
- Demo: Members Function
- Demo: Sets of Tuples
- Summary

**Functions and Reporting**
- Introduction
- Cross Join
- Time Intelligence
- Navigating Hierarchy
- Demo: Members & Cross Join
- Demo: Time Intelligence
- Managing MDX Calculations
- Add to Cube
- Demo: WITH Member
- Demo: Add Measure to Cube
- Reporting a Cube
- Reporting
- Reporting Services
- Demo: Reporting with Excel
- Demo: Reporting with SSRS
- Demo: Reporting with SSRS Cont.
- Summary