



A Practical Guide to DAX

Duration : 2 days

Course Overview

This course is aimed at existing users of Power BI, Excel Power Pivot, or SQL Server Analysis Services (SSAS) Tabular, who need to take their data analysis skills to the next level.

You will learn how to mine and expose hidden information with the DAX (Data Analysis eXpressions) language. Common business scenarios are covered, highlighting useful DAX patterns that can be implemented and adapted to solve a variety of simple and complex calculations. The theory behind the concepts of DAX will be emphasised through practical examples.

Little, or no, previous knowledge of DAX is assumed. The training is designed from the ground up to introduce delegates to this new and powerful technology, and ultimately provide attendees with a more intimate knowledge of DAX. There is a linear progression throughout the training from the initial introductory material through to more intermediate and advanced topics. There is an emphasis on practical applications of DAX to enable delegates to be productive right from the word go after attending this course.

Prerequisites

Delegates should ideally have a working knowledge of Power BI Desktop, commensurate with that attainable by attending the “Power BI Desktop Complete” course, or similar.

Alternatively, prior experience of Power Pivot, SQL Server Analysis Services (SSAS) Tabular, or similar tool that works with the tabular model, should prove suitable.

No previous knowledge of DAX is assumed.

Objectives

Upon successful completion of this course, students will be able to:

- Create and use calculated columns
- Create and use measures
- Understand the key concepts of tabular data modelling
- Understand evaluation contexts
- Work with the CALCULATE function
- Work with the FILTER function
- Work with date functions
- Understand time intelligence in DAX
- Make decisions in DAX expressions
- Understand iterator functions
- Work with complex table relationships
- Create and use custom calendars
- Create and use DAX variables
- Gracefully handle errors in DAX



Course Content

Introduction to DAX

Introducing the DAX Expression Language

Calculated Columns

Adding Calculated Columns

Properties of Calculated Columns

DAX Measures

Adding Measures

Formatting DAX Code

Measures that Use Other Measures

Benefits of Measures

Data Modelling 101

Tabular Data Modelling Concepts

Table Relationships

Filters Across Multiple Tables

Active & Inactive Relationships

The CALCULATE Function

Using the CALCULATE Function

Evaluation Context

Filter Operators

Modifying the Filter Context

The FILTER Function

When Should You Use FILTER?

Using the FILTER Function

Working with Dates and Time Intelligence

Date Functions in DAX

Introduction to Time Intelligence

Creating a Date Table

Time Intelligence Functions

Working with Weeks

Conditional and Branching Logic

Using the IF Function

Checking for the Existence of Data

The VALUES Function

Iterator Functions

The Purpose of Iterator Functions

The SUMX Function

Other Aggregate Iterator Functions

Understanding Semi-Additive Calculations

Complex Table Relationships

Multiple Relationships Between the Same Two Tables

The USERELATIONSHIP Function

Disconnected Tables

Custom Date Tables

Introducing Custom Date Tables

Creating Measures to Work with Custom Calendars

Enhanced DAX Functionality

Ranking Data

Using DAX Variables

Handling Errors in DAX