DAX for Excel and Power BI Desktop Power Query – 1 Day

Pre-requisites

Students should have completed the Advanced Complex Data Analysis course or be very familiar with Pivot Tables. This course complements the Data Transformation using Power Query course which is concerned with getting data into the Data Model however it is not strictly required.

DAX is used by Power Pivot which is common to both Excel and Power BI Desktop. Due to stability and feature issues with earlier versions of Excel this course targets Excel 2016 and later versions. Earlier versions of Excel contain support for Power Query, Power Pivot and the Data Model, they are not feature compatible with Excel 2016+ and Power BI Desktop.

Description

Data Analysis Expressions (DAX) is a formula expression language for performing advanced calculations and queries on data sources defined in the Data Model in Excel 2016+ and Power BI Desktop. This course provides a foundation for working with the Data Model and then explores the different function families and their structure and operation. A significant part of the course deals with commonly encountered analysis and reporting scenarios and solution strategies.

Learning Outcomes

At the completion of this course you should have the skills and knowledge to:

- Understand the Data Model and relationships between data sources
- Connect data sources using functions and relationships
- Understand the different function families in DAX and their intended use
- Use Measures, Calculated Columns
- Use Pivot Tables in Excel that utilise the Data Model
- Create Excel visualisations (Pivot Chart / Maps) using the Data Model

Topics Covered

Key topics covered on this course include:

- Understanding the Data Model for Excel and Power BI Desktop
- Understanding when to use Power Query Formula Language (M) or DAX.
- Calculated columns and Measures
- Basic DAX functions
    - DIVIDE, COUNTBLANK, SUM, MAX,MIN, COUNT, COUNTROWS
- Filter propagation
    - SUMX, AVERAGEX
    - CALCULATE
- Intermediate DAX functions
    - IF, SWITCH, FIND
    - VALUES, HASONEVALUE
    - ALL, ALLEXCEPT, ALLSELECTED
    - FILTER
- Time Intelligence
- Cumulative functions
- Relationships
    - Defining and modifying relationships
    - Related functions
    - Calendar tables
- Power Pivot