Power BI DAX Essentials
Power BI

About The Course

This 2-Day course is designed to lay solid foundations before diving deep into complex DAX functions. This is achieved by focusing on 2 key elements i.e. engagement, and practicality.

Participants will be spending their time writing hands-on DAX functions, looking at the result, discussing what works and especially what does not work and WHY? Additionally, all the modules and concepts are reinforced by   real-life, scenario-based examples to solidify the learnings.

After this course, participants should be able to write DAX expressions to address their specific business needs, leverage available resources to tackle complex problems, debug and optimize using available tools and right techniques.

Moreover, the entire course walks through a single data set so participants can concentrate on mastering the concepts rather than worrying about specifics of the dataset.

Duration: 2 days

Class size: 10 students max

Times: 9:00am - 5:00pm

Price: *Refer to our website for current course and package pricing*

After the course?

Each student will receive:

• Certificate of completion

• Training manual

• 12 months FREE email support

• FREE class re-sit (if necessary)

Who Should Do This Course?

This course is for business users (Finance, Marketing, Operations etc.) or SQL Server report creators who want to take their reports and dashboards to a next level by writing custom calculations using DAX functions to address specific business requirements.

Prerequisites

This DAX course is suitable for the people who have either completed the Power BI Essentials course or have reasonable understanding of data modelling concepts. To benefit most from this course, participants must have some expertise in using Excel functions or SQL.

Content

Unit 1: Getting to know Data Analysis Expression (DAX) language

• What is DAX?
• Understanding the Data Types in DAX
• Understanding DAX Type Handling
• Understanding DAX Operator Overloading
• Learning DAX as Formula Language
• Vertipaq Engine in DAX

• Difference between DAX, EXCEL Functions and M
• Do's, Dont's and Best Practices in DAX

Unit 2: Data Modelling Recap

• Fact vs Dimensions
• Understanding Schemas in Data Model
• Understanding Filter Propagation

- Understanding Data Denormalisation
- Understanding Relationship Characteristics

Unit 3: Calculated Columns and Measures

- Calculated Column and its Use Case
- When do Calculated Columns Fail
- Calculated Measure and its Use Case
- When to Use Calculated Column vs Calculated Measure

Unit 4: Basic DAX Functions

- Understanding Two Broad Categories of Functions in DAX
- Using SUM()
- Using DIVIDE()
- Using COUNT()
- Using DISTINCTCOUNT ()
- Finding Min, Max and Average
- Counting Rows
- Counting Blank Values

Unit 5: Evaluation Contexts in DAX

- What are the Two Evaluation Contexts in DAX?
- What is Initial or Incoming Filter Context
- What is Row Context
- Filter Context vs Row Context
- Rules of Evaluation

Unit 6: Table Functions

- Creating a Calculated Table
- Exploring Table Joins
- The Inner Join
- The Outer Join
- The Cross Join
- A Join on Unrelated Tables – TREATAS()
- Using GENERATE() for Joins
- Creating Summary Table for the Requested Totals using SUMMARIZE()
- Creating Summary Table over a Set of Groups using SUMMARIZECOLOUMNS()
- Improving TREATAS() using SUMMARIZE()
- Getting Top N Rows of the Specified Table using TOPN()
- Using VALUES()
- Using FILTER() as a Table Function
- Understanding Virtual Table Lineage

Unit 7: Creating Date Table

- Creating Calendar Table using DAX
- Optimising Calendar Table using DAX
- Adding Date Columns
- Working with Fiscal Years
- Setting Sorting Options

Unit 8: Basic Iterators

- Iterators vs. Normal Functions
- Using SUMX()
- Using COUNTX()
- Using AVERAGEX()
- Using MINX()
- Using MAXX()

Unit 9: Variables in DAX

- Creating Variables
- Features of a Variable
- Location of Variable Evaluation
- Conditional Computations using Variables
- Increasing Code Readability
- Writing Single and Multi-Line Comments

Unit 10: Advance Filtering in DAX

- Modification of Filter Context using CALCULATE()
- Modification of Multiple Filter using with CALCULATE()
- Mixing Filtering
- Using LOOKUPVALUE()
- Specifying the Cross-filtering Direction using CROSSFILTER()
- Activating Relationships with USERELATIONSHIP()
- Return all the Rows in a Table using All()
- Using ALLSELECTED()
- Using ALLEXCEPT()
- Modify how Filters are Applied using KEEPFILTERS()
- Using SELECTEDVALUE()
- Using CONCATENATEX()

Unit 11: Context Transition

- Understanding Implicit Calculate in Measures
- Understanding Row to Filter Context Transition
- Using CALCULATE() and CALCULATETABLE()
- Using EARIER() vs EARLIEST()

Unit 12: Time Intelligence in DAX

- What is Time Intelligence
- Understanding Date Table Properties for Time Intelligence
- Aggregations Over Time
- Understanding Total Year Till Date
- Understanding Month Till Date
- Understanding Quarter Till Date
- Handling Fiscal Year
- Same Period Last Year
- Calculating Running Total

- Using Date Modifier DATESBETWEEN
- Shifting Forward/Backward in Time using DATEADD()
- Using DATESINPERIOD()
- Using MAX or LASTDATE()
- Using FIRSTNONBLANK() and LASTNONBLANK()
- Working with Total Sales Rolling 90 days

Unit 13: Conditionals in DAX

- Using IF() Statements
- Switching between Cases using SWITCH()
- Finding your Text
- What to Do if your Text had One Value
- Concatenating Labels
- Using COALESCE()

Unit 14: Hierarchies In DAX

- What are Hierarchies
- Understanding Parent-Child Hierarchies
- Using Path Functions

Unit 15: Other Functions

- Using RANKX()
- Understanding Dynamically Controlling Units
- Using COUNTA()
- Using MINA()
- Using MINAX()

Unit 16: DAX Tools and Other Resources

- Understanding Common Errors and Causes
- Working with Error Debugging
- Understanding DAX Formatter
- Getting Started with DAX Studio
- Downloading and Installing DAX Studio
- Connecting DAX Studio with Power BI
- Calculating Performance using Data Studio
- Understanding Power BI Helper
- Clearing the Cache
- Other DAX References

Looking for course dates?

To view a full list of course dates, please visit our website at www.dynamicwebtraining.com.au
Alternatively please contact our office on 1300 888 724