training code: PBI_02_DAX_PLUS / ENG AA 3d / EN

Microsoft Power BI – Advanced Power BI solutions with DAX PLUS

This training introduces participants to the world of advanced DAX language functions, which make it possible to transform raw data into valuable insights. Participants will learn how to create measures and calculated columns, build formulas efficiently, and use time intelligence functions to analyze data across different time periods. One of the key elements of this training is its focus on practice – the extended course format, so that participants have the opportunity to independently practice each discussed technique under the guidance of an experienced trainer.

Training recipients

People working with Power BI Desktop who want to deepen their knowledge of advanced data modeling and analysis. Data analysts who need advanced tools for creating dynamic reports and analyses. Managers and reporting specialists who want to understand how to effectively analyze and present even highly complex data.

Benefits

- Advanced knowledge of DAX: Understanding key DAX functions that enable multidimensional analyses and optimization of data models.
- Dates analyses: Using time intelligence functions to create reports based on historical data and time periods.
- Data security: Implementing Row Level Security (RLS)
- Dynamic reporting: Creating flexible reports with parameters and dynamic measures that allow better data interpretation.

- Practical exercises: The opportunity to practice advanced techniques under the trainer's guidance, which makes it easier to apply them in professional work.
- Efficient DAX code: Learning best practices, such as defining variables and introducing clear code structures, which increases readability and efficiency.

Training program

1. Preparing table structures and relationships
   - Lookup/dimension tables
   - Date table – using CALENDAR, CALENDARAUTO, and FORMAT
   - Calculated columns
   - Data types
   - Conversion
   - Active and inactive relationships
   - Relationship cardinality
   - Hierarchies
   - Using multiple tables, role of fact tables and dimension tables
2. Quick measures
   - Using predefined calculations
   - Using them as a basis for more advanced measures
3. Most commonly used functions
   - Aggregations: SUM, SUMX, AVERAGE, MIN, MAX, RANKX, UNION, SUMMARIZE/SUMMARIZECOLUMNS
   - Counting elements: COUNT, COUNTROWS, DISTINCTCOUNT, DISTINCTCOUNTNOBLANK, SIGN
   - Lookup: LOOKUPVALUE
   - Text functions: CONTAINS, CONCATENATE, CONCATENATEX
   - Relationship handling: CROSSFILTER, RELATED, USERELATIONSHIP
   - Error handling: DIVIDE, BLANK, SELECTEDVALUE, HASONEVALUE
   - Table structure: ADDCOLUMNS
4. Using functions to change row, column, and filter context
   - CALCULATE
   - FILTER
   - KEEPFILTERS, REMOVEFILTERS
   - ALL, ALLSELECTED, ALLEXCEPT
5. Calculations using functions from the time intelligence category
   - SAMEPERIODLASTYEAR, LASTMONTH
   - PARALLELPERIOD, DATEADD
   - TOTALYTD, TOTALQTD, TOTALMTD
   - DATESYTD, DATESQTD, DATESMTD
   - DATESBETWEEN, DATESINPERIOD

- LASTNONBLANK, LASTNONBLANKVALUE
- EOMONTH

6. Conditional expressions
   - IF
   - SWITCH
7. Best practices useful when creating complex expressions
   - Defining variables (VAR)
   - Comments
   - Readable code structure
8. Using parameters in calculations
   - Creating a table with parameter values
   - Using the parameter value in calculations
   - Adding measures as a filter parameter (NAMEOF function)
9. Filtering data based on permissions – Row Level Security
   - USERNAME, USERPRINCIPALNAME
   - PATH / PATHCONTAINS
10. Additional exercises to be completed independently under the trainer’s guidance

Expected preparation of the participant

Basic knowledge of Power BI

Duration

3 days / 21 hours

Language

English