Power BI Advanced DAX - Customized

Duration: 32 Hours (4 Days)

Course Overview:

An advanced DAX course typically covers a wide range of topics, including time-intelligence functions, advanced filtering techniques, custom aggregation functions, optimization techniques, and working with advanced data modelling techniques such as bidirectional relationships, virtual tables, and hierarchies. The course may also include hands-on exercises and Case Studies to help participants apply their learning to real-world scenarios.

Prerequisites:

- Understanding of Basic DAX syntax: Participants should be familiar with basic DAX functions and operators, including CALCULATE, FILTER, and SUMX.
- Understanding of Data modelling: Participants should have experience with data modelling concepts, such as relationships between tables and creating calculated columns and measures.
- Power BI or Excel: Participants should be familiar with either Power BI or Excel, as these tools are commonly used in conjunction with DAX.

Modules

Module 1: DAX objects, syntax and formatting

- DAX Syntax
- DAX Formatting

Module 2: Calculated Columns and Measures

- Calculated Columns
- DAX Measures

Module 3: Evaluation Context

- The Filter Context
- The Row Context

Module 4: Iterators

- The SUMX Function
- Total Row Grief

Module 5: The CALCULATE Function

- Why You Need CALCULATE
- Using Single Filters
- Using Multiple Filters

Module 6: DAX Table Functions

- Types of DAX Functions

- Table Functions
- The FILTER Function
- Column Filters vs Table Filters

Module 7: The ALL Function and All its variations

- The ALL Function
- The ALLEXCEPT Function
- The ALLSELECTED Function
- ALL as a Modifier to CALCULATE

Module 8: Calculations on Dates: Using DAX Time Intelligence

- Power BI Date Hierarchies
- Creating Date Table
- Using Time Intelligence Functions

Module 9: Empty Values vs Zero

- The BLANK() Function
- The ISBLANK() Function
- Testing for Zero
- Using Measures to find Blanks and Zero
- Using the COALESCE function

Module 10: Using Variables: Making our code more readable

- Improved Performance
- Improved Readability
- Reduced Complexity
- Variables as Constants

Module 11: Returning Values in the Current Filter

- The SELECTEDVALUE Function
- The CONCATENATEX Function
- Using Parameter Tables
- The Values Function

Module 12: Controlling the Direction of Filter Propagation

- Programming Bidirectional Filters
- Why you should never use Bidirectional Relationships

Module 13: Working with Multiple Relationships between Tables

- Activating Inactive Relationships
- Comparing Values in the Same Column

Module 14: Understanding Context Transition

- Overview of DAX Evaluations Contexts
- How Row Context becomes Filter Context
- How Context Transition can return surprising results
- Aggregating Totals using Context Transition

Module 15: Leveraging Context Transition

- Ranking Data: Looking at RANKX
- Binning Measures into Numeric Ranges
- Calculating Top N Percent
- Calculating "Like for Like" Yearly Sales using SUMMARIZE
- Using Context Transition in Calculated Column

Module 16: Virtual Relationships: The LOOKUPVALUE and TREATAS Functions

- LOOKUPVALUE Function
- The TREATAS Function

Module 17: Table Expansion

- Revisiting Filters
- Expanded Tables Explained
- Leveraging Expanded Tables

Module 18: The CALCULATETABLE Function

- CALCULATETABLE vs FILTER
- CALCULATETABLE and Table Expansion

Module 19: Integration of Power BI with other Power Platform services

- Power BI Alerts
- Power BI integration with Power Automate
- Power BI integration with Model Driven App
- Power BI integration with Canvas App
- Power BI integration with Power Pages

Module 20: Paginated Reports

- Introduction to paginated reports
- Get data
- Create a paginated report
- Work with charts on the report
- Publish the report