Power BI DAX («PBIDAX»)

With this advanced training, you'll master the DAX language and take your Power BI and PowerPivot data analysis skills to the next level.

Duration: 5 days
Price: 3'400.–
Course documents: Digital Digicomp original courseware

Content

- Introduction
- Overview
  - What is DAX?
  - Why is DAX so difficult to learn?
  - Number of DAX functions and families
  - Presentation of the DAX current limits
  - DAX in models (column) vs. DAX in measures
  - Implicit vs. explicit DAX
  - Understanding the different DAX families (DDL, DQL, DAL, DVL, DSL ...)
- DAX Query Language (DQL)
  - EVALUATE query
  - ALL query
  - ALLNOBLANKROW query
  - SELECTCOLUMNS query
  - VALUES query
  - DISTINCT query
  - SELECTCOLUMNS + DISTINCT query with statistics
  - CALCULATETABLE query
  - FILTER query
  - CALCULATETABLE vs. FILTER ant the context transition
  - SAMPLE query
  - SUMMARIZE query
  - SUMMARIZE query with CALCULATETABLE, KEEPFILTERS and TREATAS
  - SUMMARIZE query with multiple tables
  - GROUPBY and CURRENTGROUP queries
  - SUMMARIZECOLUMN query
  - SUMMARIZECOLUMNS query with IGNORE
  - TOPN query
  - RANK.EQ query
  - ROW query
  - SELECTCOLUMNS query with RELATED
  - GENERATE query with RELATEDTABLE
  - GENERATEALL query with RELATEDTABLE
  - NATURALINNERJOIN query
  - NATURALLEFTOUTERJOIN query
  - ADDCOLUMNS query
  - ROLLUP query
  - ROLLUPGROUP query
  - ISSUBTOTAL query
  - ISAFTER and ISORONAFTER queries
  - ROLLUPADDISSUBTOTALDAX query
- DAX Definition Language (DDL)

- CALENDAR command
- CALENDARAUTO command
- UNION command
- ROW command
- GENERATESERIES command
- DATATABLE command
- INTERSECTION command
- CROSSJOIN command

- DAX Analytics Language (DAL)
  - Creating measure tables
  - Using Quick Measures
  - Main logical functions
    - IF, AND, OR
    - SWITCH
    - ISBLANK, ISEMPTY
  - Main filter functions
    - RELATED
    - CALCULATE
    - FILTER
    - KEEPFILTER
    - ALLEXCEPT
    - ALL
    - REMOVEFILTER
    - ALLSELECTED
    - EXCEPT
    - ISAFTER, ISONORAFTER
    - DISTINCT
    - HASONEVALUE
    - ISFILTERED
    - HASONEFILTER
    - USERELATIONSHIP
    - SELECTEDVALUE
    - INTERSECT
    - TREATAS
    - ISINSCOPE
  - Main statistical functions
    - SUM
    - SUMX (with or without RELATED, FILTER)
    - AVERAGEX (with or without VALUE)
    - AVERAGE (with or without HASONEVALUE)
    - MIN, MIN, MAX, MAXX
    - COUNT (with or without CALCULATE and USERELATIONSHIP)
    - COUNTX, COUNTA, COUNTAX
    - COUNTROWS
    - COUNTBLANK
    - DIVIDE
    - DISTINCTCOUNT
    - PERCENTILEX.INC, PERCENTILE.INC
    - TOPN
    - RANKX, RANK.EQ
    - GEOMEANX
  - Main date and time functions
    - DATE
    - YEAR
    - MONTH (with or without MOD)
    - FORMAT

        - DAY (with or without INT)
        - WEEKDAY
        - WEEKNUM
        - EOMONTH
        - HOUR, MINUTE
        - YEARFRAC
        - NETWORKDAYS
    - Main time intelligence functions
        - PREVIOUSDAY and NEXTDAY
        - PREVIOUSMONTH and NEXTMONTH
        - PREVIOUSQUARTER and NEXTQUARTER
        - PREVIOUSYEAR and NEXTYEAR
        - SAMEPERIODLASTYEAR
        - PARALLELPERIOD
        - DATEADD
        - DATESMTD and DATESYTD
        - FIRSTDATE and LASTDATE
        - ENDOFMONTH and CLOSINGBALANCEMONTH
        - TOTALX (TOTALMTD, TOTALQTD, TOTALYTD)
        - DATESBETWEEN
        - STARTOFX and ENDOFX
        - DATESINPERIOD and ENDOFMONTH
        - PREVIOUSX and NEXTX
        - EARLIER
    - Main text functions
        - FORMAT
        - REPT
        - VALUE
        - UNICHAR
        - FIND
        - SUBSTITUTE
        - UPER
        - SEARCH
        - CONCATENATE (with or without COMBINEVALUES)
        - CONCATENATEX
    - Main parent and child functions
        - LOOKUPVALUE
        - PATH
        - PATHITEM
        - REVERSEPATHITEM
    - Main financial functions
        - XIRR, XNPV
- DAX Visual Language (DVL)
    - Generate visuals with DAX and SVG
- DAX Security Language (DSL)
    - USERNAME( )
    - USERPRINCIPALNAME( )
    - USERCULTURE( )
    - Usage of &&, ||
    - Usage of IF, MAXX
    - Usage of IF, MAXX, FILTER and PATH
- Overview of a few external tools
    - DAX Studio
    - Bravo
    - Tabular Editor
- Conclusion

Key Learnings

- Deepen your knowledge of PowerPivot and Power BI with DAX functions:
  - DAX Definition Language (DDL)
  - DAX Query Language (DQL)
  - DAX Analytics Language (DAL)
  - DAX Visual Language (DVL)
  - DAX Security Language (DSL)

Methodology & didactics

This course is based on practical exercises.

Target audience

This course is intended for data analysts who wish to exploit the possibilities of the DAX language to create in-depth data analysis with PowerPivot or Power BI Desktop.

Requirements

In order to fully benefit from this course, participants must have a good knowledge of PowerPivot and/or Power BI, taken the following training courses beforehand or made sure they have equivalent knowledge:

- Power Query and Power Pivot for data analysis in Excel («MEPQPP»)

Additional information

This course can be of use in the context of a preparation for the PL300 "Microsoft Certified: Power BI Data Analyst Associate" certification exam.

Any questions?

We are happy to advise you on +41 44 447 21 21 or info@digicomp.ch. You can find detailed information about dates on www.digicomp.ch/courses-microsoft-office/microsoft-365-apps/microsoft-365-specials/course-power-bi-dax