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)

- o CALENDAR command
- o CALENDARAUTO command
- o UNION command
- o ROW command
- o GENERATESERIES command
- o DATATABLE command
- o INTERSECTION command
- o CROSSJOIN command
- DAX Analytics Language (DAL)
  - o Creating measure tables
  - o Using Quick Measures
  - o Main logical functions
    - IF, AND, OR
    - SWITCH
    - ISBLANK, ISEMPTY
  - o Main filter functions
    - RELATED
    - CALCULATE
    - FILTER
    - KEEPFILTER
    - ALLEXCEPT
    - ALL
    - REMOVEFILTER
    - ALLSELECTED
    - EXCEPT
    - ISAFTER, ISONORAFTER
    - DISTINCT
    - HASONEVALUE
    - ISFILTERED
    - HASONEFILTER
    - USERELATIONSHIP
    - SELECTEDVALUE
    - INTERSECT
    - TREATAS
    - ISINSCOPE
  - o 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
  - o 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-technology/microsoft-power-platform/power-platform-workshops/course-power-bi-dax