

Power BI

- An introduction to the different Power BI Products
- When to use Power BI Desktop
- Free, Pro and Premium
- Online services and databases that Power BI can connect to

The Business Intelligence Process

- Power BI in the business intelligence industry
- A day in the life of Power BI

Data Model & Transformation

- Data transformation principles
- Data normalisation
- Fact and dimension tables
- The data model
- Star schema
- Snowflake schema
- Optimising the data model

Get Data

- Data sources
- The dataset
- Get data from a SharePoint list
- Get data from an Excel worksheet
- Get data from an Azure SQL database
- Import vs DirectQuery

Power Query Editor

- Power Query user interface
- Queries pane
- Data pane
- Ribbon
- Query Settings

Data Transformations

- Filter data
- Rename queries
- Group queries
- Remove top rows
- Use first row as headers
- Rename columns
- Duplicate columns
- Split columns
- Rename Applied Steps
- Format data
- Unpivot columns
- Conditional columns
- Fill values
- Reorder columns
- Combine queries
- Append
- Merge
- Replace values
- Custom columns
- Remove columns

- Evaluate and change column data types

Check the Data: Profiling

- Column quality
- Column distribution
- Column profile

Date Transformations

- Auto Date/Time
- Create a date dimension table
- Dynamic date dimension tables
- Extract date components as columns
- Fiscal quarter and fiscal year

Load Data

- Include in report refresh
- Enable load
- Query dependencies
- Advanced Editor
- Close and Apply

Data Modelling

- The importance of a good data model
- Manage relationships
- Relationship cardinality
- Cross-filter direction
- Typical cardinality and cross filtering
- The dataset
- Modify data formats

Data Analysis Expressions

- What is DAX?
- M (Power Query) language vs DAX
- Calculated columns
- Create and use a calculated column
- Measures
- Create and use measures
- Implicit vs explicit measures
- Filter context and measures
- Referring to measures and calculated columns
- Simple DAX functions

The X Functions

- Calculating values row-by-row in a measure
- X functions vs aggregators and calculated columns
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Quick Measures

- Quick measure categories
- Aggregate per category
- Filters
- Totals
- Mathematical operations
- Text

Time Intelligence Quick Measures

- Auto date/time option
- Mark as date table
- Visuals for date/time reporting
- Quick measure using an existing measure

Secure and Share Data

- Online sharing
- Introduction to row-level security (RLS)
- Multi-row cards
- Testing row-level security
- Power BI workspaces
- Apps
- Add users to RLS roles
- Unpublish an app
- Delete a workspace

Extended Content: More Visualisations

- Combo charts
- Small multiples
- Waterfall charts
- Drill-down charts
- What if
- Bookmarks
- Buttons to navigate bookmarks

Appendix: Database Normalisation

- The Normal Forms
- 1st Normal Form
- 2nd Normal Form
- 3rd Normal Form
- Primary Keys
- Relationships