

Power BI - Intermediate

Detailed Content

Power BI

A history of Business Intelligence
The development of Self Service Business Intelligence
Introducing Power BI
How does Power BI fit in?
Introducing the three main tools – Power BI Service, Power BI desktop & Power BI Mobile
When to use Power BI
Desktop Free versus Pro
Signing up to the Power BI online service
Which sources of Data can I use in Power BI Desktop?
Content Samples

The BI Process

The Business Intelligence process
How Power BI relates to the standard BI processes.

Data Model & Transformation

The Power Query process
Data transformation principles
Manual data clean-up example
A demonstration of how Power Query helps with efficient use of data query
Dimension and Fact Tables
Data Model considerations
Common Data Models

Power Query UI

Queries Area
Data section
The Transformations Ribbons
Query Settings Area
M Language Area

Data Source

Introduction to the data source used in this course
Creating Tables of Data
Import data from Excel
Import data from Web
Renaming Queries
Grouping Queries

Column Transformations

Adding Custom Columns
Renaming Query Steps
Changing Text Data Column Case
Duplicating Columns
Renaming Columns
Splitting Columns
Creating Conditional Columns
Creating Index columns
Reordering Columns
Using the Navigate to Column tool
Creating Date columns from Date/Time Columns

Data Transformations

Removing rows from Tables
Using first row as headers
Filtering data
Detect and change data type
Filling Null areas with values
Trimming text
Replacing values

Date Transformations

Disabling Auto Date/Time
Extracting year
Extracting quarter
Extracting month
Extracting date
Filter dates

Unpivot data

Unpivot columns

Append and Merge Queries

Append Queries
Merge Queries
Merge Query Types
Cleaning the resulting query

Load data

Including and Excluding Queries in report refresh
Enabling or disabling Query loading
Applying Queries
Viewing Query dependencies

Data Modelling

Introduction to data modelling
Relationship view
Auto detecting relationships
Cardinality and Cross Filtering
Creating relationships through Manage relationships
Changing Cross Filtering
Deleting relationships
Drag and drop to create relationships

DAX

An introduction to DAX
Comparing M Language to DAX
Comparing Measures to Calculated Columns
Referring to and Using Measures and Calculated Columns
Creating a simple SUM measure
Creating a Calculated column using the IF function
Simple DAX functions
The X Functions as iterators
Comparing SUM to SUMX
A use for AVERAGEX

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Quick Measures

Introduction to Quick Measures
Quick Measure Categories
Aggregate per Category
Filters
Fine tuning the Quick Measure Totals
Arithmetic
Text

Time Intelligence Functions

Visuals for Date / Time Reporting
Create a column for abbreviated month
Mark as Date Table
Quick Measure for Year to Date
Quick Measure for YTD with different year end
Quick Measure on an existing measure using YTD

Advanced Visualisations

Introduction to Waterfall charts
Create variance measures
Using variance measures in a Waterfall chart
Create drill down time series chart
Drill down chart interaction
Create drill down bar chart
Creating What if Parameters
Using What if parameters in a chart
Enabling Q & A in Power BI Desktop
Create a visual with Q & A
Using Bookmarks in Power BI Desktop
Bookmarks to filter data
Bookmarks to change visuals
Add buttons to access bookmarks

Power BI Templates & Parameters

Introduction to parameters in templates
Enabling parameters in queries and transformations
Creating a template file based on existing query and report
Add a transformation parameter to the template

Connect Excel and Power BI Desktop

Introduction to Power BI and Excel
Ability to work with Desktop and Excel
Analyse a Power BI Desktop data model in Excel
Create a Power Pivot data model in Excel
Add a KPI based measure to the data model
Import the Excel data model to Desktop including the KPI

Extended Topic A - Transformations

Opening files and checking connections
Examine the underlying data
Find and Replace
Unpivot & Rename

Extended Topic B - Query Parameters (Dynamic Web Query)

Importing a web query using parameters
Creating a custom function
Defining a List to create a new Query
Invoking custom functions
Using Error checking processes
Cleaning queries
Create measures and visualise queried data
[Extended Topic C - Group By](#)

Using the Group By feature

Data Normalisation Appendix

The Normal Forms
1st Normal Form