

Power BI- Advanced

Detailed Content

Course Introduction

Overview of Power BI

Data Model

Data Modelling in the Real World Dataset for these exercises

Data Analysis eXpressions (DAX) - Introduction

Introduction to DAX Learning DAX Advice when creating DAX Third party tools to assist Measures Table Create a Table for Measures

DAX - Measures and Filters

Filters on a Measure Create simple aggregate measures Using measures on a report page Applying visual layouts and slicers / filters Initial Filter Context / Original Filter Context / Query Context

DAX - The CALCULATE function

Introduction to the CALCULATE function Modifying filters with CALCULATE Add, replace, clear column filters Limitation of CALCULTE Adding Filters Replacing Filters The total row Removing / Clearing Filters The ALL and similar functions

DAX - Evaluation Contexts

Overview of evaluation contexts in DAX The Filter Context The Row Context Initial Filter (Query) context Initial Row context Seeing Row context Introducing a row context

DAX - The Rules of Evaluation

Introduction to the rules of evaluation The five steps Starting set of filters Specify filtering Filters are applied Propagation of filters Evaluation of expression Stepping through the rules in an example

DAX - Contexts & Relationships

Introduction to Relationships Filter context follows relationships Explore the filter context How filter context follows relationships Filter context against relationships The Both cross-filter direction Modify the filter direction The CROSSFILTER function Impact on totals

DAX - The FILTER function

Introduction to the FILTER function FILTER returning a table Create a table with FILTER Modify existing filter context with both FILTER and CALCULATE Difference between these methods Using ALL function in FILTER Identical CALCULATE and FILTER Extended exercise – ALL functions

DAX - Variables

Overview of variables in DAX Creating and using variables Use variables to store a constant Use variables to avoid repetition Where to from here

Row Level Security

Overview of RLS in Power BI Create dynamic RLS using USERNAME or USERPRINCIPALNAME Load data and enable RLS Testing dynamic RLS in Desktop RLS data access according to organisation hierarchy DAX parent-child functions Publish and assign roles in Power BI Service Create App Workspace

Report Features

Introduction to advanced features Overview of Drill-through Create report page with drillthrough filters Interacting with drill-through Overview of custom report tooltips Modify standard tooltip display Create a custom tooltip Apply the tooltip to a field Apply the tooltip to a visual Overview of Grouping and Binning Create a group



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Create a bin Binning a date field

Date Dimension

Overview of Date Dimension in BI

Power BI Desktop settings Download or Create own table Data Table with a DateKey Convert a DateKey to a Date Create date table in Power Query

Extended exercise - Use parameter to specify date table start and end Create date table with DAX Using CALENDARAUTO in DAX

Extended Topic A - API Data Sources

Overview of Web and API data sources

Query an API data source HTTP and JSON terminology Transform a JSON response Publish to Power BI Service and setup refresh schedule

Extended Topic B -Streaming Data Sources

Overview of real time streaming data sources Push Datasets and Streaming Datasets Pushing data into a dataset Query data from PubNub stream Configure Dashboard tile to show streaming data from PubNub Create a REST API to push data into Power BI Create JSON object to insert data via this API Push data to created API using **HTTP Post** Create Dashboard tile to show updating data

Extended Topic C - Files in Folders

Overview of using a folder data source Query a folder containing multiple source files Column consistency Specify a template file to define columns View created queries / functions and dependencies Understand the created process of querying the folder Extended exercise – introduce additional files and unwanted files

Additional Study (Extended Topic D) -Power Query M Formula Language

Overview of Power Query M Formula Language Basics of Power Query M Values, Records, Lists Operators Conditional Testing Error handling Accessing table data More advanced Power Query M Each Expression Refer to other queries Understand a web query Remove Rows by Filter 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