





## POWER BI COMPLETE COURSE

## Data ware house basics

- ⇒ Data warehouse introduction
- DWH definitions
- ⇒ DWH Architecture
- ⇒ Schemas
- ⇒ Types facts
- ⇒ Types DIM
- ⇒ OLTP VS OLAP

#### **Power BI Introduction**

- Data Visualization,
- ⇒ Reporting
- ⇒ Business Intelligence (BI)
- ⇒ Flow of Work in Power BI Desktop
- ⇒ Flow of Work in Report server Power BI Desktop
- Power BI Report Server, Power BI Service
- ⇒ Power BI Mobile
- Flow of Work in Power BI / Power BI Architecture
- A Brief History of Power BI

## PBI Desktop Installation, PBI Desktop & Service Overview

- Power BI Desktop Installation
- ⇒ Datasets, Visualizations,
- Reports,
- ⇒ Dashboards
- ⇒ Power BI Desktop User Interface
- ⇒ Fields Pane,
- Visualizations pane.
- ⇒ Ribbon.
- ⇒ Views,
- ⇒ Pages Tab
- Overview of Power Query /
   Query Editor Extract, Transform & Load Data

- Connecting to Data Sources,
   Establish connection to the Excel source,
- notepad,
- ⇒ SQL
- ⇒ Importing Data into Power BI or Query Editor
- ⇒ Transforming the Data using Power Query
- Creating New Measures and New Columns and tables using DAX Data View
- Saving and Publishing the Visuals or Reports
- ⇒ Logon to Power BI Service
- View the Reports in PBI Service and Share the reports





# Power Query: Introduction to Power Query Extract, Transform & Load

- ⇒ Data Transformation.
- ⇒ Benefits of Data Transformation
- Shape or Transform Data using Power Query
- Overview of Power Query / Query Editor,
- Query Editor User Interface
- The Ribbon (Home, Transform, Add Column, View Tabs)
- ⇒ The Queries Pane, The Data View / Results Pane,

### Datatypes and Filters in Power Query

- ⇒ Datatypes,
- Changing the Datatype of a Column
- ⇒ Filters in Power Query
- ⇒ Filter a Column using Text Filters
- ⇒ Filter a Column using Number Filters
- Filter a Column using Date Filters
- Filter Multiple Columns

#### **Inbuilt Column Transformations**

- Remove Columns / Remove Other Columns
- ⇒ Name / Rename a Column
- Reorder Columns or Sort Columns
- ⇒ Add Column / Custom Column
- ⇒ Split Columns
- ⇒ Merge Column
- PIVOT.
- ⇒ UNPIVOT Columns
- ➡ Transpose Columns
- ⇒ Header Row or Use First Row as Headers
- ⇒ Keep Top Rows, Keep Bottom Rows
- Keep Range of Rows
- Keep Duplicates, Keep Errors
- Remove Top Rows, Remove Bottom Rows,
- Remove Alternative Rows
- Remove Duplicates, Remove Blank Rows,
- Remove Errors
- ⇒ Group By





## Combine Queries (Append Queries & Merge Queries)

- ⇒ Append Queries / Merge Queries
- ⇒ Query Options
- Copy Query, Paste Query
- ⇒ Delete Query, Rename Query
- ⇒ Enable Load, Include in report Refresh
- ⇒ Duplicate Query, Reference Query
- ➡ Move to Group, Move Up, Move Down

#### **Power Pivot**

- Power BI Data Modelling Relationship View
- Data Modelling Introduction
- Relationship,
- Need of Relationship
- Relationship Types / Cardinality in General
- One-to-One, One-to-Many (or Many-to-One),
- ⇒ Many-to-Many
- AutoDetect the relationship,
- create a new relationship,
- ⇒ Edit existing relationships
- Make Relationship Active or Inactive
- ⇒ Delete a relationship

## **Enhancing the Data Model - DAX**

- ⇒ What is DAX.
- ⇒ Measures.
- DAX Table and Column Name Syntax,
- Creating Calculated Columns,
- Creating Measures,
- Calculated Columns Vs Measures,
- ⇒ DAX Syntax & Operators
- ⇒ DAX Operators
- ⇒ Types of Operators
- ⇒ Arithmetic Operators,
- Comparison Operators,
- ⇒ Text Concatenation Operator,
- ⇒ Logical Operators





## **DAX Functions Categories**

- Logical Functions
- ⇒ Text Functions
- ⇒ Math & Statistical Functions
- ⇒ Filter Functions
- ⇒ Time Intelligence Functions
- ⇒ DAX Date & Time Functions
- ➡ Information Functions

#### **Date and Time Functions**

- ⇒ Year,
- ⇒ Month,
- ⇒ Day
- ⇒ Weekday,
- ⇒ Weeknum
- Format (text Function) Month Name,
- ⇒ Date,
- ➡ Today,
- ⇒ Now
- ⇒ Hour,
- ⇒ Minute.
- ⇒ Second.
- ➡ Time
- ⇒ Datediff.
- ⇒ Calendar
- ⇒ Datevalue,
- ⇒ Timevalue
- ⇒ Utcnow.
- ⇒ Utctoday

### **Date and Time Functions**

- ⇒ LEN.
- **CONCATENATE.**
- ⇒ LEFT.
- RIGHT.
- ⇒ MID
- ⇒ UPPER.
- ⇒ LOWER
- ⇒ TRIM.
- ⇒ SUBSTITUTE,
- ⇒ BLANK
- ⇒ CODE,
- ⇒ EXACT
- ⇒ FIND,
- ⇒ FIXED
- ⇒ TRIM,
- ⇒ UNICHAR
- SEARCH.
- ⇒ VALUE,
- ⇒ FORMAT

## **DAX Logical Functions**

- ⇒ IF.
- ⇒ TRUE.
- ⇒ FALSE
- ⇒ IFERROR,
- ⇔ IN
- ⇒ SWITCH,
- ⇒ AND.
- ⇒ NOT



## DAX Math and Statistical Functions

- **CURRENCY**,
- ⇒ RAND
- ⇒ INT.
- ⇒ ABS
- ⇒ ROUND,
- ⇒ ROUNDUP,
- ⇒ ROUNDDOWN,
- RAND BETWEEN.
- ⇒ DIVIDE
- ⇒ EVEN,
- $\Rightarrow$  ODD
- ⇒ SQRT,
- ⇒ FACT
- ⇒ SUM,
- ⇒ SUMX
- ⇒ MIN,
- ⇒ MINX
- ⇒ COUNT,
- ⇒ COUNTX
- ⇒ AVERAGE,
- ⇒ AVERAGEX
- COUNTROWS,
- **⇔** COUNTBLANK
- CROSSJOIN,
- **⇒** DISTINCTCOUNT
- ⇒ MEDIAN,
- ⇒ RANKX,
- ⇒ TOPN

#### **DAX Filter Functions**

- ⇒ CALCULATE,
- ⇒ ALLXECPT
- ⇒ ALL.
- ⇒ DISTINCTCOUNT
- ⇒ FILTER.
- ⇒ HASONEFILTER
- ⇒ HASONEVALUE.
- ⇒ SELECTEDVALUE



## DAX Time Intelligence Functions

- ⇒ Time Intelligence Introduction
- ⇒ Closingbalancemonth,
- ⇒ Dateadd
- ⇒ Datesbetween,
- Datesinperiod
- ⇒ Datesmtd,
- ⇒ Datesytd,
- ⇒ Totalmtd,
- **⇒** Totalytd
- Endofmonth,
- ⇒ Firstdate
- Lastdate,
- ⇒ Startofmonth,
- ⇒ Sameperiodlastyear

#### **Information Functions**

- **CONTAINS.**
- ⇒ ISBLANK
- ⇒ ISERROR.
- ⇒ ISEVEN
- ⇒ ISNONTEXT.
- ⇒ ISTEXT
- ⇒ ISODD.
- ⇒ ISNUMBER
- **⇒** USERNAME

### **Conditional Formatting**

- ⇒ Text conditional formatting
- Border conditional formatting
- Background conditional formatting
- ⇒ Font conditional formatting
- Data bars conditional formatting
- Conditional formatting icons



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### **Other Options**

- **Buttons.**
- ⇒ shapes
- ➡ Images,
- ⇒ New parameter
- ⇒ What if parameter,
- ⇒ Gridlines
- Lock objects,
- ⇒ Bookmarks.
- Selection,
- Performance analyzer,
- Sync slicers,
- edit interactions
- ⇒ Enter data.
- recent sources,
- refresh 🗢
- Data grouping,
- ⇒ visual analyzing

#### **Visualizations**

- Stacked bar chart.
- Stacked column chart
- Clustered bar chart.
- Clustered column chart
- ⇒ 100% stacked bar chart.
- ⇒ 100% stacked column chart
- ⇒ Line chart. Area chart
- Stacked area chart,
- ⇒ Line and stacked column chart
- ⇒ Line and clustered column chart,
- ⇒ Ribbon chart
- ⇒ Waterfall chart.
- ⇒ Scatter chart
- Pie chart.
- ⇒ Donut chart
- ⇒ Treemap,
- ⇒ Filled map
- ⇒ Map, Funnel

#### **Introduction to office 365**

- ⇒ What is office 365
- Download custom visuals

#### **Custom Visuals**

- Bar chart,
- ⇒ Chartaccentbarchart
- ⇒ Hierarchy slicer,
- ⇒ Linedotchart
- ⇒ Multi slicer,
- Pivotslicer table heatmap
- ⇒ Tornado chart

## Filters in Power View Filter Types

- ⇒ Visual Level Filters.
- ⇒ Page Level Filters,
- Report Level Filters,
- Drill Through Filters
- ⇒ Filter Sub Types
- Basic Filtering,
- Advanced Filtering,
- ⇒ Top N.
- Relative Date Filtering
- Numeric field filters.
- Text field filters.
- Date and Time field Filters





#### Hierarchies and Drill-Down Reports

- ⇒ Hierarchy Introduction,
- Default Date Hierarchy,
- Creating Hierarchy,
- Creating Custom Date Hierarchy
- ⇒ Change Hierarchy Levels
- ⇒ Drill-Up and Drill-Down Reports,
- ⇒ Drill Down.
- ⇒ Drill Up,
- ⇒ Show Next Level,
- ⇒ Expand Next Level
- Drilling filters other visuals option

#### **Visualizing KPI Data**

- Create and Format Gauge Visual,
- ⇒ KPI Visual
- ⇒ Create and Format Card Visualization,
- Multi Row Card
- ⇒ Create and Format Table Visual.
- Matrix Visualization
- Create and Format Map Visual,
- ⇒ Filled Map Visual

#### **Power BI Service**

- ⇒ Power BI Service Introduction
- ⇒ Power BI Service Introduction.
- ⇒ Power BI Cloud Architecture
- Creating Power BI Service Account,
- SIGN IN to Power BI Service Account
- Publishing Reports to the Power BI service,
- Import / Getting the Report to PBI Service
- ⇒ My Workspace / App Workspaces Tabs
- **DATASETS.**
- ⇒ WORKBOOKS,
- REPORTS,

- ⇒ DASHBOARDS
- ⇒ Working with Datasets,
- Creating Reports in Cloud using Published Datasets
- Power BI Datasets Live Connection using Desktop
- Working with Workbooks,
- working with Reports,
- ⇒ Sharing Reports
- Creating new reports in services
- ⇒ Embedding to web,
- ⇒ share report link
- ⇒ Row Level Security in Power BI
- ⇒ Introduction to Row Level Security

#### **Dashboards Development**

- Creating Dashboards Pin Visuals and Pin LIVE Report Pages to Dashboard
- Advantages of Dashboards
- ⇒ Interacting with Dashboards
- Formatting Dashboard
- Sharing Dashboard

#### **Data Gateways**

- ⇒ Introduction to Data Gateways
- ⇒ How Data Gateways work
- Connect to an on-premise Data Source by using a Data Gateway
- ⇒ Download Data Gateway
- ⇒ Installing a Data Gateway
- Types of Gateways
- On-premises Data Gateway, .
   On-premises Data Gateway (personal mode)
- ⇒ Manage Data Gateway
- Refresh on Premise Data





## **SQL Basics**

- ⇒ SQL Introduction
- ⇒ Installation
- ⇒ DDL Commands
- ⇒ DML Commands
- ⇒ DRL Commands
- ⇒ Types Joins
- ➡ Inner Join
- ⇒ Left Outer Join
- Right Outer Join
- ⇒ Full Outer Join
- ⇒ Select ,Case ,Switch,IF statement

### **ADD ON**

- ⇒ Power BI Admin Topics
- ⇒ Real-time Projects Explanation
- ⇒ Resume Preparation
- ⇒ Interview Questions Discussions
- **⇒** Mock Interviews





















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