



BHASKAR REDDY SOFTWARE LABS

#101, Naina Residency, Plot. No 6, Gayatri Nagar, Ameerpet, Hyderabad. 500038.

Email: info@brsl.net, website: www.brsl.net

Ph: 988-580-3552

Power BI

Power BI Complete Introduction

- Power BI Introduction.
- Data Visualization, Reporting.
- Business Intelligence (BI), Traditional BI, Self-Serviced BI.
- Cloud Based BI, On Premise BI.
- Power BI Products.
- Power BI Desktop (Power Query, Power Pivot, Power View).
- Flow of Work in 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.
- Building Blocks of Power BI.
- Datasets, Visualizations, Reports, Dashboards, Tiles.
- Power BI Desktop User Interface.
- Fields Pane, Visualizations pane, Ribbon, Views, Pages Tab, Canvas.
- Overview of Power Query / Query Editor – Extract, Transform & Load Data.
- Connecting to Data Sources, Establish connection to the Excel source.
- Importing Data into Power BI or Query Editor.
- Transforming the Data using Power Query.
- Model the Data using Power Pivot – Relationship View.
- Creating New Measures and New Columns using DAX – Data View.
- Visualizing the Data using Power View and Power Maps – Report 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, The Query Settings Pane, Formula Bar.
- Advanced Editor – Complete ETL Code.
- Saving Your Work – Applying ETL Changes – Loading into Power Pivot Model.
- Power Query Conceptually.

Data-types and Filters in Power Query

- Data-types, Changing the Data-type of a Column.
- Filters in Power Query.
- Auto Filter / Basic Filtering.
- Filter a Column using Text Filters.
- Filter a Column using Number Filters.
- Filter a Column using Date Filters.
- Filter Multiple Columns.

In-built Column Transformations

- Remove Columns / Remove Other Columns.
- Name / Rename a Column.
- Reorder Columns or Sort Columns.
- Add Column / Custom Column.
- Split Columns.
- Merge Columns.
- PIVOT, UNPIVOT Columns.
- Transpose Columns.

In-built Row Transformations

- 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 Rows / Group By.

Combine Queries (Append Queries & Merge Queries)

Append Queries / Union Queries

- Append Queries.

- Append Queries as New.
- Append 2 or more files individually with different queries.
- Appending multiple files of same type from a folder using single query.
- 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.

Merge Queries / Join Queries

- Merge Queries, Merge Queries as New.
- Default Types of Joins / Join Kinds / Merge Type.
- Left Outer (all from first, matching from second).
- Right Outer (all from second, matching from first).
- Full Outer (all rows from both).
- Inner (only matching rows).
- Left Anti (rows only in first).
- Right Anti (rows only in second).
- Cartesian Join or Cross Join.

Power Pivot

Power BI Data Modeling – Relationship View

- Data Modeling 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.
- Cross filter direction (Single, Both), Assume Referential Integrity.

Enhancing the Data Model using Data Analysis Expressions (DAX)

- What is DAX, Calculated Column, Measures.
- DAX Table and Column Name Syntax.
- Creating Calculated Columns, Creating Measures.
- Implicit Vs Explicit 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

- Date and Time Functions.
- Logical Functions.
- Text Functions.
- Math & Statistical Functions.
- Filter Functions.
- Time Intelligence Functions.

DAX-Date & Time Functions

- YEAR, MONTH, DAY.
- WEEKDAY, WEEKNUM.
- FORMAT (Text Function) à Month Name, Weekday Name.
- DATE, TODAY, NOW.
- HOUR, MINUTE, SECOND, TIME.
- DATEDIFF, CALENDAR.
- Creating Date Dimension Table.

DAX-Text Functions

- LEN, CONCATENATE (&).
- LEFT, RIGHT, MID.
- UPPER, LOWER.
- TRIM, SUBSTITUTE, BLANK.

DAX-Logical Functions

- IF.
- TRUE, FALSE.
- NOT, OR, IN, AND.
- IFERROR.
- SWITCH.

DAX-Math and Statistical Functions

- INT.
- ROUND, ROUNDUP, ROUNDDOWN.
- DIVIDE.
- EVEN, ODD.
- POWER, SIGN.
- SQRT, FACT.
- SUM, SUMX.
- MIN, MINX.
- MAX, MAXX.
- COUNT, COUNTX.
- AVERAGE, AVERAGEX.
- COUNTROWS, COUNTBLANK.

DAX-Filter Functions

- CALCULATE.
- ALL.
- RELATED.

DAX Time Intelligence Functions

- Time Intelligence Introduction.
- TOTALMTD, TOTALQTD, TOTALYTD.
- PREVIOUSDAY, PREVIOUSMONTH, PREVIOUSQUARTER, PREVIOUSYEAR.
- NEXTDAY, NEXTMONTH, NEXTQUARTER, NEXTYEAR.
- SAMEPERIODLASTYEAR.
- YOY Growth.
- MOM Growth.

Power View

Report View / Power View

- Report View User Interface.
- Fields Pane, Visualizations pane, Ribbon, Views, Pages Tab, Canvas
- Visual Interactions.
- Interaction Type (Filter, Highlight, None).
- Visual Interactions Default Behavior, Changing the Interaction.

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.

Grouping, Binning & Sorting

- Grouping and Binning Introduction.
- Using grouping, Creating Groups on Text Columns.
- Using binning, Creating Bins on Number Column and Date Columns.
- Sorting Data in Visuals.
- Changing the Sort Column, Changing the Sort Order.
- Sort using column that is not used in the Visualization.
- Sort using the Sort by Column button.

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.
- Data Actions, Drill Down, Drill Up, Show Next Level, Expand Next Level.

- Drilling filters other visuals option.

Power BI Visualizations

- Visualizing Data, Why Visualizations.
- Visualization types, Field Wells.
- Visuals for Filtering, Visualizing Categorical Data, Visualizing Trend Data.
- Visualizing KPI Data, Visualizing Tabular Data, Visualizing Geographical Data.
- Leveraging Power BI Custom Visuals.

Visuals for Filtering

- Slicer Visualization.
- When to use a Slicer.
- Create and format Slicer Visualization.
- Hierarchy Slicer (Custom Visualization).
- When to use a Hierarchy Slicer.
- Create and format Hierarchy Slicer.
- Advantages of Hierarchy Slicer.

Visualizing Categorical Data

- Create and Format Bar and Column Charts.
- Create and Format Stacked Bar Chart Stacked Column Chart.
- Create and Format Clustered Bar Chart, Clustered Column Chart.
- Create and Format 100% Stacked Bar Chart, 100% Stacked Column Chart.
- Create and Format Pie and Donut Charts.
- Create and Format the Tree Map Visual.
- Create and Format Scatter Charts.

Visualizing Trend Data

- Line and Area Charts.
- Create and Format Line Chart, Area Chart, Stacked Area Chart.
- Combo Charts.
- Create and Format Line and Stacked Column Chart, Line and Clustered Column Chart.
- Create and Format Ribbon Chart, Waterfall Chart, Funnel Chart.

Visualizing KPI Data

- Create and Format Gauge Visual, KPI Visual.
- Create and Format Card Visualization, Multi Row Card.

Visualizing Tabular Data, Geographical Data & R Script Visual

- Create and Format Table Visual, Matrix Visualization.
- Create and Format Map Visual, Filled Map Visual, Arc GIS Maps Visual.
- Create and Format R Script 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.

Dashboards Development

- Creating Dashboards.
- Pin Visuals and Pin LIVE Report Pages to Dashboard.
- Advantages of Dashboards.
- Interacting with Dashboards.
- Adding Tiles to Dashboards.
- Web Content, Image, Text Box, Video.
- Formatting Dashboard.
- Sharing Dashboard.

SQL Server

Data types in SQL Server

- Exact Numeric
- Approximate Numeric
- Character Strings
- Date and time

Introduction to Structure Query Language

- DDL Commands
- DML Commands
- DQL Commands

Operators in SQL Server

- Arithmetic Operators
- Comparison Operators
- Relational Operators
- Logical Operators
- String Concatenation Operators
- Set Operators

Built-In Functions in SQL Servers

- String Functions
- Numeric Functions
- Date and Time Functions
- Aggregate Functions

Working with Clauses

- The SELECT Clause
- The FROM Clause
- The WHERE Clause
- The ORDER BY Clause
- Using GROUP BY and HAVING

Working with Constraints

- Not Null Constraint Case Studies
- Unique Constraint Case Studies
- Primary Key Constraint Case Studies
- Foreign Key Constraint Case Studies
- Rules of Foreign key
- Default Constraint
- Check Constraint

Working with Joins

- Introduction to Joins
- Inner join
- Outer join
- Cross joins

Working with Views

- Creating Views
- Updatable Views
- Altering, dropping views
- Using Computed Columns
- Indexed Views
- Advantages of views