

Power BI & Microsoft Fabric Course Content

Introduction

- Power BI
- Introduction to Power BI Suite - Tools & Products

Power BI Setup

- Install Power BI Desktop tool
- Power BI Desktop walk through
- Power BI Forums & User Community
- Report, Table & Model Views
- Introduce Power BI Terminology
- Demo : Connecting Data using Power BI Desktop

Power BI : Data Source Universe

- Direct Query vs Import Data
- Discussing Data Refresh

Case Study 1:

- Load Data from TXT file (Sales Data As Example)
- Design Table Reports – Basic Level
- Take steps to Improve “Look & Feel” Reporting

Case Study 2:

- Load Data from Excel file (Finance Data as Example)
- Design Dashboard – Basic Level - II
Introduction to Power BI Visual Gallery

Case Study 3:

- Load Data from SQL Database (E-Commerce Data as example)
- Design Dashboard – Intermediate level
- Introduction to Slicing & Dicing in Power BI

Case Study 4 :

- Load CSV file (Real time Collisions data as Example)
- Introduce ETL in Power BI – Power Query
- Checking Data Quality - Profiling
- Resolve data quality issues
 - Data Cleaning
 - Replace null/empty values

- Changing data types
- Dates & Date parts
- Remove columns & Filter rows
- Design Dashboard – Intermediate Level - II
- Think & Act like “Data Analyst”

Power Query

Shape/Transform Data (ETL)

- Rename Queries/Tables
- Remove Columns (unnecessary)
- Filter Rows (unwanted data)
- Renaming columns
- Fixing Data types
- Replacing values
- Split Columns & Add new columns
- Duplicating/Referencing table/query
- Appending Operations
- Pivot & Unpivot Tables
- Understanding & Performing Merges
- Power Query – M Language
- Working with Folders and Files

Case Study 5 :

- Load Data from Various Sources
 - CSV Files (Comma Separated Values)
 - TSV Files (Tab Separated Values)
 - Web/HTML Files
- Clean Data from source files using Power Query - ETL
- Transform/shape data by following business rules
- Implement Data Modeling :
 - Introduce Dimension & Facts
 - Introduce Star Schema
 - Design Star Schema for Case study
 - Introduce DAX
- Design Dashboard – Advanced Level
- Finding facts from Data

Data Modeling

Data Modeling in Power BI

- Understand the role of the Data Model in Power BI
- Understand table relationships
- Setup and Manage Relationships
- Understand Cardinality and Cross Filtering
- Discuss Star and Snowflake schema
- Create a Date Dimension

- Build a Data Model from multiple Data sources
- Introduce Adventure Works Data warehouse
 - Microsoft recommended DW Example
 - Set up Adventure Works for Practice
 - Explain Data & Business rules
 - Facilitate Documentation

Case Study 6 :

- Load Data from Adventure Works
- Walkthrough Prototype & Requirements
- Brainstorm about data before reporting
- Power Query – For ETL on Data
- Design Dashboard :
 - Choosing right visuals
 - Formatting visual for Look & feel
 - Advantage of Filters – Slicing/Dicing
 - Implement Drilldown & Hierarchies
- Design Dashboard – Advanced Level – II
- End to End Power BI workflow.

Data Visualization

Additional Viz in Power BI

- Scatter & Bubble Charts & Play Axis
- Slicers & Tooltips
- Cross Filtering and Highlighting
- Visual, Page and Report Level Filters
- Hierarchies, Drill Down/Up & Drill through
- Constant Lines & Custom Visuals
- Tables, Matrices & Table Conditional Formatting
- KPI's, Cards & Gauges
- Map Visualizations & Custom Report Themes
- Custom Visualization

DAX (Data Analysis Expression)

- DAX Purpose - Why we need DAX?
- DAX Scope - Usage in Power BI
- Context, Entities, Data Types and Functions
- DAX - Calculations vs Measures
- DAX Operators & Symbols
- Time Intelligence Functions with DAX
- IF..ELSEIF.. Conditions with DAX
- Slicing and Dicing Options with Columns, Measures
- DAX for Query Extraction, Data Mashup Operations
- Advanced DAX Functions & Scenarios
- Row Context & Filter Context

Power BI Online

- Power BI Service vs Power BI Server
- Power BI Service Components
- Publishing a Project to Power BI Service (Web)
- Sharing Reports , Dashboards and Alerts
- Exporting to PowerPoint, PDF and from Viz
- Exploring Power BI Mobile

Power BI – AI Integration

- AI – Powered features in Power BI
- Azure Machine Learning Integration
- Working with Microsoft Fabric
- Working with Power Platform
- Scope of AI in Power BI

MS Fabric

Introduction

- Introduction to Microsoft Fabric
- Explore Microsoft Fabric Environment
- Setup User account
- Creating workspace

Fabric Hands-on

- Get started with Microsoft Fabric
- Implement a Lakehouse with Microsoft Fabric
- Ingest data with Microsoft Fabric
- Implement a data warehouse with Microsoft Fabric
- Work with semantic models in Microsoft Fabric

DP-600 Exam Certification

- Plan, implement, and manage a solution for data analytics
- Prepare and serve data
- Implement and manage semantic models
- Explore and analyze data

DP-600 Exam Support

- DP-600 Practice Assessments
- Sample Questions
- Guidance & Tips to gain DP-600 Certification.