

## Power BI Advance

### Module 1: Get data in Power BI

- Lesson 1: Getting Data from Multiple Sources
  - Excel (Locally Stored and Cloud-Based Excel file)
  - Access
  - .CSV files and folders
  - Web
  - Data Verse and Data flow
  - Azure SQL Database
  - **Demo**
- Lesson 2: Resolve data import errors
  - Web Authentication and Loading Tables
  - Resolving Data Load Error
  - Resolving Data Path Error
  - Resolving Refresh Error
  - Exploring Power View Visualization Error

Lab 1: Load data in Power BI

### Module 2: Preparing Data in Power BI

- Lesson 1: Introduction to Enhancing Data Structure
  - Enhancing Data Structure – Join Types Merge Queries
  - Profile data in Power BI
  - Shape the initial data
  - Simplify the data structure
  - Evaluate and change column data types
- Lesson 2: Introduction to Designing a Data Model
  - Introduction to Dimensional Modeling
  - Elements of the Dimensional Data Model
    - Fact
    - Dimension
    - Attributes
    - Fact Table
    - Dimension Table
  - Fact Vs Dimension
  - Understanding cardinality
  - Creating Relationships and their effects
  - Define data granularity
  - Configuring Tables
  - Work with relationships and cardinality 5 min
  - Resolve modelling challenges

- Creating Hierarchy
- Explore time-based data

Lab 2: Data Transformation and Create Data Model :

### Module 3: Calculation with DAX

- Lesson 1: Introduction to DAX
  - Write DAX formulas
  - Calculated Column
  - Measures
  - Create simple measures
  - Create compound measures
  - Create quick measures
  - Calculate Tables
  - Compare calculated columns with measures
  - Evaluation Context
  - Types of Contexts
- Lesson 2: Basic Math calculation
  - Summarization and Aggregation
    - Modify filter context
    - Use filter modifier functions
    - Examine filter context
    - Perform context transition
- Lesson 3: Working with context in the data model
  - Getting data from other tables using RELATED and RELATEDTABLE
  - Modifying the context using CALCULATE function
  - Use of USERELATIONSHIP function
- Lesson 4 Using DAX to perform Advance calculation
  - Handling errors gracefully
  - Understanding Row Context with Iterator function
    - SUMX
    - AVERAGEX
    - MAXX
    - RANKX)
- Lesson 5: Creating and Manipulating Table in DAX with functions
  - FILTER
  - SUMMARIZE
  - SUMMARIZECOLUMNS
  - GROUP BY
  - ADD COLUMN
  - CALENDAR & CALENDARAUTO
- Lesson 6: Working with Time
  - DatesYTD
  - DatesQTD
  - DatesMTD

- Year on Year growth calculation
- DateAdd
- Parallelperiod
- SameperiodLastYear
- Importance of Variables and Comments
- Introduction to Optimizing Model Performance

Lab 3: Calculation using DAX

## Module 4: Visualize your data

- Lesson1: Introduction
  - Creating reports with different visuals
  - Cluster and Stacked column and bar chart
  - Map visualizations
  - Matrices and tables
  - Create scatter, waterfall, and funnel charts
  - Modify colors in charts and visuals
  - Page layout and formatting
  - Formatting different Visuals
- Lesson 2: Enhancing Report
  - Filtering and Sorting Reports
  - Sync Slicers
  - Creating Drill Through Pages
  - Advance Drill Through
  - Applying Conditional Formatting
  - Control visibility of measure in DAX
  - Bookmarks and Selection
  - Display measure for specific users
- Lesson 3: Introduction to advanced data visualization concepts
  - Create and import a custom report theme
  - Enable personalized visuals in a report
  - Design and configure Power BI reports for accessibility
  - Review report performance using Performance Analyzer
  - Explore statistical summary
  - Identify outliers with Power BI visuals
  - Apply clustering techniques
  - Conduct time series analysis
  - Use the Analyze feature
  - Use advanced analytics custom visuals
  - Advanced Analytics – Grouping
  - Advanced Analytics – Binning
  - Advanced Analytics – Bandings
  - Creating Animated Scatter Charts
  - Using Visuals to Forecast Values

Lab 4: Design Report in Power BI Desktop

### **Module 5: Advance feature of Power BI**

- Lesson 1: Downloading Report Builder and creating Paginated Report
  - Introduction to paginated reports
  - Get data
  - Create a paginated report
  - Work with charts on the report
  - Publish the report
- Lesson 2: Introduction to creating Dashboards
  - Creating Dashboards – Editing Published Reports and Pinning to a New Dashboard
  - Introduction to Real-Time Dashboards
  - Creating Forms for Pushing Data
  - Creating Push Datasets
  - Accessing Power Automate
  - Creating Flow to Push Form Data into Dataset
  - Respond to Survey
  - Enhancing Dashboards with Custom Themes
  - Enhancing Dashboard with Videos
  - Enhancing Dashboard Tile Alerts
  - Using Q&A and Quick Insights and Add to Dashboards

Lab 5: Create Power Bi Paginated Report

Lab 6 : Create Power Bi Dashboard

### **Module 6: Managing Workspace and Datasets**

- Lesson 1: Introduction to Workspace
  - Managing Workspace
  - Distribute a report or dashboard
  - Monitor usage and performance
  - Creating and Publishing Apps
  - Loading Sample Data and Making Workspace Premium
  - Recommend a development life cycle strategy
- Lesson 2: Introduction to Managing Datasets
  - Creating Parameters
  - Editing Parameters in the Service and Refreshing Datasets and Visuals
  - Working with What if Parameter
  - Implementing Row Level Security

Lab 7: Creating Workspace and Managing Dataset

### **Module 7: Revision session and Q&A session**