Real Time Intelligence in Power BI

Duration: 6 Days (48 Hours)

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 cardinality5 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 CALULATE 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
    - SUMMARIZECOLUMN
    - GROUP BY
    - ADD COLUMN
    - CALENDAR & CALENDARAUTO
- Lesson 6: Working with Time
    - DatesYTD
    - DatesQTD
    - DatesMTD

        - Year on Year growth calculation
        - DateAdd
        - Parellelperiod
        - 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
    - Accessing Power Automate
    - 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: Implement Real-Time Intelligence with Microsoft Fabric

- Lesson 1: Get started with Real-Time Intelligence in Microsoft Fabric
    - Introduction
    - What is real-time data analytics?
    - Real-Time Intelligence in Microsoft Fabric
    - Ingest and transform real-time data
    - Store and query real-time data
    - Visualize real-time data
    - Automate Actions
- Lesson 2: Use real-time eventstreams in Microsoft Fabric
    - Introduction
    - Components of eventstreams

    - Eventstream sources and destinations
    - Eventstream transformations
- Lesson 3: Work with real-time data in a Microsoft Fabric eventhouse
    - Introduction
    - Get started with an eventhouse
    - Use KQL effectively
    - Materialized views and stored functions
- Lesson 4: Create real-time dashboards with Microsoft Fabric
    - Introduction
    - Get started with real-time dashboards
    - Advanced features
    - Real-Time dashboard best practices