

# **Power Bi Course Details**



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#### Module 1: Introduction to Power BI

## Overview of Power BI

- O What is Power BI?
- o Components of Power BI
- o Power BI Service vs. Power BI Desktop vs. Power BI Mobile

# • Getting Started with Power BI

- o Installing Power BI Desktop
- Power BI Interface Overview
- Basic Workflow in Power BI

## **Module 2: Connecting to Data Sources**

#### Data Connection Basics

- Types of data sources supported by Power BI
- o Importing data from different sources (Excel, SQL Server, Web, etc.)

# • Data Transformation with Power Query

- Introduction to Power Query Editor
- Data shaping and transformation
- Combining multiple data sources

## Module 3: Data Modeling

#### Introduction to Data Modeling

- o What is a data model?
- Importance of data modeling in Power BI

# Creating Relationships

- Understanding relationships in Power BI
- o Creating and managing relationships between tables

## Data Modeling Techniques

- o Star schema vs. Snowflake schema
- Normalization and denormalization

## Module 4: DAX (Data Analysis Expressions)

## • Introduction to DAX

- o What is DAX?
- Basic DAX syntax and functions
- Basic DAX Functions

- Aggregate functions (SUM, AVERAGE, COUNT)
- Logical functions (IF, AND, OR)
- Text functions (CONCATENATE, LEFT, RIGHT)

#### Advanced DAX Functions

- Time intelligence functions (YTD, QTD, MTD)
- o Filter functions (FILTER, ALL, CALCULATE)
- Table functions (SUMMARIZE, ADDCOLUMNS)

## Module 5: Data Visualization

#### Introduction to Visualizations in Power BI

- Types of visualizations
- Best practices for data visualization

## • Creating Basic Visuals

- o Bar charts, Line charts, Pie charts
- o Tables and matrices
- Cards and KPIs

## Advanced Visualizations

- o Slicers and filters
- o Drill-through and drill-down reports
- Custom visuals

#### Module 6: Power BI Service

# • Introduction to Power BI Service

- o Publishing reports to Power BI Service
- Managing datasets and reports in Power BI Service

## Workspaces and Dashboards

- Creating and managing workspaces
- Building and sharing dashboards

## Collaborating and Sharing

- Sharing reports and dashboards
- Row-level security (RLS)
- Embedding Power BI content

#### Module 7: Power BI Mobile

## • Introduction to Power BI Mobile

- Overview of Power BI Mobile app
- o Viewing and interacting with reports on mobile

## • Designing for Mobile

- Creating mobile-optimized reports
- Best practices for mobile report design

# **Module 8: Advanced Topics in Power BI**

## Power BI and Excel Integration

Using Power BI Publisher for Excel

Importing Excel workbooks into Power BI

# • Power BI and Azure Integration

- Connecting to Azure services
- Using Power BI with Azure Machine Learning

## • Performance Optimization

- Best practices for performance tuning
- Optimizing DAX queries and data models

# **Module 9: Custom Visuals and Development**

# • Using Custom Visuals

- o Importing and using custom visuals from the marketplace
- o Creating custom visuals with R and Python

#### Power BI API and Automation

- Introduction to Power BI REST API
- o Automating tasks with Power BI API

## • Embedding Power BI Reports

- o Embedding reports in web applications
- Using Power BI Embedded service

#### Module 10: Governance and Administration

## Power BI Administration

- Managing Power BI settings and tenant
- User and group management

## • Data Governance

- o Implementing data governance policies
- Monitoring usage and performance

## Compliance and Security

- Ensuring data compliance
- Implementing security best practices

# Conclusion and Final Project

## Final Project

- o Developing a comprehensive Power BI solution for a real-world scenario
- Implementing learned concepts and best practices
- Presentation and review of the final project

## • Course Review and Q&A

- Recap of key concepts
- Addressing student questions and feedback

## • Certification

- o Course completion certificate
- o Guidance on further learning paths and resources