This course offers a detailed, hands-on approach to mastering data modeling in Power BI. The methodology includes:

- Instructor-led demonstrations: Detailed walkthroughs of Power BI data modeling concepts and best practices.

- Practical exercises: Participants will build complex data models using real-world datasets, gaining practical experience.

- Collaborative learning: Group discussions and peer-to-peer learning to tackle common data modeling challenges.

- Case studies: Application of data modeling techniques to solve real business problems.

- Feedback and evaluation: Continuous feedback to help refine participant skills in building optimized data models.

Course Overview

The Power BI Data Modeling course is designed to provide participants with the skills required to design, build, and optimize data models in Power BI. The course covers data modeling fundamentals, advanced techniques, and best practices for creating efficient, scalable models. By the end of the course, participants will be able to design data models that support complex analysis and reporting needs.

What You Will Learn

Power BI Data Modeling

- Data Relationships: Understanding how to create and manage relationships between different data sources in Power BI.

- Normalization and Star Schema: Learn about data normalization and star schema design for better performance.

- DAX Calculations: Use Data Analysis Expressions (DAX) to build calculated columns, measures, and custom aggregations.

- Optimizing Models: Techniques for reducing model size and improving performance in large datasets.

- Data Governance: Applying data security and governance best practices within Power BI models.

Who Should Learn

- Data Analysts: Individuals responsible for managing and analyzing complex datasets.

- Business Intelligence Professionals: BI professionals looking to enhance their data modeling skills in Power BI.

- Data Architects: Those who design and manage data infrastructures and need to optimize models for Power BI.

- Financial Analysts: Professionals handling financial data who require optimized models for analysis and reporting.

- IT Managers: Those overseeing data systems and reporting infrastructure in organizations.

5 Training Modules

Module 1: Fundamentals of Data Modeling in Power BI

Power BI Data Modeling

- Understanding data models and relationships.

- Creating and managing data relationships between tables.

- Introduction to one-to-many, many-to-many, and one-to-one relationships.

Module 2: Star Schema Design and Data Normalization

- Designing star schema models for improved performance.

- Best practices for data normalization and denormalization.

- Organizing fact and dimension tables for efficient querying.

Module 3: Advanced DAX Calculations and Measures

- Creating calculated columns and measures with DAX.

- Building advanced DAX formulas for custom aggregations.

- Using DAX to implement complex business logic in data models.

Module 4: Optimizing Data Models for Performance

- Techniques for reducing model size and improving query performance.

- Implementing aggregations, partitions, and columnstore indexing.

- Best practices for handling large datasets and optimizing refresh rates.

Module 5: Data Security and Governance in Power BI

- Applying row-level security to restrict data access.

- Managing permissions and roles within Power BI models.

- Ensuring data governance and compliance in shared environments.

Conclusion

Power BI Data Modeling

By the end of the Power BI Data Modeling course, participants will have gained a deep understanding of how to build and optimize data models in Power BI. They will be able to create efficient, scalable models that support complex reporting and analysis requirements, making this course ideal for data analysts, BI professionals, and IT managers looking to elevate their data modeling skills.