

COURSE GLOSSARY

Data Modeling in Power BI

Append (Append Queries / UNION ALL): A Power Query operation that stacks the rows of two or more tables into a single table, matching columns by name and equivalent to SQL UNION ALL

Column extraction: The process of creating a new table from distinct values of one or more columns (often to form a dimension), retaining the key in the original table for relationship building

Column splitting: A transformation that breaks a single column into multiple columns based on delimiters, fixed character positions, or other split criteria to separate embedded values

Column: A named field in a table representing a single attribute or variable, which can have a defined data type and formatting

Data modeling: The process of designing and building a data model, including cleaning, transforming, and structuring data so it is efficient, consistent, and easy for business users to query and interpret

Data type: The classification of values stored in a column (for example, text, integer, decimal, date/time) that constrains allowed operations and can optimize storage and performance

Database normalization: A set of design principles and processes for structuring tables to reduce redundancy and ensure data consistency, often by splitting data into related tables with keys

Dimensional model (Kimball model): A data modeling approach that organizes data into fact and dimension tables arranged as star schemas to simplify analysis and improve query performance

Fact table: A central table in a dimensional model that stores measurable, numeric business events or transactions (facts) along with foreign keys that link to related dimension tables

Key: A column or set of columns that uniquely identifies a row within a table and is used to establish relationships between tables

Lookup (reference) table: A compact table that stores distinct attribute values and their meanings (for example codes and descriptions) used as a dimension to reduce redundancy and support joins

Measure: A numeric value or aggregation (such as sum, count, or average) stored or calculated for analysis, typically found in fact tables and used in visualizations

Merge (Query merge / Join): A Power Query operation that combines columns from two tables based on matching key values, analogous to SQL join operations, to bring related data together

Performance Analyzer: A Power BI tool that records and reports timing for visual queries, DAX processing, visual rendering, and other operations to help diagnose and optimize report performance

Power BI: A Microsoft business intelligence platform for importing, modeling, visualizing, and sharing data-driven reports and dashboards

Power Query: The data preparation and ETL (extract, transform, load) editor used by Power BI and other Microsoft products to import, clean, transform, and shape data before loading it into a data model

Relationship: A defined link between two tables, typically using matching key columns, that enables queries and visualizations to combine related data across tables

Snowflake schema: A dimensional modeling variant where dimension tables are normalized into multiple related tables to represent hierarchies, reducing redundancy but increasing complexity

Star schema: A dimensional modeling pattern where a central fact table is surrounded by denormalized dimension tables, forming a star-like shape and prioritizing ease of use and query performance

Table: A structured collection of data organized into rows and columns where each row represents a record and each column represents an attribute