**Data Modelling in Power BI  
  
Fact Table:**   
A fact table is the central table in a star or snowflake schema that contains quantitative data for analysis. It typically includes keys to dimension tables.

**Dimension Table**  
A dimension table contains descriptive attributes (or fields) related to dimensions in a fact table.

**Primary Key**  
A primary key is a column (or a set of columns) in a table that uniquely identifies each row in that table.

**Foreign Key**  
A foreign key is a column in one table that is a primary key in another table. It creates a relationship between the two tables.

**Star Schema**  
 A star schema is a type of data model in which a central fact table is connected to one or more dimension tables directly, forming a star-like structure.

**Snowflake Schema**  
 A snowflake schema is a more complex data model where dimension tables are normalized, meaning they are broken down into sub-dimension tables. This leads to a more complex structure resembling a snowflake.

**Relationships in Power BI**  
Power BI supports different types of relationships between tables

**One-to-One**: Each row in Table A is related to only one row in Table B and vice versa.

**One-to-Many**: A row in Table A can relate to many rows in Table B. This is the most common type.

**Many-to-One**: Similar to One-to-Many, but in reverse order.

**Many-to-Many**: Both tables can have multiple matching rows. This can lead to ambiguity and incorrect results in reports.

**Ways to Avoid Many-to-Many Relationships**:

- Use bridge tables to resolve many-to-many relationships.

- Normalize data where applicable.  
  
  
**Active Relationship**

* An **active relationship** is the default relationship used by Power BI in calculations and visualizations.
* Only **one active relationship** can exist between two tables at a time.
* It is shown as a **solid line** in the model view.
* Power BI uses the active relationship automatically for filtering and aggregations.

**Inactive Relationship**

* An **inactive relationship** is not used by default in reports and calculations.
* It is shown as a **dashed line** in the model view.
* You can have **multiple inactive relationships**, but only one can be active at a time for filtering.
* It must be **explicitly activated** using the USERELATIONSHIP() function in DAX.