

Part - 5

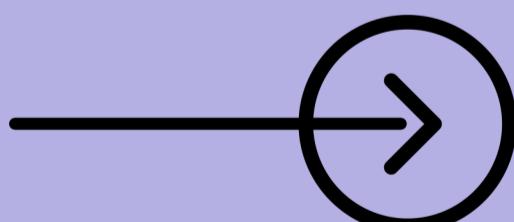
Data Modelling

Interview

Questions and Answers...!



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What rules must be followed in creating a relationship between two tables in Power BI?

When creating relationships between tables in Power BI, it's essential to follow certain rules and best practices to ensure your data model is robust and efficient.

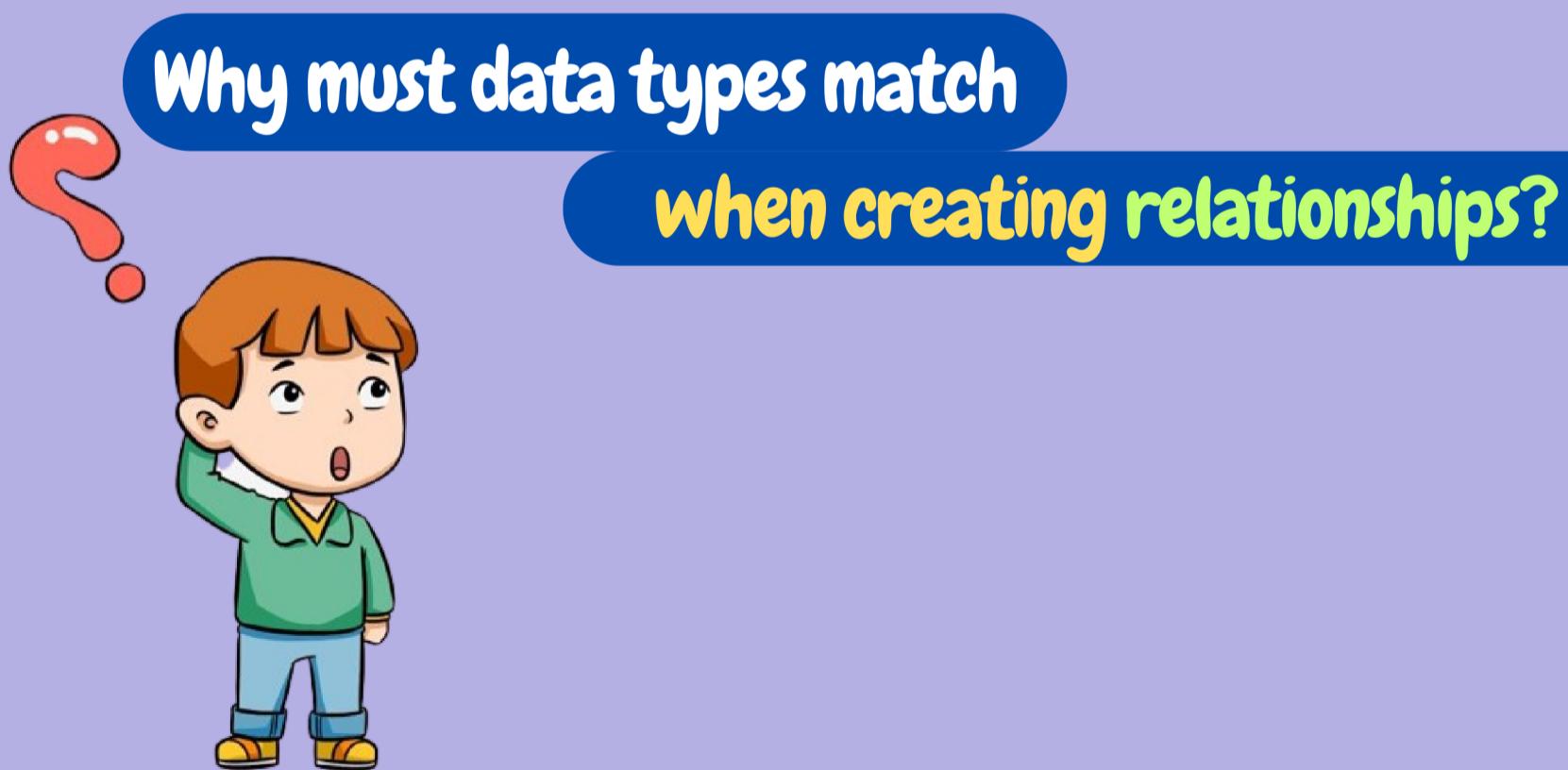
What is the importance of primary key - foreign key relationships in Power BI?



Primary-Foreign Key Relationship:

- Ensure that one table (usually a dimension table) has a unique primary key, which will be referenced by another table (usually a fact table) through a foreign key.

Example: A Customer table with a unique CustomerID and a Sales table that references CustomerID.



Data Types Must Match:

- **The columns used to create the relationship must have the same data type.**

Example: If CustomerID in the Customer table is an integer, CustomerID in the Sales table must also be an integer.

How do you define the correct cardinality
in Power BI relationships?



Cardinality:

- Define the correct cardinality of the relationship, which can be one-to-one (1:1), one-to-many (1:), or many-to-many (:*). Most relationships are one-to-many.

Example: One Customer can have many Sales records, forming a one-to-many relationship.

What is cross-filter direction in Power BI

and why is it important?



Cross-Filter Direction:

- Determine the appropriate cross-filter direction (single or both). Single direction is usually preferred for performance and simplicity.

Example: If you set the relationship to filter from Customer to Sales, filtering Customer will affect Sales, but not vice versa.

Can you explain **active** and **inactive**

relationships in Power BI ?



Active vs. Inactive Relationships:

→ You can have multiple relationships between tables, but only one can be active at a time. Use inactive relationships with DAX functions if needed.

Example: Between Orders and Dates, you might have an active relationship on OrderDate and an inactive one on ShipDate.

Why is it important to use consistent

naming conventions?



Consistency in Naming Conventions:

→ **Use consistent and descriptive naming conventions for columns and tables to ensure clarity and ease of understanding.**

Example: CustomerID in both the Customer and Sales tables ensures clarity.

What **should** you do to **avoid**
many-to-many relationships?



Avoid Many-to-Many Relationships When Possible:

→ **Structure your data to avoid many-to-many relationships due to their complexity and potential performance issues. Use bridge tables if necessary.**

Example: Use a BridgeTable to link Products and Orders in a many-to-many scenario.



**How do you ensure data integrity
in your relationships?**



Data Integrity:

→ Ensure your data has no orphan records (records in the fact table without corresponding records in the dimension table). Clean your data before creating relationships

Example: Ensure every CustomerID in Sales has a corresponding CustomerID in Customer.

How can you optimize your data model's performance regarding data types and columns?



Optimize Data Types and Columns:

→ **Use appropriate data types and remove unnecessary columns to optimize model performance.**

Example: Use integers for IDs and remove columns not needed for analysis.



wanna see some
Counter Questions

1 . What is the difference between single and bi-directional cross-filtering?

→ **Single-direction cross-filtering allows filters to flow from one table to another in one direction, optimizing performance.**

Bi-directional cross-filtering allows filters to flow both ways, which can be useful in complex models but may impact performance.



Next Question

2. How do you handle multiple relationships between two tables?

→ Power BI allows only one active relationship at a time. For additional relationships, you can use inactive relationships and activate them using DAX functions like **USERELATIONSHIP** in calculations.



3. Why might you want to avoid many-to-many relationships in your data model?

→ Many-to-many relationships can be complex and may negatively impact performance. They often lead to ambiguous results in queries.

Using bridge tables can help manage these relationships more efficiently.



**Motu kya kar rha hai yaar,
Last Qestion or dekh lo**



4. What steps do you take to clean your data before establishing relationships?

→ Clean data involves removing duplicates, handling null values, and ensuring there are no orphan records.

This can be done using Power Query Editor tools such as Remove Duplicates, Replace Values, and performing joins to validate data integrity.



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