

Part - 10

Data Modelling

Interview

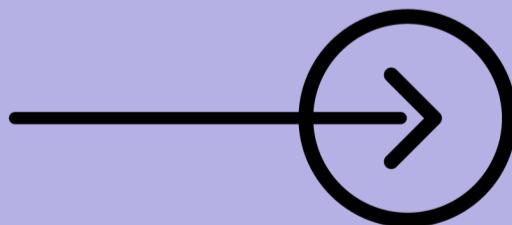
Questions and Answers...!



Sharing with
Counter questions ↑



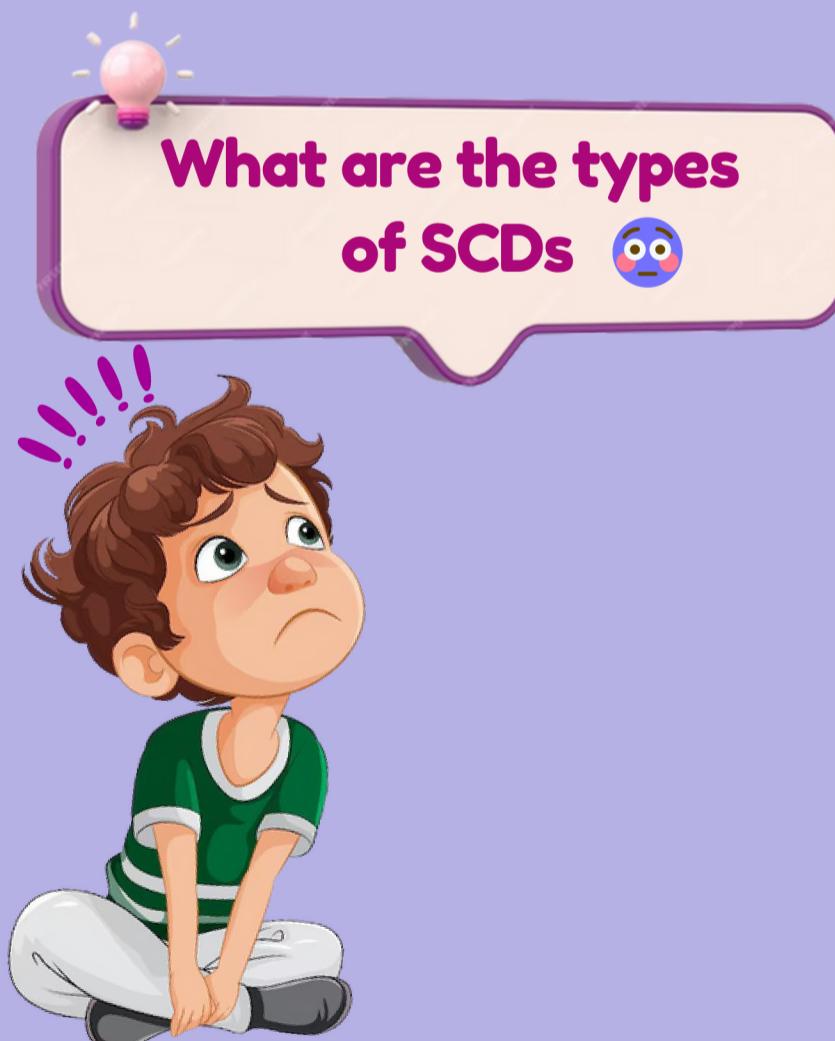
krishna kumar
@Krishan kumar



How do you handle slowly changing dimensions (SCDs) in your data model?

→ **Handling Slowly Changing Dimensions (SCDs) in a data model involves managing changes in dimension data over time.**

There are different types of SCDs, and the approach to handle them depends on the specific requirements of the data model.



Types of SCDs

- ➡ • **Type 0 (Fixed): No Changes Allowed.**
Once data is entered, it remains unchanged.
- **Type 1 (Overwrite): Update with New Data.**
Old data is overwritten with new data, and history is not preserved.
- **Type 2 (Add New Row): Preserve History.**
A new row is added with a new surrogate key whenever changes occur, preserving historical data.
- **Type 3 (Add New Column):**
Track Limited History:
An additional column is added to store the previous value, allowing limited history tracking.



okayy.. how we handle SCDs

How to handle it

→ **To handle slowly changing dimensions in Power BI, I typically use Type 2 (Add New Row) to preserve historical data.**

This method ensures that all changes are tracked accurately, and historical data can be analyzed effectively.

This approach is crucial for data integrity and enables comprehensive historical analysis.



Nice.. why it is Important to Data analyst & Scientists

Why it's Important

- ➡ • **Data Integrity:** Ensures the accuracy and consistency of historical data.
- **Historical Analysis:** Allows for meaningful historical analysis and trend identification.
- **Regulatory Compliance:** Helps in compliance with regulations that require historical data tracking.



wanna see some
Counter Questions

1. How do you decide which SCD type to use in a given scenario?

→ **The choice depends on the requirement for historical data tracking.**

Use Type 1 if history isn't important and you only need the latest data.

Use Type 2 if preserving full history is crucial.

Use Type 3 if you only need limited historical context, like tracking the previous value.

Next Question



2. What are the challenges associated with implementing Type 2 Slowly Changing Dimensions?

→ **Implementing Type 2 can lead to larger table sizes due to the addition of new rows for each change.**

It may also complicate queries and reporting as you need to handle multiple rows for the same entity.



3. Can you provide an example of a scenario where Type 3 Slowly Changing Dimension might be preferable?

→ Type 3 is useful when you only need to track the most recent change and the previous value, such as tracking a customer's current and previous address for short-term analysis.



4. How would you handle SCDs in Power BI if you need to join historical data with current data?

→ Use Type 2 dimensions to join historical and current data by including valid-from and valid-to date ranges or flags in your tables.

This setup allows you to filter data based on the required time periods for accurate joins and analysis.



5. What performance considerations should be taken into account when using SCDs in a large dataset?

→ Performance can be affected by increased table size and complexity due to additional rows (Type 2) or columns (Type 3).

Indexing and query optimization strategies are crucial to ensure efficient data retrieval and processing in large datasets.



**you completed one interview question
with me,**

can you do me a favour



Find This Useful



**Time to hit that like button
and give it some love! 😍**

Visit my LinkedIn for such amazing Content 😊

[in krishan kumar](#)