

Data Analyst Interview Questions

Part 1

Difficulty Level:



DATA MODELING:

1

What is Cardinality? Explain its types.

Difficulty: 🤖🤖🤖 🧠🧠

----- Try to answer before checking the answer -----



Cardinality in databases refers to the maximum number of times an instance of an entity can participate in a relationship.

There are four main types of cardinality:

► **One-to-One (1:1):**

A single instance in one entity is associated with only one instance in another entity, and vice versa.

► **One-to-Many (1:N):**

This type represents a common relationship where a single instance in one entity is associated with many instances in another entity.

► **Many-to-One (N:1):**

This is the opposite of the one-to-many relationship. Here, many instances in one entity are associated with a single instance in another entity.

► **Many-to-Many (N:N):**

This type of relationship occurs when multiple instances in one entity are associated with multiple instances in another entity.

2

Where are Many-to-Many Relationships Used?

Difficulty: 🤖🤖🤖🤖🤖

----- Try to answer before checking the answer -----

Many to Many Relationship



Many-to-many relationships are used in scenarios where instances of two different entities can have multiple associations with each other.

Products and Orders: In an e-commerce system, each order can contain multiple products, and each product can be part of multiple orders.

"Refer to this resource for a deeper understanding of Data Modeling concepts."



SQL:

3

What is a Null Value? Is a Null Value Equal to Zero?

Difficulty: 🤖🤖🤖🤖🤖

----- Try to answer before checking the answer -----



Null: In the context of databases, a null value represents the absence of any value or a 'missing' value. Null values are distinct from an empty string or a zero value.

Null: Represents missing or unknown data.

Zero: Represents a specific value, in this case, nothing or none.

Example: Consider a database tracking the number of books a user owns. If a user hasn't added this information, the field might be marked as null. This signifies that we don't know how many books they have, rather than confirming they own zero books.

POWER BI:

4

What are Power BI paginated reports, and when would you choose to use them over standard interactive reports?

Difficulty: 🤖🤖🤖🤖💡

----- Try to answer before checking the answer -----



Paginated reports are reports designed to be printed or shared. They are called "paginated" because they are formatted to fit well on a page. They allow for precise control over layout and can display all the data in a table, even if it spans multiple pages.

This type of report is ideal for creating invoice statements, operational reports, or any scenario where a specific, fixed format is required.

While standard interactive reports in Power BI are excellent for exploratory analysis and interactive data visualization, paginated reports fill the need for highly formatted, distributable, and printable reports where layout and structure are more important.

5

What is a Slicer?

Difficulty: 🤖 🤖 🤖 🤖 🤖

----- Try to answer before checking the answer -----



In Power BI and other data visualization tools, a slicer is a graphical filter. It allows users to filter the data displayed in reports and dashboards dynamically. Slicers provide a more interactive experience, enabling end-users to focus on specific segments of data, like dates, regions, or products, without altering the underlying queries.



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