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Notes on FQD's, FQTN's, and Taxonomies

Fully Qualified Domains (FQDs)

- Offer convenient and organizational benefits
- Allow specific address of a server
- Identify resources without confusion

Qualified means that the domain name is specific and can be uniquely identified

An example or analogy of this can be like a home address, which includes house number, street, city, zip code, etc. A FQD is similar to this since every home address is specific and uniquely identifiable.

Fully Qualified Table Names (FQTNs)

- A specific identifier for a table within a DBMS
- Provides all info to uniquely locate a table within a specific database instance
- Used to reference a particular table

Structure: dbName**.**schemaName**.**tableName

Why use FQNs?

- To avoid the collision of names, because there can be column(s) with the same name in 2 different tables or 2 tables with the same name in 2 different databases, which causes collisions

Taxonomies

What is a Data Taxonomy?

- A way to organize and classify data
- Involves creating a hierarchy of categories/subcategories

Benefits

- Easier to access / find data
- Data sources are clear
- Easier to communicate with
- Better data quality
- Avoids duplication

How to Build a Taxonomy

1. Identify goals/objectives
2. Plan a structure
    - Organize tables that have similar info
3. Define and classify the terms and categories
4. Implement the taxonomy to systems

Its best to regularly review and update the Taxonomy as data becomes consistent and grows.

QUESTIONS

Review how T-SQL uses the CREATE TYPE statement and how it functions similarly to the ANSI SQL CREATE DOMAIN standard.

The CREATE TYPE is used to make our own data type on an existing one and so its similar to the ANSI SQL CREATE DOMAIN because this command also lets you make a custom data type with specific rules

Analyze the benefits of implementing Fully Qualified Domains within a Taxonomy, focusing on data consistency, reusability, and governance.

For consistency, it ensures that the systems use the same format for the data.

Reusability: the domain can be used in many other systems without redefining it

Governance: easier to manage and check data

Discuss the importance of Fully Qualified Table Names in maintaining clarity, referential integrity, and scalability across heterogeneous database environments.

- Helps identify which database, schema, and table is being used
- Prevents confusion between tables with the same name in different schemas or db's
- Supports growth in multiple databases and is organized

RESOURCES:

DOMAIN

https://www.sql-aide.com/domains/domains/

https://people.cs.pitt.edu/~chang/156/04reldb.html#:~:text=A%20domain%20is%20a%20set%20of%20legal,of%20different%20types%20should%20not%20be%20allowed

FQD

https://www.networksolutions.com/blog/what-is-fqdn-example-meaning/#:~:text=A%20fully%20qualified%20domain%20name%20(FQDN)%2C%20also,be%20uniquely%20identified%20without%20needing%20more%20information.

FQTN

https://www.tektutorialshub.com/sql-server/fully-qualified-table-names-in-sql-server/

TAXONOMIES

https://hightouch.com/blog/what-is-data-taxonomy