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Date: 11/09/25

Class: CSCI 331

## FULLY QUALIFIED DOMAINS

### **What is a domain ?**

A domain is a data type with optional constraints. They are useful for setting 'global' constraints. For example, if multiple tables store phone numbers, instead of writing the same validation rule repeatedly for each table, we can define a PhoneNumber domain once, and then reuse it wherever a phone number is needed. This promotes consistency and avoids errors.

### **What do we mean by a FULLY QUALIFIED Domain?**

A fully qualified domain is simply a domain whose name is unique, and clearly understood, and includes the schema or taxonomy it belongs to. This makes the domain name clear and prevents confusion when different parts of the organization may use similar domain names.

For example:

- Not qualified domain: Email
- Qualified domain: Nissan.Employees.Email **OR** Nissan.Customers.Email

## FULLY QUALIFIED TABLE NAMES (FQTN)

### **What is a fully qualified table name ?**

A fully qualified table name consists of three parts. The database name which the schema belongs to, the schema name which the table belongs to, and the actual table name.

### **Why do we need FQTN's?**

In practice, many systems contain multiple items that may be different with the same name. For example, there could be two 'Employees' tables:

1. One in the Sales database
2. One in the Admin database

Just saying 'Employees' is not enough, we need the full reference now. Such as,

1. SalesDB.dbo.Employees
2. AdminDB.dbo.Employees

We are essentially creating parent and child hierarchies, where each level can help us identify more clearly where this element we are looking at lives. Similar to the fully qualified domain, where we are specific about what the data means, fully qualified table names require us to be very specific about where the data is located.

## TAXONOMIES:

### ***What are data taxonomies?***

A data taxonomy is a way of organizing and classifying data. It involves creating a hierarchy of categories along with their subcategories that can be used to organize the data consistently. As database systems grow, they can become extremely difficult to work with, some users may not even know what data is available, however building a data taxonomy fixes this for us.

## **Sources**

- <https://www.geeksforgeeks.org/sql/sql-create-domain/>
- <https://www.tektutorialshub.com/sql-server/fully-qualified-table-names-in-sql-server/#fully-qualified-table-name>
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