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Fully Qualified domain: -

A Fully Qualified Domain means the database knows *exactly* what kind of value is allowed in a column — including its type, size, and constraints (rules).

Advantage: -

1. Consistency data formation
2. Reuse of rule whenever needed

Example of not using Domain

```
CREATE TABLE U (
```

```
    ID INT PRIMARY KEY,
```

```
    Email VARCHAR(255)
```

```
);
```

Here, Email is just a string — you can insert anything:

```
INSERT INTO U VALUES (1, 'hero');
```

```
INSERT INTO U VALUES (2, 'aaalu');
```

That's bad because those aren't valid emails.

Example of using domain

```
CREATE DOMAIN email AS VARCHAR(255)
```

```
    CHECK (VALUE LIKE '%@%.%');
```

```
CREATE TABLE U(
```

```
    ID INT PRIMARY KEY,
```

```
    EMAIL email NOT NULL
```

);

If you insert bad data:

```
INSERT INTO U VALES(1, 'not-an-email');
```

You'll get an error, Because your domain rule stops it.

Fully Qualified Table Name:-

Fully Qualified Table Name is combination of database name, schema name and table name which tells the database complete path to find the table.

For eg. Sales.dbo.Employees

Advantages

1. When multiple table share same name, we can reference exact table
2. Enables reliable joining tables
3. Makes easier to understand

For example :-

Sales.dbo.Employees is different than admin.dbo.Employees even both table have same Employees name.

Taxonomies :-

Taxonomies is a way to organize data in a hierarchy (like a tree).

We can use taxonomies when one item belongs inside another.

For eg :-

Electronics

Computers

Laptops

Gaming laptops

```
CREATE TABLE Categories(
```

```
CategoryID INT PRIMARY KEY,
```

```
CategoryName VARCHAR(100),
```

```
ParentCategoryID INT NULL
```

```
);  
INSERT INTO Categories VALUES  
(1, 'Electronics', NULL),  
(2, 'Computers', 1),  
(3, 'Laptops', 2),  
(4, 'Gaming Laptops', 3);
```

This means:

Electronics is the parent of computers

Computers is the parent of Laptops

Laptops is parent of Gaming laptops

Now when we type

```
SELECT * FROM Categories WHERE ParentCategoryID= 2
```

This shows Laptops,because it's under computer