**PostgreSQL: Types vs. Domains**

In PostgreSQL, both types and domains are fundamental concepts for defining the structure and constraints of data. Understanding their differences is crucial for effective database design.

**-Types :**

Types define the basic nature of the data, such as its storage format and the operations that can be performed on it.

**Example**:

CREATE TABLE employees (  
    id serial PRIMARY KEY,  
    name text,  
    age integer,  
    salary numeric(10, 2),  
    hire\_date date  
);

**-Domains :**

**Definition**: Domains are user-defined types based on existing base types. They allow you to add constraints to restrict the set of valid values.

**Example**:

CREATE DOMAIN positive\_integer AS integer CHECK (VALUE > 0);  
  
CREATE TABLE products (  
    id serial PRIMARY KEY,  
    quantity positive\_integer,  
    price numeric(10, 2)  
);

**Difference Between Domain and Type in PostgreSQL :**

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| **Feature** | **Domain** | **Type** |
| Definition | A domain is a refined version of an existing data type with additional constraints. | A type is a completely new data structure that can hold multiple attributes. |
| Purpose | Enforces constraints across multiple tables without repeating them. | Groups multiple values into a structured format for better data management. |
| Flexibility | Limited to modifying existing types with extra validation rules. | Can hold multiple attributes and be used in tables, functions, and procedures. |
| Usage | Used mainly for enforcing consistent validation. | Used for defining structured objects in tables or functions. |
| Example | CREATE DOMAIN positive\_integer AS INTEGER CHECK (VALUE > 0); | CREATE TYPE address\_type AS (street VARCHAR(255), city VARCHAR(100), state VARCHAR(50), zip\_code VARCHAR(10)); |