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This video is all about how to improve our current data modeling architecture. It puts a focus on User-Defined Datatypes (UDTs) more specifically on how they can be used and their benefits. A User-Defined Datatype is a custom datatype that fits the needs of the database. It allows for more flexibility, empowering developers to define data types tailored to specific requirements. Instead of using the system database datatypes (such as varchar(10)), UDTs enable you to make your own types with constraints and checks to make sure your data is correct. This makes it less prone to errors. In other words its abstraction, which allows for reusability and reliability. For example, instead of directly telling the database to store a person's name as text, you could create a constraint that says, "Name should always be stored as text, but it should also have a maximum length of 50 characters." Then, whenever you need to store a name, you just follow that rule.

UDT Taxonomy is another central concept in the video. It organizes UDTs in a hierarchical classification system based on what they are and how they are used. It keeps UDT naming conventions standard. UDT Taxonomy makes databases more consistent and easy to understand. UDT Metadata Taxonomy is another important concept that is also structured hierarchically, with parent domains, subdomains, and physical database schema names which allows for searchability and easier maintenance. It builds on the SOLID design principles. The SOLID principles, in short, state that each UDT should have one job, keeping it simple; implementations should be flexible, using abstractions instead of specific concrete implementations; UDTs can operate independently from the database; the ability to expand or modify the UDT design without disrupting what's already there; and finally, UDT Metadata stays modular and independent by avoiding unnecessary dependencies. UDT Metadata Taxonomy also builds on Object Oriented Programming (OOP) which makes sense since UDTs can be considered a type of “object”, and although inheritance isnt directly used the hierarch structure is similar due to the relationships between UDTs.

Simplifying data modeling architecture through these concepts enhances the organization and management of data and improves the overall efficiency and reliability of database systems. By using these basic principles when designing and using UDTs and their taxonomies, data modeling becomes strong, flexible, and easy to handle. It allows for easier workflow due to how seamless it is to integrate UDT taxonomies since it doesn’t compromise the system integrity. Additionally, it makes databases adaptable and more secure in the long run. Moreover, it doesn’t only benefit developers, it also makes it more intuitive and accessible to people across the organization (including business people/stakeholders), leading to improved decision-making and overall business success.