

Jude Pierre

Prof. Heller

CSCI 331

4/26/2024

Video Analysis

The video makes a proposal to develop data modeling architectural strategies for any DM architecture using UDT (user-defined types) metadata taxonomies. UDTs are custom data types that are created from primitive types provided by the database or other UDTs and can be combined with domain constraints for better modeling. UDT metadata gives us information about UDTs. The benefits of implementing UDTs and UDT metadata taxonomies into an architecture are flexibility in organizing and structuring data for analysis, easier maintenance and searchability in an architecture, and easy adoption.

A user-defined type metadata taxonomy categorizes and organizes the UDTs within a database by their names and other attributes. UDT metadata taxonomy design is also based on SOLID principles for the OOP paradigm. Therefore, the benefits are similar. UDT metadata taxonomy is structured hierarchically, therefore UDTs have fully qualified names that contain the domain parent. The domain parent is represented by the domains, subdomains, as well as the physical DB schema name. Thus, a UDT metadata taxonomy would also be in alphabetical order and with groupings because of the UDTs having fully qualified names.

Standardizing the format of UDT metadata taxonomies will ensure the efficient use of UDTs because it will ensure that data is entered consistently into the architecture. It will also be better for making business decisions because querying and searching for information will be much easier, and more accurate. Additionally, UDT names can also be reused across different databases, forming sub-taxonomies, which creates a standard for the UDT names across the databases and thus the entire architecture.