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***When you use a SQL UDF:***

SQL UDFs are used when applying specific logic to parts of your database. UDFs are valuable whenever you encounter frequent calculations, transformations, or standard business logic. This is especially true when multiple queries require the same reasoning, reducing redundancy and ensuring consistency of results. For example, if you frequently calculate shipping costs based on distance and weight, creating a UDF can simplify queries and ensure accuracy. Additionally, UDFs help download functionality robustly from a space, increasing the readability of your SQL code and simplifying implementation over time.

***The differences between Scalar, Inline, and Multi-Statement Functions:***

There are three main types of SQL UDFs: Scalar, Inline, and Multi-Statement Functions, each with unique characteristics.

Scalar functions: Scalar functions return a value for each input parameter. They are suitable for simple arithmetic where a single result is obtained, such as converting units or performing arithmetic operations. Scalar functions can be used directly in SELECT statements, WHERE clauses, and expressions.

Inline Functions: Inline functions return a table result with a single SELECT statement. They are helpful for grades that can be easily entered into more extensive quizzes. Inline functions provide efficiency because they are designed according to the query, and their logic aligns with the main question.

Multi-Statement Functions: Multi-statement functions return a table but contain multiple SQL statements in their body. These functions can be more complex and multifunctional than inline functions because they support complex logic. However, they may be less desirable compared to inline tasks due to the possibility of complicated processing.

Conclusion:

SQL user interfaces are potent tools that simplify database operations by making sense of consistent and reusable operations. Depending on the situation, Scalar, Inline, or Multi-Statement Functions can be used to achieve specific functions with varying degrees of complexity and efficiency.