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Assignment 7 – SQL UDFs and Functions Explained

Introduction

SQL (Structured Query Language) is used to manage and work with data in databases. In this document, we'll look at when to use a SQL User-Defined Function (UDF) and the differences between Scalar, Inline, and Multi-Statement functions.

SQL UDF

A SQL UDF is useful when you need to create a custom function for something that built-in SQL functions can't do. For example, if you have a specific calculation or data transformation that you use a lot, you can create a UDF to handle it. This helps you avoid repeating the same code, making your queries easier to read and more efficient.

Differences Between Scalar, Inline, and Multi-Statement Functions

- **Scalar Functions**: These work with a single value and return one result. You use them when you need to perform an operation on a single piece of data, like calculating the length of a string or changing the format of a date.
- **Inline Functions**: Inline functions return a table of data from a single query. They're quick and great when you need to filter or return data without extra steps.
- **Multi-Statement Functions**: These are more complex and let you run multiple steps before returning a result. For example, you might need to update data or perform calculations. While they're flexible, they can be slower than Inline functions because they involve more steps.

Summary

In summary, SQL UDFs let you create custom functions for things that built-in functions can't do. Scalar functions work with individual values, Inline functions

return a table, and multi-statement functions let you do more complex things. Understanding these differences helps you pick the right function for your needs.