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https://github.com/Y-Kozar/DBFoundations-Module07

Assignment 07

Introduction

This document will explore the use of the SQL User-Defined Function (UDF) and highlight the differences between Scalar, Inline, and Multi-Statement Functions.

Explaining when to use SQL UDF

User-Defined Functions (UDF's) are custom functions in SQL. There are two main types of UDFs: functions that return a single value and those that return a table of values. UDFs are particularly useful when you need reusable logic for repetitive tasks or operations, and they help improve code organization and maintain consistency across multiple queries. Additionally, UDFs can return result sets, allowing them to function like regular tables in queries.

Explaining the differences between a Scalar, Inline, and Multi-Statement Functions

Scalar, inline, and multi-statement functions are distinct types of SQL UDFs, each with different behaviors. A scalar UDF returns a single value and is typically used for operations that generate one result per row. An inline UDF, a type of table-valued function, returns a result set (table) and is defined by a single SELECT statement. A multi-statement UDF, also table-valued, allows multiple SQL statements within the function, providing greater flexibility but potentially slower performance compared to inline UDFs because of the additional complexity and multiple steps.

Summary

In this paper, we discussed SQL User-Defined Functions (UDFs), focusing on the distinctions between Scalar, Inline, and Multi-Statement Functions. It highlights their unique characteristics,

use cases, and performance considerations to provide a clear understanding of when and how to utilize each type of UDFs.