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Foundations of Databases & SQL Programming

Assignment07

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Assignment 07

Introduction

In this seventh week of class, we are learning about the uses of functions within the databases. In this paper, I will explain when to use SQL functions and explain the differences and similarities between a Scalar, Inline and Multi-Statement Function.

When to use a SQL UDF

SQL UDF means SQL User Defined Function. In a UDF, the user can create custom functions. There are 2 different types, one that will return a table of values and a function that returns a single value. Like most things in SQL, like views and stored procedures, the primary purpose of UDF's is to help save time by saving a lengthy or complicated query into a function that can be reused.

Differences and Similarities between a Scalar, Inline and Multi-Statement Functions

Scalar functions return a single value as an expression and can be used to check constraints. An in-line table-valued function just returns a single set of rows. A multi-statement table-valued function is a function which returns a table of data, but only after some additional processing.

All function types can be used with parameters to return data or tables in a reusable manner. They are all used withing queries and with parameters. Each function returns values or a set of values.

Multi-Statement functions take a bit more time to run. The syntax specifies the structure of the return table to be used, whereas with Scalar and Inline is just states either Return or Return table. Scalar will only return a single value, while inline and multi return a table of values. Scalar can consist of many statements while inline consists of a single statement.

Summary

In this paper, I have talked about the use of functions within a database and when to use them. I described the differences and similarities between Scalar, Inline and Multi-Statement Functions.