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Foundations Of Databases & SQL Programming

Assignment 07

https://github.com/dl-11/DBFoundations-Assignment07

Introduction

This week our focus was on Functions and how they can be useful for our work with databases and tables. SQL has built in functions, but you can also create your own custom functions. Functions are reusable code blocks. You can use them to retrieve the date in a specific format, work with currency numbers, generate a SUM, Average, etc.

When you would use a SQL User Defined Function (UDF)

If a SQL built-in function isn't available that meets your needs, you can create your own User Defined Function, also known as a UDF.

A UDF can be used if your business has custom logic that you want to build into the database layer. It could be used for specific data checks beyond the CHECK function. You can use UDFs for advanced calculations beyond the basic aggregations available.

Differences between Scaler, Inline, and Multi-Statement Functions in SQL

First, let's define each of these above. A Scaler function is one that returns a single value. There are two table-valued functions. First are Inline functions return a table. Multi-Statement Functions also return a table but can be used for more complex queries.

No matter how many rows are processed, a scaler function returns one value. A scaler function can be used to calculate a simple value such as a discount.

An inline function is like a shortcut for a single query. The benefit of using is it is you can pass in a parameter to the function. It returns a table which is useful.

Lastly, a multi-statement function is similar to the inline function, in that it returns a table, but you can use multiple SQL statements to populate it. This allows for more complex logic.

Summary

As you see above, functions are quite valuable for working with data. They will allow you to do more complex calculations and also pass in parameters. As we grow our SQL skillset I imagine functions will become a valuable tool to use.