Name: ADinkel

Date: August 23, 2023

Course: IT FDN 130 A

GitHub: https://github.com/adinkelUW/DBFoundations

Assignment 07 – Functions

Introduction

This week was the seventh week of the course. This week largely revolved around the use of SQL's many types of functions – like the module title would suggest. While most of the assignment was about utilizing the default functions that come with SQL, the last question was about making our own user defined function, or UDF.

1. Explain when you would use a SQL UDF

SQL comes with a large assortment of pre-defined functions that a user can utilize when writing code and queries in various SQL tools. However, these won't always be enough to quickly and efficiently do what the user needs SQL to do. In this case, the user could create their own function – a UDF (User Defined Function) – to quickly perform whatever action they need in one simple command. UDFs can also be used to turn a large and reoccurring chunk of code into a single command/function, which would greatly reduce the bulk and time taken to write the query/code.

2. Explain the differences between Scalar, Inline, and Multi-Statement Functions

A Scalar Function is used to return a single value. "Scalar" is essentially just a fancy term for a single value, cell, character, etc., and a scalar function is a function that just runs a process on whatever data was entered, and returns a scalar. Inline and Multi-Statement Functions both return tables instead of scalars, but their structure differs. Inline functions return a basic table structure with little input, while a Multi-Statement function uses a return clause to determine the table structure. Inline functions are more efficient, but more rigid than Multi-Statement functions.

Summary

So, this week we focused on functions. The coding assignment mostly focused on using the prebuilt functions that come with SQL, with the last question requiring us to create our own

function. Meanwhile, the writing assignment focused more on user-defined functions and their properties.

Bibliography

DBFdn Mod07. Randal Root, Updated 21 April 2023, https://www.youtube.com/playlist?list=PLfycUyp06LG9wAGPKBZ7poKBcbDZrmXpi Accessed 22-23 August 2023.

SQL Functions. W3 Schools, Updated 2023, https://www.w3schools.com/sql/sql_ref_mysql.asp. Accessed 23 August 2023.