

Name: Jordan Javier

Date: 8/14/2024

Course: IT FDN 130

Assignment 7

Github URL: <https://github.com/javi4609/DBFoundations-Module07>

Functions

Introduction

SQL has the ability to create functions which are blocks of code that perform a task. Functions serve an important role in automating tedious tasks as well as providing consistency when performing a task. In a database context, this can be important to ensure data integrity especially when cleaning data.

User Defined Functions

One type of function in SQL is known as a User Defined Functions or UDFs for short. These are blocks of code that are created by the user to form a specific task. The pro of a UDF is that the user can customize their code to meet the task at hand. UDFs are best suited for repetitive coding tasks that SQL does not have a system function for. For example, let's say you need to format addresses that are stored as a string of letters to be separated out into different columns in a database. You can create a UDF to do that work for you rather than individually editing each string. This can help make coding easier as well as increase the readability of the code.

Types of Functions

There are three types of UDFs: scalar, inline and multi-statement functions. Scalar functions are UDFs that return a single value. I like to think of scalar functions similar to a calculator. You feed a calculator number into an expression and it returns a single value. Inline functions are similar to scalar functions but the difference is that they return tables or rows of information. This is similar to

creating a view but instead you can have parameters that customize the view. This is especially useful if you have repetitive tasks or views you need to look at.

Multi-statement functions takes inline functions to the next level. They are very similar as they both return tables, the difference is that a multi-statement function can use multiple SELECT, FROM statements for more detailed processing while the inline just uses one.

Summary

To sum up, functions serve an integral part in creating efficient and readable code in SQL.