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Due: 24 August 2022
Foundations of Databases and SQL Programming
Assignment 7
Link: https://github.com/wns213/DBFoundations-Module07

Assignment 07: Functions

Introduction

Functions are a helpful tool in SQL. There are numerous functions a SQL user can utilize, and a user can even create their own functions (UDFs). Most SQL functions return one value (such as GetDate), but you can use them in a SELECT, and apply the function to many rows, saving the SQL user time. In this assignment, I will explore how a user can create their own functions, and the differences between a Scalar, Incline, and Multi-Statement Functions.

Explain when you would use a SQL UDF.

User Defined Functions or UDFs are custom functions. UDFs allow faster execution for a SQL user. If a SQL user had a set of complex string of values that the user needed to reuse, the SQL user could create a UDF to save the set of code to the database. The user would then be able to utilize the UDF whenever they needed to bring up the specific code again.

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

There are two basic functions, and these two functions allow a user to retrieve a table of values or a single value. Custom Scalar functions are sometimes used for Check constraints because you cannot otherwise reference a column in another table. You can create a UDF to return a single (scalar) value as an expression. Unlike a Scalar function, an Inline function returns a table instead of a single value. A multi-statement table-valued function (MSTVF) is similar to an Inline function in that it also returns a table. However, a MSTVF uses multiple SELECT statements – this function is useful, because a SQL user can execute multiple queries within the function and aggregate results into the returned table.

Summary

There are numerous Function provided in SQL, and a SQL user also can create their own Functions (UDF's). Preset and UDF Functions are helpful for a SQL user if they want to save time or keep their code uniform. A Function can return one single value, which is the most common, but it can also return tables data through the use of Inline and Multi-Statement functions.