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Assignment 07

<https://ductheduke.github.io/DBFoundations-Module07/index.html>

SQL Functions

# Introduction

This week, I learned more in depth about SQL Functions. The purpose of this memo is to document the use case of different types of SQL functions.

# When to use a SQL UDF

A SQL UDF is a User Defined Function in SQL. It can be used to define a set of commands that will be repeated multiple times throughout the database so a UDF can be created to store and be called on to invoke those commands. A UDF can apply a set of SQL built-in functions to create a customized function for end users’ benefits.

# Differences between Scalar, Inline, and Multi-Statement Functions

A Scalar UDF returns a single value as a result of performing the actions called by the function. Inline and Multi-Statement UDFs are two types of Table-Valued functions that return a table variable as a result of actions performed by the function, instead of returning a single value as in the case of a Scalar UDF.

The difference between an Inline and a Multi-Statement Table-Valued functions is that an Inline function will only contain a single Select statement to output a table of values, while the Multi-Statement function will create a table variable and add values into that table via multiple insert and select statements so the table of values can be output after calling the function.

# Summary

When developing a UDF, the SQL developer should keep in mind the built-in functions within SQL Server that can be used to incorporate into their customized functions to fulfill the objective of their functions. Beside a Scalar UDF which only returns a single value, Inline and Multi-Statement table-valued functions are more complex in nature to output a table of values.