

**Name:** Brennan Lingo

**Date:** June 4<sup>th</sup>, 2025

**Course:** IT FDN 130 A Sp 25: Foundations of Databases & SQL Programming

## Assignment 5 – Functions

### Introduction

In this assignment, I will be discussing when you would use a SQL UDF and the differences between Scalar, Inline, and Multi-Statement Functions. By the end of this assignment, I hope to demonstrate my knowledge and understanding of these topics.

### When would you use a SQL UDF?

A SQL UDF is used when you want to compute reusable logic that returns values or a table and make your SQL code to be more readable and maintainable.

You would use a SQL UDF when you have a calculation or operation that is used repeatedly across multiple queries so you can just write it once, when you want to return a single computed value based on input parameters, when you want a reusable query that returns a set or table which you can join or query like a table, and when you want to abstract complicated expressions or subqueries.

### What are the differences between Scalar, Inline, and Multi-Statement Functions?

Scalar Functions – This function returns a singular to perform calculations or operations that return a single value.

Inline Table-Valued Functions – This function returns a table result set which helps to encapsulate a single “select” statement that returns a table.

Multi-Statement Table-Valued Functions – This function also returns a table result set but it is used when you need multiple statements, variables, or complex processing to build the table results.

### Summary

In this document, I have explained when you would use a SQL UDF and the differences between Scalar, Inline, and Multi-Statement Functions. Through these topics, I have demonstrated my understanding of the material and my learning progress.