Aggregate Functions, Common Functions, and Windowed Functions

Introduction  
This week, I learned how to use SQL functions to retrieve information from a database. Functions perform calculation on a set of values and return a single value. This assignment focused on creating functions to allow us to perform the set of calculations in the data. Functions are a named collection of SQL programming code. In this assignment, We also learned how to use functions for reporting. To create reporting quiries, you start off with a simple Select statement and then build on it by adding more and more detailed code until you get what you want as a result. These concepts were applied and used in this assignment to perform the requested results.

Explain when you would use a SQL UDF

The programmer uses SQL User-Defined Functions (UDF) to create a function by using a SQL expression. A UDF accepts columns of input, performs actions on the input, and returns the results of those actions as a value. The programmer can use UDFs as either persistent or temporary. The programmer can reuse persistent UDFs across multiple queries while temporary UDFs only exist in the scope of a single query. UDFs cant be used to perform actions that modify the database state and cant contain an output into clause.

Explain the difference between scalar, inline, and multi-statement functions

The difference between scalar inline and multi-statement functions ins that scalar functions is a user defined function written in SQL and it returns a single value each time it is invoked. The scalar function contains the source code for the user-defined function in the user-defined function definition. There are two types of Scalar functions, inline and multi. An inlined function is one that allows you to group multiple SQL statements into an optionally atomic block in which you can declare variables and condition handling elements. A multi-statement function combines the scalar functions capability to contain complex code with the inline table-valued functions capability to return a result set.

Summary

In this assignment, the concepts of functions were further investigated and applied. This assigned allowed the programmer to create different kinds of functions such as scalar, inlined, and multi-statement to achieve the set of results that was requested.