Erin Sweet

May 26, 2021

IT FDN 130

Assignment 7

https://github.com/esweetnd/IT-FND-130-Module-07-Functions

**USING SQL FUNCTIONS**

**INTRODUCTION**

In this paper I will review the several topics related to the use of SQL FUNCTIONS. The learning material for week seven of IT FND 130 described these differences in detail and the week six assignment reiterated these concepts in practice.

WHEN TO USE A SQL USER-DEFINED FUNCTION (UDF)

User defined functions in SQL Server prevent us from writing the same logic multiple times. A function can be created once within a database and used any number of times. UDFs help us separate complex calculations from a regular query. UDFs can be modified independently of the source code. There are two types of SQL UDFs; a scalar function which returns a single value and a table valued function which returns a table.

THE DIFFERENCE BETWEEN SCALAR, INLINE AND MULTI-STATEMENT FUNCTIONS

There are two types of SQL UDFs; a scalar function which returns a single value and a table valued function which returns a table.

User-defined **scalar functions** accept parameters and return a single data value of the type defined in the RETURNS clause. For an inline scalar function, the returned scalar value is the result of a single statement.

User-defined **table valued functions** return a result set of rows in the form of a table instead of a scalar value. This table can be queried and joined with other tables. It is used in conjunction with the FROM or JOIN clause of a SELECT query. Table valued functions can be an alternative to a VIEW as VIEW does not allow parameters whereas table valued functions allow parameters.

User-defined **inline table valued function** tables are the result set of a single SELECT statement which returns a single set of rows. It specifies only RETURNS TABLE. The entire select query inside the function is a single RETURN statement.

User-defined **multi-statement table valued function** definition specifies RETURNS along with the definition of TABLE VARIABLE. It can contain multiple SELECT statements.

**SUMMARY**

There are several useful tools available including the use of functions, which support processing data when working with a relational database. User defined functions in SQL Server can be created once within a database and used any number of times. UDFs help us separate complex calculations from a regular query. There are two types of SQL UDFs; scalar functions which return a single value and table valued functions which return a table of values. Inline scalar or table valued functions return either a single value or a single row of data and are the result of a single statement query. Multi-statement table valued functions may contain multiple SELECT statements.