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GIT Hub URL: https://github.com/jtarrach/DBFoundations.git

Assignment #7 - SQL User Defined Functions

1. Explain when you would use a SQL UDF.

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

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Introduction
Functions are a type of abstraction level in a database, used to transform the base data. SQL has many pre-built functions that allow users to select and view data in a variety of ways. Aggregate functions perform a calculation on a set of values and bring back a single value. Partitioned or Windowed Functions allow you to group data differently than the standard Group By clause. Other functions allow users to parse the data, find data or filter data. Used together, functions allow developers to create powerful reports.

Using a SQL UDF
UDF stands for User Defined Functions. If one of Microsoft's prebuilt functions does not perform the task you wish, you can build your own function. There are two basic types of functions; functions that return a table of values and functions that return a single value. These are

Scalar,Inline,and Multi-Statement Functions
There are several types of user defined functions, scalar, inline and multi-statement. Scalar functions are functions that bring back a single value. They are used to aggregate data or perform a calculation. Inline functions bring back a table from a defined SELECT statement. Parameters can be set to bring back a subset of the data easily, although this can also be accomplished with a WHERE clause in a View. Multi-statement functions bring back a table as well, but combine the results of two SELECT statements into one table.

Summary
In the article, we have reviewed functions in SQL. SQL comes with dozens of prebuilt functions that allow users to aggregate, parse and filter data. If the pre-built functions do not perform the task needed, one can create a custom function. Functions are a useful abstraction layer in databases.