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5/28/2024
IT FDN 130 A
Assignment 07
https://github.com/inosine4wobble/DBFoundations-Module07

User Defined Functions

Introduction

User defined functions (UDF) comprise of SQL script that has been saved in the database and can be called with the function name to return a single value or a table.

When to Use a UDF

Because of the flexible nature of UDFs, they can be used for many purposes. Essentially, if there is SQL script that many users may need to use repeatably then that script is a good candidate to be moved into a UDF. Some common uses include data cleaning (AKA ETL) or checking constraints.

For example, you may want a UDF that formats a phone number as (###) ###-#### regardless of input formatting.

Or another example, a UDF can return the meeting time for an inputted meeting id so that later the SQL statement to insert sign up times can quickly reference the meeting time to ensure that the sign up is always before the meeting.

Scalar, Inline, and Multi-Statement Functions

Scalar UDFs return a singular value, as in the above examples of returning a properly formatted phone number or the meeting time for a particular id.

Inline and multi-statement functions both return a table, but the difference is a inline function only supports a single SELECT statement, whereas multi-statement functions allow for several statements. Multi-statement functions have a specified table variable to return, which is how it's possible to have multiple statements and only return one table.

Summary

User defined functions are a great tool to reduce repetition and complexity in SQL queries.