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<https://uwcora.github.io/DBFoundations-Module07/>

## SQL Functions

### Introduction

I will be outlining when user defined functions are used, as well as the differences between scalar, inline, and multi-statement functions.

### Using SQL User Defined Functions

User defined functions, or UDFs, are used to create custom functions outside of SQL Server's built-in functions and perform tasks such as data processing and complex calculations. These functions can be stored in the database with relative assurance they will not alter the source code of a given program. User defined functions include functions that return a single value, such as a scalar function, and functions that return a table of values based on specific set parameters. UDFs can also be used to check constraints using scalar functions.

### Differences Between Scalar, Inline, and Multi-Statement Functions

While scalar, inline, and multi-statement functions are all considered user defined functions, or UDFs, only scalar functions return a single value as an expression. On the other hand, inline functions return a single set of rows while multi-statement functions return a table of data. Both inline and multi-statement functions are considered table-valued functions. Rather than having to reference a view or stored procedure to return, these types of functions allow you to return a table of data or rows of data.

(WiseOwl Training Website , <https://www.wiseowl.co.uk/blog/s347/table-valued-functions.htm>, 2023)  
(External Site).

### Conclusion

User defined functions can accept parameters, perform actions, and return results from those actions as values. Utilizing UDFs can also reduce the amount of data accessed by users. Because of the ability to use these functions repeatedly, the speed and efficiency of our computations increase.