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[GitHub](https://github.com/DefinitelyNotSamC/DBFoundations)

**SQL Views, Functions, and Stored Procedures**

**Introduction**

This paper will discuss the concept and use-cases of SQL Views, and briefly explore its similarities and differences relative to Functions and Stored Procedures.

**SQL View**

In SQL, a View is essentially a temporary table that contains the results of a query. The View is recreated each time a user queries it, so it will always contain the latest data from its parent tables.[[1]](#footnote-1)

The two most prominent use-cases of Views are (1) to allow users to easily access a commonly used query, (2) to isolate a query from its surrounding code, and (3) to restrict users’ access to specific fields (typically sensitive or private information) within parent table(s).

**Comparison Between Functions and Store Procedures**

While SQL Functions and Stored Procedures are both stand-alone operations that manipulate elements of the database, they do so in drastically different ways. Broadly speaking, a Function is typically used to perform computations, while a Stored Procedure is typically used to perform some programmed logic, usually in a way that manipulates database objects and parameters.[[2]](#footnote-2)

Specifically, this difference is highlighted by the two operations’ input requirements and constraints.

A Function can only take parameter inputs, must return/output a single value, and can be used in SQL queries (SELECT/WHERE/HAVING), but cannot alter database objects, cannot call functions, and cannot use error handling statements.

In contrast, a Stored Procedure is flexible in its input and output requirements, can alter database objects, can call other functions, and can utilize error handling.

**Conclusion**

To conclude, this paper has explored the relation between, and use-cases for, SQL Views, Functions, and Stored Procedures. Basically, a View is used to isolated a query’s results and make it quickly accessible, a Function is used to perform calculations and return a value to be used in other SQL statements, and a Stored Procedure is used to group a set of relatively complex SQL statements.

1. External Source. *SQL Views*. W3Schools. <https://www.w3schools.com/sql/sql_view.asp> [↑](#footnote-ref-1)
2. External Source. (2020, June 18). *Function vs. Stored Procedure in SQL Server*. StackOverflow <https://stackoverflow.com/questions/1179758/function-vs-stored-procedure-in-sql-server> [↑](#footnote-ref-2)