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Assignment 06

## **SQL Views**

### **Introduction**

Database management systems provide tools to constrain access to the database to increase performance, secure data, and make access easier to use. Some of the main methods to do this are VIEWS, functions, and stored procedures. These can be used independently or in conjunction with each other.

### **VIEWS**

A SQL VIEW is a SQL statement stored in a database (tutorialspoint.com). Storing a SQL statement this way provides several organizational benefits. VIEWS can allow data to be structured in a way that is more human readable without a user needing to organize it (tutorialspoint.com). A VIEW can also be used to restrict access to sensitive data in a table while still allowing access to the rest of the table (tutorialspoint.com). Another use of a VIEW is saving a frequently used statement so reports can be generated easier.

A VIEW creates a virtual table based on the results of a SQL statement (W3Schools). VIEWS are primarily used for SELECT statements, but depending on the permissions and structure of a VIEW data can be added, modified, or deleted. A VIEW only exists when it is called, the results are not saved.

### **Functions**

A SQL function is an object in a SQL Server database ("Different Types of SQL Server Functions"). This object contains a set of SQL statements that accept parameters, perform a

transaction, and return the result (“Different Types of SQL Server Functions”). Functions only allow SELECT statements, they cannot be used to modify the stored data like VIEWS can. Functions must return a result, but this result is not stored permanently. So a function must be called to have a result.

## Stored Procedures

Stored procedures in SQL are “a batch of statements grouped as a logical unit in the database (Babu).” Unlike VIEWS and functions, stored procedures also save the results so they can be accessed faster when the procedure is ran again (Babu). Stored procedures can modify data like VIEWS, and can call functions.

## Conclusion

VIEWS, functions, and stored procedures are important resources to use when managing a database. They allow data to be compartmentalized for security, and in the case of stored procedures reduce load on the database by saving results. Utilizing these resources makes accessing data easier for users, and makes generating reports much simpler.

### Works Cited

- Babu, Ranga. "SQL Server Stored Procedures for Beginners." *SQL Shack - Articles about Database Auditing, Server Performance, Data Recovery, and More*, 29 July 2019, [www.sqlshack.com/sql-server-stored-procedures-for-beginners/](http://www.sqlshack.com/sql-server-stored-procedures-for-beginners/).
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