

Views

Introduction

In this paper, I will be discussing the use of SQL Views, going over what they are, how they are used, and how they can be used to effectively manage a database. I will also cover the differences between Views, Functions, and Stored Procedures.

SQL Views

A View in SQL is simply a saved and named SELECT statement. Typically, an administrator might save a statement as a view if the statement is repeatedly used, such as when pulling information from the database to generate a report. This is especially useful as a Select statement becomes more complex - if it is to be used with any frequency, saving the statement as a view can ensure that there are no errors made when writing the statement.

An administrator can also use what are called Base Views. Base Views act as copies of the database's tables, allowing the administrator to restrict access to the tables to preserve data integrity. The Base Views can then be used to generate further views.

Views, Functions, and Stored Procedures

Views, Functions, and Stored Procedures are all very much akin to each other, all essentially being different kinds of saved statements. Functions are also saved Select statements, like Views, but functions allow for parameters to be set within the statement to achieve different results (as opposed to a View, which is intended to generate the same result). Functions are meant to help make repeated tasks easier.¹

Stored Procedures differ significantly from these in that they need not necessarily be a Select function. Create, Insert, Update, and Delete statements can all be used as stored procedures. Much like views and functions, they are intended to be used as tools for people who wish to access the SQL database.²

¹ Jan Potgieter. "SQL Stored Procedures, Views and Functions Examples." MSSQLTips. October 18, 2022. <https://www.mssqltips.com/sqlservertip/7437/sql-stored-procedures-views-functions-examples/>

² Ibid.

Conclusion

Views, Functions, and Stored Procedures are all very useful tools for accessing SQL databases. It is recommended that a database administrator create and have a good understanding of the different kinds of statements they can make, and set different access levels for them, so that people who need to access the database can do so easily and safely. A good administrator will have an understanding of the needs of their users, so that saved statements can be created for them.