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Foundations of SQL Programming

Assignment – 06

Github Link: <https://github.com/ichooseviolins/DBFoundations.git>

Week 6

Introduction

During this week's lesson, we explored more about views in SQL. It was further explained when views could be best used and why as well as operations that are of similar nature to views.

When to Use a SQL View

There are a few reasons why one might choose to use views in SQL. One, it is a way to save script, perhaps complex script, that was written and access it again without having to rewrite it each time. Another option may be to protect tables within the database and create a view that becomes an abstraction layer, thus, forcing "public" users access to the data within the view with no risk to altering the main table. Another reason could be restricting certain data, which can be done by granting and denying *Select* rights to views within the database. While simple in form, views can serve many purposes that can be very useful for database users.

Comparing & Contrasting Views, Functions, and Stored Procedures

Along with views, there are functions and stored procedures which have both their similarities and differences. Like views, functions have similar syntax with the exception that they require a parenthesis at the end of the naming convention if a parameter is to be used and their syntax varies slightly. The function also needs the syntax *returns table*. A function also can utilize parameters to change the outcome of a query. The parameter feature works like the *where* clause in that it sets the conditions in which to query. A stored procedure is a SQL statement, usually in a set, that is given a name. It must be *executed*, whereas a view uses the *select* syntax. Like a function, it, too, requires a parenthesis after the naming convention, but parameters are not required. There are some differences with views from the other two in that it has limited capability to *insert* and *alter* a table along with simply accessing or viewing the data. Each of these actions have their specific uses. While there could be a way to find a workaround to make one work like another, it would be a best practice to become familiar with each to employ it when necessary for ease of use.

Summary

Views in SQL are a powerful tool that maintain a variety of uses. There are other actions similar to views, but have enough difference in their capability that it is worth learning how they operate, too. It was not completely clear, initially, how exactly views could be essential, but this week has provided quite a bit of enlightenment that I can see myself using them in the near future.