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IT FDN 130 A

Assignment 6

Link to GitHub: https://github.com/kcl989/DBFoundations

Introduction

Module 6 - Views continued to build on the previous modules and delved into different aspects of SQL, including Views, Functions, and Stored Procedures. For the assignment, we transitioned the SELECT statements made from Assignment 5 into new views saved to the database. This allows for cleaner code and more complex select statements to be easily called instead of re-created each time. Views also allow for data to be protected with an abstraction layer, which means users or software programs can call a view instead of the source datatable.

Short Answer

1. Explain when you would use a SQL View.
   SQL View is typically used in cases where a complex SELECT statement is needed to be saved or re-used multiple times. Views are stored in the database's file, which allows the view to be called by name or label instead of re-writing the entire SELECT statement over and over again. Views are also used as a way to protect the data. By creating a view as a copy of an existing table, you are creating an abstraction layer. Future select statements using the view then do not affect the source data. To go a step further, you can deny public permission to the source data, forcing users or web applications to only have access to and/or manipulate the view. A major benefit of this step allows web applications to keep running while the source datatable design is changed.

2. Explain the differences and similarities between a View, Function, and Stored Procedure.
   As stated in the previous prompt, a view is typically used in cases where a complex SELECT statement is needed to be saved or re-used multiple times. Views, functions, and stored procedures are all similar in the fact that they are a stored batch of code saved to the database. The differences are views and functions are limited to select statements, while stored procedures do not have this limitation. Views and Functions differ in that functions can use parameters and can also return a scalar value.

Summary

This module helped provide practical examples for the views, and introduced the concept of functions and stored procedures. The module also introduced GitHub, prompting account creation and posting to the public GitHub repository. The next module will delve deeper into functions, with the stored procedures in the subsequent module.