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Assignment06
RebGol/DBFoundations (github.com)

Views, Functions, and Stored Procedures

Introduction

Views, functions, and stored procedures were the topic this sixth week. We took what was learned last week with complex joins and queries continued to add additional layers, now having the ability to create views, functions, and stored procedures with our more complex SELECT statements. This paper will discuss when a view would be used in SQL and continue with a discussion around the similarities and differences between views, functions, and stored procedures.

Topic 1 - Explain when you would use a SQL View

SQL statements can become quite large and complex depending on the data being queried from a database. As a result, a SQL view may be used to quickly extract data, and each table should have a base view created. These base views are also referred to as simple views as they only contain one table. Once a base view is created, the database owner can restrict access as users can now view the table's data in the abstract and can build queries upon them. Views may also be complex where they leverage more than one base table and can be assembled to contain join conditions, group by clause, or the order by clause. Like with simple views, complex views allow users to view data across the tables, while maintaining table integrity.

Topic 2 - Explain the differences and similarities between a View, Function, and Stored Procedure

Views, functions, and stored procedures are all similar in that they all are named sets of SQL statements, and they reflect data from a table or set of tables within a database.   A view provides visibility of data stored in the database tables based on a select statement. They are very similar to functions and serve the same purpose. However, the primary difference is that functions can accept parameters, where views cannot. The stored procedure also is based on a group of select statements, and they are executable. Like functions, they can use parameters. The primary difference between a function and stored procedure is that functions produce values where procedures do not.

Summary

In summary, views are used to quickly extract table data. They are especially handy when complex select statements come into play, or when one would want to limit the ability of other to access the table data directly. Views, functions, and stored procedures are all similar, yet each have innate differences that would drive a user to use one over another.