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August 16, 2022
Foundations of Databases & SQL Programming
(IT FDN 130 A SU 22)
Assignment 06
<https://github.com/AndieTSL/DBFoundations>

SQL Code Insurance: Views, Functions, and Stored Procedures

Introduction

While you may not want to have to use it, insurance is a great thing to have when you do need it. Views, Functions and Stored Procedures can be somewhat like insurance – protecting you from having to rewrite time-consuming and complex code for a report, protecting your database tables from unauthorized or ill-advised changes, and basically giving you peace of mind.

When to Use a SQL View

SQL views have many advantages. As SQL statements that have been stored to the database itself, they're great for saving code you need to run complex reports.

Additionally, by using views instead of select statements that interact directly with your tables, developers and others in your company can be assured they won't accidentally delete or modify important data that others depend on.

Comparing Views, Functions, and Stored Procedures

Views, Functions and Stored Procedures are very similar, in that they are ways to store your SQL code, but each can be used in slightly different contexts.

- **Views** are great for saving code used for running complex reports, for promoting data integrity (and privacy) in a database, and for modifying the underlying database structure without upsetting day-to-day users.
- Like views, **Functions** allow you to return tables of results. Unlike views, they may also be used to return single (or scalar) values. In addition, parameters included in a function can change the results of the query as it is being executed.
- Finally, **Stored Procedures** are more like views than functions. But like the other two, they also provide a way to store your SQL code. Stored Procedures are the most flexible of the three, allowing you to store multiple statements and even create new tables. They are often used for the most complex of reporting needs.

Summary

In summary, if your SQL code is complex, you may want to take out some insurance in the form of storing it more than one place. Whether you save code snippets on your hard drive, on GitHub or within the database itself as a view, function or stored procedure, you can rest assured that your hard work won't need to be repeated.