

Name: Justin Logan (JALogan)

Date: 2/22/2023

Course: IT FDN 130 A Wi 23: Foundations Of Databases & SQL Programming

GitHub URL: <https://github.com/tenfoot1/DBFoundations>

Assignment 6 – Views, Functions, and Stored Procedures

Introduction

This week we learned new ways to interact with SQL data. The Views, Functions, and Stored Procedures we covered act as an abstraction layer between users and data, thereby reinforcing the consistency & reliability of that data.

When Would You Use A SQL View

When SQL Selects become complex or used repeatedly, it is useful to save those statements so that they may be referenced & re-used later. A View is simply a Select that has been saved to the database itself. A View can be queried like a table, or joined like a Select. Views are commonly employed for Reporting functions, and to ease the burden of creating more complex Selects. Hundreds of lines of code can be contained in a View, and that view may be called with a very simple Select:

```
SELECT * from vEmployeesByManager
```

Distinguishing Views From Functions and Stored Procedures

Views, Functions, and Stored Procedures are similar in that each is a named set of SQL statements that is stored in the database itself. Each may contain Select statements as well. There are numerous key differences to note, though. Views and Functions are limited to Select statements, but Stored Procedures are not. A Function must return a value, but a Stored Procedure may not necessarily. Functions may have only input parameters, whereas Stored Procedures may have input and output parameters. A View is simply a shortcut to a Select statement, whereas a Stored Procedure may contain complex code capable of performing more actions than any single piece of SQL. A View produces only one discreet result set, where a Stored Procedure may produce many.

Summary

Views, Functions, and Stored Procedures all provide novel ways to interact with SQL data, and to abstract that data for users. All are useful in that they represent simple ways to call & re-use complex SQL statements.