Name: Aline Benson

Date: November 22, 2021

Course: Foundations of Databases & SQL Programming

Assignment #: 6

GitHub Link: https://github.com/alinerb/DBFoundations

Intro

This week we learned about the different abstraction layers available in SQL Server Management Studio, Views, Functions, and Stored Procedures. There are many similarities between the three abstraction layer types and each has its own unique advantage, but views seem to be the most used. Below I will describe a few key different between the three different abstraction layers.

Database Design

Views are useful when you want to allow users to interact with data without allowing them to change things in the underlying database. They also allow you to create a personalized, saved query allowing users to see what they want to see in an easy to pull format. Views allow users to interact with data without allowing them to change things in the underlying data *(Greg Hay,* **SQL Views** *(external link), 2015).*

Views, functions, and stored procedures all allow a user to see a subset of a data from a database based on a saved query either through vertical or horizontal partitioning. **Functions** differ in that they can incorporate parameters to change the results of a query, similar to the where clause in a view. **Stored procedures** allow a user to insert, update, and delete as well as calling a specific subset of data and are more ideal for complex queries. While all have similar syntax, a stored procedure doesn't use the select statement and instead uses execute (Root Class Lecture on Nov. 15, 2021; Root, Module 6 Notes, 2021).

Summary

This week I used Azure Data Studio to explore views. I was able to demonstrate my knowledge of creating useful views by slightly changing the select statements that we have been using. I use views a lot in my day to day, so would have enjoyed the opportunity to push on functions and stored procedures a bit more, but enjoyed working on these in the labs.