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<https://github.com/colleen89/DBFoundations#dbfoundations>

Assignment 6: Views, Functions and Stored Procedures

Introduction

In this week's assignment, we learned about how to use SQL views, functions and stored procedures. They are all very handy to use when writing code in SQL server, but it is important to get the syntax right because they can be tricky to write. In this writeup, I will cover when it would be best to use a view and what the differences and similarities are between all three.

Topic 1: Explain when you would use a SQL View

A SQL View is a Select statement that you name and save for later, to be used multiple times. It is best to consider using a view when your SQL code starts getting lengthier and more complex. For example, if you need to write code that uses joins to bring data from multiple tables together and you want to include only some of the data, but you know you will need to reference the code repeatedly, you should use a view. You can also use views to create a makeshift table of data from another table that has some columns that you know need to be kept private from the public. On the other hand, you can create views to create a makeshift table of sensitive data that can only be viewed by some, if they have authorization.

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

Like Views, Functions are also select statements that are given a name and stored for later repeated use. Stored Procedures on the other hand don't have to be select statements. Functions that you create are typically called UDFs (User Defined Functions) and like views, they can also return data in a table. However, unlike views, functions can also return a single value. To create views and functions, you start each with 'Create' and then 'View' or 'Function' depending on which is needed. When creating a view, the second line would be 'As' and then your select statement. Alternatively, when creating a function, you need to write 'Returns Table' before 'As', and after 'As', write 'Return' again and then wrap your select statement in parentheses. Also, functions can use parameters whereas views cannot. Stored procedures are similar to views and functions in that they are also given a title and stored for later repeated usage. They are also like views (and different from functions) in that they are created almost the

same way by writing 'Create Procedure', then the procedure name, then 'As' and then your select statement. One last way that views and functions are similar but stored procedures are different is that if you want to check your work with views or functions you just have to write 'Select * from', then your view/function name, followed by a semicolon if it's a view and a set of closed parentheses and a semicolon if it's a function. Yet with stored procedures to check your work, instead of 'Select * from', you have to write 'Execute' or 'Exec' for short, then your procedure (or proc for short) title, then a set of closed parentheses and a semicolon.

Summary

Again, views, functions and stored procedures are tools for naming, selecting and storing data in a database. They are very useful when writing complex code and they all have different uses. There are many similarities and differences between all three but the fact is that they are all very important when coding with SQL.