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GitHub URL: <https://github.com/kateholz/DBFoundations.git>

## Assignment 6 – Views

### Introduction

In the SQL language there are several ways to utilize stored code to increase efficiency and ease of use of your code. Three of these options are Views, Functions, and Stored Procedures. Here we will review the use of the simplest option, Views, and then discuss some of the similarities and differences between all three.

### Use of a SQL View

A SQL View allows you to execute a previously written Select statement without having to write the statement again. This is helpful for ease of use of a database. Using a stored View also allows others to execute complex Select statements even if they don't have high SQL proficiency or access to the complete database. For example, if users need access to a report on employees at your company, you could create a view to allow them to easily access the list without providing access to private employee data that should not be shared.

### Differences and similarities between a View, Function, and Stored Procedure

Views, Functions, and Stored Procedures have similar functionality and both Functions and Stored Procedures can result in the same output as a View. However, Functions and Stored Procedures have additional functionality beyond the use of a View described above.

Unlike Views, which return tables of data, Functions can return either a table or a single value. Also, Functions require different syntax than Views and will accept parameter variables. Functions are similar to views in that they primarily use Select statements, and you use a Select statement to utilize a Function.

Stored Procedures use syntax similar to that of a View, but have wider functionality. For example, stored procedures can contain many SQL statements, not just a Select statement, and will accept parameters to complete its job. However, stored procedures can not be used within SQL statements such as Select, Insert, or Update.

### Summary

It is important to understand the differences between SQL Views, Functions, and Stored Procedures in order to properly utilize them within your code. Each of the three can be useful in specific scenarios, but are not always suitable for the same situations due to their differing functionality.