# Name: Ching Sam

**Date**: Feb 21st, 2022

**Course**: IT FDN 130 A

**Module 6 - Assignment #6 Write-up**

**GitHub URL:** <https://github.com/csamiam22/DBFoundations>

**Introduction**

In this assignment, I will be responding to the questions below regarding SQL Views, Functions, and Stored Procedures:

1. Explain when you would use a SQL View.
2. Explain the differences and similarities between a View, Function, and Stored Procedure

Explain when you would use a SQL View

“A view is nothing more than a SQL statement that is stored in the database with an associated name. A view is actually a composition of a table in the form of a predefined SQL query.” (<https://www.tutorialspoint.com/sql/sql-using-views.htm>). The view is a saved SQL query that can be utilized as a way to save and store simple to very complex Select Statements which would eliminate having to rewrite the code over and over again and can be reused and repurposed. There are other ways that you could save your Select Statements and SQL code and a SQL view is just one of a few options, for example you could also save your SQL code as separate SQL script text file and you could reference that as well.

Views can be used to simplify the experience and environment for users who will access the data within a given database. You can customize views and set restrictions where certain users can only see a subset of data - for example, public vs private views by limiting columns of data for them as well. Views are nice because users have the ability to query the data within the view as if it is a table. Views are useful as it provides a security level in the sense that the users are only seeing a subset of data, that has been predetermined for them, or could be determined by themselves as well and the database and tables will not be impacted. Using views also secures the database itself because the user cannot update and insert into the tables in which the views are querying from. This is a safeguard to the tables within the database and restricts users from being able to modify the tables directly. The users can get the data they want once a view is created and they also don’t need to worry about the complex SQL coding behind the scenes either. (<https://www.youtube.com/watch?v=Y-Qk4vpklJ8&list=PLfycUyp06LG8cefs0gA38wO7nFrRjD5Ad&index=7>, 2015).

**Explain the differences and similarities between a View, Function, and Stored Procedure**

View, Function and Stored Procedure are all tools that can be used to save SQL Select Statements in a database versus saving it outside the database as a SQL Script file. They are all similar as it is SQL coding, with similar syntax, and outlines the query or Select Statements and commands to be used. They are similar in which you could create views, functions, and stored procedures to produce the same or similar results, where each are slightly different in the written syntax. One difference of the stored procedure is that you can include transactions for inserting, updating, and deleting which is different from the view and function. The stored procedures can contain all those types of transactions that can be executed versus the view and function which you can select from. You can query a view as if it were a table, and with a function you have the ability to also return a single value based on the parameters given to it. Functions can also be used to calculate where a view cannot.

**Conclusion**

In closing, I hope that I have been able to explain the purpose and use of SQL Views, and how functions and stored procedures can also be used as well.

**Citations:**

“SQL - Using Views,” Tutorials Point, <https://www.tutorialspoint.com/sql/sql-using-views.htm>

Hay, Gregory, “Basic SQL Commands Views” , YouTube, Feb 10, 2015, <https://www.youtube.com/watch?v=Y-Qk4vpklJ8&list=PLfycUyp06LG8cefs0gA38wO7nFrRjD5Ad&index=7>