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Course: Foundations of Database & SQL Programming: IT FDN 130 A

Assignment 06

## Introduction

This assignment will provide an overview on when to use SQL Views and the differences and similarities between Views, Functions, and Stored Procedures. Each paragraph will also explain these items in detail.

## SQL View

A commonly used command in SQL is the View statement. Views are virtual tables of data from one or multiple tables. Since views do not hold data or physically exist, views do not require storage within the database. Therefore views protect tables within the database from being manipulated.

Another commonly used function for views is to deny access to a table but allow access to the view of the table. This allows the developer to not only protect the database from being manipulated, but also to protect users from accessing sensitive information in the table. A view can be created with non sensitive information columns for all to access and the table itself can be restricted for only those with certain clearances. For example, a table with employees and their social security numbers could have an all viewable table with employee names and employee IDs and a restricted view of their social security number for HR.

## View, Function, and Stored Procedure: Differences and Similarities

These common SQL Statements, View, Function, and Stored Procedure are similar but are also different in large ways.

Views, as stated in the previous paragraph, are virtual tables of data from one or multiple tables. Functions are like Views that must have parameters and return a single or multiple value. A Stored Procedure is a stored code that can perform a wide range of operations and be reused or executed multiple times.

Stored Procedures can maintain the security of the data by only giving certain people access which is similar to Views. Stored Procedures, unlike Views and Functions, can pass input parameters for users to change data or return multiple output parameters. Of the three, Functions are the most complex while Stored Procedures and Views are simpler.

## Conclusion

This assignment went over a few Views and the differences and similarities between Views, Functions, and Stored Procedures. Views and Stored Procedures are simpler than Functions and allows the owner to restrict access to the user. Stored Procedures can pass input parameters for the user and can be recalled by the user.