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IT FDN 130 A

Assignment 06

# SQL Views, Functions, and Stored Procedures

## Introduction

This week in IT Foundations of Database Management, our class learned about SQL views and the importance they serve within a database. Our assignment included writing Views using SQL statements, setting permissions for users, and continued to build upon creating Joins between tables. In this assignment, I will demonstrate what I have learned from this week’s lecture, videos, and coding assignment.

## When to use a SQL View?

Views can pull data from individual or multiple tables and utilize stored queries and statements. This allows users to pull data without having to re-create the queries each time, which saves time and ensures the views remain consistent across the organization. Views also allow users to have access to the data within a database without directly interacting with the data. The permission settings can also be changed in a view, based on a specific user, or be set on a global level. These abilities allow administrators to control interactions with the data can protect the database and maintain data integrity.

Views should be used when users want to interact with the same set of data on a regular basis. The permission settings can also be changed in a view, based on a specific user, or be set on a global level. This ability makes views a valuable tool for database administrators because it allows them to control the user’s interactions, which protects the database and maintains the data integrity.

By using stored queries, users can access the same set of data without having to write or manipulate queries. This is critical, especially when users are not familiar with writing scripts in SQL. This simplifies the process for users, allowing them to pull the required information with less coding experience required. See Figure 1 for an example of the difference in complexity between writing an SQL query versus using a view to pull the necessary data.

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| --- | --- |
| **SQL Query Code to View Data** | **SQL View Code to View Data** |
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***Figure 1: Difference in SQL code when writing queries to extract data versus using Select to view an existing view.***

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

Views, functions, and stored procedures are all similar in that they all use pre-written queries to generate results that can be viewed by users. These queries allow data to be retrieved at any time, making them an efficient and reliable tool for an organization needing to extract data regularly from databases. Both views and functions

The differences between these three items come down to their distinctive qualities. Views show the data result of a specific SQL query. Functions can show a table full of information or be used to create calculated fields based off existing values within a table. They also allow for parameters to be specified, which allows data to meet certain requirements. Stored procedures can contain one or more SQL statements and return a specific set of results. While views and functions are similar in that they utilize one SQL Select statement, this makes them different than stored procedures.

## Summary

After this week’s assignment, I have a better understanding of SQL views, functions, and stored procedures. While similar, by supplementing views with the data necessary for user queries, they have subtle differences. These features enhance the usability of databases and allow users to have reliable access to the data they need, which increases efficiency and promotes best business practices for an organization.