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Assignment 06

IT FDN 130A

2.21.21

<https://github.com/kimdaeh84/DBFoundations>

Assignment 06: SQL View

# Introduction

The purpose of this paper is to describe how to utilize views, functions and stored procedures in relational databases. The topics this paper will describe are the similarities and differences between a view, function, and stored procedures.

When to Use a SQL View

A view is a virtual table. A view consists of rows and columns just like a table. The difference between a view and a table is that views are definitions built on top of other tables (or views), and do not hold data themselves. If data is changing in the underlying table, the same change is reflected in the view. A view can be built on top of a single table or multiple tables. It can also be built on top of another view (See Figure 1).

Diagram

Description automatically generated

Figure 1 displays a view that contains the columns of two tables, Table A and Table B, using a query. A view is created using a select statement and are stored as an object within the database.

Similarities and Differences of Views, Functions, and Stored Procedures?

Similarities: Views, functions, and stored procedures do not affect the actual data within the database tables and act as an application layer where users can access and manipulate data from a protected view. Each statement serves a different function, Viewing select data, creating complex formulas based on parameters that return a value, or executing a series of statements that input, update or delete data after the parameter has been loaded into the object. The benefit is that these are statements do not store physical data itself and is quick enough to return the intended result quickly without introducing additional code or bloat into the application.

Differences: The main difference between these statements are the instructions on how the user can access these statements. Views can only be accessed through select statements and combined with join statements to reproduce how the intended result of a normal table. Functions can be utilized with parameters to give the users additional options to return the intended set of data. Store procedures contain variables, loops and calls to other stored procedures. It's a programming language, not a query language.

# Conclusion

The purpose of this paper was to describe how to utilize views, functions and stored procedures in relational databases. The topics this paper described were the similarities and differences between a view, function, and stored procedures.