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Course: IT FDN 130 A Wi 24: Foundations of Databases & SQL Programming

Assignment 6 – Views

Introduction

Paraphrasing W3Schools' page on SQL Views, a View is data output of records from a database's tables based on the results of a SQL statement.

1. When to Use a SQL View

The utility of implementing a SQL View is to give a safer “sandbox” of data from which users can prepare reports. The benefits can be preventing altering or deletion of data from users with unnecessary access to live data, as well as limiting what fields from a table users may be allowed to view in order to protect data privacy.

2. Differences and Similarities Between a View, Function, and Stored Procedure

View

A View is a user-written set of instructions in SQL for *how* to display a specified amount of data from a table or tables in a database. On its own, a View does not automatically display said data, but specifies which data and in what order it should be displayed once requested by a user.

Function

SQL Functions are built-in instructions to SQL which conduct a predetermined action when used. These can be for manipulating strings of data, either combining data together (CONCAT), returning only a specified number of characters from an entry starting from the left (LEFT), or returning data in all uppercase (UPPER). There are also mathematical and numerical functions (MIN, MAX, ROUND)

Stored Procedure

A SQL Stored Procedure is a pre-written, named, set of instructions that can be reused upon command, using **CREATE PROCEDURE** to write the reusable statement, then **EXEC** to run the Stored Procedure. A Stored Procedure useful for Assignment 06 could be assigning a Select * From statement for one of the views, so as to have a shortcut at the ready to audit the output of a View.