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Course: Foundations Of Databases & SQL Programming

Assignment 6 - Views, Functions, and Stored Procedures

Introduction

This document will explain the concept of SQL views, discuss when and why you would use a SQL view, and highlight the differences and similarities between SQL views, functions, and stored procedures. It aims to provide a clear understanding of these database objects to help you decide when and how to use them effectively.

Using SQL Views

A SQL view is a virtual table that represents the result of a pre-defined SQL query. Views are used to simplify complex queries, enhance security by restricting access to specific data, and provide a consistent, reusable interface for querying data. By using views, you can encapsulate complex joins, calculations, and logic, presenting a simpler and more readable dataset to the end-user.

Differences and Similarities Between View, Function, and Stored Procedure

A view is a virtual table representing the result of a pre-defined SQL query, used to simplify complex queries and enhance security. A function is a database object that encapsulates reusable logic and returns a value or table, used within queries for calculations and data manipulation. A stored procedure is a set of SQL statements that perform specific tasks, executed explicitly to handle complex logic and administrative tasks. While views and functions are used within queries, stored procedures are called explicitly and can accept multiple types of parameters.

Summary

In summary, SQL views, functions, and stored procedures are essential tools for database management and optimization. Views provide a simplified and secure way to present data, functions allow encapsulation of reusable logic for calculations and data manipulation, and stored procedures are used for executing complex tasks and workflows. Understanding the differences and appropriate use cases for each can greatly enhance database performance and maintainability.