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August 30, 2021

Foundations Of Databases & SQL Programming

Assignment 06

VIEWS, FUNCTIONS, AND STORED PROCEDURES

INTRODUCTION

Views, functions, and stored procedures are all unique ways to store a named set of statements (typically SELECT statements) in the database. This functionality is useful when a user creates complex queries that need to be saved and stored in multiple locations. This summary will review some of the similarities and differences of views, functions, and stored procedures.

WHEN WOULD YOU USE A SQL VIEW?

SQL views are named select statements whose code is stored in a database. There are different types of views such as reporting views and base views. Reporting views are used for reporting purposes and can be as complex or as simple as needed. Reporting views allow an end user to store SQL scripts and quickly run them when needed. Base views are a copy or an abstraction of the original tables and are created to restrict the end user from querying the original tables directly. Abstraction layers make it easier to apply updates or changes to the base tables without affecting applications using the data.

WHAT ARE THE DIFFERENCES AND SIMILARTIES BETWEEN A VIEW, FUNCTION, AND STORED PROCEDURE?

Views, functions, and stored procedures are similar in that they are all a named set of SQL statements. They each require a similar syntax consisting of the CREATE/AS statement surrounding the SELECT statement. SQL server allows users to create custom functions called user-defined functions. Functions either return a table of values or a single value and can be scalar. Functions are unique in that they can use parameters to change the results of queries. Stored procedures are distinct in that they execute code, do not select from the code, and cannot be used as tables. Additionally, store procedures can have many statements in stored procedures that do not necessarily have to be SELECT statements.

SUMMARY

In summary, views, functions, and stored procedures are all ways to store named statement queries in the database. Each has its own unique use case, and they are useful tools when constructing large, complex queries that require quick and repeated access.