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Foundations of Databases and SQL Programming

Assignment 06

[DaxTh/DBFoundations (github.com)](github.com)

SQL Views

Introduction

For this paper I will discuss when to use SQL views. I will also explain some differences and similarities between View, Function and Stored Procedures.

SQL View

A view is a well-known feature in SQL. It allows the user to create a virtual table based on an SQL query referring to other tables in the database. A view stores an SQL Query that is executed whenever you refer to the view, making it a very convenient way to get your desired data because it is easier to run a query stored in a view than to type a query from scratch (Stawinska).

Function

Functions are routines that accept parameters, perform an action, such as a complex calculation, and return the result of that action as a value. The return value can either be a single scaler value or a result set (Microsoft).

Stored Procedure

A Stored Procedure is a prepared SQL code that is beneficial to save because you then can use the code as many times needed to execute your query.

Differences / Similarities

Stored Procedure	Function	View
Accepts Parameters	Accepts Parameters	Does not accept Parameters
Can contain several statements	Can contain several statements	Can contain only one single SELECT query

Can return multiple values/tables	Can return a single value/table	Can return a single table
Exceptions can be handled using try-catch block	Exceptions cannot be handled	Exceptions cannot be handled
Allows insert/update/delete/select	Only allows select statement	
Cannot be used in a select query	Can be used in a select query	Can be used in a select query
Not mandatory to return a value	Should return a value	Should return a table

Table 1: Differences and Similarities for Stored Procedures, Function and Views

Summary

SQL users have several ways to store queries for later executions. In the short paper, we have seen what views, functions and stored procedures can do for the user and what makes each one unique.

REFERENCES

Stawinska, M. (2020 December 11th). What is a SQL View. What is an SQL View? | LearnSQL.com (external link to source). Accessed August 15th.

User-Defined functions. Microsoft SQL Docs. User-Defined Functions - SQL Server | Microsoft Docs (external weblink to source). Accessed on August 15th 2022.