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Foundations of Databases and SQL Programming

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GitHub link:

## Assignment 06

## Introduction

Views, Functions and Stored Procedures are all used as way to store code in a database. They provide a layer of abstraction between the viewer and the database.

## Using a SQL View

SQL Views are used to return data from tables. Views are a layer of abstraction between the data and the user. I’d use a View to allow someone to see the data without having access to the data itself. In this way, it protects the database against accidental alterations to the data. It also provides the user with the opportunity to see just the data they’d like to see in an organized way.

## Views, Functions, and Stored Procedures

Views, Functions, and Stored Procedures are all used to save select, and other, statements. By using a function, view, or stored procedures the system runs the associated select statement anytime the user selects that view, function or stored procedure. Thus, Views, Functions, and Stored Procedures are very user friendly, as well as up to date with the database.

Views are used to create a “virtual” table, called a view, of the data. Functions are similar to Views in that they can return a table of data. Functions can also return a single value of data, which is called a Scalar Function. Finally, in a Function you can set a parameter based on a variable. For example, returning results only for a certain city. A Stored Procedure is another way to store code in a database; or a procedure stored for later use. When you run a Stored Procedure, you execute it rather than select it, which is different from Views and Functions. A Stored Procedure can contain many statements, unlike Views and Functions. These statements can Select statements, but they can also be a variety of other statements such as insert, delete, update.

## Summary

Views, Functions and Stored Procedures are versatile ways to save code. Views allow the user to view a table of data, customized to their needs. Functions also return tables of data, but can also be utilized to return a single value of data. Finally, Stored Procedures are quite flexible and can be used to save many types of statements.