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GitHub: <https://github.com/jazmingithub/DBFoundations>

Assignment 06: Views

### Introduction

A view is basically a query with an abstraction layer that provides secure data by restricting users and preventing modifications to original data. Views, functions and stored procedures are all SQL codes that perform a specific task that can be save in a database.

## When to use a SQL View

The benefits of using SQL views is the ability to save complex code in a database. It also simplifies the use of the code for retrieving data by other users. Views are saved in complied format in SysComments table under text column. You can also retrieve formatted script with Sp\_helpText vtblname. The order by clause will not work unless the top keyword is included but this is not considered best practice because it requires for a specific number of rows to be retrieve and may not show the entire results or the query.

## Views, Functions, and Stored Procedures.

The base view is a representation of the original table without any manipulation. A view provides an abstraction layer that forces users to use the views and denies access to the underlying table. This makes it easier to with keeping original data untouched. Binding the view to the table schema prevents dropping of child tables or make any changes to the table that will break the view like change column names. You can however add a column that does not affect the view statement.

Functions are similar to views but can include parameters that return a table or a single value. Arguments (a value) are fed into parameters (a range like a column). It’s recommended to use BEGIN and END in a function. A scalar function can be used in the SELECT and WHERE clause while a table function can be used in the FROM clause. A scalar function can also be used as a check constraint.

A stored procedure is a SQL code that can be saved to use many times. It can include many statements, can create tables, and is flexible for complex coding. Similarly, to a function a stored procedure can also pass parameters. If the stored procedure does not contain any parameters, it does not need parenthesis contrary to functions which always require parentheses. It also recommended to include BEGIN and END keywords in both.

## Summary

Views, function, and stored procedures are SQL statements that perform a specific task, they can be saved in the database and used by other users. They are saved as a complied format in SysComments table under text column.