

# Views, Functions, and Stored Procedures

## Introduction

Views, Functions and Stored Procedures are database objects that allow you to save complex or simple SQL scripts to improve efficiency. Will discuss what a view is and when to use it. As well as the differences between Views, Functions, and Stored Procedures.

## When to use a SQL View

A View is a Select statement(query) that has been given a name and saved in the database. A view allows you to save simple queries used repeatedly or complex queries that contain joins and aggregations. You can hide the query behind the view. It secures data by allowing you to create constraints to confidential data and prevent end users from viewing the data. Views can be customized for different end users and allow them to edit the data. It's like a virtual table that contains data from one or multiple tables.

## Views, Functions, and Stored Procedures

As previously mentioned views, functions and stored procedures are all saved SQL queries but they have their differences and similarities.

Views	Function	Stored Procedures
Select Statement to run	Select Statement to run	Execute to run
Multiple values in a table	Result is single value, scalar or table	Multiple values table or Single value
End users can edit and view	Can be viewed and used by end user	End users can edit and view
Improves programmer productivity	Improves programmer productivity	Improves programmer productivity
Data security	Data security	Data security
Don't allow parameters	Allows input parameter.	Allows input and output parameters.
Can't call stored procedure or function from a view	Can't call a stored procedure from a function	Can call a function from a stored procedure
Can be used in join function	Can be used in join function	Can't be used in join function
If indexed they can be cached and improve performance	Caches the plans and reusing them for repeated	Caches the plans and reusing them for repeated

	executions. Improving performance	executions. Improving performance
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## Summary

Takeaways from this assignment are that Views and Stored Procedures have the most similarities. While Functions are used to reduce more common tasks and serve more like a mathematical problem by correlating an input variable with an output variable.