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**Views**

Introduction:

My analysis in this paper will highlight someone would use a SQL View along with explaining the differences and similarities between Views, Functions, and Stored Procedures

**Views**

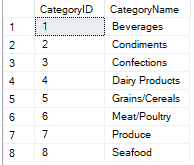
W3schools define Views as “a virtual table based on the result-set of an SQL statement. A view contains rows and columns, just like a real table. The fields in a view are fields from one or more real tables in the database.”

In cases where a view is extracting data, these views are known as **reporting views.** Views can be used for a host of functions, some of which include protecting sensitive data elements from the public (patient addresses and SSID numbers), hide complex SQL code for reporting, and supporting legacy code when updating tables would break table links or web user interfaces.

An example of a view is below, using the Categories table:

Select \* From Categories;

Go



Create View vCategories

WITH SCHEMABINDING

AS

Select Categories.CategoryID, Categories.CategoryName

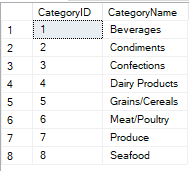
from dbo.Categories

go

Select CategoryID, CategoryName

from vCategories

go



As you can see, the view represents all the same data as the table without having to query the table.

**Views, Functions, and Stored Procedures**

Views and Functions are similar in that they can both be used to select and show data from a table. The below view and function would produce the same output:

Create View vProductsByCategories

AS

Select CategoryName, ProductName, UnitPrice

From Categories as C

Inner Join Products as P

on C.CategoryID=P.CategoryID

go

Select \* from vProductsByCategories

**Function:**

Create **Function dbo.f**ProductsByCategories()

Returns Table

AS

Return(

Select CategoryName, ProductName, UnitPrice

From Categories as C

Inner Join Products as P

on C.CategoryID=P.CategoryID

);

go

**Select \* from dbo.f**ProductsByCategories **();**

go

Stored procedures on the other hand – similar to Views and Functions – are a named set of SQL Statements. Using the stored procedure command would produce the same result as the two examples above:

Create **Procedure p**ProductsByCategories()

AS

Select Select CategoryName, ProductName, UnitPrice

From Categories as C

Inner Join Products as P

on C.CategoryID=P.CategoryID

go

**Execute p**ProductsByCategories()

As for the differences, a function will return a single value while views will select statements that have been predefined by a user.

**Bibliography:**

* “SQL Views.” SQL CREATE VIEW, REPLACE VIEW, DROP VIEW Statements, www.w3schools.com/sql/sql\_view.asp.