**Title:** INFO 330 – Module 4: Assignment04 (Questions and Answers)

**Desc:** This file has the answers to the questions in Assignment04

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**Introduction**

In this assignment, we explore the Views, UDFs and Stored Procedures. We dive into how they are different from each other and when to use each one.

Explain why Views are an important part of a RDMS.

When a complex SQL SELECT statement is called multiple times, saving it as a View can be more convenient. The View can be repeatedly called and reused without needing to retype the entire complex SELECT statement. Another important benefit of Views is the consistency of data that will be displayed using the View. Even if the underlying source tables are altered, the View can still provide an unchanged image of the selected data. Views also constrict someone to view only certain selected columns in a database. If there were certain columns with sensitive data, it could be excluded from the View. A database manager could create Views so that users can only see the data that they were authorized to see.

Explain the differences between a view and a custom table function (UDF).

UDFs are custom functions that users can define to execute some specific lines of code. The difference between Views and UDFs is that UDFs can use parameters to change the results of the query. For example, in the Northwind Database, a UDF can take in a Category as a parameter to select rows from that Category. On the other hand, every View can only “hard-coded” to select a single Category, making Views more inflexible than UDFs. However, you can make the View of all Products and then add a WHERE clause to select a specific Category.

Another difference between UDFs and Views is that UDFs can return a single scaler value as an expression. For example, in the Northwind Database, you could create a UDF to calculate the total revenue from a specific year. A View would only allow you to view the Price and Quantity of products sold in a specific year, and additional lines of code would have to be written to calculate the revenue.

Explain the differences between a view and a stored procedure.

Stored procedures are a named collection a few lines of SQL code. Compared to Views, stored procedures are much more flexible in what they can do. Unlike Views, stored procedures can use Input Parameters. The arguments that are passed into the stored procedure make them more flexible than views since they can create filtered reporting results. These parameters can also have default values. Furthermore, stored procedures can return results from multiple statements, while Views cannot.

**Conclusion**

Views, UDFs and Stored Procedures have distinctly different functions. Views are used to view a specific set of data but UDFs and Stored Procedures can be used to perform a larger variety of tasks. UDFs and Stored Procedures can have parameters which makes them more flexible.