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**Assignment 06 – Views, Functions, and Stored Procedures**

**Introduction**

This week I learned about creating views and the nuances behind ordering. I also learned about creating temporary tables as base views so to add a layer of abstraction. This learning can be seen as a follow up from last assignments and applications of it. Last, the functions we previously learned in class about was demonstrated this week as well as how stored procedures work.

**SQL View**

SQL view creations are virtual tables calculated at run time from a resulting set of SQL statements (<https://www.w3schools.com/sql/sql_view.asp>, 2023). A view is just like a regular table out of a database but are separate from it. Therefore, most of the time, a view generated by the user adds a layer of protection to the database. A programmer will typically use SQL view whenever results from a database needs to be seen from a user’s standpoint for specific data. This allows for the removal of unnecessary data from the table and scoped to the user’s objectives.

One caveat to using views is the order by clause. It doesn’t seem self-intuitive since an ordering command requires a selection of an arbitrarily large number above data size. Personally not my favorite but that’s how SQL is apparently.

**View, Function, and Stored Procedures**

The differences and similarities between View, Function, and Stored Procedure is the fact that they all serve a purpose of creating results that a user desires. Many of the cases this can include a select statement of pulling data from a database. These functions, view, and stored procedures are for the purpose of recycling code and simplifying readability. The differences with Functions is the ability to take arguments in its function parameter and perform SQL statements in a consistent manner. Input to output, very re-usable. Stored procedures however do not have table outputs and will only execute the code. This means verifying results require a select statement outside the procedure. Similarly to functions, stored procedures accept parameter but the difference is that it is optional. (<https://www.w3schools.com/sql/sql_stored_procedures.asp>, 2023).

**Summary**

Overall I learned about how SQL applies a form of encapsulation to prevent users from accessing undesired data. Selection of specific constraints can be done with simple Views and access permissions. I also learned how function and stored procedures can be used so hopefully these techniques can be combined in later assignments.