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Databases & Data Modeling

Assignment 05

**Professional Database Design**

**Introduction**

Professional databases house important data for businesses and with one wrong SQL statement all that data can be erased or altered. Transactional statements provide a backup to maintain the integrity of the data in case the transaction encounters errors. Additionally, in industry reports must be generated of the same information overtime. Instead of rewriting the same code again and again, the user can create UDFs to avoid the redundancy.

**Professional Database Design**

Abstraction is a crucial part of professional database design because it allows for developers to only write complicated code once and reuse it later. Tools such as a stored procedures are useful in this situation. Stored procedures use parameters to complete a function such as updating or inserting data in a table or just returning a value or set of values. Views are similar since they can be used to save select statements but they are limited to one statement. Views can be used in a larger query whereas stored procedures cannot. In the industry, using these layers of abstraction make it possible for less experience SQL users to still complete the tasks they need by using a stored procedure, view or other UDF written by someone else.

**Transaction Statements and Stored Procedures**

Transactional statements are ways to permanently update the database while also allowing for a way to deal with errors that may occur. Stored procedures are used to update, insert and delete data from the database. Many things can go wrong when trying to complete these tasks, so by using a transactional statement gives the ability to rollback a transaction if an error was thrown.

**Conclusion**

There are many useful tools to build and maintain a professional database. Learning to successfully implement these will allow for your database the function efficiently and provide a solid foundation for future additions.