**End-of-Quarter Reflection**

Course: Info 330

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INFO 330 was the first class I’ve taken regarding databases and I had minimal prior knowledge of this subject area. I came into this class expecting to only learn SQL, but I was pleasantly surprised by the fact that this class focused a lot on the theory regarding database design as well. However, I still learned the crucial fundamentals of SQL and some python.

Database Design:

Having no background of database design, I felt quite overwhelmed by knowledge in the first few lectures. However, doing labs and homework assignments really helped drill in the knowledge really well. I learned how to create and read ERDs and how normalization played a big role in designing databases. I learned three Normal Forms. The first normal form makes sure the data itself is as small as possible and does not have repeated entries. The second form states that data cannot be dependent on other parts of the data in the same table. Finally, the third normal form states that the data cannot be determined by anything other than the primary key.

I learned about how constraints help maintain entity integrity, domain integrity and referential integrity. This makes the database usable and trustworthy. The constraints I learned to use are Primary Key, Foreign Key, Unique, Check and Nullability.

SQL Coding:

I learned how to create tables, stored procedures, functions and views. For built in functions, I learned insert, delete and select. I learned how to implement constraints like identity and foreign key references. Other than the basic coding knowledge, learning about granting permissions, reporting error codes and try catch blocks were very helpful. I have a decently extensive coding background so most of this came quite easily to me.

Reporting:

Reporting data was mostly quite straight forward. I learned how to create pivot tables in excel. I learned how to import SQL data into PowerBI and Tableau to create graphs. Most of this wasn’t too hard since the software we used has pretty intuitive user interfaces. Also, there were many helpful instructional content online.

Overall, I really enjoyed this class and I’m looking forward to taking INFO 430 next quarter. My goal is to be a software engineer and I know that databases play a vital role in that.