Wayne Wang

INFO 498 C

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Lesson Learned From Info 498

Taking INFO 498 is one of the greatest experiences in my college life. I have indeed learned a lot about managing databases and some real life skills. The several major skills I have learned from this courses are using Stored Procedures to perform a variety of tasks; recognizing the different purpose of OLTP and OLAP databases; Using SQL Script to perform ETL process; Using many non-SQL ways to perform ETL process; Learning about managing and organizing a project; creating backups, creating jobs and create security for databases. In addition, writing technical document for every assignment is one of the most valuable skill I learned from this course.

On the top of what I have learned from INFO 330, I have learned more advanced technics on utilizing Stored Procedures. We can use Stored Procedures to organize different task, in addition, using stored procedures could minimize the risk of causing unexpected impact on the database when our transaction command have errors. Throughout this term, we have learned to use stored procedure to perform ETL process, to create backups etc. It makes me to realize that SQL is not just about some simple command of insert, update and delete. It is such a powerful tool and have so many functionalities that I haven’t yet explored.

Taking INFO 498 has given me the opportunity to use SQL to deal with some real life problems. For about half of this term, we are learning different concepts of ETL process and different approaches to perform ETL tasks. One of the most intriguing parts would be learning using different ways to perform incremental ETL process. We can use ‘Except’ statements as reference to find the new data, updated data and deleted data. We can also use ‘Merge’ with a very different syntax but to perform the same tasks, to be honest, I still feel a little bit shaky about using ‘Merge’ method. In addition, we learned different ways to keep track of the slow change dimensions based on our analytical needs. For instance, if we are updating the Data warehouse for Sales data, every data entry would be valuable for us, with that being said, we can’t simply delete some data rows when perform the ETL process, instead, we can add more information such as ‘StartDate’, ‘EndDate’ and ‘IsCurrent’ to indicate a data entry’s status. This would be a common situation in the industry.

In addition, while learning the ETL process, I realized the importance of making a database to be simply understood and consistent. Throughout this term, we have encountered databases with inconsistent data in different tables. (Example: the Clinic Id in some tables are using 1/2/3 representation, but in some tables are using 100/200/300 representation; some columns’ data type within a table is inconsistent, such as ‘varchar(27)’). This will cause trouble when joining tables together for analyzing purpose or to perform a ETL process. People need to speed extra time to look into the detail of tables to find the inconsistent part and to normalize them. Imagine how much time will we save if we can put more efforts into creating the database at the first place. I will always keep this in mind when I taking other relative courses as well as when I work in the related industries.

One of the most practical things that I learned from this course is to write technical documents. I know there is still a long way to go until I can write a very professional technical documents, however, this is a good start. Professor Root has mentioned more than once the importance of technical documents in our future career. I have also asked my sister in law, who is currently working in Amazon. She told me that knowing how to write a technical document is a must-have hard skill that is required for software developers and programmers. I am so glad that Professor Root would emphasize the importance of technical document and let us to practice writing it for every assignment. From my own perspective, I realized that writing a technical document is not only beneficial for people to understand my project, it is also a great way to help me to reflect my own project. While writing the technical report, I am going through my flow of thoughts from the beginning, I would often spot some minor errors that I did not realized at the time I wrote the project. Writing technical document is also a way to double check and to debug my projects.

What I have learned from this course is much more than I have talked about. This is a great course and guided me into the world of databases and SQL. Now, I can feel a great passion towards this area of study and I can’t wait to learn more advanced skills about it.

In a nutshell, the past month has been great and extremely beneficial. I would like to thank you Professor Root and Daniel for the efforts you have put into this course, and all the supports you have provided us.