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Info 330

Lesson Learned

Info 330: Designing Database System Designing

Throughout the class, I have learned several concepts and applications related to database. The most important and most focused subject was what is relational database management system (RDMS), and how to code SQL on designing RDMS.

First few weeks, I learned about the normalization and how it defines the key factor of relational database management system and how I can apply that concept when I design database in SQL.

In depth, we have learned primary and foreign keys of normalization such that we are able to join the normalized tables into one group. Also, using the concept of abstract layers, I was able to seperate the purpose of each layers -- tables are to store data, views are to present data and sprocs are to execute behaviors: create (insert), update and delete. The concept of abstract layers allow each data structure to focus on one role so that it can be used efficiently as well as can secure the database by separating users from accessing data directly.

Then, we moved onto more details on databases in general; how we can use the database we created. It is important to note that even if we create the database using relational database, we need to find some ways to use those data in a meaningful way, such as reports and visualization. For instance, we learned how to make reporting views --not just views for each table--, and how to use Excel, Tableau, Power BI.

For the last 2 or 3 weeks, we have learned using python and C# for the multi-tier applications (accessing database not using SQL) and learn cloud based data as well as no-SQL. Those are essentially teaching us how to create/report database outside of SQL, and to me, it would be interesting to explore on reporting system and no-SQL more in the future.