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IT FDN 130 A: Foundations of Databases & SQL Programming

Final Assignment

<https://github.com/bestiems/DB-Foundations>

LESSONS LEARNED

Beginning the course with only a very basic overview of what SQL does and how it works, I didn't know what to expect or how my prior knowledge would be applicable. Looking back, the lessons were laid out to progressively build on each other, and tasks that seemed difficult or abstract in the beginning are now almost trivial.

In particular, the de-mystifications of how JOINS work was extremely helpful. In my job, JOINS are probably the most important concept to query data and build meaningful tools from different database tables. Reading about JOINS online may seem confusing, but the instruction and practical application made them much easier to visualize and implement.

Another aspect of the class that stood out to me was the importance of data normalization and database architecture. Although many real-world databases don't always follow all of these design principles, I found it useful to see what the ideal state should be, and how it affects database usability and applications. It helps me to consider how to improve databases that I use, or how I may structure new databases in the future.

Another concept that stood out to me was how SELECT, INSERT, UPDATE, and DELETE statements generally follow a set structure. Once I understood the basic elements and outline of each type of SQL transaction, it made building complexity into the queries much easier, and it will be easier to remember these basic outlines going forward.

Lastly, I really appreciated the open nature of the course; we were encouraged to utilize outside resources, which really helps to model approaching these problems in the "real world." Knowing *where* to look and *how* to look will really serve me in the future, as I now understand conceptually what I am trying to look for and my approach to solving particular problems. Overall it was a great course.