CS-499-X2150

Computer Science Capstone – Enhancement Three

Databases

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The second artifact I selected for algorithms and data structure was the final project I completed during my DAD-220 course. This was the third enhancement I made for this CS-499 course. The DAD-220 final project was related to using CRUD (Create, Read, Update and Delete) on a variety of databases in MySQL. Some databases were already set up and needed to be updated. In order to update the SQL queries, I previously wrote, I had to install MySQL on my PC and recreate the databases I used in Codio during the course. The final project was completed in August of 2018, which was my second year here at SNHU.

In my career, I have worked with SQL in different aspects, mainly Oracle databases. I used Oracle syntax SQL for extracting data from databases as well as made some minor updates to some tables. This course allowed me to expand my SQL knowledge into another SQL platform, MySQL. I was able to create databases, drop them as well as manipulate them in different manners. It was something I had wanted to expand my skills and knowledge on, and this course provided that. I appreciated everything that was taught to me and I liked completing the series of tasks that were assigned to us during the final project. It was a project that took me out of my comfort zone, taught me more and allowed my SQL skills to be sharpened. I improved the artifact by improving the flow of some of the SQL queries and displaying different ways to complete similar tasks. I also created SQL to rebuild the databases that were available to me in Codio. At the time of this enhancement I did not have access to Codio from my DAD-220 course. I needed to find another way to make my enhancements and ensure that they worked as intended. This project forced me to learn a new manner of managing data structures. For this enhancement I recreated some of the databases that existed in Codio as well as created the ones we created during the course ourselves. I created the database and created the individual tables for the databases. I then reviewed all the SQL I had written and was able to use advanced SQL to modify some of the statements I had written. I updated them by trying to simplify and streamline them. I did that by finding key variables to use to make updates or display data as well as use one statement to make inserts into a table instead of adding one row entry at a time. The main task that I had to work on that took me some time to get working correctly was for task 8. I wanted to find a way to import multiple entries from an external csv file. This was more complex than using standard SQL syntax. I was required to make some updates to privileges and had to look up some fixes for some errors I received. I was able to finally get it to work after the required updates were made. The main thing to remember is that the path to the csv file needs to be set prior to execution of the statement.

I believe I met the objectives with this enhancement. While I was not able to update all of the tasks. I used some advanced SQL to update the final project SQL I had created. I navigated through them all and update the ones that I found I could and should make more efficient. There were a few tasks of inserting information into a table on a database; I added some additional entries into one query to add multiple people. Another had us delete or perform updates to another table by selecting multiple variables that exist on rows; I updated these by selecting one particular key item that distinguishes those entries and updating them. I used the auto assigned key for the entries to address the changes.

The process of updating the SQL was not too difficult. I was able to review them in Notepad ++ and decide on how to update them. For one of them I used Syntax that was meant for Oracle databases so that one I had to update when I got into the testing phase. My hardest challenge was installing MySQL on my PC. For the course we had the availability of using Codio. Codio is no longer available to us for older courses unless we work with SNHU IT in order to reactivate access. I downloaded a few different installations of MySQL and could not get any of them to work and was getting errors. I used YouTube and found how to correctly install it. The internet can be a computer scientists’ best friend. Once I installed MySQL, I remembered that some of the databases we used in Codio already existed for us and had some data present. I had to go back to my course information and recreated the databases and tables we previously had access to. Once I had everything prepared, I was able to test my updates and get everything in sync. I had to make some updates to ‘GLOBAL’ in order to get the right privileges set to execute one of my updates. This update was for task 8. I wanted to import information from a csv file. It would not work automatically. I tried a few troubleshooting tips I found online and finally got it to work by changing the slashes in the path to forward slashes and updating the global privileges as I mentioned. The artifact was improved because the SQL statements and queries became more efficient. I learned to use external tools and sources like YouTube when needed to accomplish tasks or refresh your memory if you do not remember or know how to complete a task. I also noticed that taking good notes and creating guides will help you in the long run in computer science. I make guides and notes for projects I work on now to remember how to install something or the changes I made. This will help avoid issues in the future.

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