**Computer Database Management Spring Semester**

**CST 225-02A Final Project Part 4 - Description**

A screenshot of a computer

Description automatically generatedMay 2, 2023

PC-B

Creating our COVID-19 Database (Group 2)

In project part one, we decided it would be interesting and perhaps practical to create our own COVID database that could represent North Carolina, or a snippet of North Carolina, and help viewers organize this data through several tables. We initially thought it would be easier to utilize a subject for the project that is popular and relevant because it would be easier to acquire data for the tables. What we found is that the CDC website has an extremely powerful database that could do everything we wanted to do, and more. At that point it became clear that we would use the CDC website as our primary source of data—later we would need to tweak our tables (and our entire project) to better match the data from the CDC.

In project part two, we built our ER table. Even though we ended up making several changes from the initial design to the database, the ER diagram served as a guideline to get us started. At the end of the project, it’s a lot easier to see how a well-designed ER diagram can save a lot of time and effort when designing a database. While our ER diagram wasn’t perfect, it served as an excellent learning experience for any future databases we may design.

In project part three we needed to make several changes to the fundamental design of the database to both facilitate the CDC data and normalize the database. These changes were documented in the readme.txt included with the ‘Loading\_Relations’ folder. Some of the changes included dropping a redundant table, switching the focus of our project to include the data from HHS Region 4 (a group of South Eastern states). We also performed a basic decomposition of the tables which resulted in the creation of age, gender, and race tables. Lastly, we began work on creating forms and integrating them into an accessible webpage.

In the final portion of our project, we focused on getting our webpage and forms to connect and take input from the forms. While the database may be imperfect, our end goal was to draw inspiration from the CDC webpage and get a small taste of what it might be like to create a powerful relational database. Because relational databases can be powerful tools for practically anything, this knowledge we have gained will be invaluable and change the way we think about technological resources we use every day.