Final Report
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https://github.com/HughDillon/CS4620-Final-Project

Deviations from Midterm Report

As stated originally, our goal was to use C++ to build our application. Over time we began to realize that the tools we were using would take too long for us to learn how to use properly, as C++ builder is somewhat outdated. In the end, we decided to change our programming language to python, utilizing tkinter in order to build our user interface. Despite these challenges, we managed to implement most of the features we wanted in our project originally, save for adding SQL Injection and some minor problems joining our database tables in an efficient way. Overall, we had a much better experience using python to build this project because it was much more efficient in how it handled many of the issues we had with C++.

Deviations from Milestones

By the time we completed the project we reached most of the milestones we had set for us to achieve. A milestone we did not have time to get to was implementing SQL injection protection in our codebase. One of our milestones in our project proposal was to create a console based UI for our users, however we instead made a python program with working buttons and window screens for our UI. This makes user input much more easy to navigate and control, it is also much quicker than manually typing commands into a command line. Further, python made it even easier to implement scripting events like opening the web browser to view a malwarebytes.com page with the virus description and vulnerabilities.

Lessons Learned

Some things we learned while completing this project was how to create a database, how to use C++ Builder and RAD Studio to create a simple GUI. When we switched our project's methodology over to python instead of C++ we had to learn a lot about python. We learned how to create a UI with python and the tkinter library. We learned how to make a python program open URLs from a button click. An overall lesson we learned is that creating a UI with C++ is a nontrivial task (especially with RAD studio), and that sometimes you can make a problem simpler by using a different language that is built to succeed in solving the problem.