Criterion A - Planning

Scenario

The client has an ever-growing set of Lego sets that are currently in storage. Currently, they have about 100 sets that they would like to sell in the future. However, the sheer size of their collection makes it difficult to efficiently store all the necessary information. The client tends to forego record-keeping due to the massive amount of work it would require. Lately, they been seeking a way to organize the information in one central location but are unsure how to go about it in an efficient and intuitive way.

After consulting with the client (refer to Appendix A), we concluded that the best solution to their problem was to create a program where they could store and display their collection in a table. This program would have a username and password-based account system, but with the extra benefit of no one on the web being able to access their information. For convenience's sake, they would have a way to automatically create set entries just by selecting a set from a catalogue of LEGO sets. In addition, the client would like to be able to sort the entries by the column headers and be able to search for certain sets with keywords.

Proposed Program

I will be creating a GUI using Java, Eclipse, and SQLite. This GUI will have an account-based system and be connected to a SQLite database that stores a catalogue of LEGO sets, each account's log-in information, and all set entries. The account these set entries belong to will be denoted by a user id generated by SQLite.

The user will be able to add sets to their collection by selecting a set from the catalogue and then entering certain information in manually. They will also be able to edit or delete sets by selecting them.

The user will also be able to sort the sets by their various properties (set number, name, etc.) and filter particular sets using keywords entered into a search bar in both their collection and the catalogue.

Rationale:

I am using Java because it is a programming language that I am well-versed in, and because it is a free, platform-independent language. And because I am using Java, I am also using Eclipse. Eclipse would allow me to freely create and edit a GUI, with some pre-added classes. I am also utilizing SQLite because it has the innate ability to store information in a singular database, as well as add, edit, delete, and sort through data.

The reason I am creating my own program is because my program provides extra security and anonymity due to its independence and free price. A variety of users would be able to access it independently without worrying about Internet connections or companies collecting their data without them knowing. In addition, it would be easy for the users to learn how to use, with no additional fees or excessive extra downloads.

My computer science teacher will serve as my advisor for developing this program.

Word Count: 493

Success Criteria:

- The program should allow the user to log in and out of the GUI program.
- The program should be able to retain all data when the user logs in and out.
- The program should allow users to create new accounts.
- The program should be able to store information from different users in the correct account.
- The program should allow the user to add entries.
- The program should allow the user to delete entries.
- The program should allow the user to edit entries.
- The program should have search bar functionality that connects to the catalogue.
- The program should allow the user to sort the information in their collection by the column headers of the collection table.