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Problem Specification for **webb**

Application Description: **webb** is a data management web application for users to be able to import, export, and secure documents, pdfs, and files with having an emphasis on security for both login, as well as encryption on said imported files.

Language of **webb**: Application will be written in Python with the Django Framework to assist with development.

Front end, back end, and security for **webb**: For the web application, I will be using the Django framework to help manage both front end, back end, and all security portions of the application. The Django framework will not only help speed up development of the app, but will help the security, front end, back end portions of the project together to help avoid mistakes when creating a web application. Django combines these portions of making a website to assist the developer in countless ways with its included packages.

The Django Framework is a free and open source combination of packages that will help keep the development of the application secure, faster and help avoid any common mistakes when creating a website or web application. Using Python, Django allows for user authentication, establishing dynamic apps, and has been used by Instagram, Spotify, and even DropBox. Django also helps managing a database as well, which will be used for the "Users" in my project.

For a user to take advantage of **webb's** features, a user must sign up within the web application to get started. There will be a strict set of password requirements, with a minimum amount of characters being twelve, maximum character password being one hundred, and the password must contain a special character and number at least once. The user will also be prompted to setup a selection of no less than three to no greater than six security questions. Once this is done, there will be a two way authentication system setup with the users email for authentication when logging in for either the first time, or on a new IP address.

Although there are no prototypes of the project built yet, my case diagram gives a detailed visual diagram of some of the backbones of the project, how it will work and what the user can do.

List of Deliverables:
• Two factor authentication system for new accounts and new log ins on different IP's.
• Strict requirements for account creation regarding password requirements and security question setup (Requirements listed above).
• User can import a file or photo within the web application, and move the file too and from folders within the app.
• User can export a file or photo, assuming there is no password encryption set on the file.
• User can setup password encryption for files within the application that are already imported.
• Passwords for the account as well as the files with the encryption set on them will be encrypted using the algorithm PBKDF2 with a SHA256 Hash.
• User should be able to log in to the app, open there account settings and be able to change password, security questions and amount of security questions, as well as use a different email address for the account which will then prompt to setup the two factor authentication system again.
• User will have the ability to access History, which will show any changes that have been made to the account while logged in, as well as if any log in attempts have been made for the account.