Formal Requirement Write-Up

The project requirements can be broken down into the following five categories: the main features, data visualization reports, database, screen scrape, and security. The system will be designed to be as user-friendly as possible, to help users input new incident report data as quickly as possible, and to generate reports that show overall behavioral trends of one or many children in the home. The system will be able to handle multiple types of data, including one or more bevorial classifications, booleans, text, integers, etc. A major characteristic of the system is modularity, it will be constructed in order to allow for the addition, removal and editing of incident reports. Additionally, these forms will support various input types such as booleans, integers, and text. It will also allow for easy exporting to common file types such as PDFs, Excel spreadsheets, and Word documents. This system will officially support running on Google Chrome in a Windows 10 environment, using a database running on the home’s server.

We believe implementing a database into the system would be beneficial to both parties. With a database is implement, the system will query faster, be more reliable, and offer enhanced security. We would utilize PostgreSQL as the DataBase Management System (DBMS), but the logical representation will allow it to be built in other DBMSs. The database will contain login credentials with encrypted passwords, to enforce group and user permissions for security. There will be no identifiable information linked to children; every child will be a number, as to comply with HIPAA. The database will quickly show the data in a browser and then add the incident to the database. All of the data in the database will be privately stored on the premises, it will not go out onto the Internet. Stored procedures implemented in the database can be created later to add additional functionality or further automate the data intake procedure.

We would also implement screen scraping the reports from Kaleidacare in order to know what kind of incident it is and all other relevant information DonnaMarie would like to include. The system would allow DonnaMarie, or an admin user, to review the material before it is added to the database, to ensure data integrity. Screen scrapes will expedite the data intake process, as it would require less manual work.

The system will be secured by login credentials and given to the select users of the system and group permissions that reflect the internal operations of the home. A Root user will have complete access to the system to add and remove anything, this user will only be used by our team as we construct it. An Admin user will have full control over editing the incident reports and visualizations. Donnamarie will be another user that will be able to add incident reports and create data visualization reports. Dr. C will be another user who will only be able to view data visualization reports. All users will have to login to their local machine using biometrics, to access the system to login and view data.

This proposed system will automate incident report intake, improve data visualizations, allow for easy exporting of data, improve data integrity, data retrieval, and security.