Project Outline

Client needs

The health inspector is looking for an application which will be able to replace his current physical filing system, which is hard to navigate and does not give a complete view of the current state of the town's public health. It would allow him to search the food code for violations based on keywords and save information about restaurants, water wells and septic tanks within the Sunderland and Leverett area. It would also be able to store the information he puts into food inspection forms, and search for that information based on keywords or restaurant name. A similar system would be put in place for the wells and septic tanks of both towns, because their filing system is equally unnavigable, and data frequently gets lost. As part of a long term plan, the client would also like to be able to see information about well locations and water quality laid out on a map. The application needs to be user friendly enough to be used by computer beginners, secure enough that sensitive data can be stored on it and reliable enough that it can be trusted to hold records of legal documents and serve them up correctly.

Ultimately, the health inspector would like to have an app which is able to integrate all of these functionalities seamlessly. It would have a section for filling out food inspection forms, a section for filling out septic and well forms, and a section for viewing and searching relevant health codes. The implementation would be hidden from the client so that he would be able to interact with food, well and septic forms in the same manner. He would be able to search based on past violations and restaurant names and be served all of the information immediately. Violations which show up next to a restaurant would be symlinked to their search results in the health code, allowing him to review the details of a violation immediately, which would save him a lot of extra work. The subprojects we see arising from this main project are searching the food code for key words, creating a map of wells and their water quality, creating an application allowing access to food inspection data, and creating an application with access to well/septic data.

Project proposals

Searching the food code for keywords

This application would allow users to search the food code for keywords so that they can find references to certain sections of the food code quickly. Users could either type in the keywords or click on the tags of common keywords to start the search. The application would also allow users to search for multiple keywords in the same time. Since the food code is huge and the users might just want to search in certain chapters or sections, the application would allow users to choose the chapters or sections that they would like to search for.

Creating a map of wells and their water quality

This application would display a map of the Sunderland and Leverett area with markers for each well. For every well on the map, it would have the most recent report on the quality of that well's water as well as any past reports for that well. The client would be able to organize these reports to see the history of each well's water quality, and see on the map where potential spread of contamination may have occurred between nearby wells by examining the report data. This project would be an application with a database for water quality reports of all the wells and a map interface to visualize these wells and their locations.

Creating an application allowing access to food inspection data

This project would be an application which makes it easier for the client to organize and search his health inspection information. Over the course of the project, we would set up a system where the client would be able to search inspection reports and information about restaurants within the Sunderland and Leverett area. We would need to include information such as the the restaurant's name, address, previous violations, and the last time each was updated. Searching these restaurants in the application would pull up any reports in the database which were filed for that particular restaurant.

Creating an application allowing access to well/septic data

This project would be an application which makes it easier for the client to organize and search information on wells and septic tanks in Sunderland and Leverett. The client would be able to look up wells by location and see a list of any water quality reports for that location. He would also be able to do the same for septic tank reports, finding information on the amount drained and tank capacity. These reports would be stored in a database accessed by the application, and the client would be able to search through them by keywords in each report similar to the food inspection application.

Creating an input form which he can use remotely

This project would involve creating an application with which the client would be able to write any kind of health inspection data to the database. This would end up being information the inspector collected while he was on duty. Since he may not have access to a reliable connection, he would need to be able to store data locally and sync with the database when he reestablishes a connection. It would need to have a user friendly UI, so he could start using it in the field right away; it could be based on the physical forms he is already using.