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CS4760

Jan. 25, 2024

Project Assignment 6 – App Description

- App Description:
 - App Idea:
 - A common practice for sheep farmers is to ‘deworm’ sheep affected by a parasite called the barber pole worm. The best practice is to treat only sheep currently affected by the worm, to ensure the worms don’t become resistant to the treatment, so tracking the health and treatment history of each individual sheep is crucial to maintain the flock’s health. Currently, sheep farmers are using software such as spreadsheets and notes apps to track this information, but these methods lack elegance and efficiency. The proposed sheep wormer app will enable these farmers to both record and track the deworming status/history of each of their sheep in a much more efficient manner, whether the user is online or offline.
 - Users:
 - The app will have one main type of user, being sheep farmers and their helping hands. However, there are three possible user roles:
 - Entering sheep data
 - Sheep data analysis & comparison to other farms

- System administration

It is assumed that the users will be well-versed in sheep farming and deworming practices/terminology. Their expertise in technology should not be assumed to be too high. There is an emphasis on ease of use for the app's implementations.

- Major Workflows:

- First, the user needs to log in to their farm account
- Second, the user will then have the option to either go through the sheep that are already in the database or add a new sheep
- Third, the user will then be able to query through their sheep based on their identification tag
- Fourth, the user will be able to modify the different data regarding sheep worming such as FAMACHA score, dewormer status, and optional notes regarding the sheep.
- Finally, the user will then be able to view the statistics of near sheep farms as long as they are opted into sharing their data.

- Views:

- Login
- Create Account
- Home page
 - Button to go to other Farms Data
 - Other Farms Data

- Graph Displaying other Worming information from other farms
 - Back Button
 - Logout Button
 - Help Button
 - Help Page
 - Description for what all other buttons/Pages Do
- Search Sheep Tag Entry and Add/Remove Sheep Page
 - Search bar -> string value
 - Identification number
 - Name, Age, Sex
 - Worming Status for the Day
 - Back Button
- Sheep Check Entry Page
 - Sheep selection by tag
 - Display last check data
 - Dewormer status input (i.e. dewormed or not, dewormer used)
 - Reason for Deworming input (i.e. have worms, diarrhea, etc.)
 - Input additional notes/comments as needed
- Analytics Pages
 - Individual Sheep Analytics
 - Display the sheep's deworming trend
 - Flock Trends

- Display trends around the deworming of a flock

App Usage:

- The app will mainly be used during checks in the field. As sheep are herded through a chute, they are inspected for symptoms of the barber pole worm. The farmer will record the results of each parasite check in the app. During these checks or at another time, the farmer may also choose to view the results of each sheep's most recent parasite check in the app. The users will also be able to add/remove their sheep within the app as needed. The other usage of the app will be outside of worm checks, in which the user will review and potentially upload the data they recorded. The user should also have the capability to opt in to sharing their data and in doing so be able to see the statistics of those around them who have also done so.
- Data:
 - Required Data for Sheep
 - Sheep identification information (i.e. ear tag #, name)
 - Sheep classification information (i.e. date of birth, sex, breed)
 - Worm check information (i.e. date, FAMACHA score)
 - Dewormer status (i.e. dewormed or not, dewormer used)
 - Reason for Deworming (i.e. have worms, diarrhea, etc.)
 - Additional notes/comments as needed
 - Sheep breeding information (OPTIONAL)
 - Required Data for The User/Farm
 - Farm identification (Keep all data associated with the farm)

- Farm Location (Address or zip code)
 - Login Credentials (Username and Password)
 - Shared data between farms
- Challenges
 - The first challenge that we are going to face is in relation to the database design. From what we have gathered, we should start with having a single database for each farm and a single central database to be used for statistics. The scientist also mentioned we should design it in such a way that if we want to move to a single centralized database for all farms, the export capabilities will be able to handle that.
 - The second challenge is going to occur when switching to offline mode for the app. We need to make sure that the user's session is up to date before going to the field and losing wifi to ensure that they will be able to access their sheep data. The app has to simulate the database locally and synchronize with the server at some point. The session failure state of a native app with a local database is that the data is old. The session failure state of a web app using browser storage is no app at all.

Question for Scientist when meeting follow-up is sent:

- Is it a deal-breaker to always have to connect to the server before going offline?
- How would you like your summary data presented when looking to analyze (Graph, table, insights dashboard, etc.)
 - From an individual sheep perspective
 - From the flock as a whole

- Will there be more than one flock on a single farm?
 - If there is more than one flock, how are they identified to be within a specific flock
 - Would they change flocks?
- She sent the table she currently uses to keep record of worming, breeding, etc. but further clarification of data to be displayed would be great (Why? Will this even make sense to her as a question?)