Milestone 3

03/15/2023

Group #10

Name	Student Number	CS Alias (Userid)	Preferred E-mail Address
Benjamin Farris	20530606	j8c9p	benner.farris@gmail.com
Jonathan Chow	33049743	e4i4a	jon.chowyyc@gmail.com
Allen Zhu	63577860	u6y8q	allenzhu2000@hotmail.com

By typing our names and student numbers in the above table, we certify that the work in the attached assignment was performed solely by those whose names and student IDs are included above. (In the case of Project Milestone 0, the main purpose of this page is for you to let us know your e-mail address, and then let us assign you to a TA for your project supervisor.)

In addition, we indicate that we are fully aware of the rules and consequences of plagiarism, as set forth by the Department of Computer Science and the University of British Columbia.

Description

This project is a farm management system that keeps track of many farming utilities and processes such as facilities, fields, animals, crops, farmers, products, and buyers, with the intention of helping farm owners manage their farms more efficiently and effectively. The main aspects of the system are separated between staff, livestock, agriculture and the many components that are required to mass produce these items. All of these many entities will be linked to provide a user interface for the farmer in order to keep track of tasks needing to be accomplished, which include those listed above, in addition to keeping track of expenses and profits. Furthermore, important distributors will also have access to the system in order to purchase products to distribute to other manufacturers, which implies a needed access to the database in order to view available products.

What we need to discuss:

- Create table .sql files
- Populate tables .sql files
- Connect the front end to Oracle
- Make a README.md
- Make the basic Frame classes
- Submit the project
- Make the cover page + project description
- Come up with the queries

Timeline

Deadline	Task Description	Group Member(s)
Mar. 15th	**PRELIMINARY**	
Mar. 15th	brainstorm use cases (refer to ER diagram for inspiration)	Everybody
Mar. 31st	**BACK-END**	
Mar. 18th	build schemas (create tables)	Anybody (if they have time)
Mar. 18th	create sample/pre-loaded data	Anybody (if they have time)
Mar. 25th	create unit tests	Allen, Ben (checked over by rest)
Mar. 28-29th	create sql queries	Everybody

Mar. 31st	set up backend api	Ben (with help of others)
Mar. 31st	**FRONT-END**	
Mar. 18th	design ui	Everybody
Mar. 22nd	construct ui	Jon, Allen
Mar. 25th	create unit tests	Jon (checked over by rest)
Mar. 31st	set up frontend controllers	Jon, Allen
Apr. 5th	**FULL**	
Apr. 2nd	include middlewares to link frontend to backend	Everybody
Apr. 4th	manual tests	Everybody
Apr. 4th	(done concurrently with manual testing) add demo screenshots / milestone 4 deliverable	Everybody

What functionality we expect from the GUI

1. Log in as either a Farmer or as a Buyer.
    - We need a login page that differentiates between a Farmer and a buyer.
    - Make it simple. No need for authentication (just have two buttons, “Farmer” and “Buyer”)

Logged in as a Farmer

1. The farmer would be able to add/remove data and manage products (ex. The farmer would be able to sell livestock or buy crops to be planted).. This would increase/decrease the budget available.
    - Maintain catalog of products for sale
2. Display alerts/warnings of animals not being fed, buildings not being maintained etc.
3. Keep track of budget, crops, etc.
4. Tend facilities
    - Move some livestock from different pens to create space, make sure that baby cows are with their mothers, and move farmers’ living quarters.
5. Tend to livestock.
    - Make sure that they are fed/watered on a timely basis
    - Be able to check the weight and age of the animals.
    - Be able to check the vet records for the animals
6. Plant crops/harvest crops.

    - Check to see if crops are in need of harvesting or being planted.
    - Do that task which would increase the crop count in the database

Logged in as Buyer

1. The buyer would have access to the product database
    - They would be able to see the quantity of product available
    - They would see the details of the product (age, variant, yield, etc.)
2. Be able to make purchases with a given budget
    - Would buy a certain amount of product
    - Can buy a multitude of products (different products at once)
3. View historical transactions.
    - Filter by date (eg. 6months ago, 30 days ago etc.)

Ideas for the future:

- Farmers can request tasks to be accomplished. A task can be something like moving animal #1 from pen A to pen B, or watering plants with X amount of water.
- Farmers can look at task board to accept tasks and see what needs to be done. When complete the task, they check of a box which prompts the database to update to the current state of the farm.