**C868 – Software Capstone Project Summary**

**Task 2 – Section A**



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| **Capstone Proposal Project Name:** | Farm Inventory: Cost Tracker |
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# **Business Problem**

## **The Customer**

Faithful Companion Inc. (FCI) is a small not-for-profit animal sanctuary and education company employing 2-3 people. The animals on the farm are primarily rescued from farms where the animal no longer meet the needs of the farm. And a few have come from shelters. Their policy is that once an animal is on the farm, it is at its forever home to live its life out there. Throughout the year, they take a few animals to schools, summer camps, and events for education on how to care for them and teach children how to interact with different animals. They also have small groups, or a family come to the farm for pet therapy and volunteer work.

The employees are good with computers, and the supplication will have a user-friendly graphical user interface (GUI) that will make it easy to understand and operate. The information entered with the application will be stored in a database using MySQL. The user can add, update, and delete Animals, Items, Medications, and Visits through the application.

## **Business Case**

Currently, tracking an animal’s cost is looking over all the receipts, pulling out all that is for the period, then looking through those pulled out to see if it is for a specific animal. This application will have you enter receipts as you get them after the initial starting batch is entered. Then you will select which animal and a timeframe, and the total cost will be calculated with an itemized list for that animal in that timeframe.

## **Fulfillment**

The application will be a Java-based program with a MySQL database. The user will log in on the Login Screen. Once a valid username and password are entered, the Home Screen will be displayed. The Home Screen will have buttons for Animals, Visits, Medications, and Items. It will take the user to that screen where they can add, update, or delete the database’s information. There will also be a button for Reports Menu, which has buttons for a report about Visits, Medications, or Items. There will be a list of time frames on that report screen to look up. They will select an animal or all. A button for 30 and 90 days ago, along with Spring, Summer, Fall, and Winter. They will choose a year for the seasonal buttons to get the correct information wanted.

# **Existing Gaps**

To track an animal’s cost for food, supplies, medications, and Vet and Ferrier visits, they must go through all the receipts for the time frame they want to know about. This application will be able to show it in a matter of seconds. Once the information is entered, the application can do all the work for them by looking up all the dates and who it was for with a click of a button. You can enter the data into the application when you have a receipt, and when you need to know the cost, it will calculate all the dates and total up the cost.

The application will interact with the database without the user knowing anything about SQL. The user will use the GUI and only need the basics of using a computer and mouse. The application will get the information to and from the database.

# **SDLC Methodology**

For this project, the Agile model will be used. This will ensure the client approves how the application looks and feels as it is being created. Little changes can be made at each Scrum meeting if needed. This will ensure that the client is going to enjoy using the application. With Scrum meetings every other day or so, it will be quicker and easier if a change is wanted.

The core values of agile follow how I will build this program. The first one is people and collaboration over procedure and tools, and I will be in close contact with the client to get feedback. The second value, software over documents, is how I like to work. I like coding more than writing papers on what I will be coding. Third, value communication over contracts; being so close to the client writing up a contract and following it would be much harder on both of us. And the final value is being flexible to change instead of focusing on a plan. With all parties able to communicate quickly, new ideas or realizing some feature would make it harder to use, or a better way was thought of, it can be discussed without a significant plan or process needing to be followed.

# **Deliverables**

Thethree3 types of deliverables the client requested that are associated with the Agile SDLC. They are Your product vision, product roadmap, and release plan.

## **Product Vision**

Create an application for Faithful Companion Inc that will track the cost of all the animals on the farm individually and as a group in any given timeframe without having to look over a stack of receipts.

## **Product Roadmap**

This identifies the most valuable features and prioritizes them.

* Requirements Gathering – List of features the application should have the client wants.
* Design – This is for designing the way the GUI will look.
* Development – This is the coding of the application.
* Testing – This is the testing parts of the application as they are completed and then together.
* Implementation – This is the way it will be delivered or installed for the client.
* Training – This is training the client will go through to learn how to use the application.

## **Release Plan**

This is a timeline that shows when the application will be running.

* 3/8/2023 Gather Requirements.
* 3/9/2023 Start working the Design.
* 3/9/2023 Start the Development of the application.
* 3/19/2023 Start the Testing alongside the Development.
* 4/5/2023 Start the Implementation of the application.
* 4/7/2023 Training the employees on the application.

# **Implementation**

The application is only installed on one computer, with the company being small. This can be installed Monday through Thursday from 8:00 to 6:30 when the computer is not in use. The owner works another job and does not use the computer during those hours. Once a date is selected, the first thing is to install MySQL and set up the database. The application will then be installed and set up for the database. Testing will be done to make sure it is all working together. Once the software is installed and tested, any issues will be addressed and resolved before the client is off work. When the client can go over the new application, I will go through a training process with the client.

The training process will allow any unclear steps to be addressed and cleared up. Each screen and its functions will be covered in detail until the client feels comfortable using the program. As maintenance is needed for any bugs, it will be done on my computer and tested. After testing and issues are resolved, the update will be done when the client is working and not using the computer.

Any new features the client may want can be reviewed and discussed to determine if they can be added. It will be done on my computer first and tested if they can be added. Once it passes testing, it can be pushed to the client’s computer.

# **Validation and Verification**

Verifying that the software meets the requirements will be done with each testing sprint. The requirements document will be reviewed, and then the software will be inspected to confirm the requirements are met. The validation process will be done alongside the verifying process. This process will be done with the client to justify whether the software met their needs.

# **Environments and Costs**

## **Programming Environment**

The client has a computer in place for the software to be installed. The software they will need will be:

* Java 8 or higher
* MySQL Community (GPL) 8.0.32 or higher
* MySQL Connector-J 8.0.32 or higher

## **Environment Costs**

The environment cost will be minimal, with the MySQL Community being an open source. All the rest of the equipment is already in place. This is a nonprofit, so the cost must be as small as possible.

## **Human Resource Requirements**

The only human resources this project has is the client and me. Since it is just two people, I will take on every task of developing the application. The client will be involved in the approval and feedback steps on the design. With this being a nonprofit company, I am donating my labor cost as volunteer hours.

# **Project Timeline**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Phase** | **Milestone/Task** | **Deliverable** | **Description** | **Dates** |
| Pre-development | Task 1 / Requirements Gathering | Requirements | Meet with the client to discuss requirements and features | 3/8/2023-3/8/2023 |
| Design | Task 2 / Design GUI | Low fidelity wireframe | Design the Login and Home Screen | 3/9/2023-3/11/2023 |
| High fidelity mockup |
| Design | Task 3 / Design GUI | Low fidelity wireframe | Design the Animal and Visit screens | 3/11/2023-3/12/2023 |
| High fidelity mockup |
| Design | Task 4 / Design GUI | Low fidelity wireframe | Design the Items and Medication screens | 3/12/2023-3/14/2023 |
| High fidelity mockup |
| Design | Task 5 / Design GUI | Low fidelity wireframe | Design the Reports Menu and Animal Report screens | 3/14/2023-3/15/2023 |
| High fidelity mockup |
| Design | Task 6 / Design GUI | Low fidelity wireframe | Design the Medication, Item, and Visit Report screens | 3/15/2023-3/18/2023 |
| High fidelity mockup |
| Development | Task 7 / Coding | Working prototype | Code the Login and Home screens | 3/9/2023-3/19/2023 |
| Testing | Task 7 / Testing | Prototype passes testing | Test the Login and Home screens | 3/19/2023-3/21/2023 |
| Development | Task 8 / Coding | Working prototype | Code the Animal and the Visit screens | 3/21/2023-3/22/2023 |
| Testing | Task 9 / Testing | Prototype passes testing | Test the Animal, and the Visit screens | 3/22/2023-3/24/2023 |
| Development | Task 10 / Coding | Working prototype | Code the Items and Medication screens | 3/24/2023-3/25/2023 |
| Testing | Task 11 / Testing | Prototype passes testing | Test the Items and Medication screens | 3/25/2023-3/27/2023 |
| Development | Task 12 / Coding | Working prototype | Code the Reports Menu and Animal Report screens | 3/27/2023-3/28/2023 |
| Testing | Task 13 / Testing | Prototype passes testing | Test the Reports Menu and Animal Report screens | 3/28/2023-3/30/2023 |
| Development | Task 14 / Coding | Working prototype | Code the Medication, Item, and Visit Report screens | 3/30/2023-3/31/2023 |
| Testing | Task 15 / Testing | Prototype passes testing | Test the Medication, Item, and Visit Report screens | 3/31/2023-4/3/2023 |
| Testing | Task 16 / Testing |  | Put it all together for Testing | 4/3/2023-4/5/2023 |
| Implementation | Task 17 / Installing | All required software is installed and set up | Install MySQL and set up Database and Install the Application and Set up the new Database | 4/5/2023-4/5/2023 |
| Training | Task 18/ Training | The user understands how to use the new software | Training meeting with the client. | 4/7/2023-4/7/2023 |