**SAVANNAH DAIRY FARM MANAGEMENT SYSTEM.**

**THARAKA UNIVERSITY COLLEGE**

**PRESETEND BY**

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## DECLARATION.

I Kimanthi Martin Gikundi hereby declare that this project proposal is original and has not been published or submitted for any other diploma award to any other university before.

Signature…………………….. Date…………………………

NAME OF SUPERVISOR: Mr. Kevin Tuei

Signed…………………………. Date………………………….

## Abstract

A dairy management system is a research work that will help build an efficient information management for the dairy farms. It is aimed at developing a system for record keeping in case of any retrieval needs. This will help build a more reliable and effective means of keeping records, removing all forms of delay, stress and any inconvenience. This project work will help to understand what dairy farm is all about, the procedures for data entry, how to keep these records on the web and a design and implementation of an online record keeping system. Moreover, the design and implementation will be carried out using HTML, PHP-MYSQL and JavaScript

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### CHAPTER ONE

# INTRODUCTION

A dairy farm is an agricultural institution that deals with receiving milk products, processing milk calculating each farmer’s quantity of sales and paying back with a rating that is determined by the prevailing milk demands.

In a dairy farm there are various departments like Production department, health department, consumption department and many others. All these departments’ perform different tasks which need to be well coordinated to ensure smooth running of the firm. Dairy farms have a wide range of information that needs proper record keeping and so it needs a well-developed system for keeping all these records.

## BACKGROUND OF THE STUDY.

Over years, the tasks that pertains animal registration , animal selling, ensuring the dairy animals in the farm are in good health, monitoring their consumption as well as their production are among the many activities carried out in a dairy farm as an organization.

PROBLEM STATEMENT.

The existing system has various challenges as explained.

A record of registered animals with their details like date of birth and their Id has not been happening in the existing systems. The information regarding the health details of all the dairy animals in the farm has over years been kept in books .This is tiresome and takes a lot of space in an office especially on retrieving important details and on case where such books get lost, such details are forgotten. Also the system has not been capturing details of the sold animals in dairy farm. The existing system cannot produce a production report, consumption report and health reports of the registered animals in case a needed.

Also records concerning the animal health, consumption and production has over years been recorded manually where updating them is a problem and getting them when needed is time consuming.

The existing system also does not allow the user to view the animals registered in a farm, the sold animals and some registered animal details.

## Objectives of the study

### Major objective

The major objective of this project is to come up with a system that can ensure safe record keeping of important details in the dairy farm. The system is expected to have a database where all the farm records can be posted by the respective persons.

### General objective

The system aims to allow for easier, convenient and efficient record keeping as pertains animal health, their consumption and production and enable all users to the system get updated of the registered animals, sold animals and other animal details.

**Specific objectives**

* To develop a system that can allow animal registration capturing their Id, breed, date registered and calving times.
* To develop a system that can enable user update on records of animal production, consumption and health details.
* To develop a system that can print out a report of animal health details, overall production details and consumption details.
* To develop a system that admin can login, add user, update animal details and add animal breeds.
* To develop a system that both the user and the admin can view details of registered animals, sold animals and other available animal details.
* To create a system that can allow the admin sell an animal and retain it records.
* To create a system where the admin can delete or edit registered animal details in case of their death.

## SCOPE AND LIMITATIONS OF THE STUDY

In the development of the proposed system, I would like to dwell much on record keeping by creating a platform for capturing the relevant details. I will also go beyond and provide a platform where the users to the system can update these details and view the existing animal details. I will ensure the user can view sold animals. The system will be able to print out various reports when prompted to. The admin to the system will be able to add unlimited number of users to the system.

## Justification of these study

The system has its significance to the users (admin and registered users) whereby it will be able to wipe out the existing challenges in record keeping. There is no farm that has been able to come up with a scheme whereby clients can view registered animals and their details. The system therefore, will open an avenue where such dairy farm can be able to fetch the existing market in the dairy farming industry. If a company offers services of viewing all types of animals, clients will not be bothered to contact any other farm but them. Getting various reports as pertains animal details has been a challenge. The system aims to ensure reports regarding animal health, production and consumption can be printed out to the client on enquiry.

Below are the major advantages that will be brought upon by the proposed system.

* There will be safe record keeping of important information to a dairy farm.
* Easy retrieval of data by printing out reports when needed.
* Fast update to the data in the system.
* Eliminating paper work in the office.
* Time saving.
* Save on cost of buying files and books.

### CHAPTER TWO

# LITERATURE REVIEW

## 2.1 Introduction

A dairy firm is an organization that deals with all what pertains dairy animals. These include managing milk production, consumption and health matters of the animals to ensure their high productivity. It is often organized with numerous local branches and primarily located near towns or in towns or busy city areas.

Dairy farms primarily serve farmers who are registered to a dairy firm with services like providing fodder ad concentrates for their animals on an affordable price, allocating a veterinary officer to attend to their animals on health matters like vaccination and disease treatment as well as calving services and collecting animal milk from various system provide a rating and paying back to the customer’s monthly each according to his or her production quantity. Animal registration in the dairy farms and from the farmers is among the other tasks in the dairy farm. In the area of study, many dairy farms that have been operating have been doing so but have been leaving out vital functionalities like printing vital reports on demand. The systems that have been in operation and that many farms are using has not been providing a platform where users can view the animal details and allow the admin to update anytime need arises. It has not been enabling the firm to keep a record of registered animals and sold animals. Mostly, the firms provide services without proper record keeping. For example in case a veterinary is sent to attend an animal in a farmers home or even within the firm, the veterinary will go and live a written report to the farmer which in case of disposing it the farmer cannot be able to retrieve the date and type of service provided during the accounting period.

The current system works in interactive mode with departmental staff and to coordinate their activities and facilitate running the organization. The interaction online through a web browsers and is manually through a many office books and files.

Some information about the farm progress, location and milk rating is available on the internet. Either important records like consumption production and animal health details are recorded manually in the files and office books. It’s tiring for a staff to record all these details in books and retrieving them becomes another tiring task.

### CHAPTER THREE:

# METHODOLOGY

## 3.1 Introduction

The proposed system is supposed to help solve corporate record keeping situation whereby the users can update various animal details under one platform. The system will be providing vital functionalities and periodic reports on demand, viewing of all registered animals, their health details, consumption & productivity and offer animal selling service.

To accomplish this project, data is supposed to be collected using various techniques such as observations, questionnaires, sampling and interviews. The data collected will help in designing and developing a system with correct user requirements that will be geared towards solving the record keeping problem.

The final product of the project will be a web based system which will provide an online record keeping system of all the animal under one platform. Once the system has been developed, it will be made available in mainstream browsers, then advertised via the social media sites such as Twitter, Facebook and instagram for dairy farms to adopt it.

3.2 The Methodology

When developing the system, one of the system development methodologies that will be best suited for the project will be used.

For this project, agile development methodology will be used. It is based on incremental, iterative approach. This methodology is open to changing requirements over time and encourages feedback from the end users and does not require an in-depth planning at the beginning of the project.

The goal of each iteration is to produce a working product that satisfies the customer.

## 3.2.1 Reasons for choosing agile methodology

The methodology was chosen because of the following reasons:

1. It embraces changes as it is easy to accommodate and accept changes at any time during the project.
2. It is very beneficial for project whose end goals are not clearly defined.
3. It provides faster and high-quality delivery as breaking down the project into iterations allows the team to focus on high-quality development, testing and collaboration.
4. Customers are heard as they are given many opportunities to see their work being delivered, share their input and have a real impact on the end product. This gives them a sense of ownership as they work so closely with the project team.
5. Since Agile projects encourage feedback from users throughout the whole project there is continuous improvements as lesson learned are used to improve future iteration

**Steps to be followed in the methodology**

**Planning:**Once an idea is deemed viable and feasible, the project team comes together and works to identify features. The goal of this phase is to break down the idea into smaller pieces of work (the features) then to prioritize each feature and assign it to iteration.

**Requirements analysis:**This phase involves many meetings with managers, stakeholders, and users to identify business requirements. The team needs to gather information like who will use the product and how they will use it. These requirements must be quantifiable, relevant, and detailed.

**Design:** The system and software design is prepared from the requirements identified in the previous phase. The team needs to think about what the product or solution will look like. The test team also comes up with a test strategy or plan to proceed.

**Implementation, coding or development:** This phase is all about creating and testing features, and scheduling iterations for deployment (following the iterative and incremental development approach). The development phase starts with iteration 0, because there are no features being delivered. This iteration lays down the foundation for development, with tasks like finalizing contracts, preparing the environments, and funding.

**Testing:**Once the code has been developed, it is tested against the requirements to make sure the product is actually solving customer needs and matching user stories. During this phase, unit testing, integration testing, system testing, and acceptance testing are done.

**Maintenance:** After testing, the product is delivered to customers for them to use. Once customers start using the product, they may run into new problems or breakdowns hence the need for maintenance

**Sources of data**

*Primary sources*

This is the first hand information that we will acquire from the parties involved in the car rental industry. In analyzing the requirements of the proposed system, a number of data collections tools will be employed. The primary data collection tools to be used are to administer questionnaires to the parties involved. Other method to be employed is observation.

*Secondary sources*

This is the information obtained from already documented sources. Those sources to be used include;

## Internet

The internet will be a useful tool since it will help in doing a research on how the current system can be improved and how the new system will be favourable to the users.

## Journals

Published books and journal by scholars in the field will be read and valuable concepts derived on how to carry out the process. We will be able to review what others have done on such web related systems. The journals are quite comprehensive and we are glad they will provide a lot of insight into how the system can be implemented and which disciplines have benefited from this system.

## Data collection methods

*Questionnaires*

Questionnaires are a set of structured questions.

The questionnaires will be prepared and distributed to the users regarding the use of the current system, problems facing the users and the shortcoming of the current manual system. Both closed and open ended questions will be used in the questionnaire so as to get adequate information concerning the basic operations in the enterprises to gather requirements.

Questionnaires were our chosen primary method of data collection as is expressed below.

## Advantages of Questionnaires

1. Questionnaires can be answered quickly and efficiently unlike interviews that require a lot of preparation.
2. Questionnaires are a relatively cheap way of gathering information as compared to interviews and observation that may require one’s physical presence.
3. Questionnaires may also, where need be, help respondents maintain their anonymity.

**Disadvantages of Questionnaires**

1. Questionnaires are difficult to prepare
2. Questionnaires don’t guarantee that the respondent will answer all the questions

**Preparation**

The questionnaire will be prepared using Microsoft word office and be well sectioned to provide an easy environment to gather data. The questionnaire will be divided into THREE main sections

1. Section A: Basic Details – Personal Details
2. Section B: ADMIN– To be filled by the administrator/hire firm owners.
3. Section C: CLIENTS – To be filled in by the departmental staffs.

**Administration**

The questionnaires will be administered manually where the various customers (clients) identified will make tremendous contribution. The questionnaire will also be administered to a number of administrators and the car hire owners who will give a great contribution and support.

## 3.5 Required resources

3.5.1 Server side

**Processor:** Intel ® Xeon ® Processor 3500 series

**HDD:** Minimum 500GB Disk Space

**RAM:** Minimum 16GB

**Operating system**: windows 7, windows 10

**Database**: SQL server 2014 (SQL14)

**Application**: XAMPP, phpmyadmin

3.5.2 Client side

**Processor**: Intel dual core

**HDD**: MINIMUM 80GB Disk space

**RAM:** Minimum 1GB

**Operating system**: Windows 7, windows 8

## 3.6 Budget

|  |  |  |
| --- | --- | --- |
|  | **Infrastructure** | **Cost in ksh** |
| 1 | Laptop hp dual core , 4gb, 500gb | 35,000 |
| 2 | Modem | 1,500 |
| 3 | Printing paper A4 size | 500 |
| 5 | Xampp server | Open source |
| 6 | Microsoft office 2010 | 5,000 |
| 7 | Operating system –( windows 7 or windows 10) | 10,000 |
| 9 | Avira antivirus | 1,500 |
|  | **TOTAL** | **53,500** |

*Table 1*

### CHAPTER FOUR

# INTRODUCTION

This chapter is about getting information and determining requirements. Here the responsibility includes only requirement determination, not the design of the system.

## Functionality of the current system.

The system works in interactive mode with departmental staff and to coordinate their activities and facilitate running the organization. The interaction online through a web browsers and is manually through a many office books and files.

Some information about the farm progress, location and milk rating is available on the internet. Either important records like consumption production and animal health details are recorded manually in the files and office books. It’s tiring for a staff to record all these details in books and retrieving them becomes another tiring task.

## Users to the system to the proposed system

Department staff

Administrator

## Functional requirements of the proposed system

On consulting the managers in the farm, facts are that the system shall make a note of a database of the user accounts. This system will have two kinds of users.

The first user will be a staff who must have been added by the administrator. The staff will be able to update and submit some details in the system.

The second user will be the administrator who adds the staffs to be users of the system, he can also edit and delete various details in the system. He also prints out consumption, production and health reports as available in the system.

## Non-functional requirements.

The system must be error free in the common web browsers available to users for example Mozilla Firefox, Opera, Internet Explorer, Safari and Chrome. The system should be fast enough to inform the user about its current state.

The system must not contain errors making other system functionality unavailable or even user being disturbed by errors while busy working with the system.

## Design requirements.

The system must work in a form of online web application.

**Implementation requirements.**

The presentation layer of this system has to be implemented in HTML Framework.

**System user interaction**

**Departmental Staff**

Staffs interact with system online through a computer to be able access the site, update records and view various details.

**Admin**

They use the system to manage animal details, add users and print various reports. He also makes major updates to the system by editing and deleting some details.

Unified

Modeling language

(uml)

(diagram);

Use case diagram

ADIMIN.

unified modeling language

Diagram

STAFF

Use case diagram

### CHAPTER FIVE

## Introduction

This chapter will cover the details of the proposed system in great depth showing all its functionalities to yield outputs**.**

## Functionality of the proposed system

The system will work in interactive mode with departmental staff and to coordinate their activities and facilitate proper record keeping. The interaction is online through a computer web browser.

A staff logs into the system given he/she is registered as a user to the system and the information is stored in a staff’ table in the database. This information aid in facilitating operations in the system. The staff can update various records in the system submitting them to be stored for future reference. He can also be able to view the animals registered in the system and the ones sold together with other animal details available. After all this He logs out.

The admin to the system too logs in to the system with the right credentials as an admin. On logging in he can manage animal registration, sell an animal, add breed and add a user either as another admin or a normal user. He can also update production, consumption or health details of the animals. He will also be able to view registered animals and sold animals.

The admin can also print a report of overall production, animal consumption and health.

**Users**

Department staff

Administrator

Functional requirements**.**

The system shall make a note of a database of the user accounts. This system will have two kinds of users.

The first user will be a staff who must have been added by the administrator. The staff will be able to update and submit some details in the system.

The second user will be the administrator who adds the staffs to be users of the system .He can also edit and delete various details in the system. He also prints out consumption, production and health reports as available in the system.

**Activity diagram for the admin.**

Start

Invalid

Valid

Consume

**Activity diagram for the staff:**

Start

Invalid

## Conclusion

The proposed system shall entirely improve the current system on the major issues that pertains record keeping. It will be cost effective and easy to use. It will also reduce paper work in the offices which takes a lot of office space. The issue of report printing will help save time taken by the staff in writing the report. The proposed system is open for any relevant improvement as they arise in the dairy firm.

## References

BOOK REFERRED:

•Book Name: PHP6 and My SQL

•Author Name: Steve Suehring, Tim Converse, and Joyce Park

SITE REFERRED:

•http://www.w3schools.com

•http://www.dhudhsagar.com

•http://www.banasdairy.com