A Project Report On

"Farm-Help Management."

SUBMITTED TO

MTES's Smt. G. G. Khadse College, Muktainagar

College Code: 180036

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IN THE PARTIAL FULLFILMENT OF

Bachelor of Computer Application (BCA)

Kavayitri Bahinabai Chaudhari North Maharashtra University, Jalgaon

for the Academic Year 2023-24

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CERTIFICATE

This is to certify that the Project Report entitled **"Farm-Help Management"** has been Successfully completed for partial fulfilment of Degree Course of **"Bachelor of Computer Application (BCA)"** Kavayitri Bahinabai Chaudhari North Maharashtra University, Jalgaon. It has been carried out under my guidance.

It is the original work of **Hitesh Prakash Mali** who work hard and sincerely completed the Field Work I am fully satisfied with his performance.

Guide Name
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Mrs. Seema V. Rane
HOD

Examined By

Internal Examiner

External Examiner

Declaration

I hereby declare that the project work entitled, "Farm-Help Management" submitted under guidance of "Mrs. V. V. Chaudhari". It is my original work for partial fulfillment of the BCA degree during the academic year 2023-24. The report submitted is my own work and has not been duplicated from any other source. I shall be responsible for any unpleasant moment/situation.

Date:

Student Name
Hitesh Prakash Mali

Abstract

"Farm-Help Management " provides the farmers to upload their products and helps its users or buyers to get the details of the agricultural products. The main objective of this project is building an application which will help the farmers to sell their products by uploading the details of that product in the application.

Farm-Help Management is an online web application where buyers can go through the list of products uploaded by the farmer and can add to their cart or buy the required product directly. Both farmers and buyers need to login separately using their own user id and password. And the buyer can place their items into a cart and can purchase it. This application is developed using Python programming language.

Farms forms the backbone of Indian economy and there is always a need of supporting and improving it. As a part of which some of Indian NGO's are with an initiative of supporting the farmers by facilitating them with the modern agricultural equipment's on rental basis. Modern agricultural equipment's make farmers work more efficient and easy. As a part of which there are some organizations that are set up to help those farmers who are in need of such equipment's, where the organization owns the equipment's and rent those on request of farmers at liable amounts.

At present, farmers need to travel to a place to borrow all the essential needs, which is a tiresome and not a cost effective work. So a smart digital farming is listed as the highest ranking technology opportunity in the latest Global Opportunity report in terms of its expected positive

impact on society. This paper is on digitizing the process of renting the agricultural equipment’s by the farmers .We aim at developing an application that farmers can use to get their equipment’s on rent and also check the availability and renting .We also allow them to book the equipment’s in advance .It also helps us to get the track of equipment’s that are on rent .We also aim at developing analytic for the state heads to make better availability of equipment’s and to keep track of the equipment’s as well, which could help in providing better support for farmers.

Keywords: Agriculture, Farmer, Equipment’s, Application, Rental.

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1.Introduction

Modern agricultural equipment's make farmers work more efficient and easy. As a part of which there are some organizations that are set up to help those farmers who are in need of such equipment's, where the organization owns the equipment's and rent those on request of farmers at liable amounts. At present, farmers need to travel to a place to borrow all the essential needs, which is a tiresome and not a cost effective work. So, a smart digital farming is listed as the highest ranking technology opportunity in the latest Global Opportunity report in terms of its expected positive impact on society.

Agriculture yet forms the backbone of Indian economy and there is always a need of supporting and improving it. As a part of which some of Indian NGO's are with an initiative of supporting the farmers by facilitating them with the modern agricultural equipment's on rental basis. We aim at developing an application that farmers can use to get their equipment’s on rent and also check the availability and renting. The weak purchasing power of agricultural machinery is China’s current condition, and the cost of large agricultural machinery is very high. Due to the small size of farmland and strong seasonal characteristics of crops in China, it is difficult for farmers who have bought agricultural machinery in a short time to make profits.

Agricultural machinery idles for a long time, which is a waste of resources. In addition, the function of Chinese agricultural machinery is singular, and many different types of agricultural machinery are needed in the production of a crop. The role of a single type of agricultural machinery is

extremely limited, so farmers are extremely unwise to buy large agricultural machinery. Agricultural machinery rental is a new service form that can lighten the burden of buying agricultural machinery. This service improves the utilization rate of agricultural machinery and promotes the development of the agricultural economy. However most agricultural machinery rental companies are still in the stage of immediate deployment Staff only considers the time sequence when the agricultural.

2. Proposed System

The proposed system aims to develop a dynamic and user-friendly Management using Python. This project is designed to provide an online platform for a farming system, allowing customers to browse products, place orders, and manage their prescriptions. The system will also offer administrative tools for inventory management, order processing, and customer relationship management.

Technology Stack:

Frontend: Python and PyQt5

Database: Firebase Realtime Database

Key Features:

1. **User Authentication:** Secure user registration and login functionalities. Differentiate between customers and administrators with distinct access levels.

2. **Product Catalog:** Display a comprehensive catalog of Equipment's, Fertilizers, Land Lease and other Coming Soon products. Include product details, images, and pricing information.

3. **Shopping Cart and Checkout:** Enable users to add products to a

shopping cart for easy ordering. Provide a smooth and secure checkout process with payment options.

4. **User Profiles:** Allow users to create and manage their profiles. Maintain a purchase history and prescription record for each user.

5. **Admin Dashboard:** Provide administrators with a dashboard for managing products, orders, and customer data. Implement tools for updating inventory, tracking sales, and analyzing customer trends.

6. **Inventory Management:** Enable administrators to add, update, and remove products from the inventory. Set up notifications for low stock levels and reorder alerts.

7. **Responsive Design:** Ensure the app is responsive and compatible with various devices, including desktops, tablets, and smartphones.

3.Need of the System

When creating a Farm-help Management as a app using Python and the Php MySQL server framework, there are several needs and advantages. Here are some key points to consider:

I. Product Functions:

Agriculture is a labor intensive job and that needs for deployment of machines in the farm. These machines can carry out farming operations much faster than the human labor. But these farming equipment and machinery are often very expensive & not every farmer is able to purchase it.

II. User Characteristics:

Our design vision is such that the system should do the majority of the work for the user. The user just needs to interact with the system to state their needs.

III. Specific Constraints:

With the increasing demand for farming machinery, it can be extremely difficult for equipment rental companies to keep up with mounting needs. What the industry requires is a custom farm machinery rental platform that ensures optimal management of agricultural equipment, booking requests, customers, downtime needs and more Specific Requirements.

IV. External Interface Requirements:

This provides detailed description of all inputs and outputs from the application. This requirement iso-organized in the following subsection.

V. Functional Requirements:

The System is expected to provide its user the following features: User login details are saved in database proper manner. System shall response in effective manner. Gives proper direction and choice to user.

VI. Communicational Interface:

This application uses internet connection to connect.

4.Software & Hardware Requirements

When creating a Farm-help Management using Python and MySQL, will need both software and hardware components. Here's a basic list of requirements for both:

Software Requirements:

1. Operating System: Windows, Linux, or macOS.
2. Web Browser: Latest versions of browsers like Google Chrome, Mozilla Firefox, Safari, or Microsoft Edge.
3. Text Editor/IDE: Choose a code editor or integrated development environment (IDE) for coding in Python or PyQt5. Examples include Visual Studio Code, PyCharm
4. Database: Choose a database backend supported by Firebase Realtime Database. Install and configure it accordingly.

Hardware Requirements:

1. Processor: A modern multi-core processor for better performance.
2. Memory (RAM): At least 4GB of RAM for a development environment. More for production.
3. Storage: Adequate storage space for the operating system, development tools, and project files.

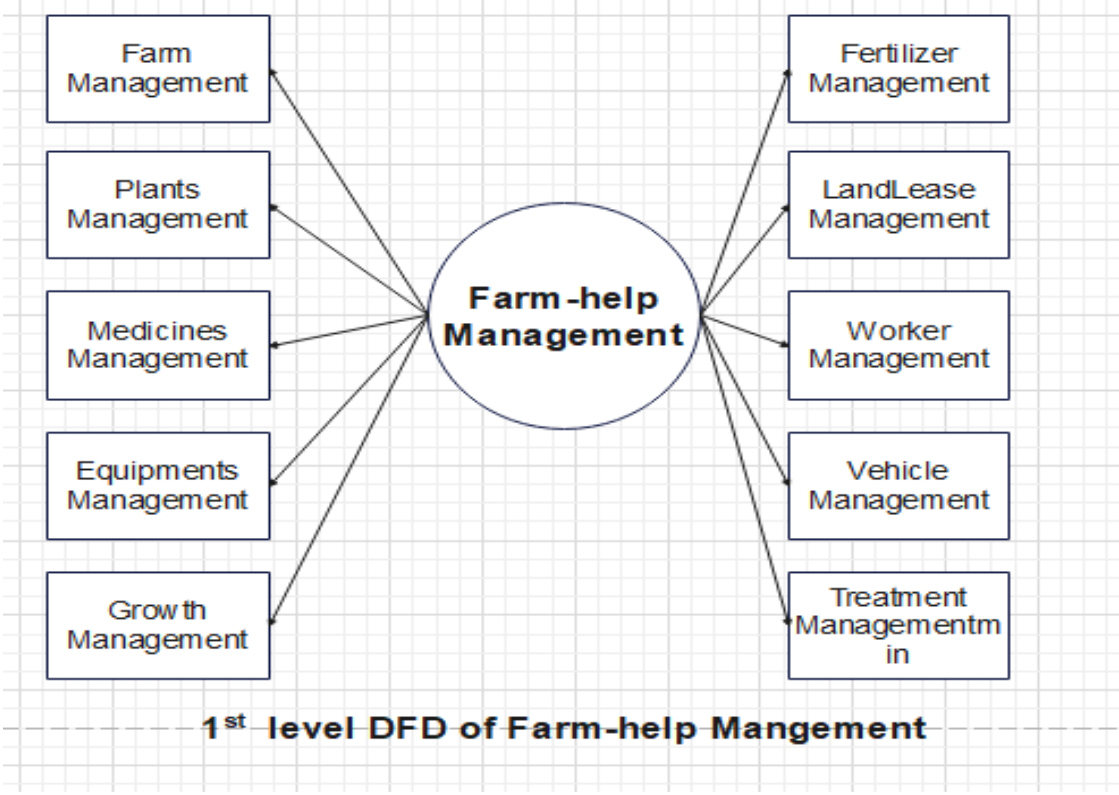
4. Network Connectivity: Required for downloading dependencies, updates, and potential integration with other systems.

5. Database Diagram

0th Level DFD:

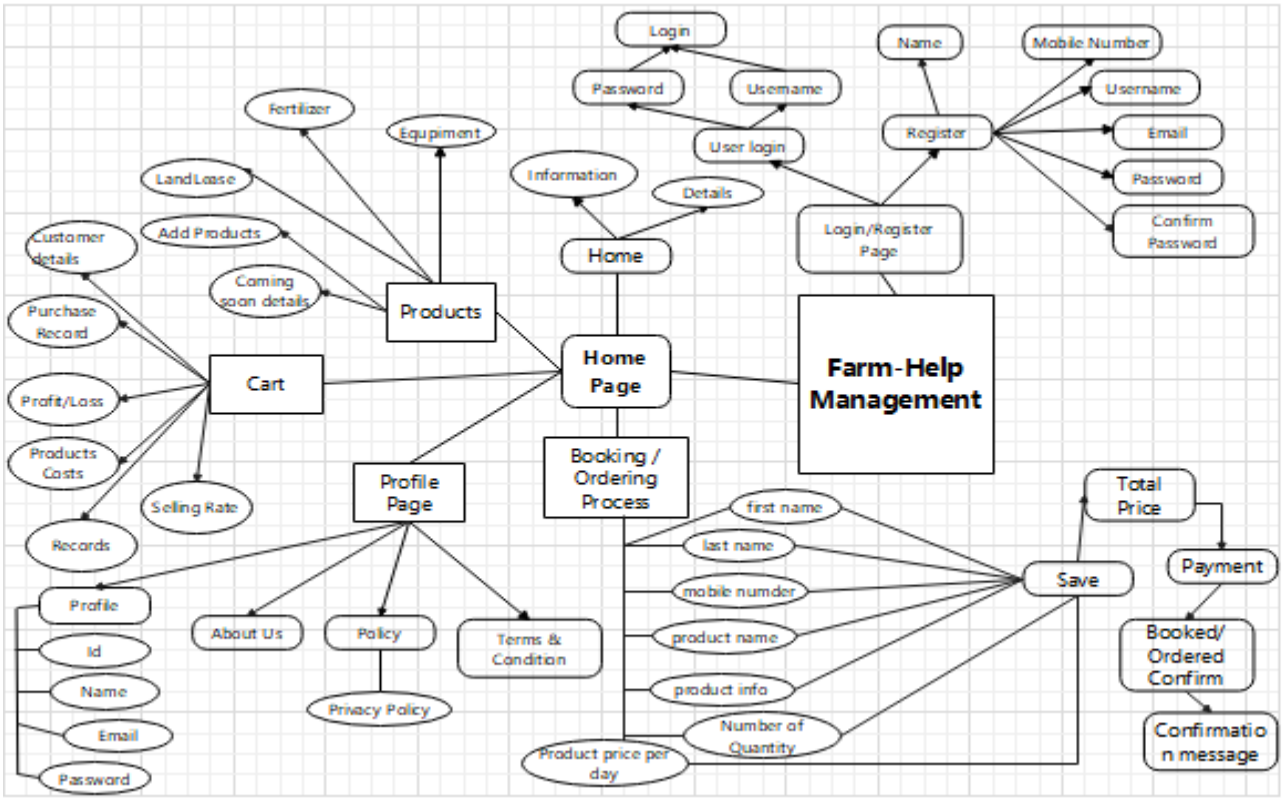
0th level DFD of Farm-help Mangement

1st Level DFD:

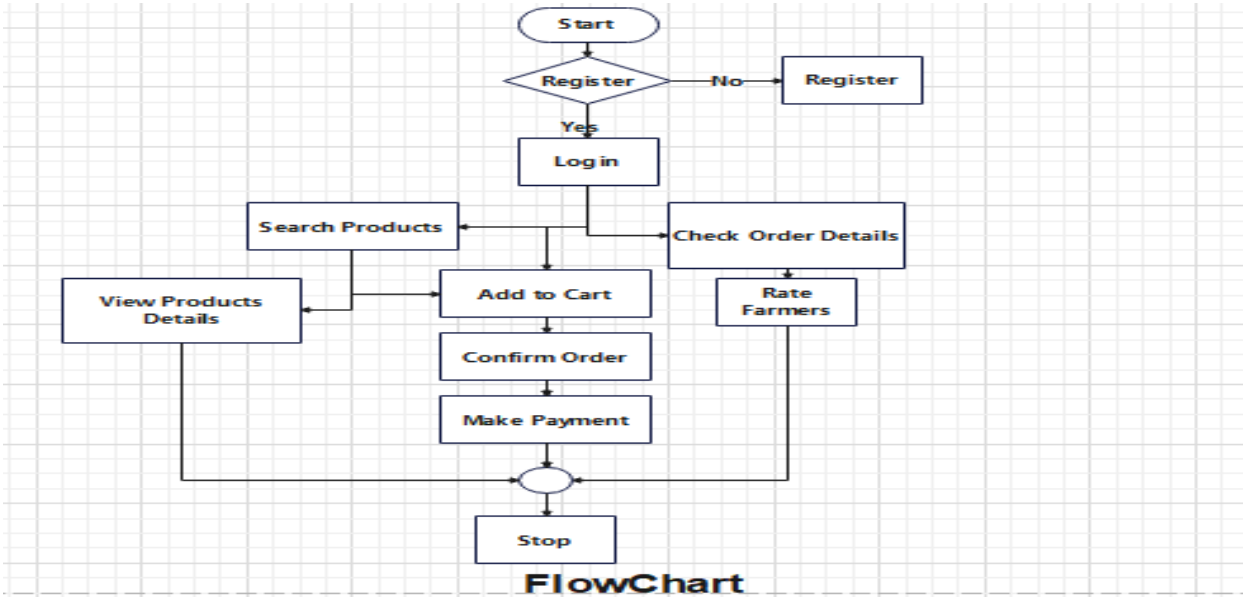


1st level DFD of Farm-help Mangement

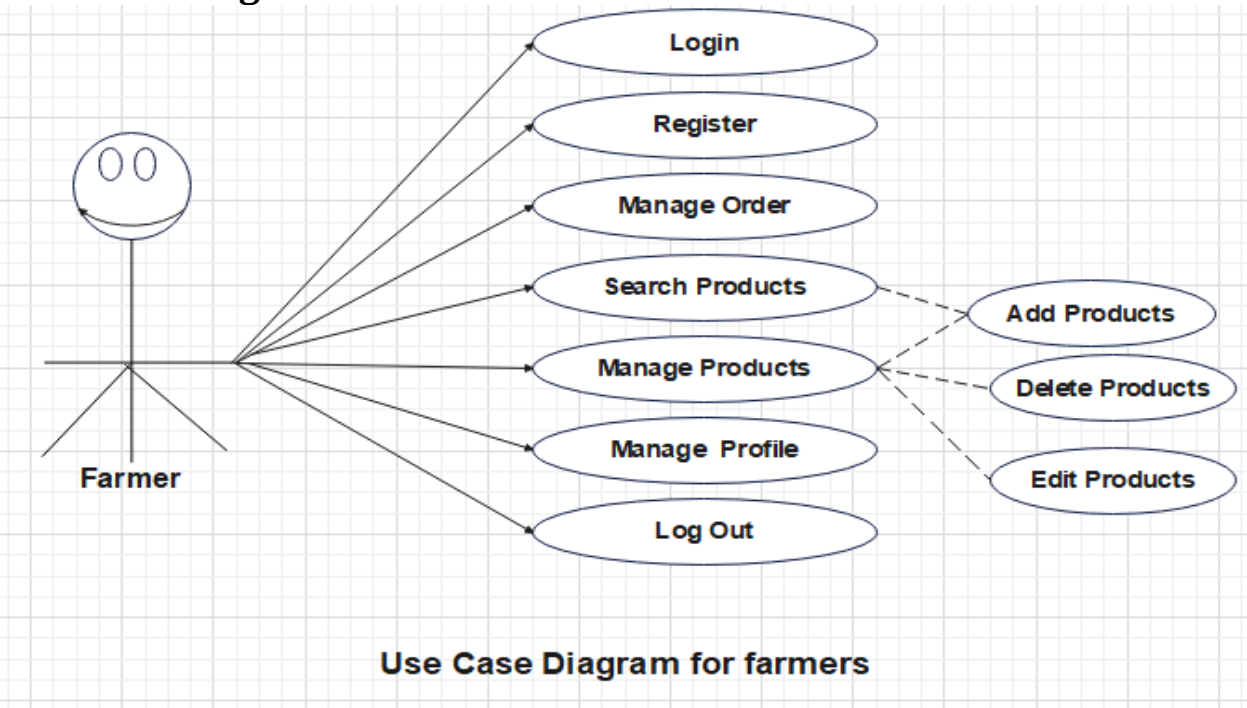
ER Diagram:



Flowchart:

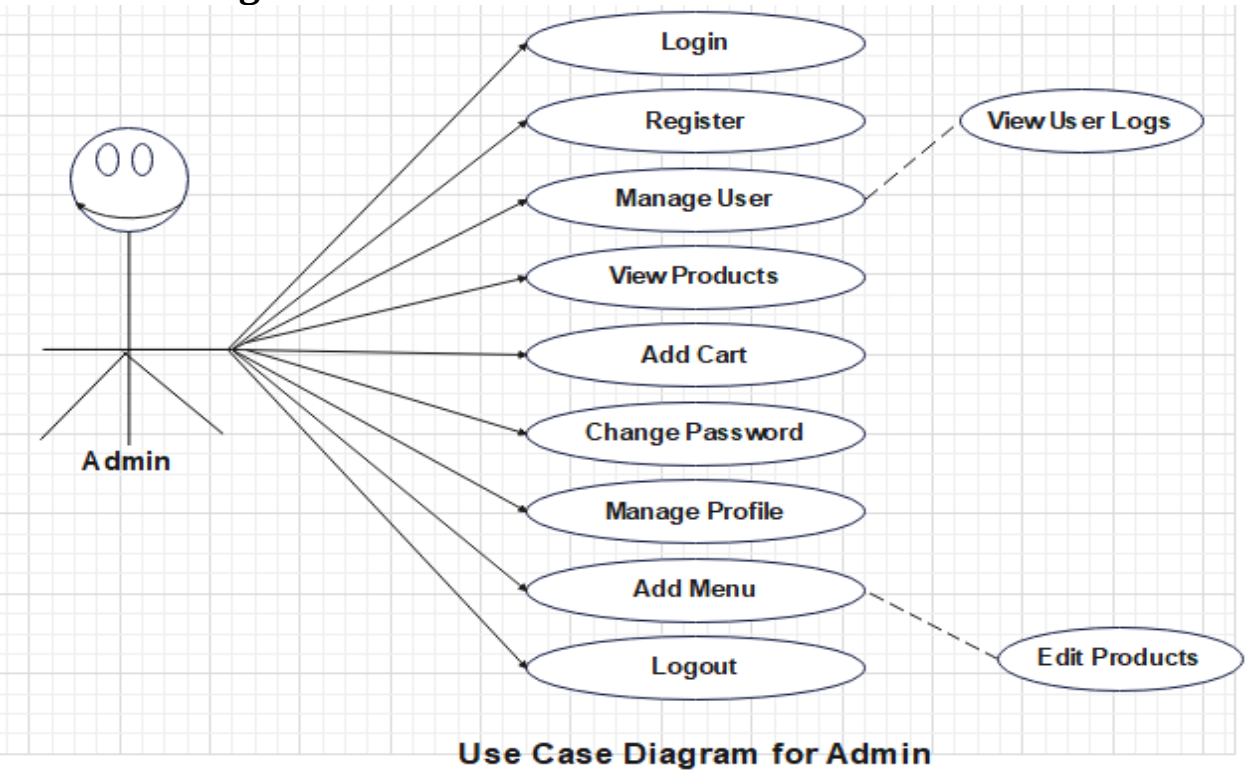


Use Case Diagram for Farmer:



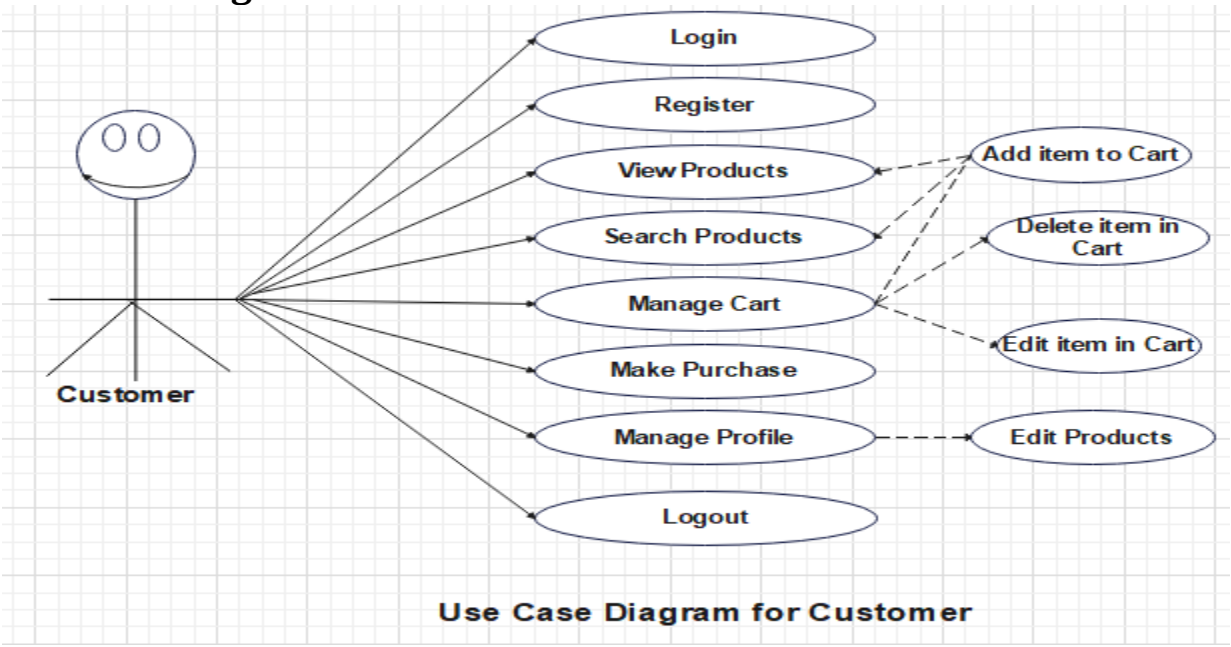
Use Case Diagram for farmers

Use Case Diagram for Admin:

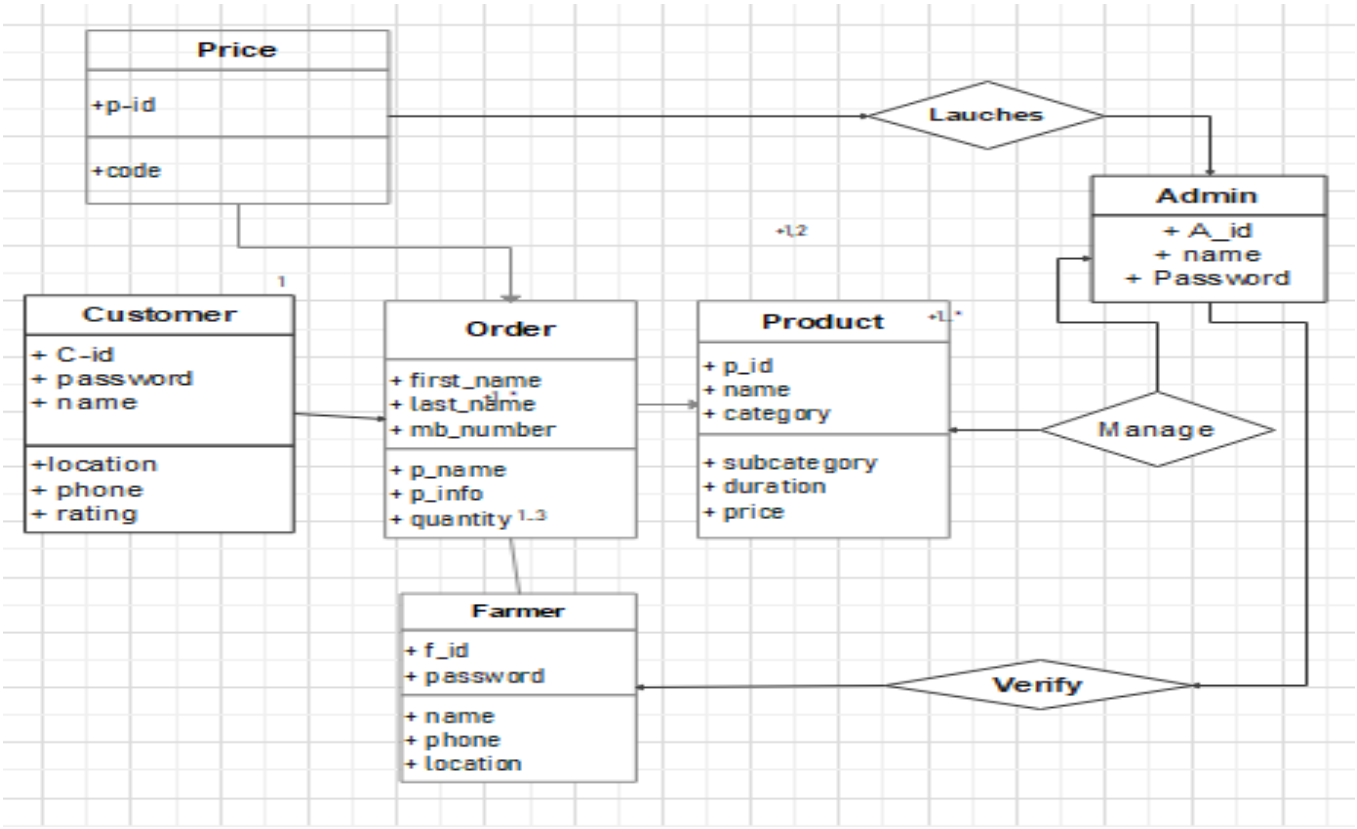


Use Case Diagram for Admin

Use Case Diagram for Customer:

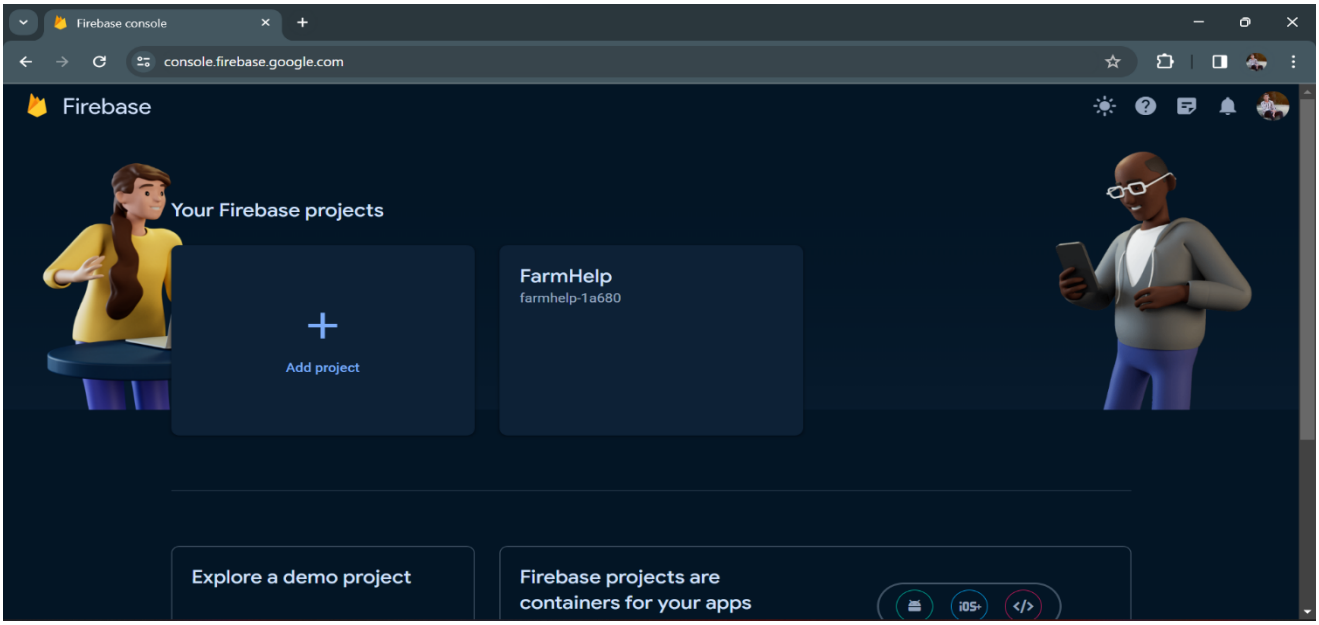


Class Diagram:

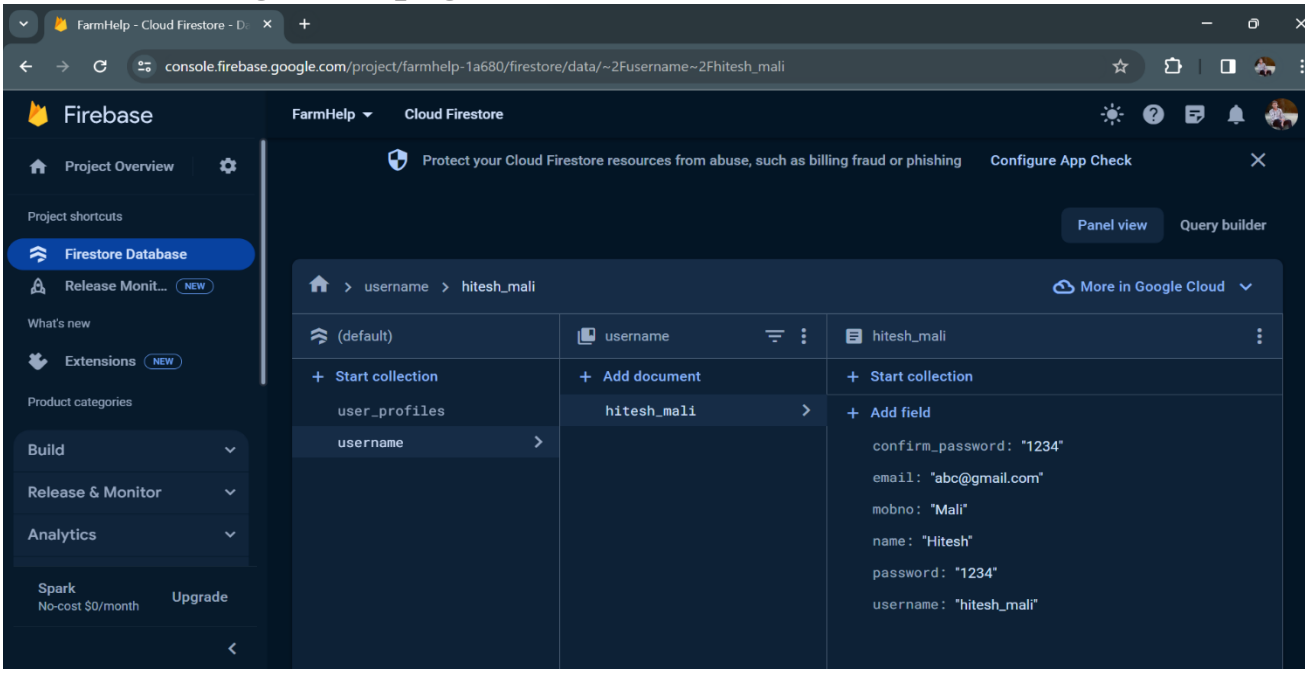


6. Database Design

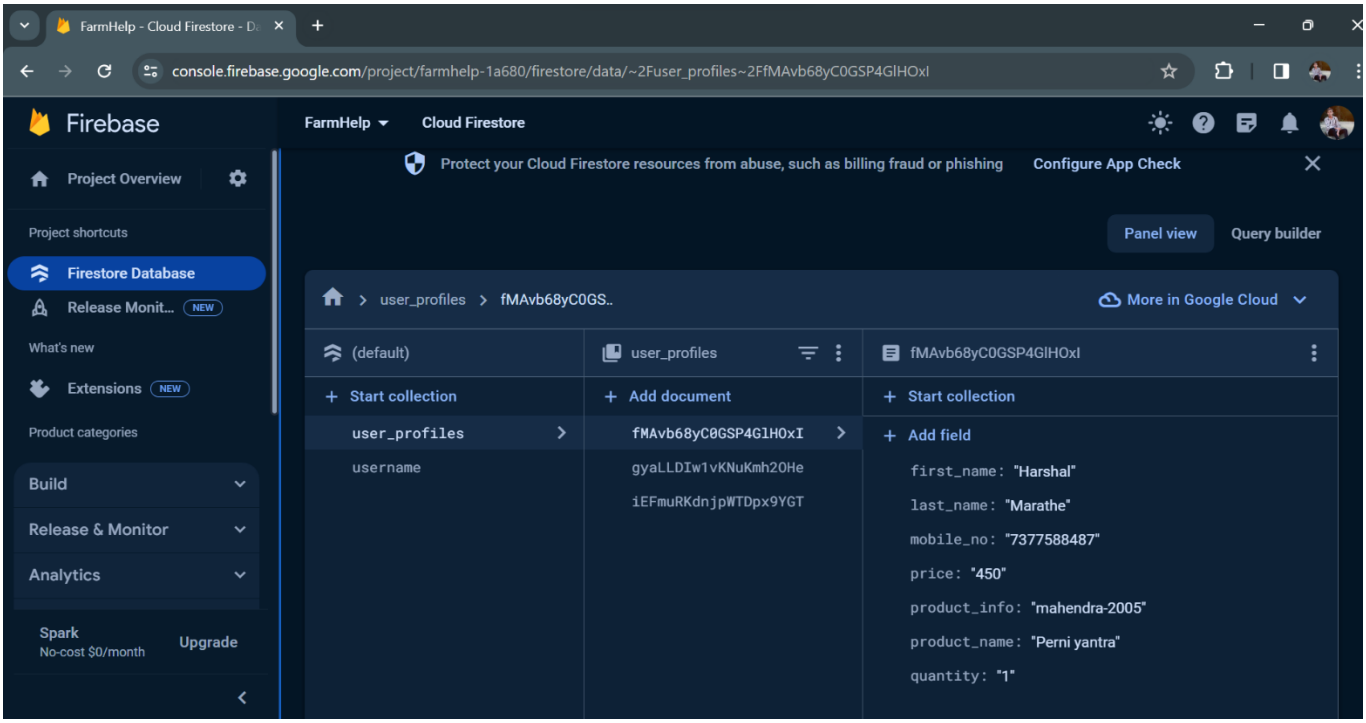
Database:

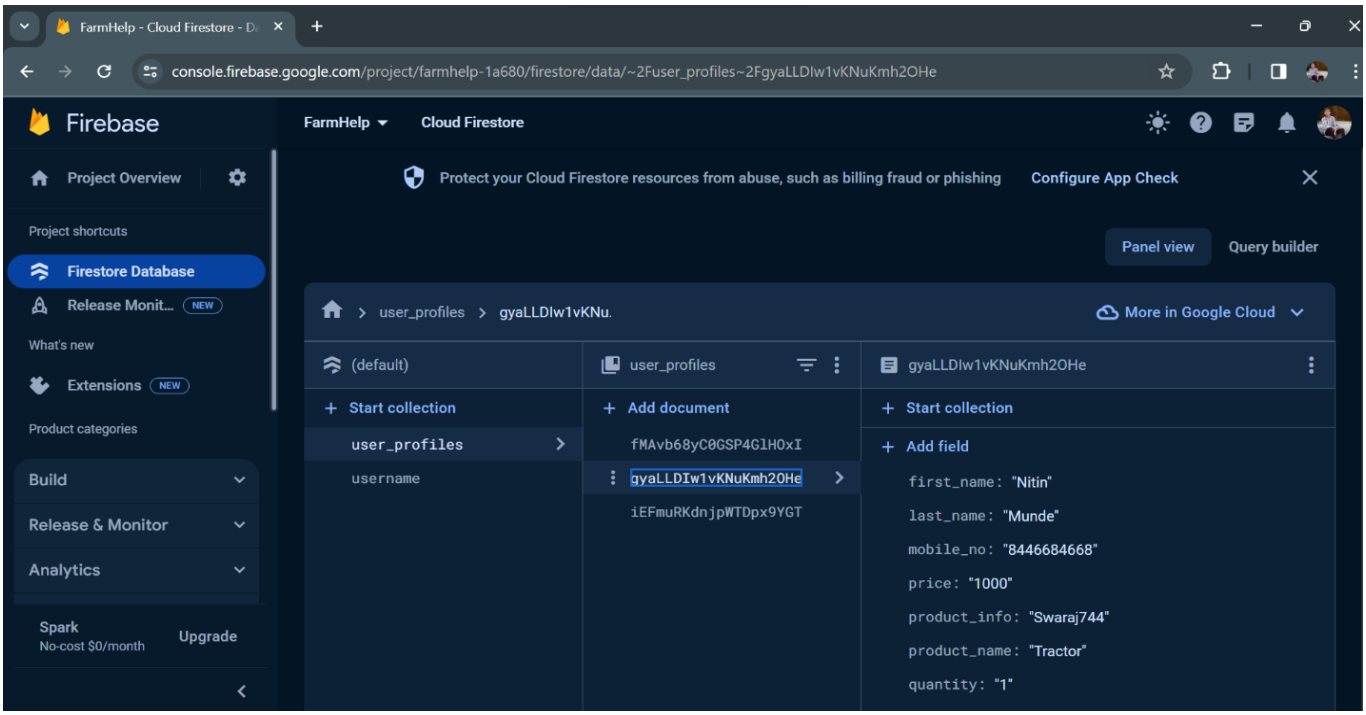


Admin management page:

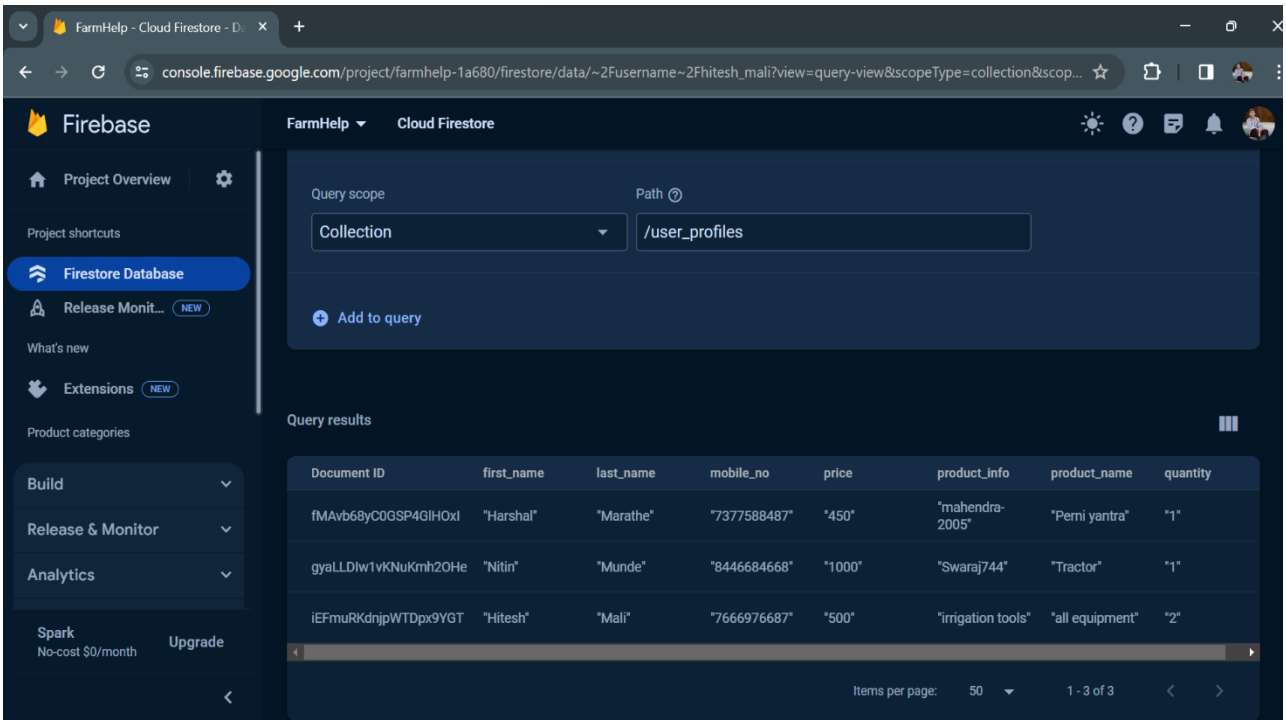


User Profile database:





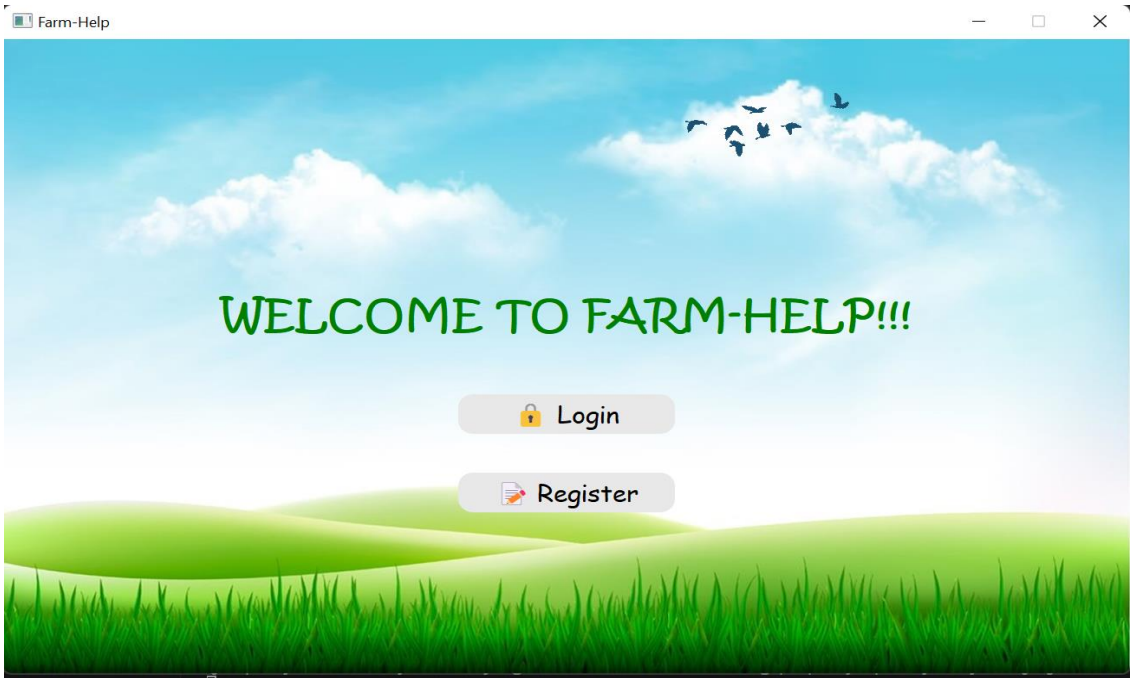
Database collections:



7. Project Screenshot

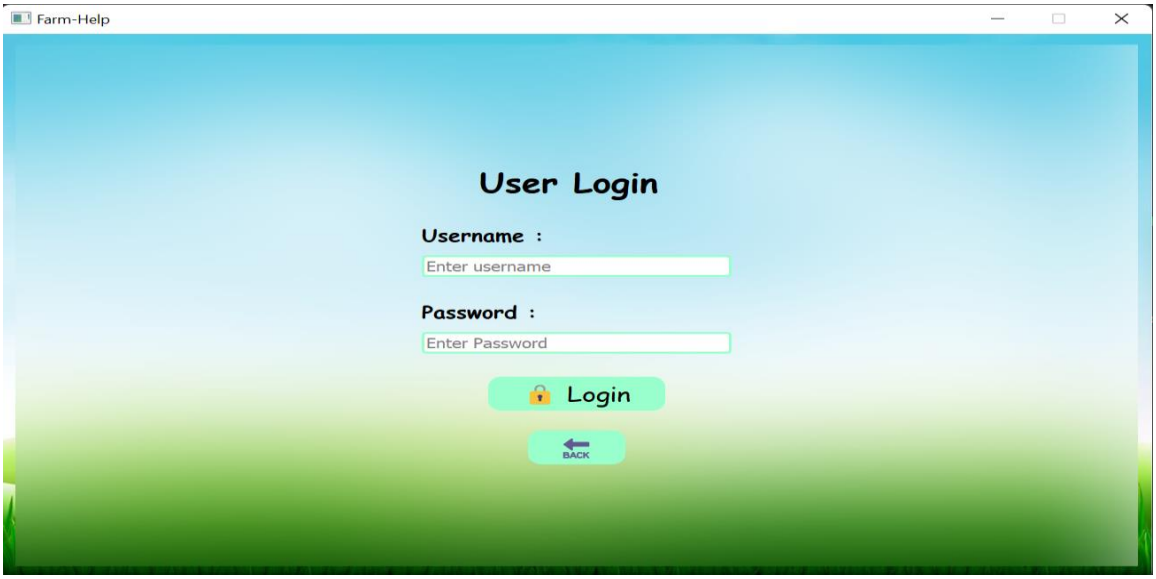
Homepage:

By adding correct information to log in page they can access the homepage of our system where they get information of equipment's.



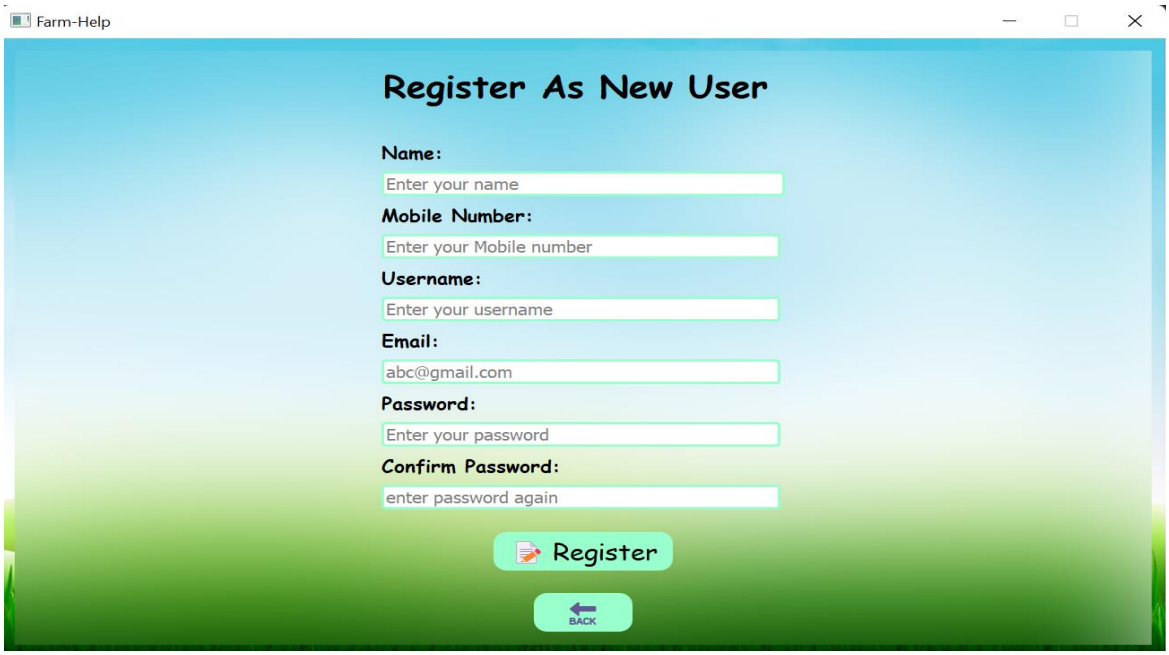
Log In:

Form By using registration details contact and password, they can log in to our system.



Farmer Registration Pannal:

Here we created registration form for farmers. By entering Their personal information like their Name Contacts number, Username, Email, Password. They can register themselves on our system.



Landing page:

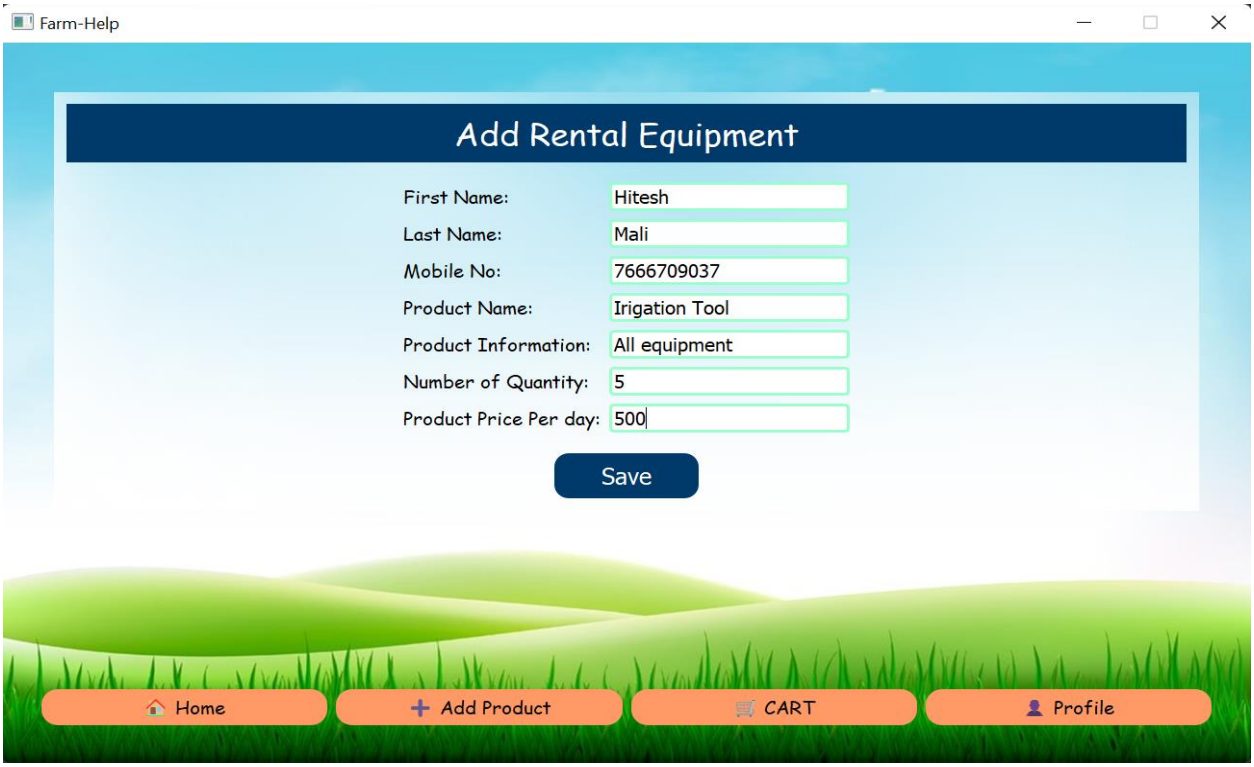
Here’s the information of the products, equipments, fertilizers, etc.

Equipments: All Items Present in Farmer Market

Add to Cart pannel:

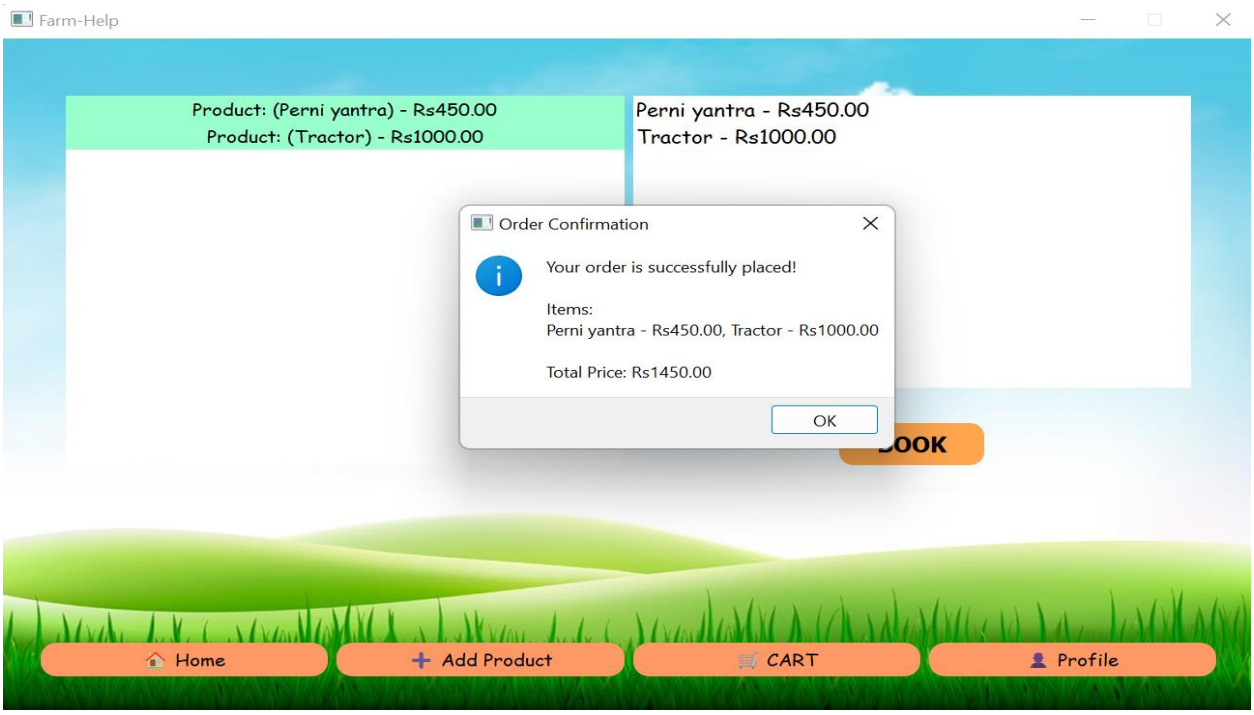
Purchase Request: Sending Purchase Request to the Farmer

Equipment's on rental basis:



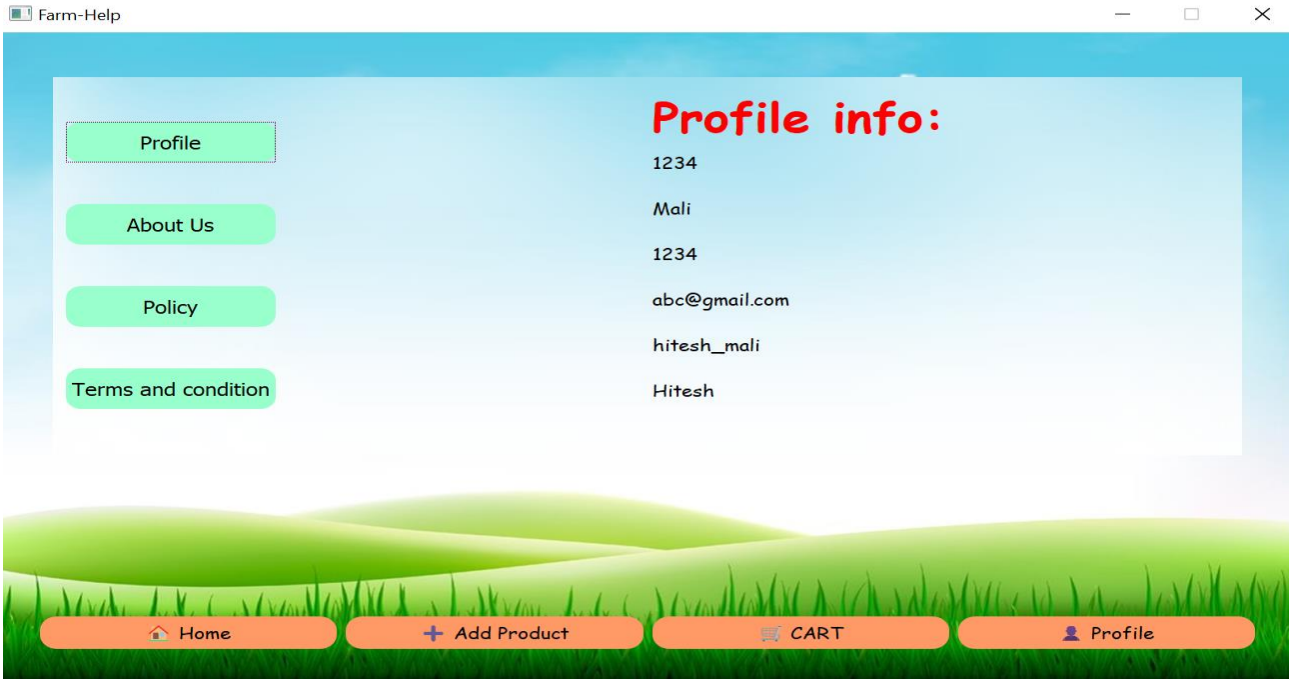
Payment Process:

Confirmation Process:



Admin page:

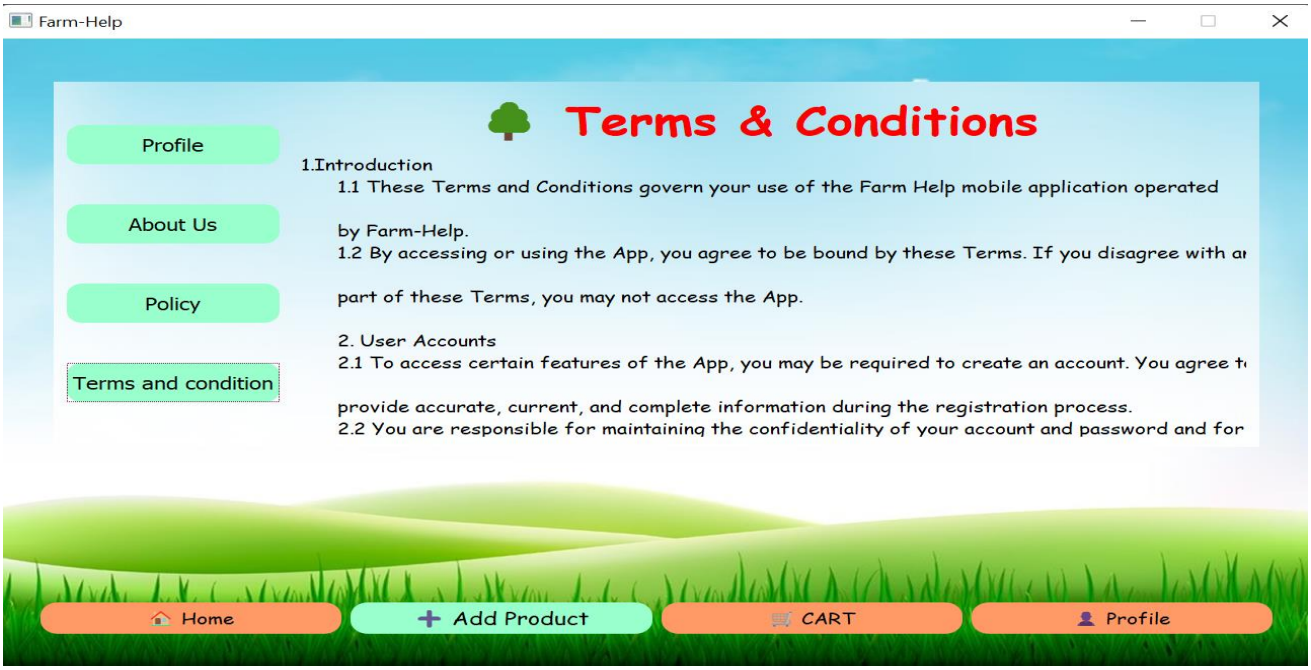
Admin Profile:



Admin About us:

App Privacy Policy:

Terms and Conditions:



Coming Soon Products:

8. Conclusion

The online administration framework for Agri-Equipment rental framework was made to guarantee the productive task and straightforward administration of a government-upheld farming hardware rental business It reduces the manual work. It reduces the paper work, thus supporting the sustainable environment. It saves time also. Moreover, the proper documentation of whole project is also provided so that any-one can understand the project and can do the necessary changes if required. This application can be improved in many ways and can be extended to support multiple devices.

The online administration framework for Agri-Equipment rental framework was made to guarantee the productive task and straightforward administration of a government-upheld farming hardware rental business It reduces the manual work. It reduces the paper work, thus supporting the sustainable environment. It saves time also. Moreover, the proper documentation of whole project is also provided so that any-one can understand the project and can do the necessary changes if required. This application can be improved in many ways and can be extended to support multiple devices.

Following are some of the possible extensions: Analytics can be extended in such a way that State head can view, in which region which machinery is required and move to that location in prior. Inclusion of crops and

fertilizers to the list. The name Farm Help System indicates intelligent Agriculture. This is a model farmer management application and site helps the farmers to sell their agricultural products online and suggest best in practice farming processes. This enables wholesalers and retailers to expand their business.

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