DESIGN DOCUMENT

1. Introduction

1.1 Purpose

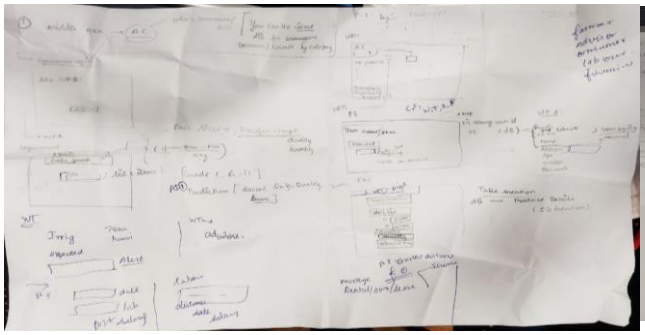
The Agricultural Management System is designed to facilitate seamless interactions between farmers, consumers, logistics providers, and financial institutions. It also integrates real-time weather information and chatbot support to enhance user experience. The system provides a structured framework for managing agricultural transactions, logistics, and financial services efficiently.

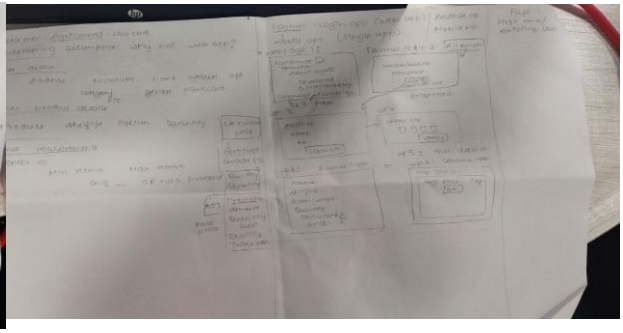
1.2 Scope

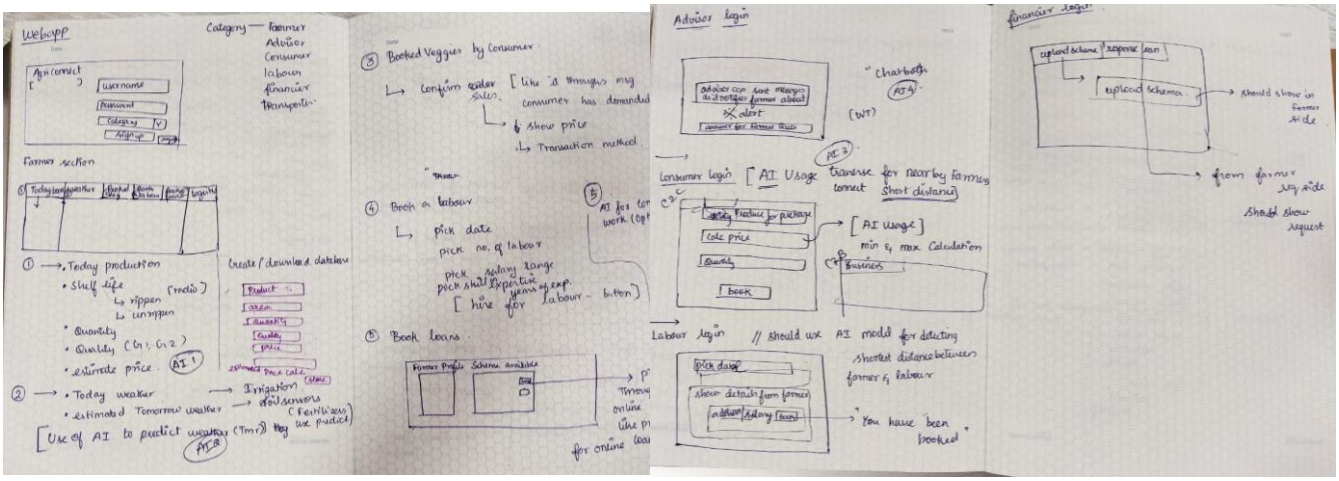
The system enables:

- **Farmers** to register, list crops, and manage sales.
- **Consumers** to browse and purchase agricultural products.
- **Logistics providers** to track transportation and routes.
- **Financial institutions** to offer loan schemes and financial aid.
- **Weather forecasting** to assist farmers with climate data.
- **Automated chatbot** to provide instant support.

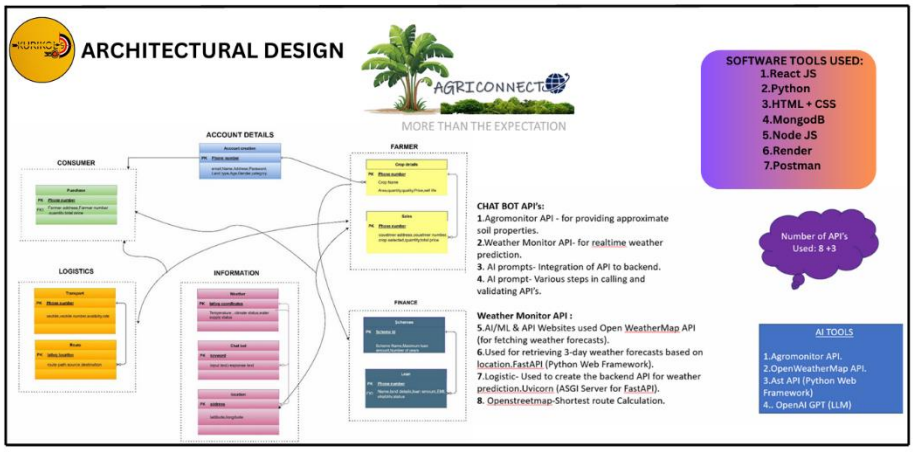
2.Agriconnect Initial Architectural Design(By discussing with team)







3.AgriConnect Final Design



Roles of Team members:

Technical :

Front end Team-Dharshini P & Iyyappan R

Back end Team-Bargavi G & Karthikeyan V & Varshamai TH

1.Dharshini.P - Creative thinking

2.Bargavi.G - Task managing and Critical thinking

3.Iyyappan.R - Color theory based designing

4.Karthikeyan.V - analytical thinking and problem solving

5.Varshamai T.H -Presentation skill

4. System Overview

The system is structured into six primary modules:

1. **Account Management** - Handles user registration and authentication.
2. **Farmer Module** - Manages crop details and sales transactions.
3. **Consumer Module** - Enables product purchases from farmers.
4. **Logistics Module** - Handles transportation and delivery tracking.
5. **Finance Module** - Provides financial schemes and loan management.
6. **Information Module** - Offers weather forecasts, chatbot assistance, and location services.

5. System Modules & Design

5.1 Account Management

Entities:

- **Account Creation**: Stores user details with Phone Number as the primary key.

Key Attributes:

- Email, Name, Address, Password, Land Type, Age, Gender, Category.

5.2 Farmer Module

Entities:

- **Crop Details**: Stores data on crop type, quality, and pricing.
- **Sales**: Manages transaction details between farmers and consumers.

Key Attributes:

- Phone Number (Primary Key for both entities)
- Crop Name, Area, Quantity, Quality, Price, Shelf Life.
- Customer Address, Customer Contact, Crop Selected, Quantity, Total Price.

5.3 Consumer Module

Entities:

- **Purchase**: Records consumer transactions.

Key Attributes:

- Phone Number (Primary Key)
- Farmer Address, Farmer Contact, Quantity, Total Price.

5.4 Logistics Module

Entities:

- **Transport**: Manages vehicle and availability data.
- **Route**: Stores delivery path details.

Key Attributes:

- Phone Number (Primary Key for Transport)
- Lat/Long Location (Primary Key for Route)
- Vehicle Number, Availability, Rate, Source, Destination.

5.5 Finance Module

Entities:

- **Schemes**: Stores financial scheme details.
- **Loan**: Manages loans taken by farmers.

Key Attributes:

- Scheme ID (Primary Key for Schemes)
- Phone Number (Primary Key for Loan)
- Scheme Name, Maximum Loan Amount, Number of Years, EMI, Status.

5.6 Information Module

Entities:

- **Weather**: Provides real-time climate data.
- **Chatbot**: Offers automated support based on keywords.
- **Location**: Stores geolocation data.

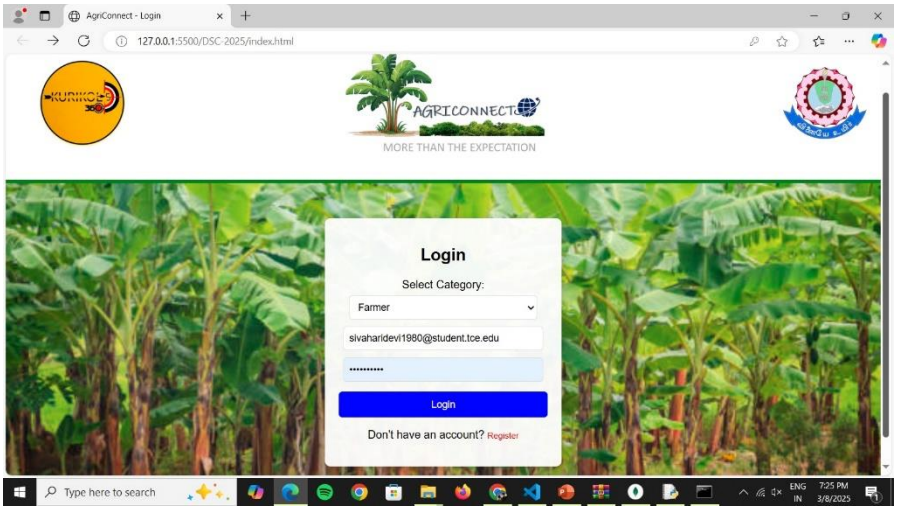
Key Attributes:

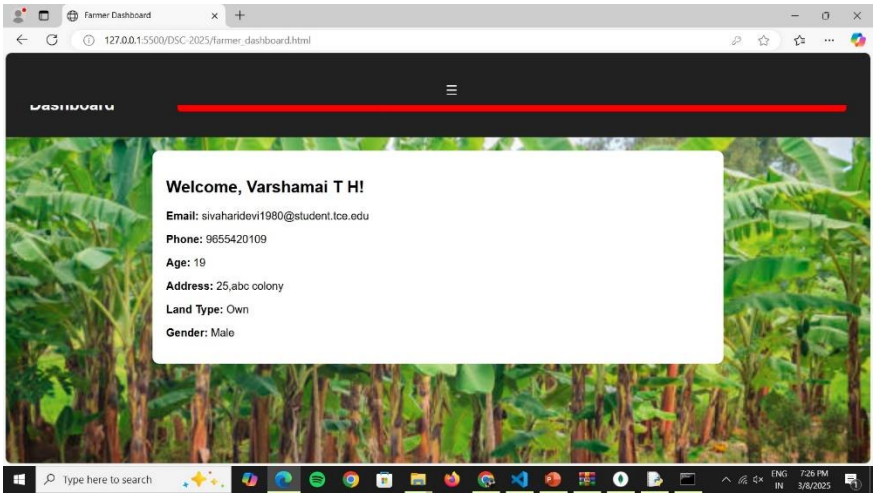
- Lat/Long Coordinates (Primary Key for Weather)
- Keyword (Primary Key for Chatbot)
- Address (Primary Key for Location)
- Temperature, Climate Status, Water Supply Status, Response Text.

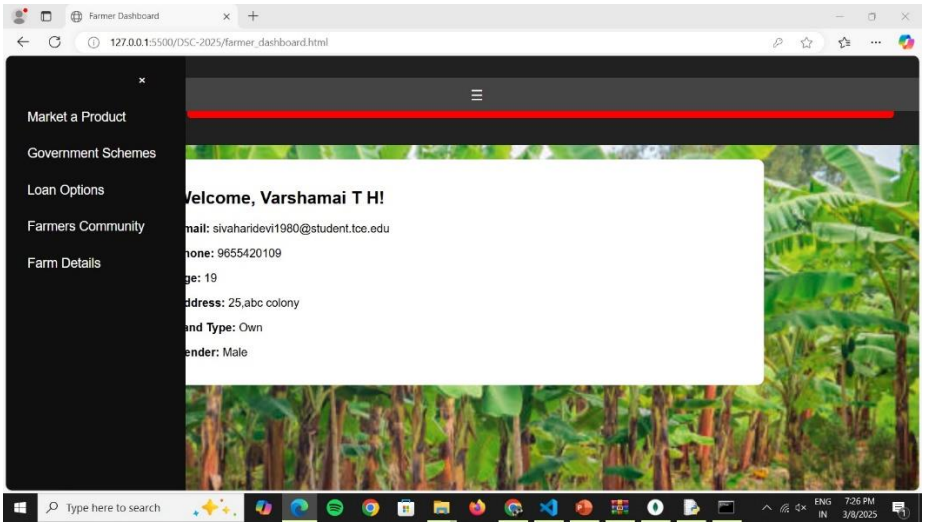
6. System Workflow

1. **User Registration** - Users create accounts and log in.
2. **Farmer Management** - Farmers add crops and manage sales.
3. **Consumer Purchase** - Consumers browse and buy products.
4. **Logistics Tracking** - Monitors transportation of goods.
5. **Financial Support** - Loans and schemes are managed.
6. **Information Services** - Weather forecasting and chatbot interactions assist users.

Final Design:







7. Conclusion

This system bridges the gap between farmers, consumers, logistics, and financial institutions while incorporating advanced information services to improve efficiency in agricultural management. It is designed to ensure transparency, reliability, and ease of use for all stakeholders.