

AgriFarm

A PROJECT REPORT

Submitted by

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In partial fulfilment for the award of the degree of

DIPLOMA ENGINEERING

in

Computer Engineering



Faculty of Diploma Studies

Marwadi University, Rajkot



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2025-26

CERTIFICATE

This is to certify that the project entitled **AgriFarm** has been carried out by **Nirbhay Bhanderi (92300938070)** under my guidance in partial fulfilment of the degree of Diploma Engineering in Computer Engineering (6th Semester) of Marwadi University, Rajkot during the academic year 2025-26.

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She provided invaluable guidance throughout the project and consistently offered encouragement, boosting our confidence to fully utilize the opportunities it presented. We are deeply grateful for her support and contributions.

With Sincere Regards,

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Abstract

The AgriFarm is a web-based platform designed to revolutionize agricultural commerce by providing a direct digital interface between farmers and buyers. The system eliminates traditional middlemen, enabling farmers to list and sell their agricultural products online at fair market value. Buyers can browse product listings, compare real-time prices, and participate in an integrated bidding system, promoting transparency and competitive pricing in agricultural transactions.

A core feature of the platform is the Crop Advisory Module, which provides farmers with personalized recommendations on crop management, including fertilizer usage, irrigation schedules, and pest control measures. This module leverages data on soil type, crop type, and current farming practices. In addition, the system incorporates a live weather dashboard, delivering accurate, location-based weather forecasts and alerts. This enables farmers to make informed decisions regarding sowing, harvesting, and other agricultural operations, thus improving yield and reducing risk.

The system facilitates secure user registration and login for both farmers and buyers. Farmers can create product listings that include details such as type, quantity, price, and images, with the ability to edit or remove them as needed. A dynamic bidding system allows buyers to place real-time bids on listed products, enabling farmers to secure the best possible prices. Additionally, buyers can compare prices of similar products from different farmers through a real-time comparison feature, supporting informed purchasing decisions. The platform includes a crop advisory module that offers data-driven recommendations on fertilizer use, pest management, and best agricultural practices. A live weather dashboard provides current weather conditions and forecasts based on the farmer's location to support planning and operations.

An admin dashboard is available for system administrators to monitor users, manage listings, and ensure compliance with platform policies. Transactions between farmers and buyers are protected through secure systems that maintain data integrity. The frontend of the platform is developed using HTML5 and CSS3 for structured layout and responsive design, along with JavaScript and jQuery for interactivity and real-time features like

bidding and weather updates. On the backend, PHP handles server-side logic and API integrations, while MySQL is used for storing user information, product data, bids, and advisory records. A weather API is integrated for live weather data, and the system incorporates input validation, session management, and role-based access control to ensure secure and reliable operations.

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1. Use Case

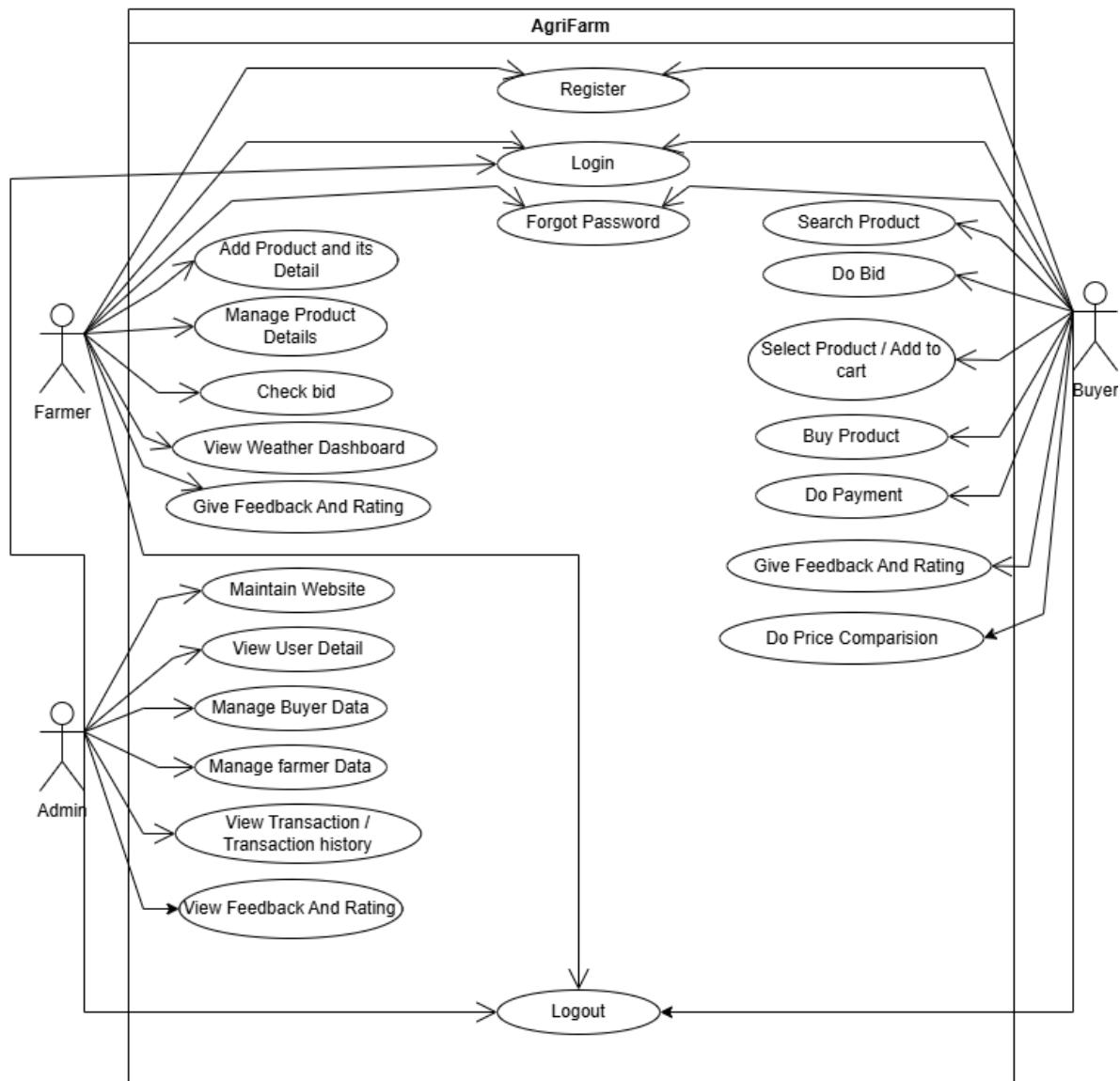
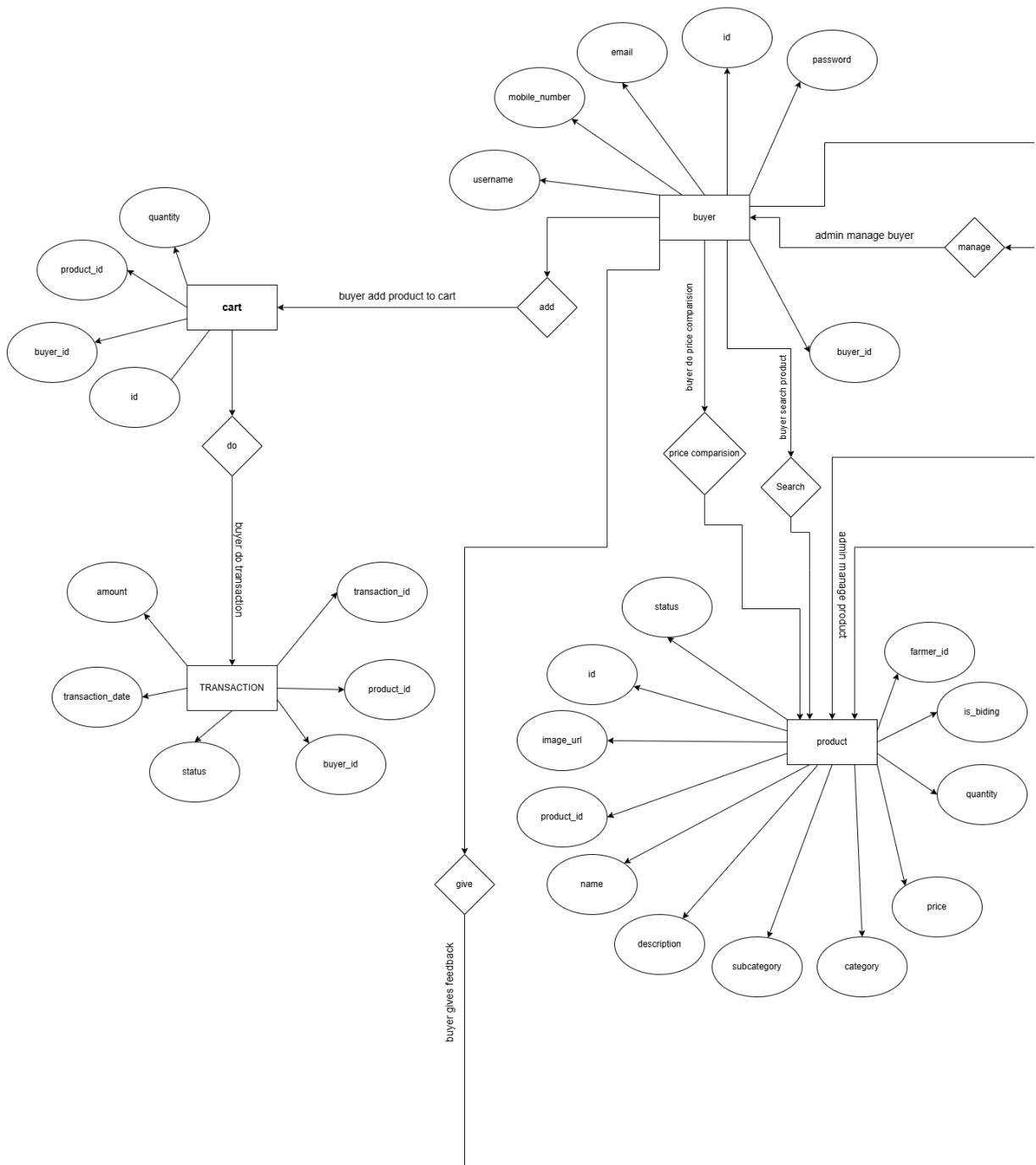


Figure 1.1 Use Case Diagram

2. E.R Diagram



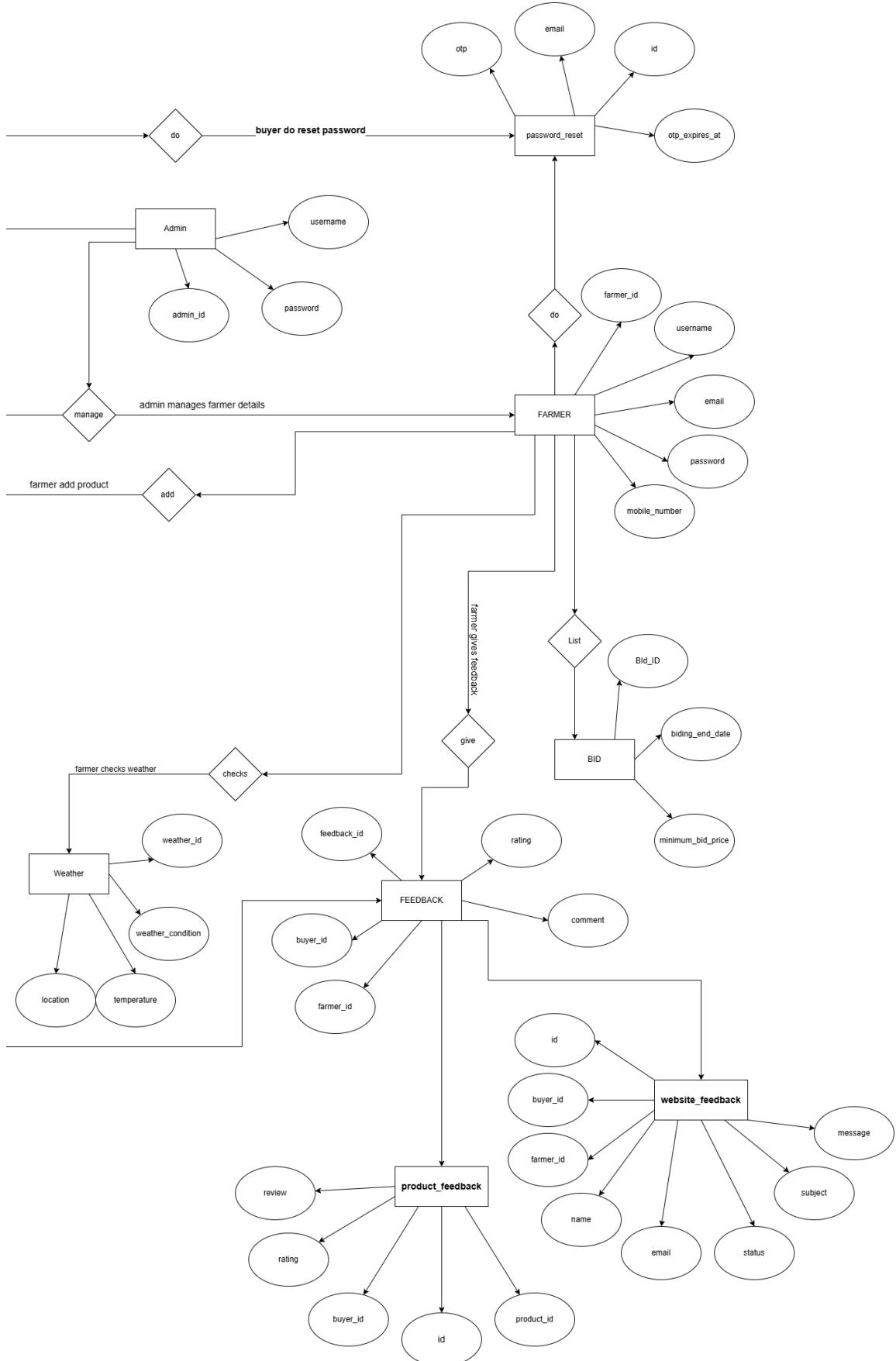
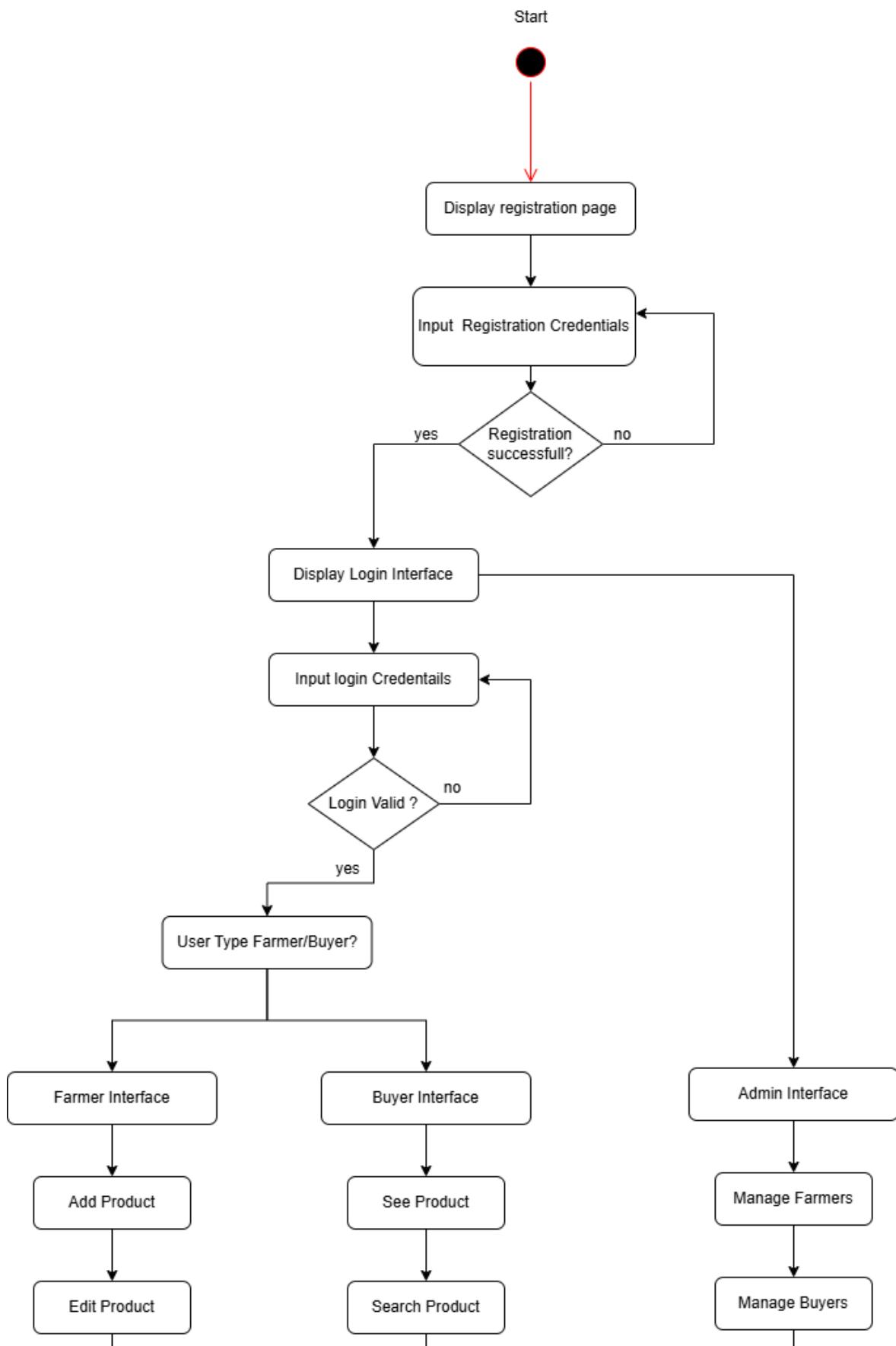


Figure 1.2 ER Diagram

3. Activity Diagram



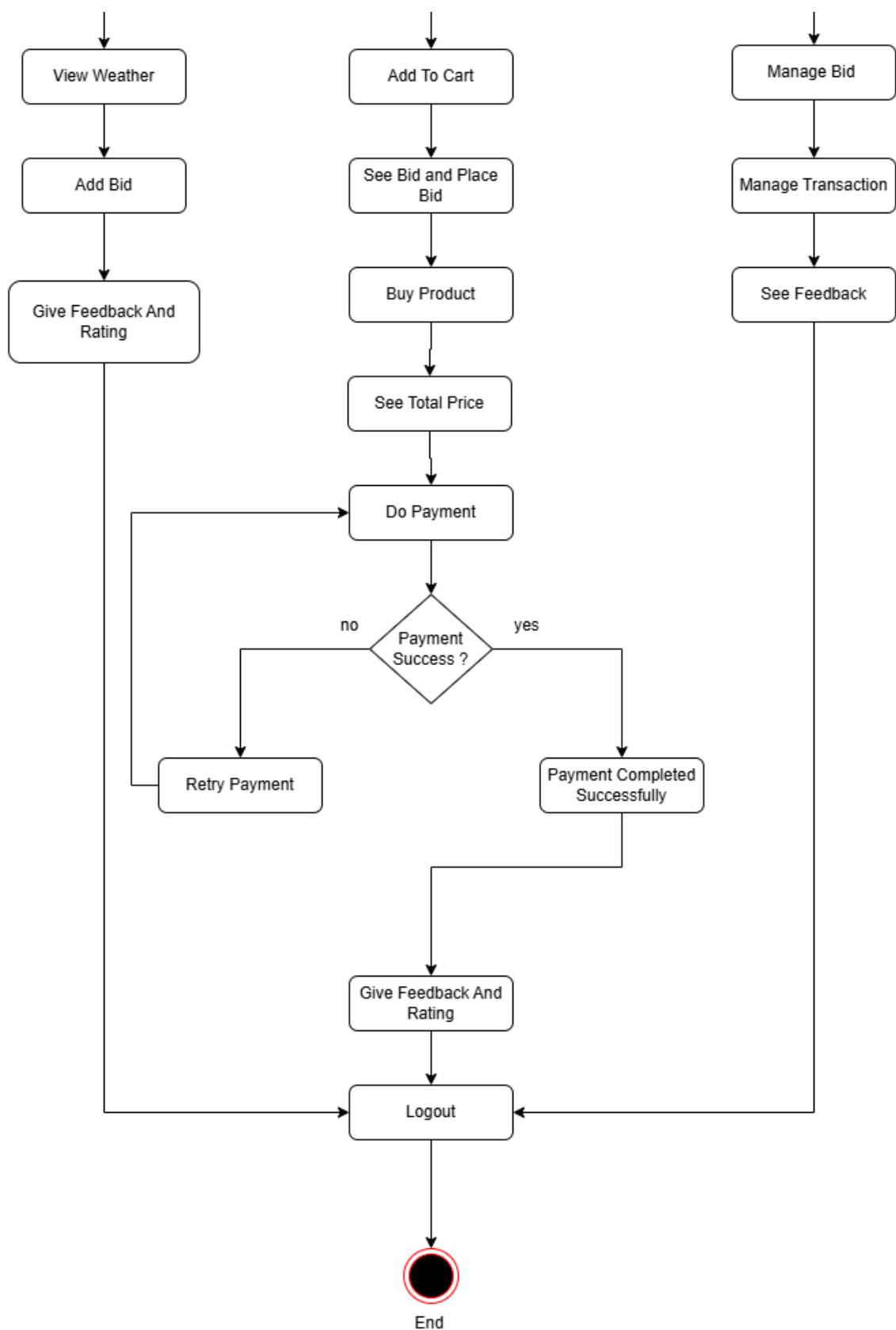
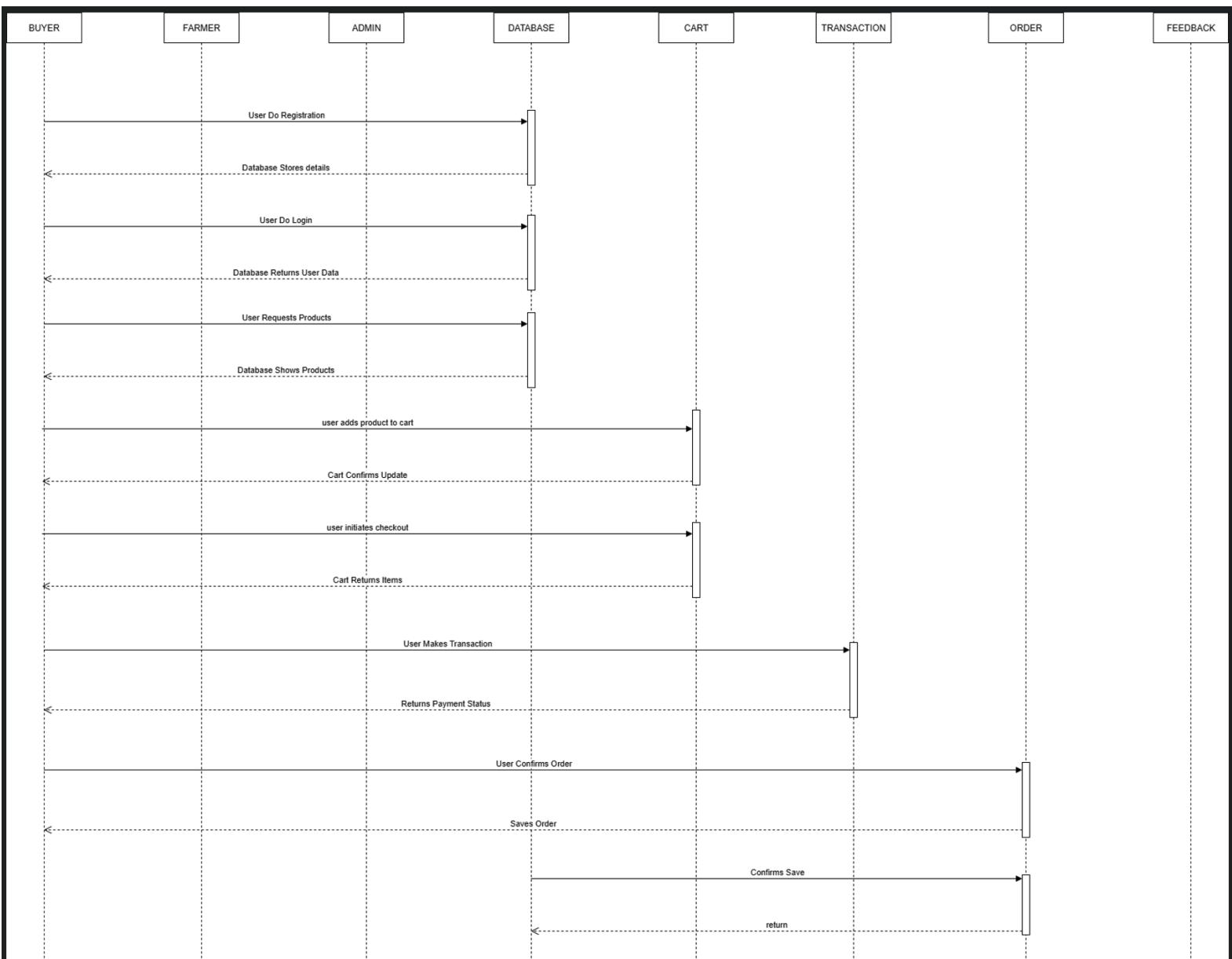
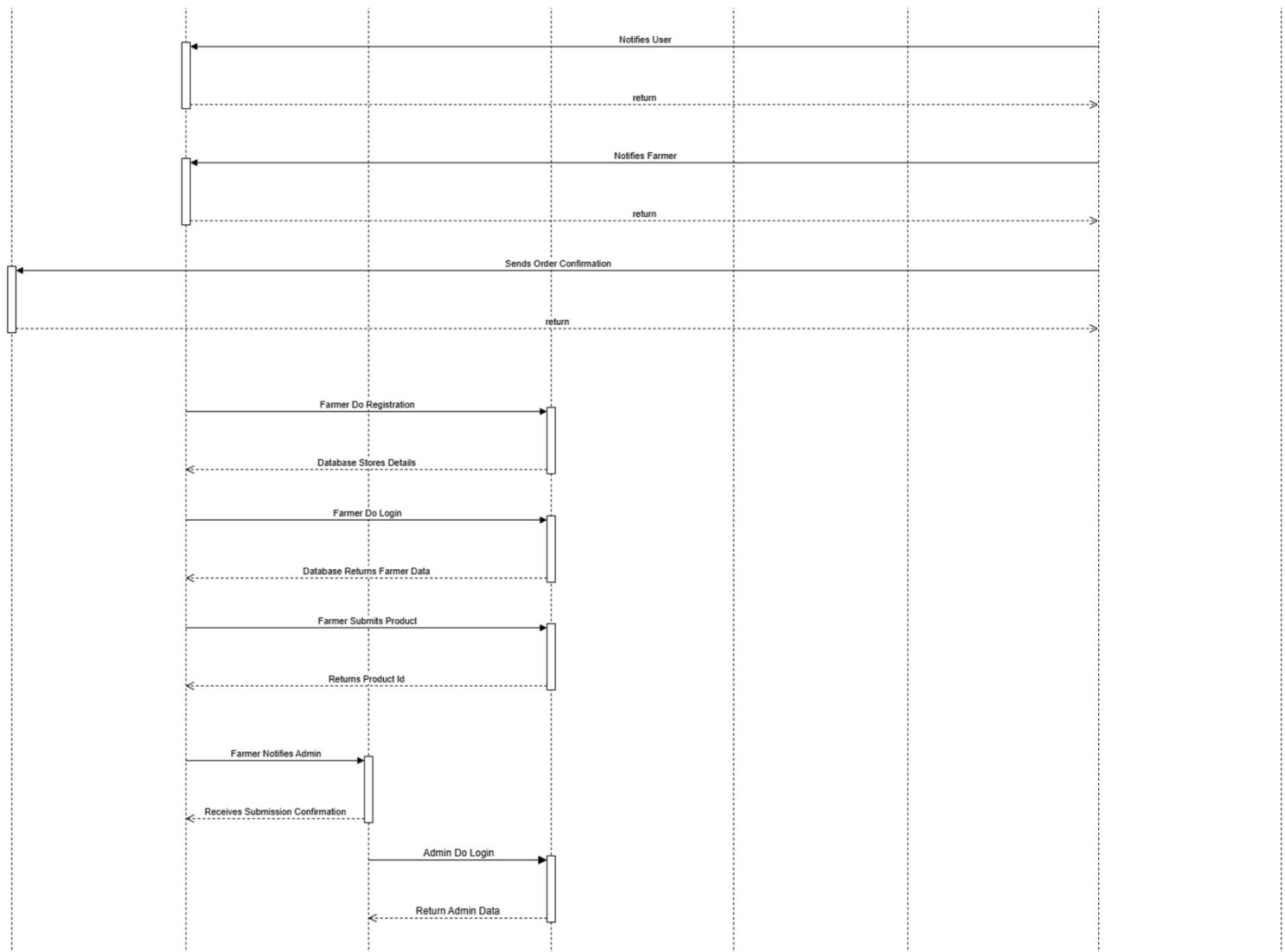


Figure 1.3 Activity Diagram

4. Sequence Diagram





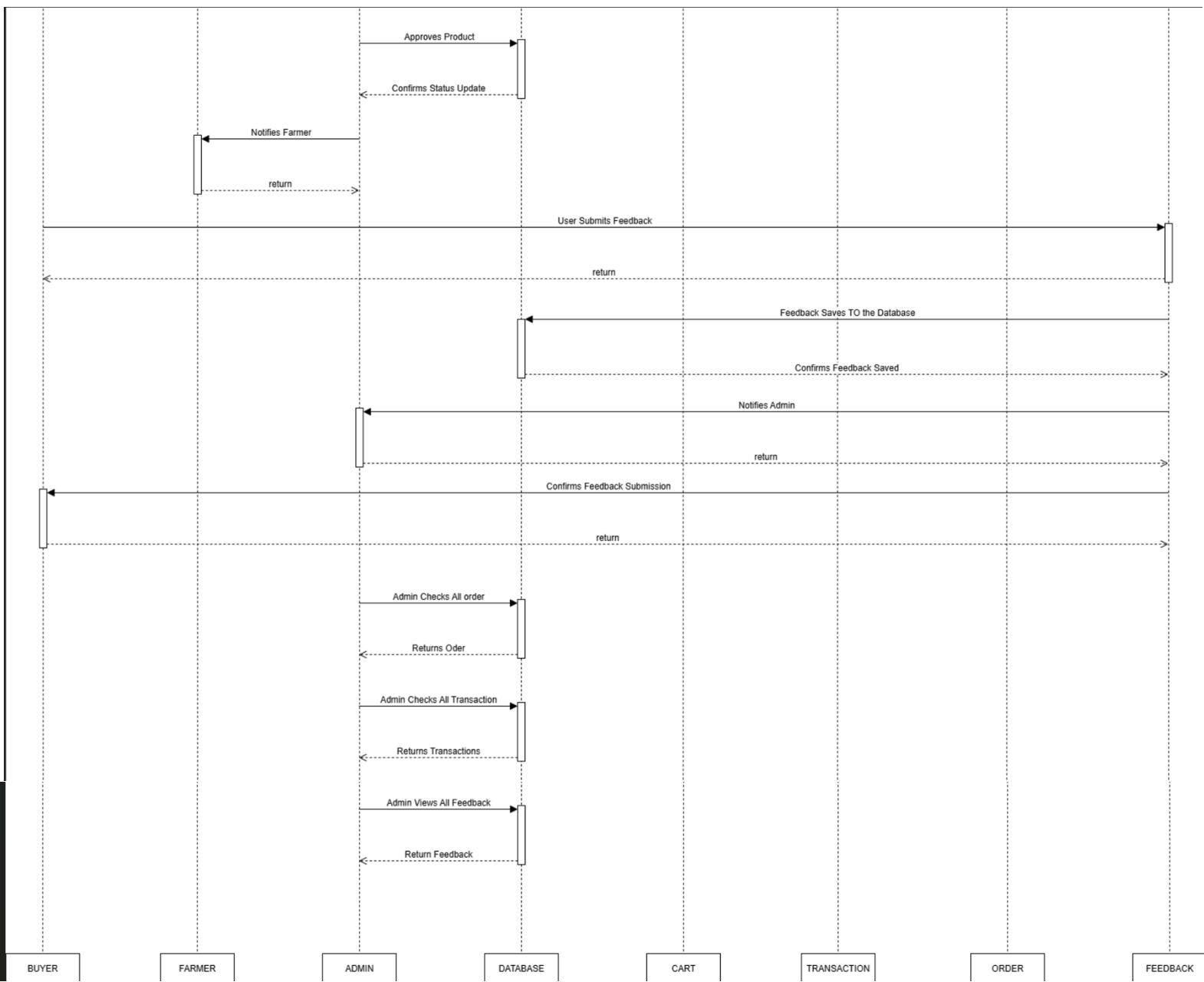


Figure 1.4 Sequence Diagram

5. DFD Diagram(Level 0)

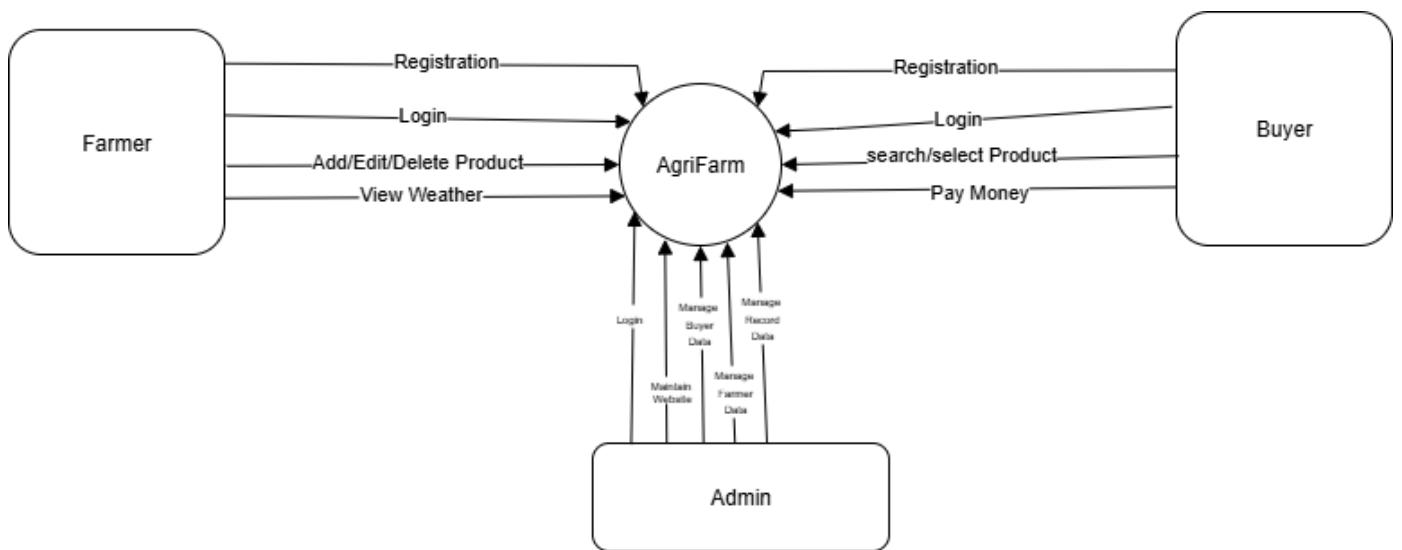


Figure 1.5 DFD Diagram(Level 0)

6. DFD Diagram(Level 1)

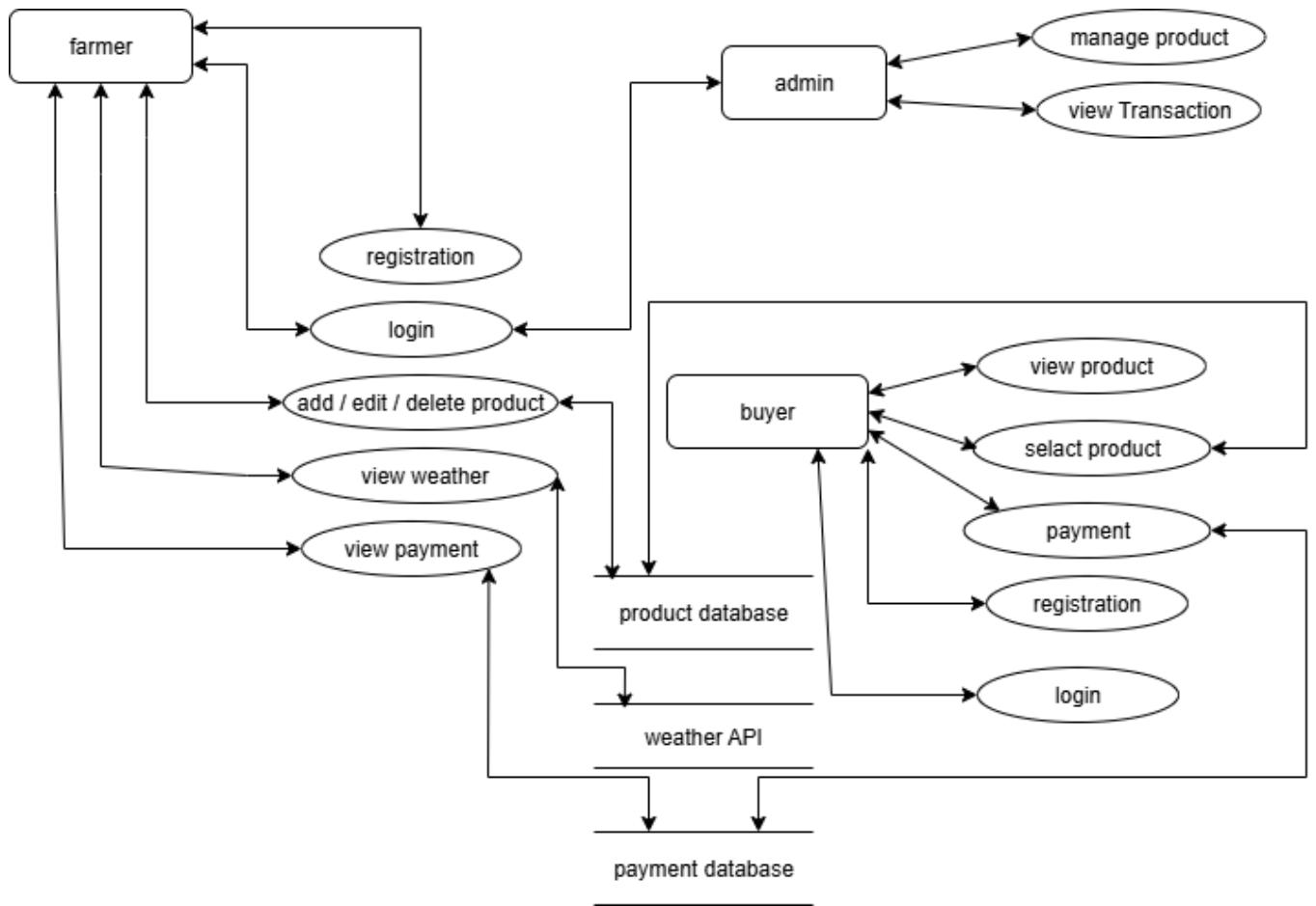


Figure 1.6 DFD Diagram(Level 1)

7. DFD Diagram(Level 2)

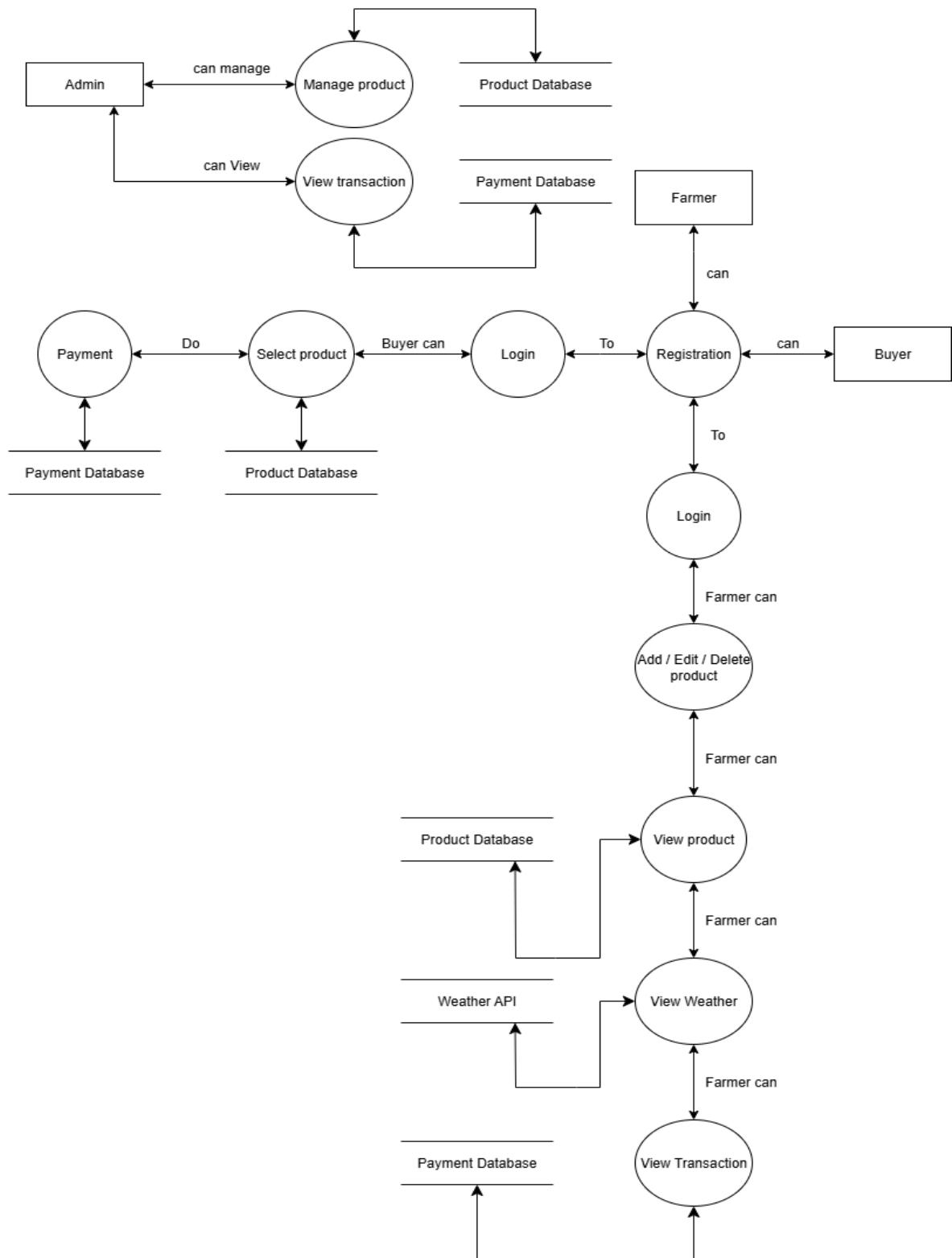


Figure 1.7 DFD Diagram(Level 2)

8. Class Diagram

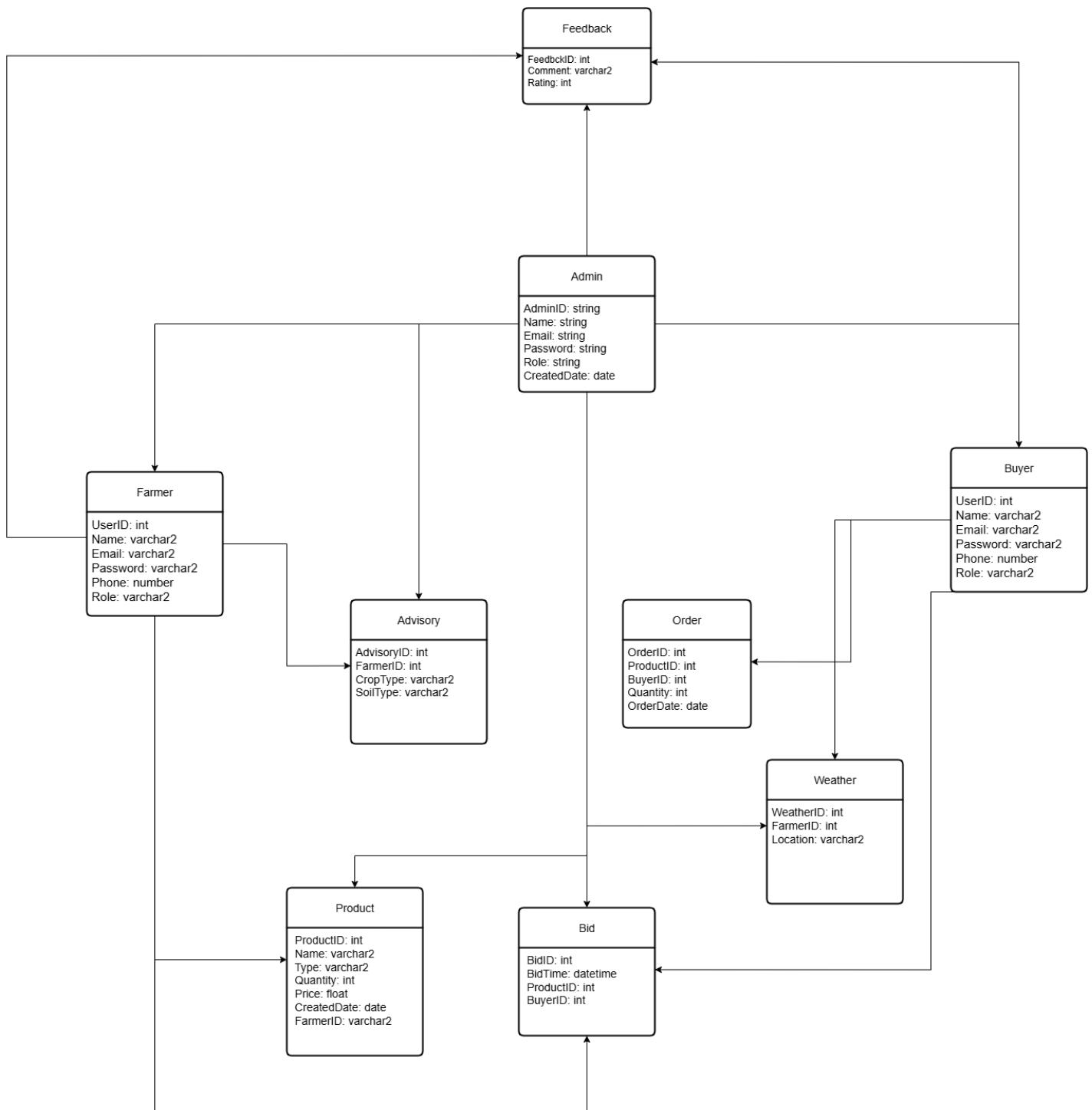
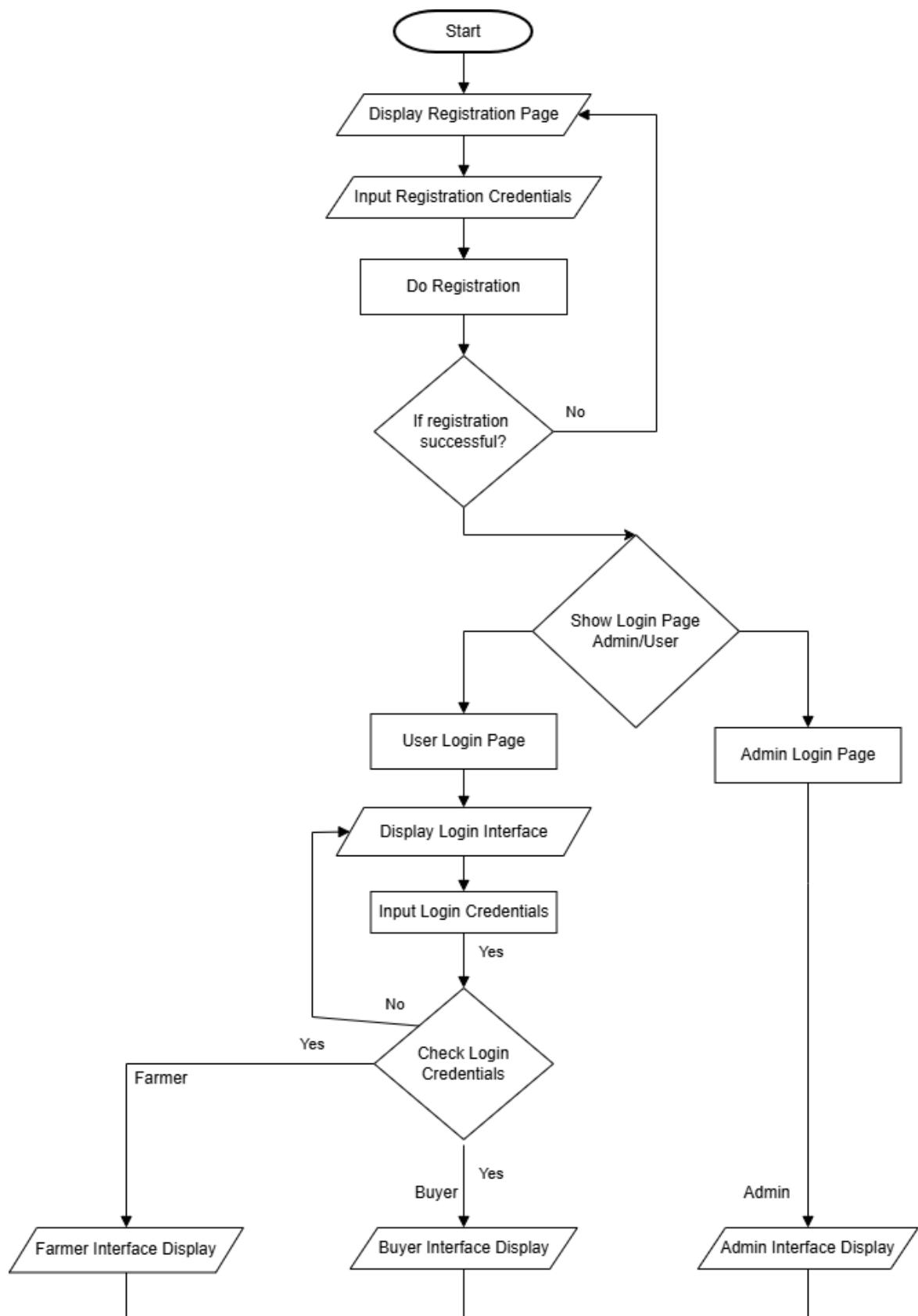


Figure 1.8 Class Diagram

9. Flowchart



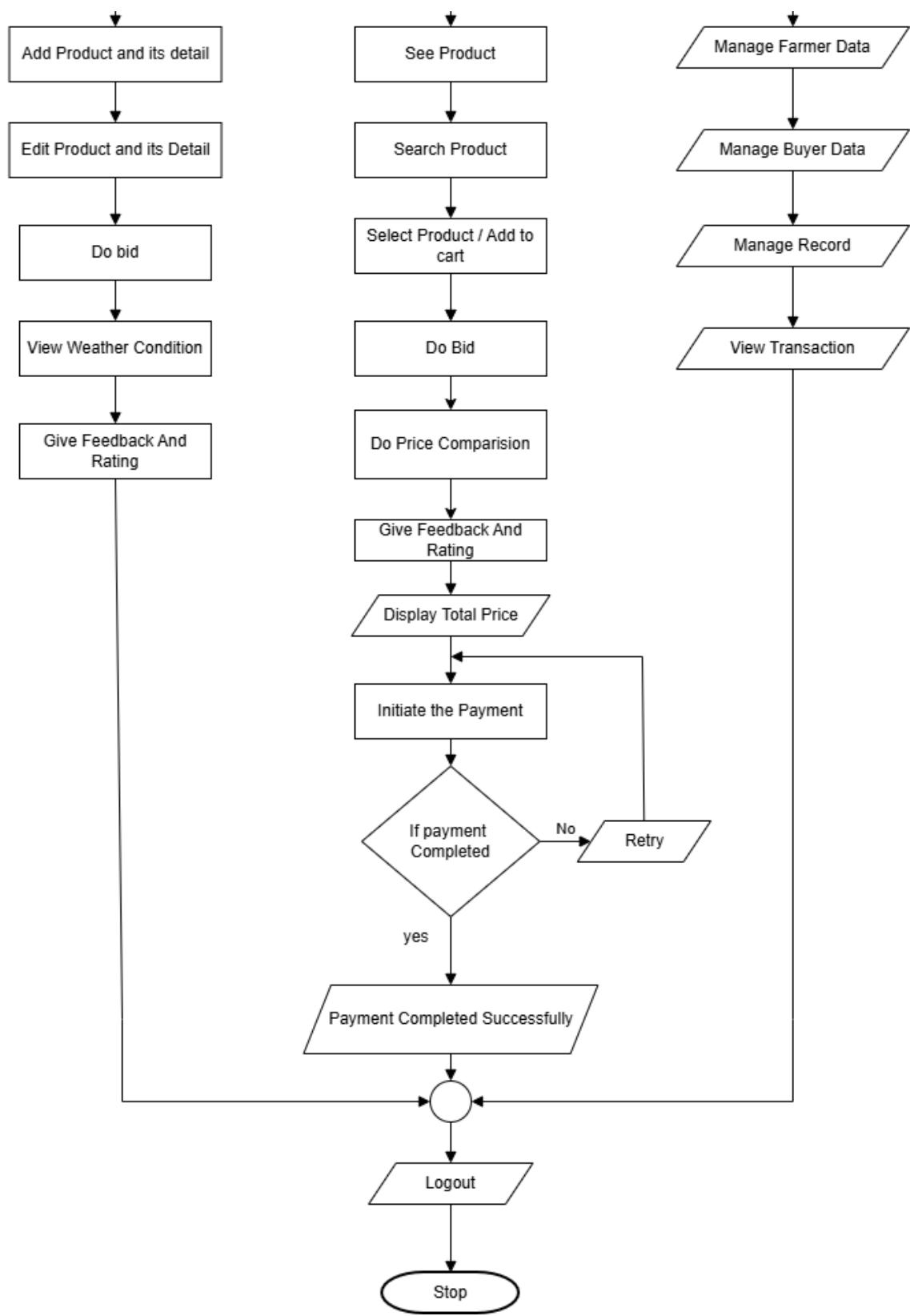


Figure 1.9 Flowchart

1. Introduction

1.1 Document Purpose

The purpose of this SRS document is to provide a comprehensive and structured description of the functionalities, scope, and behavior of the AgriFarm system. This document serves as a formal agreement between the project stakeholders — including the development team, testers, academic supervisors, and end users regarding the expected capabilities and limitations of the system. This SRS aims to ensure that the development team has a clear and unambiguous understanding of the system requirements to guide implementation and database design; the testing team can refer to this document to verify and validate the functionalities of the system through test cases; project evaluators and academic reviewers can evaluate the completeness, clarity, and innovation of the project based on defined goals and requirements; and future maintainers or developers can use this as reference documentation for upgrading or scaling the platform.

Specifically, this document defines the core functionalities of the system, such as product listing by farmers, bidding by buyers, real-time price comparison, weather-based advisory, and administrative controls. It also details non-functional requirements including performance expectations, usability standards, security measures, and system limitations. Furthermore, it outlines user interactions, interface expectations, and backend integration strategies for seamless system operations. This document serves as a foundational document for project planning, development milestones, and quality assurance processes. By following the IEEE SRS standards, this document promotes a unified understanding of the project and ensures traceability from requirements through design, implementation, and testing.

1.2 Product Scope

The AgriFarm is a web-based platform designed to transform traditional agricultural trade by facilitating a direct and transparent connection between farmers and buyers. The system eliminates the need for middlemen, providing both parties with a secure, feature-rich environment where agricultural products can be listed, discovered, compared, and traded in real time. The primary goal of this product is to empower farmers by giving them control over how their crops are priced and sold while enabling buyers to access high-quality

produce at competitive prices. The platform introduces digital features like bidding, real-time pricing, crop advisory services, and weather dashboards that are typically absent in conventional agricultural marketplaces.

Key functional capabilities of the system include farmer product listings, buyer bidding, real-time price comparison, advisory modules based on weather and crop data, live weather integration using third-party APIs, and an admin dashboard for platform moderation. The platform is scalable for deployment at local, regional, or national levels, and while initially designed for web browsers, future versions may include mobile or progressive web apps. It benefits farmers by providing access to wider markets, better pricing, and advisory support; buyers by offering product variety and transparent pricing. Built using HTML5, CSS3, JavaScript, PHP, MySQL, and third-party APIs, the platform also includes essential security features. The scope includes future extensibility for logistics tracking, multilingual support, and government portal integration, thereby addressing inefficiencies and promoting digital tools in rural communities.

1.3 Intended Audience and Document Overview

This SRS document is intended for a diverse group of readers involved in the planning, development, testing, evaluation, and use of the AgriFarm. Each stakeholder group will find relevant sections tailored to their specific interests and responsibilities.

Developers will use this document as a technical reference for implementing system functionalities, designing the database, and integrating APIs.

Testers and QA teams can refer to this SRS to understand the system behavior and define test cases.

Clients (farmers, buyers, and system administrators) will benefit from reading the introduction and product overview to understand what features and benefits the platform offers and how it impacts their roles.

Academic evaluators or professors can examine the entire SRS to assess the depth, completeness, technical accuracy, and innovation of the project.

Future developers or maintainers can use this document as a foundation to understand the original system logic, scope, and design intentions. They should follow the full document sequentially for better context and continuity.

The SRS is structured into clear sections:

1. **Introduction** – Covers the purpose, scope, audience, and organization of the document.
2. **Overall Description** – Provides a high-level view of the system, its functions, user characteristics, and constraints.
3. **Specific Requirements** – Details functional, interface, and system behavior in precise terms.
4. **Non-functional Requirements** – Outlines expectations for performance, reliability, security, usability, and other system attributes.

1.4 Definitions, and Abbreviations

Definitions

- **Admin:** The system administrator responsible for managing users, monitoring activities, handling disputes, and ensuring data integrity and security.
- **Buyer:** A registered user who can view, compare, and bid for agricultural products listed by farmers.
- **Bidding System:** A mechanism that allows buyers to place competitive offers on listed agricultural products, ensuring dynamic pricing.
- **Crop Advisory:** A module offering recommendations to farmers about crop selection, disease prevention, weather alerts, and farming techniques based on real-time data.
- **Farmer:** A registered user who lists agricultural products on the platform for sale or bidding.
- **Listing:** The process by which a farmer uploads details of an agricultural product (including images, descriptions, and price) for buyers to view or bid on.
- **Real-time Price Comparison:** A feature that allows buyers and farmers to view current market prices for various crops across different regions to make informed decisions.

- **AgriFarm:** A web-based platform that enables direct interaction between farmers and buyers, allowing product listings, bidding, and agricultural consultation services without intermediaries.
- **Weather Dashboard:** An integrated interface providing live weather updates relevant to the farmer's location, helping with agricultural planning.

Table 1.4.1 Abbreviations Table

Abbreviation	FULL FORM
API	Application Programming Interface
CRUD	Create, Read, Update, Delete
CSS	Cascading Style Sheets
DBMS	Database Management System
GPS	Global Positioning System
HTML	HyperText Markup Language
CSS	Cascading Style Sheets
IEEE	Institute of Electrical and Electronics Engineers
JS	JavaScript
MVC	Model-View-Controller
PHP	Hypertext Preprocessor
SQL	Structured Query Language
SRS	Software Requirements Specification
UI	User Interface
UX	User Experience
QA	Question Answer
LAMP	Linux,Apache,MySQL,PHP
D2C	Direct-to-Consumer
RTO	Recovery Time Objective
My SQL	My Structured Query Language
XAMPP	Cross-platform Apache MariaDB PHP Perl
eNAM	Electronic National Agriculture Market
GB	Gigabyte
RAM	Random Access Memory

HTTPS (SSL/TLS)	HyperText Transfer Protocol Secure (Secure Sockets Layer / Transport Layer Security)
FAQs	Frequently Asked Questions
PDF	Portable Document Format
macOS	Macintosh Operating System
iOS	iPhone Operating System
XSS	Cross-Site Scripting
CSRF	Cross-Site Request Forgery
PCI-DSS	Payment Card Industry Data Security Standard
GDPR	General Data Protection Regulation
JSON	JavaScript Object Notation
SHA-256	Secure Hash Algorithm 256-bit

1.5 Document Conventions

To ensure clarity, consistency, and professional standards throughout this SRS document for the AgriFarm, the following typographical, formatting, and naming conventions have been followed. These conventions enhance the readability and usability of the document for all stakeholders including developers, testers, clients, professors, and future maintainers.

1.6 References and Acknowledgments

This SRS document has been developed using well-established standards, academic texts, technical documentation, and relevant domain knowledge to ensure its clarity, accuracy, and completeness. The following references have been instrumental in shaping the structure, content, and implementation of the AgriFarm.

1.6.1 References

The document refers to the following standards, literature, and online resources, cited in IEEE format:

1. <https://chatgpt.com/>
2. <https://chat.deepseek.com/>
3. <https://www.google.com/>
4. <https://www.w3schools.com/>

2. Overall Description

2.1 Product Perspective

The AgriFarm is a newly developed, standalone web application that addresses the inefficiencies in the traditional agricultural market system by enabling direct transactions between farmers and buyers. This platform is not a follow-on member of any existing product line nor a replacement of a legacy system; rather, it is a self-contained digital product built from scratch to meet the needs of rural communities, smallholder farmers, and agricultural buyers seeking a more transparent, competitive, and fair marketplace. It introduces a post-harvest sales model that is largely absent in most existing agricultural platforms, which are typically focused on input sales (e.g., fertilizers, seeds) or are limited to government-mandated structures.

Designed with modularity and extensibility, this system can operate independently or be integrated with external systems and services through APIs. For instance, real-time weather information is fetched using the OpenWeatherMap API, providing farmers with relevant climatic data on their dashboard. Similarly, a price comparison module fetches current market rates from government data feeds or allows manual updates, helping both farmers and buyers make informed pricing decisions. A crop advisory module is also embedded, offering agricultural tips and best practices, either through curated static content or dynamically linked external resources like government portals and agricultural research centers.

The platform's frontend is designed using modern web technologies such as HTML5, CSS3, JavaScript, and jQuery, ensuring responsiveness and ease of use for all users. The backend is powered by PHP, with data being securely stored and managed in a MySQL database. Transactions, bidding, product listings, and user management are handled server-side, ensuring data integrity and business logic enforcement. The system runs on a standard LAMP stack and is hosted on a server that supports PHP and MySQL operations—such as XAMPP for local deployment or cloud-based hosting for production use.

From a usage perspective, farmers interact with the system by creating profiles, uploading their produce details, viewing weather forecasts, and participating in price bidding. Buyers can browse product listings, compare market prices, and place bids or make direct

purchases. The platform is designed to be browser-based, requiring only an internet connection and a compatible web browser—ensuring accessibility even in low-resource environments.

Though the application is capable of standalone operation, it is structured to complement existing national and local government agriculture initiatives. For example, it can work alongside government portals like eNAM by offering a more user-friendly interface for small farmers and supporting a D2C business model. Its architecture supports future extensions such as multilingual support, integration with payment gateways, or adaptation into a mobile application, making it a scalable and future-ready solution for digital agriculture.

2.2 Product Functionality

The AgriFarm is designed to streamline agricultural commerce by providing a set of well-integrated functionalities for farmers, buyers, and administrators. The system supports key activities such as user registration, product listing, bidding, advisory support, and weather tracking — all within a secure and user-friendly environment.

Major Functionalities of the System:

User Registration and Login

- Allows farmers and buyers to create accounts and log in securely.
- Authenticates users using credentials to access personalized features.

Farmer Dashboard

- Enables farmers to add and manage agricultural product listings.
- Upload details including product name, quantity, price, description, location, and images.
- View bid status, edit or delete listings, and monitor market price trends.

Buyer Interface

- Allows buyers to browse available listings in real time.
- Provides detailed views of products with options to place bids or make direct purchases.

Crop Advisory Module

- Provides guidance to farmers on crop selection, pest control, fertilizers, and planting schedules.
- Offers region-based advice curated by experts or external databases.

Weather Dashboard

- Displays real-time weather conditions including temperature, humidity, rainfall, and wind speed.
- Helps farmers in planning harvesting and logistics.

Admin Panel

- Lets the admin manage user accounts, verify listings, monitor bids, and resolve disputes.
- Admin can also update advisory content and price feeds.

2.3 Users and Characteristics

The AgriFarm is designed to support a broad spectrum of user types, each with different needs, technical proficiency, and interaction levels. Understanding these user classes ensures that the platform meets the unique expectations of its audience and delivers an accessible, secure, and useful experience.

2.3.1 Farmers (Primary Users)

Characteristics:

- Often from rural areas with basic or limited digital literacy.
- May prefer regional language options and simplified interfaces.
- Use mobile phones or low-end devices with internet access.

Key Responsibilities:

- Register and log in to the platform.
- Upload and manage agricultural product listings with details like price, quantity, and images.
- Monitor and respond to buyer bids.
- Access real-time crop advisory and weather updates.

Importance Level:

- **Most important** users to satisfy, as they supply the core content (agricultural products) of the marketplace.

2.3.2 Buyers (Wholesalers, Retailers, Individuals)

Characteristics:

- Medium to high digital literacy; can be urban or rural.
- Use desktop or mobile platforms.
- Require quick access to product listings, market prices, and bidding tools.

Key Responsibilities:

- Create and manage buyer profiles.
- Browse, search, and filter products.
- Participate in bidding or purchase directly.
- Track orders and receive notifications on transaction status.

Importance Level:

- **Equally critical** to the platform's success, as they generate demand and drive transactions.

2.3.3 Administrators (Platform Managers)

Characteristics:

- Technically proficient with IT or system management experience.
- Typically internal staff or platform operators.
- Access all system modules and data dashboards.

Key Responsibilities:

- Manage user registrations and permissions.
- Moderate product listings and resolve disputes.
- Maintain market data, advisory content, and system logs.
- Oversee system security, bug fixes, and feature updates.

Importance Level:

- **Highly important** for operational stability, user trust, and platform integrity.

2.4 Operating Environment

The AgriFarm is a web-based application engineered to operate efficiently within a standard cloud or shared hosting infrastructure. It is primarily developed using HTML5, CSS3, JavaScript, and jQuery for the frontend, ensuring responsiveness and compatibility across major browsers and devices. On the backend, the system utilizes PHP (version 7.4 or above) and MySQL (version 5.7 or later) as the relational database management system, with data interaction following a secure and optimized query structure. The server-side

application will be hosted on a Linux-based environment—preferably Ubuntu Server 20.04 LTS or later—and managed via web servers such as Apache.

To ensure wide accessibility, the platform is designed to function on modern web browsers including Google Chrome, Mozilla Firefox, Safari, and Microsoft Edge. The responsive design supports desktops, laptops, tablets, and smartphones, allowing rural users with lower-end devices and limited bandwidth to still access the platform smoothly. A minimum of 2 GB RAM and dual-core processor is recommended on the client side for optimal browser performance. The server infrastructure must support HTTPS (SSL/TLS) to secure user sessions and data transmissions. Additionally, the system integrates with third-party APIs for weather forecasting and real-time agricultural price comparisons, requiring stable internet access and external API endpoints to be reachable at all times.

The environment also includes user authentication, session management, and secured database access protocols to enforce data integrity and privacy. The platform's modular architecture ensures that it can scale efficiently as traffic and transaction volumes grow. Furthermore, system logs and monitoring tools will be implemented to assist in administration, debugging, and performance tuning.

2.5 Design and Implementation Constraints

The development and deployment of the AgriFarm are governed by several constraints that shape the software architecture, technology stack, and operational workflow. These constraints include technical limitations, resource availability, legal compliance, and user accessibility, all of which must be considered to ensure a practical and sustainable system.

2.5.1 Platform and Technology Constraints

The backend is strictly limited to PHP and MySQL due to predefined project and academic guidelines. This rules out more modern or scalable backend frameworks such as Node.js, Django, or Spring Boot. On the frontend, only HTML5, CSS3, JavaScript, and jQuery are allowed, which limits advanced client-side rendering and componentization that could be achieved using libraries like React, Angular, or Vue.js. These constraints influence performance tuning and restrict some dynamic UI capabilities.

2.5.2 Hardware and Connectivity Constraints

The target audience—primarily farmers in rural areas—may use low-end smartphones with outdated hardware and limited internet access, often on 2G/3G networks. As a result, the platform must be optimized for minimal bandwidth consumption, lightweight interfaces, and offline-friendly behavior wherever possible. Heavy multimedia assets, real-time streaming, or high-resolution graphics must be avoided or optimized using compression and lazy loading techniques.

2.5.3 Security and Privacy Constraints

Since the platform stores and transmits sensitive information such as user credentials, contact details, geolocation, and transaction data, it is essential to implement end-to-end encryption using HTTPS (SSL/TLS). Compliance with regional data protection regulations is mandatory, including safe storage practices, access controls, and regular audits to protect users' privacy and digital rights.

2.5.4 Scalability and Maintenance Constraints

Although the system will initially serve a limited user base, future expansion to multiple geographical regions and languages is expected. The current design involves manual approval for new user registrations and product listings, which may cause administrative bottlenecks and delays as the system scales. Scalability planning must include modular code structures, load balancing, and multi-language UI support for future extensibility.

2.5.5 API and Integration Constraints

The application depends on external APIs for real-time weather data and market price comparisons. These APIs often come with rate limits, usage restrictions, and availability issues (especially with free-tier plans). As such, fallback mechanisms such as local caching, alternative data sources, or informative alerts must be implemented to handle outages and ensure service continuity.

2.5.6 UI/UX and Accessibility Constraints

Many users may have limited literacy or may not be familiar with complex interfaces. Hence, the UI must support regional languages, icon-based navigation, and visual simplicity. Accessibility standards such as keyboard navigation, screen reader compatibility, and high-contrast modes should be followed to ensure usability by individuals with disabilities or impairments.

2.6 User Documentation

The AgriFarm will be accompanied by comprehensive user documentation tailored to the needs of various user groups including farmers, buyers, and administrators. This documentation will include detailed user manuals that provide step-by-step instructions on key functionalities such as account registration, product listing, bidding, and purchase confirmation, enhanced with screenshots for clarity. An administrator guide will cover system management tasks such as user approvals, complaint handling, content updates, and monitoring system health. Additionally, a quick start guide will offer a concise overview of essential features, supported by visual aids and tooltips for easy onboarding. The platform will also feature an integrated online help section containing FAQs, troubleshooting articles, and live support options via email or chat. Optionally, training videos hosted on platforms like YouTube, available in regional languages, will be provided to demonstrate core workflows and improve accessibility. All documentation will be delivered digitally alongside the software, primarily in PDF format and accessible via the web interface to ensure users can easily access guidance as needed.

2.7 Assumptions and Dependencies

This section outlines the key assumptions and dependencies that influence the design, development, and operation of the AgriFarm. These factors are critical as any deviations or changes could significantly affect system requirements and performance.

2.7.1 Assumptions

- All users, including farmers, buyers, and administrators, have reliable and consistent internet access, which is essential for real-time features such as product listings, bidding, and price comparisons.
- Users, particularly farmers, possess a basic level of digital literacy sufficient to navigate the platform, complete forms, and use interactive features.
- Farmers provide accurate and honest information when listing products, ensuring data integrity and user trust.
- Real-time weather data is reliably supplied by third-party APIs or government-authorized sources, which is vital for the accuracy of crop advisory and weather dashboard modules.

- The platform will be accessed via modern, standards-compliant web browsers or smartphones with compatible operating systems, enabling responsive design and full functionality.

2.7.2 Dependencies

- The system relies on third-party APIs for weather updates and crop advisory content; any disruption or delay in these services can affect system reliability.
- Hosting infrastructure and server environment impact system availability, performance, and scalability. Downtime or misconfigurations could degrade user experience.
- Future features such as online payments will depend on integration with external, secure payment gateways, which must maintain high availability and API reliability.
- Client-side technologies (JavaScript, HTML5, CSS3) are required for proper functioning; users disabling these technologies or using outdated browsers may face limited access or interface issues.
- Compliance with evolving government regulations and policies related to agricultural trade and digital commerce is necessary; regulatory changes may require system updates or reconfiguration.

3. Specific Requirements

3.1 External Interface Requirements

3.1.1 User Interfaces

The AgriFarm provides a responsive and intuitive web-based user interface that caters to different user groups, including farmers, buyers, and administrators. The primary web interface supports:

- **Navigation menus:** Easily accessible menus to navigate major sections such as Product Listings, Bidding, Crop Advisory, User Profiles, and Admin Dashboard.
- **Forms:** Interactive forms for user registration, login/logout, product listing uploads, bid submissions, and profile management.
- **Notifications:** Real-time pop-up alerts and notifications for bid updates, advisory messages, transaction confirmations, and system messages.
- **Language support:** Initially in English with plans to include regional languages to improve accessibility.
- **Accessibility:** The UI incorporates icons, tooltips, and simple layouts to accommodate users with varying literacy levels.
- **Responsive design:** The interface adapts to different screen sizes to ensure usability on desktops, laptops, tablets, and smartphones.

Though no dedicated mobile app is available in the initial release, the platform's responsive design ensures full functionality on mobile browsers.

3.1.2 Hardware Interfaces

The system is designed to interact with a variety of hardware devices primarily used by the end users:

- **Client Devices:** The platform supports desktops, laptops, smartphones, and tablets with the following minimum hardware specifications:
 - At least 2 GB RAM
 - Modern web browsers compatible with HTML5, CSS3, and JavaScript
 - Touchscreen input for mobile devices
 - Optional camera access or image upload support to enable users to upload product images
- **Server Hardware:** The backend will run on web servers configured with:
 - Apache or Nginx as the web server software

- Minimum 8 GB RAM and multi-core processors to ensure scalability and performance under concurrent user load
- Scalable cloud or dedicated server infrastructure to support future traffic growth

3.1.3 Software Interfaces

The software interfaces are critical to the platform's operation and include the following components:

- **Web Browsers:** The platform supports the latest stable versions of major browsers including:
 - Google Chrome
 - Mozilla Firefox
 - Microsoft Edge
 - Safari
- **Operating Systems:** Compatible with client devices running:
 - Windows, macOS, and Linux (desktop/laptop environments)
 - Android and iOS (mobile environments)
- **Database Interface:** The backend interacts with a MySQL relational database through PHP scripts. The system performs standard CRUD operations to manage users, products, bids, and advisory content.
- **Third-Party APIs:** The system integrates with external services including:
 - Weather API (e.g., OpenWeatherMap) for real-time weather data
 - Payment gateway APIs such as Razorpay or PayPal for future payment processing
 - Location services like Google Maps API for geotagging users and products

3.1.4 Communications Interfaces

All communication between client devices and the server occurs over the HTTP/HTTPS protocols, with a strong preference for HTTPS to ensure secure, encrypted data transfer.

- **Security:** The platform enforces SSL/TLS encryption to protect sensitive user data such as credentials, transactions, and personal information.
- **Data Transmission:** The system uses RESTful API calls for asynchronous data exchange with third-party services and client-server interactions.
- **Protocols and Standards:** Standard web communication protocols (HTTP/HTTPS) and data formats such as JSON are used for interoperability.

- **Performance:** Data transfer and synchronization are optimized to function efficiently even on low-bandwidth connections commonly found in rural areas.

3.2 Functional Requirements

The AgriFarm shall provide the following core functionalities, categorized by user roles and system features:

3.2.1 Farmer Functions

- Farmers shall be able to register on the platform by providing personal details such as name, email, contact number, address, and valid identification.
- Farmers shall be able to log in securely and access a personalized dashboard.
- Within the dashboard, farmers shall list new agricultural products with details including product name, category, quantity, quality grade, price expectations, and upload product images.
- Farmers shall have the ability to update or delete their product listings as long as the product remains unsold.
- Farmers shall receive notifications for new bids on their products and be able to accept or reject bids.
- Once a bid is accepted, the product is marked as sold, preventing further bids, and confirmation notifications are sent to both parties

3.2.2 Buyer Functions

- Buyers shall be able to register and securely log in to the platform.
- Buyers shall access a dedicated dashboard to browse agricultural products filtered by crop type, price range, region, and quality.
- Buyers shall be able to view detailed product listings and place bids on products.
- Buyers can track the status of their bids in real-time.
- An optional secure messaging feature shall allow buyers to communicate with farmers during the negotiation process.

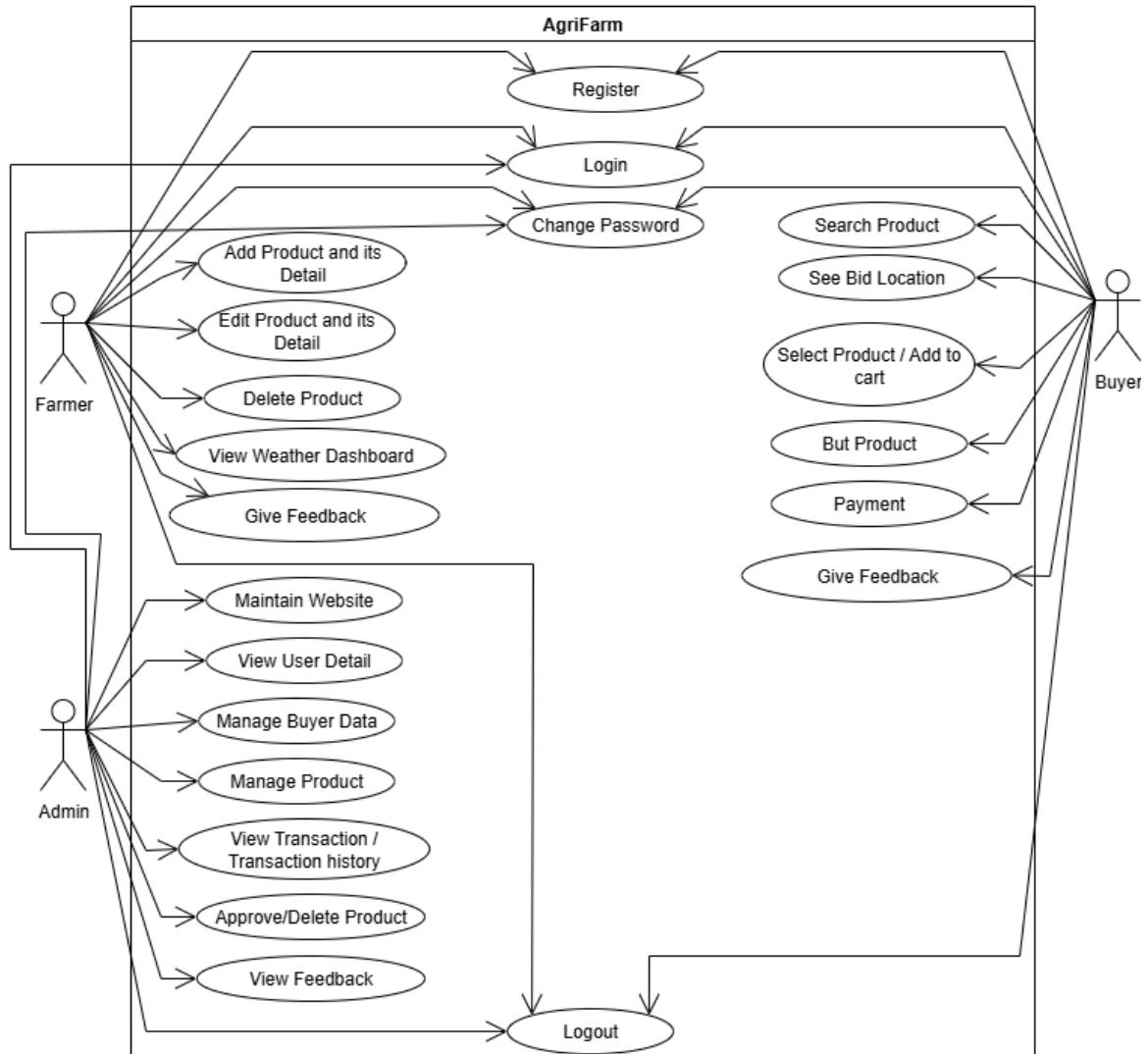
3.2.3 Administrator Functions

- Administrators shall manage user registrations, approve or block users, and moderate product listings.
- Admins shall have access to bidding histories and flagged content.
- Admins shall oversee system health, manage data backups, and ensure system security and uptime.

- Administrators shall update crop advisory content, weather dashboard settings, and market data feeds.

3.3 Behaviour Requirements

Use Case View



Usecase

This section summarizes the major use cases that describe the interaction between the system and external actors. Each use case represents a discrete goal or function that the system fulfills for its users. The main actors involved are:

- **Farmer:** Registers, lists products, manages bids, views advisory and weather data.
- **Buyer:** Registers, browses products, places bids, communicates with farmers.
- **Admin:** Manages users and listings, moderates content, maintains system.

4. Other Non-functional Requirements

4.1 Performance Requirements

4.1.1 Response Time for User Actions:

All critical user actions such as login, product listing submission, bid placement, and accessing advisory content shall complete processing within 2 seconds on average under standard network conditions.

4.1.2 Page Load Times:

Web pages must fully load within 3 seconds on broadband connections and within 5 seconds on 4G mobile networks, including dynamic content such as charts, weather dashboards, and real-time bid updates.

4.1.3 Concurrent User Support:

The platform's backend infrastructure must support at least 500 concurrent users without noticeable performance degradation, ensuring simultaneous activities by farmers, buyers, and administrators remain smooth and uninterrupted.

4.1.4 Database Query Performance:

Data retrieval operations involving product searches, filtering, and bid comparison must return results within 1 to 1.5 seconds, achieved by implementing optimized SQL queries and appropriate indexing on key tables.

4.1.5 Real-Time Update Latency:

Real-time features like bidding notifications and weather data refreshes shall update with a maximum lag of 5 seconds through scheduled polling or WebSocket communication to maintain near real-time accuracy.

4.1.6 System Availability and Maintenance:

The system shall maintain a minimum uptime of 99.5% per month. Scheduled maintenance shall be performed during off-peak hours, with advance user notifications and a user-friendly maintenance page displayed during downtime.

4.1.7 Failure Handling and Recovery:

In case of slow API responses or server overload, the platform shall implement appropriate timeouts, retry mechanisms, and provide clear user notifications to handle failures gracefully and maintain system stability.

4.2 Safety and Security Requirements

The AgriFarm prioritizes the safety, security, and privacy of its users, data, and transactions. The system must enforce stringent security measures to maintain user trust, protect sensitive information, and comply with relevant laws and industry standards.

4.2.1 Safety Requirements

- **Data Protection and Encryption:**

All sensitive user data—including personal details, login credentials, and transaction records—must be securely encrypted both at rest and in transit. Passwords should be hashed using robust algorithms such as bcrypt or SHA-256 to prevent unauthorized access even if the database is compromised.

- **RBAC:**

Access to system features and data must be restricted according to user roles (farmers, buyers, administrators). Unauthorized access attempts should trigger logging and alert mechanisms to quickly detect and respond to security threats.

- **Secure Session Management:**

User sessions must automatically expire after 15–20 minutes of inactivity to reduce risks on shared or public devices. Session tokens must be protected against vulnerabilities such as XSS, CSRF, and session hijacking to prevent unauthorized account access.

4.2.2 Major Security Requirements

- **Encrypted Communication:**

Use HTTPS with valid SSL/TLS certificates to secure all data exchanges between clients and the server.

- **Input Validation:**

Implement both client-side and server-side validation to prevent injection attacks, invalid data submission, and manipulation, especially in product listings and bidding modules.

- **Anti-bot and Spam Protection:**

Deploy CAPTCHA or similar mechanisms during user registration and login to prevent automated attacks and spam accounts.

- **Payment Security Compliance:**

For any payment integration, adhere to PCI-DSS standards, ensuring that payment data is tokenized and never stored on platform servers.

- **Audit Logging:**

Maintain detailed logs of critical actions, including login attempts, bid submissions, product listing modifications, and administrative changes for accountability and forensic analysis.

- **Data Backup and Disaster Recovery:**

Schedule automated backups with secure offsite/cloud storage and ensure a RTO of 4 hours to restore operations after incidents.

- **Legal and Regulatory Compliance:**

Ensure adherence to applicable data protection laws such as India's Personal Data Protection Bill and GDPR for international users, including user consent management and data privacy rights.

4.3 Software Quality Attributes

The AgriFarm is designed to meet high standards of software quality to ensure robust, user-friendly, and maintainable software that can evolve over time while delivering excellent performance and security.

4.3.1 Reliability

- **Requirement:** The system must be available 99.5% of the time with minimal downtime during maintenance windows scheduled during off-peak hours.

- **Implementation:**

- Use fault-tolerant server configurations with failover mechanisms.
- Implement comprehensive error handling and logging to capture unexpected failures.
- Design database transactions to be atomic and consistent, preventing partial updates or data corruption.
- Monitor system health continuously with alerts for anomalies.

4.3.2 Usability

- **Requirement:** The platform shall provide a simple, clean, and responsive user interface that minimizes user errors and learning time.

- **Implementation:**

- Use consistent navigation menus and familiar UI controls with clear labeling.
- Incorporate tooltips and inline help on forms to guide users.
- Optimize for mobile and desktop views using responsive web design principles.

- Conduct usability testing with representative users (especially farmers) and iterate UI design based on feedback.

4.3.3 Maintainability

- **Requirement:** The system must support efficient updates, bug fixes, and feature enhancements with minimal downtime.
- **Implementation:**
 - Modular code structure separating frontend, backend, and database layers.
 - Use version control systems (e.g., Git) with clear branching and merge strategies.
 - Write comprehensive documentation and in-line code comments.
 - Follow established coding standards and conduct peer code reviews.

4.3.4 Scalability

- **Requirement:** The system should handle increasing user load and data volume without performance degradation.
- **Implementation:**
 - Use scalable infrastructure (cloud hosting with autoscaling or load balancers).
 - Optimize database queries with proper indexing and caching mechanisms.
 - Design the system to support horizontal scaling by adding more servers.
 - Implement asynchronous processing for non-blocking operations such as notifications.

4.3.5 Security

- **Requirement:** The system must enforce strong data protection and access controls to maintain user privacy and comply with regulations.
- **Implementation:**
 - Encrypt sensitive data at rest and in transit (using HTTPS and secure hashing).
 - Implement role-based access control to restrict user permissions.
 - Protect against common web vulnerabilities (XSS, CSRF, SQL injection) with input validation and security libraries.
 - Regularly update dependencies and monitor for security patches.

4.3.6 Efficiency

- **Requirement:** The system must deliver fast response times and minimize resource consumption.
- **Implementation:**
 - Optimize front-end assets by minimizing CSS/JS and compressing images.

- Use database connection pooling and query optimization.
- Cache frequently accessed data on both client and server sides.
- Perform load testing and tune the system to meet performance benchmarks.

4.3.7 Portability

- **Requirement:** The platform should run seamlessly on all major browsers and devices without additional plugins.
- **Implementation:**
 - Adhere to web standards (HTML5, CSS3, JavaScript ES6).
 - Test across multiple browsers (Chrome, Firefox, Edge, Safari) and devices (desktop, tablets, smartphones).
 - Use responsive design techniques to adapt layouts dynamically.
 - Avoid use of browser-specific features or provide polyfills when necessary.

Appendix A – Data Dictionary

Table 1.1 users

Field Name	Data Type	Constraints / Format
id	INT UNSIGNED AUTO INCREMENT	PRIMARY KEY
username	VARCHAR(100)	NOT NULL
email	VARCHAR(191)	NOT NULL, UNIQUE
password	VARCHAR(255)	NOT NULL
role	ENUM('farmer','buyer')	NOT NULL
created_at	TIMESTAMP	DEFAULT CURRENT_TIMESTAMP

Table 1.2 temp_users

Field Name	Data Type	Constraints / Format
id	INT UNSIGNED AUTO INCREMENT	PRIMARY KEY
username	VARCHAR(100)	NOT NULL
email	VARCHAR(191)	NOT NULL, UNIQUE
password	VARCHAR(255)	NOT NULL
created_at	TIMESTAMP	DEFAULT CURRENT_TIMESTAMP
otp	VARCHAR(6)	NOT NULL
otp_expires_at	DATETIME	NOT NULL
created_at	TIMESTAMP	DEFAULT CURRENT_TIMESTAMP

Table 1.3 farmer_users

Field Name	Data Type	Constraints / Format
id	INT UNSIGNED AUTO INCREMENT	PRIMARY KEY
username	VARCHAR(100)	NOT NULL
email	VARCHAR(191)	NOT NULL, UNIQUE
password	VARCHAR(255)	NOT NULL
mobile_number	VARCHAR(20)	NOT NULL
created_at	TIMESTAMP	DEFAULT CURRENT_TIMESTAMP

Table 1.4 buyer_users

Field Name	Data Type	Constraints / Format
id	INT UNSIGNED AUTO INCREMENT	PRIMARY KEY
username	VARCHAR(100)	NOT NULL
email	VARCHAR(191)	NOT NULL, UNIQUE
password	VARCHAR(255)	NOT NULL
created_at	TIMESTAMP	DEFAULT CURRENT_TIMESTAMP

Table 1.5 admin

Field Name	Data Type	Constraints / Format
id	INT UNSIGNED AUTO_INCREMENT	PRIMARY KEY
username	VARCHAR(100)	NOT NULL, UNIQUE
password	VARCHAR(255)	NOT NULL
created_at	TIMESTAMP	DEFAULT CURRENT_TIMESTAMP

Table 1.6 products

Field Name	Data Type	Constraints / Format
id	INT UNSIGNED AUTO_INCREMENT	PRIMARY KEY
farmer_id	INT UNSIGNED	NOT NULL, FOREIGN KEY → farmer_users(id)
name	VARCHAR(150)	NOT NULL
category	VARCHAR(50)	NULL
subcategory	VARCHAR(50)	NULL
description	TEXT	NULL
price	DECIMAL(10,2)	NOT NULL
quantity	INT UNSIGNED	DEFAULT 0
status	ENUM('pending','approved','rejected')	DEFAULT 'pending'
is_bidding	ENUM('yes','no')	DEFAULT 'no'
bidding_end_date	DATETIME	NULL
minimum_bid_price	DECIMAL(10,2)	NULL
created_at	TIMESTAMP	DEFAULT CURRENT_TIMESTAMP

Table 1.7 cart

Field Name	Data Type	Constraints / Format
id	INT UNSIGNED AUTO_INCREMENT	PRIMARY KEY
buyer_id	INT UNSIGNED	NOT NULL, FOREIGN KEY
product_id	INT UNSIGNED	NOT NULL, FOREIGN KEY
quantity	DECIMAL(10,2)	DEFAULT 0
created_at	TIMESTAMP	DEFAULT CURRENT_TIMESTAMP
unique_cart_item	UNIQUE KEY	(buyer_id, product_id)

Table 1.8 orders

Field Name	Data Type	Constraints / Format
id	INT UNSIGNED AUTO_INCREMENT	PRIMARY KEY
buyer_id	INT UNSIGNED	NOT NULL, FOREIGN KEY
product_id	INT UNSIGNED	NOT NULL, FOREIGN KEY
farmer_id	INT UNSIGNED	NOT NULL, FOREIGN KEY
quantity	DECIMAL(10,2)	NOT NULL
price_per_kg	DECIMAL(10,2)	NOT NULL
total_amount	DECIMAL(10,2)	NOT NULL
remaining_quantity	DECIMAL(10,2)	NOT NULL
payment_method	VARCHAR(50)	NULL
payment_status	ENUM('pending','completed','failed')	DEFAULT 'pending'
payment_transaction_id	VARCHAR(100)	NULL
order_date	TIMESTAMP	DEFAULT CURRENT_TIMESTAMP

Table 1.9 product_ratings

Field Name	Data Type	Constraints / Format
id	INT UNSIGNED AUTO_INCREMENT	PRIMARY KEY
product_id	INT UNSIGNED	NOT NULL, FOREIGN KEY
buyer_id	INT UNSIGNED	NOT NULL, FOREIGN KEY
rating	TINYINT UNSIGNED	CHECK (1-5), NOT NULL
review	TEXT	NULL
created_at	TIMESTAMP	DEFAULT CURRENT_TIMESTAMP
unique_rating	UNIQUE	(product_id, buyer_id)

Table 1.10 website_feedback

Field Name	Data Type	Constraints / Format
id	INT UNSIGNED AUTO_INCREMENT	PRIMARY KEY
buyer_id	INT UNSIGNED	NULL, FOREIGN KEY
farmer_id	INT UNSIGNED	NULL, FOREIGN KEY
name	VARCHAR(100)	NOT NULL
email	VARCHAR(191)	NOT NULL
subject	VARCHAR(200)	NOT NULL
message	TEXT	NOT NULL
rating	TINYINT UNSIGNED	CHECK (1-5), NULL
status	ENUM('new','read','replied')	DEFAULT 'new'
created_at	TIMESTAMP	DEFAULT CURRENT_TIMESTAMP

Table 1.11 bids

Field Name	Data Type	Constraints / Format
id	INT UNSIGNED AUTO_INCREMENT	PRIMARY KEY
product_id	INT UNSIGNED	NOT NULL, FOREIGN KEY
buyer_id	INT UNSIGNED	NOT NULL, FOREIGN KEY
bid_amount	DECIMAL(10,2)	NOT NULL
quantity	DECIMAL(10,2)	NOT NULL
status	ENUM('active','accepted','rejected','won','lost')	DEFAULT 'active'
created_at	TIMESTAMP	DEFAULT CURRENT_TIMESTAMP

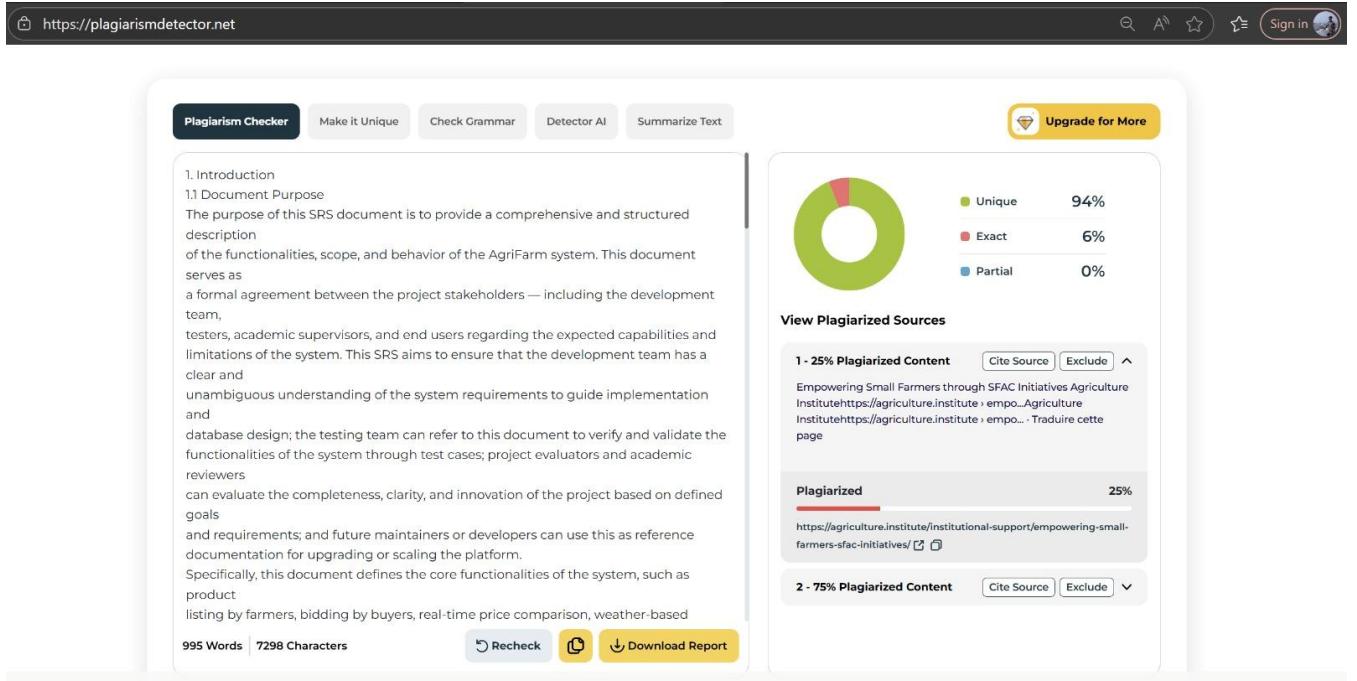
Table 1.12 password_reset

Field Name	Data Type	Constraints / Format
id	INT(10)	PRIMARY KEY
email	VARCHAR(191)	NOT NULL
otp	VARCHAR(6)	NOT NULL
otp_expires_at	DATETIME	NOT NULL
created_at	TIMESTAMP	DEFAULT CURRENT_TIMESTAMP

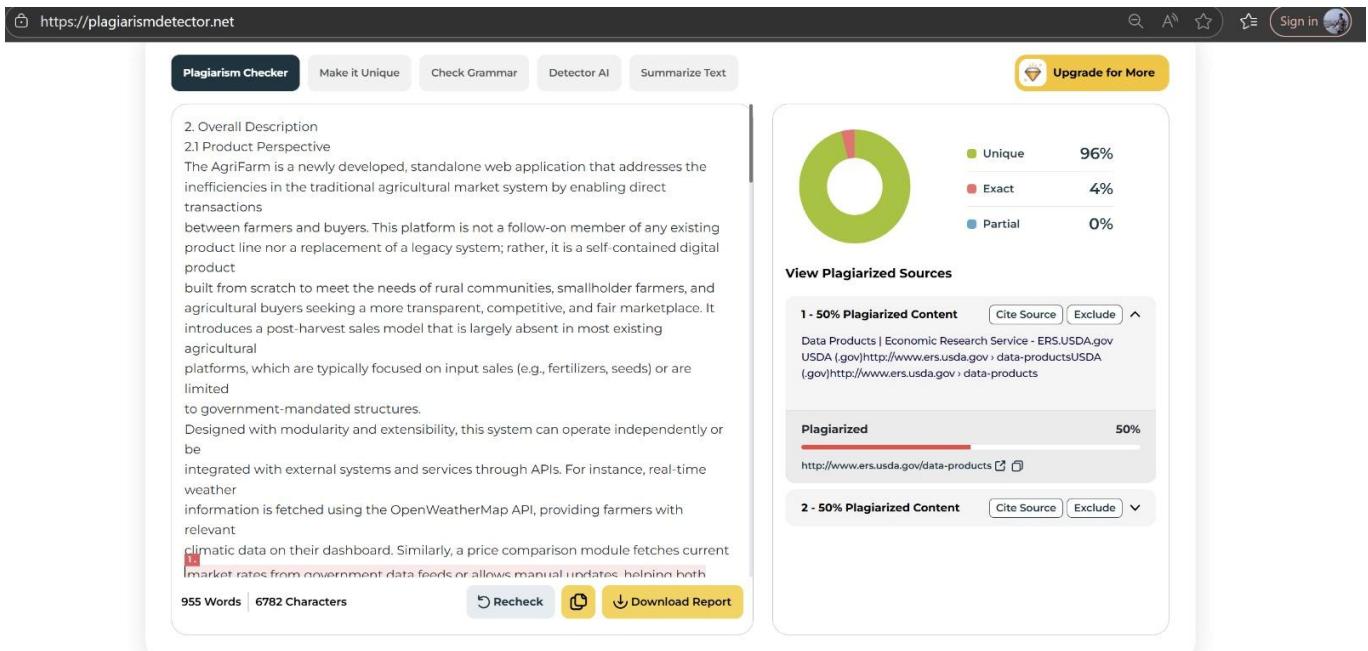
Table 1.13 product_returns

Field Name	Data Type	Constraints / Format
id	INT	PRIMARY KEY, AUTO_INCREMENT
order_id	INT	NOT NULL
product_id	INT	NOT NULL
farmer_id	INT	NOT NULL
buyer_id	INT	NOT NULL
return_quantity	DECIMAL(10,2)	NOT NULL
return_reason	TEXT	NOT NULL
return_status	ENUM('pending','approved','rejected','completed')	DEFAULT 'pending'
refund_amount	DECIMAL(10,2)	DEFAULT NULL
created_at	TIMESTAMP	DEFAULT CURRENT_TIMESTAMP

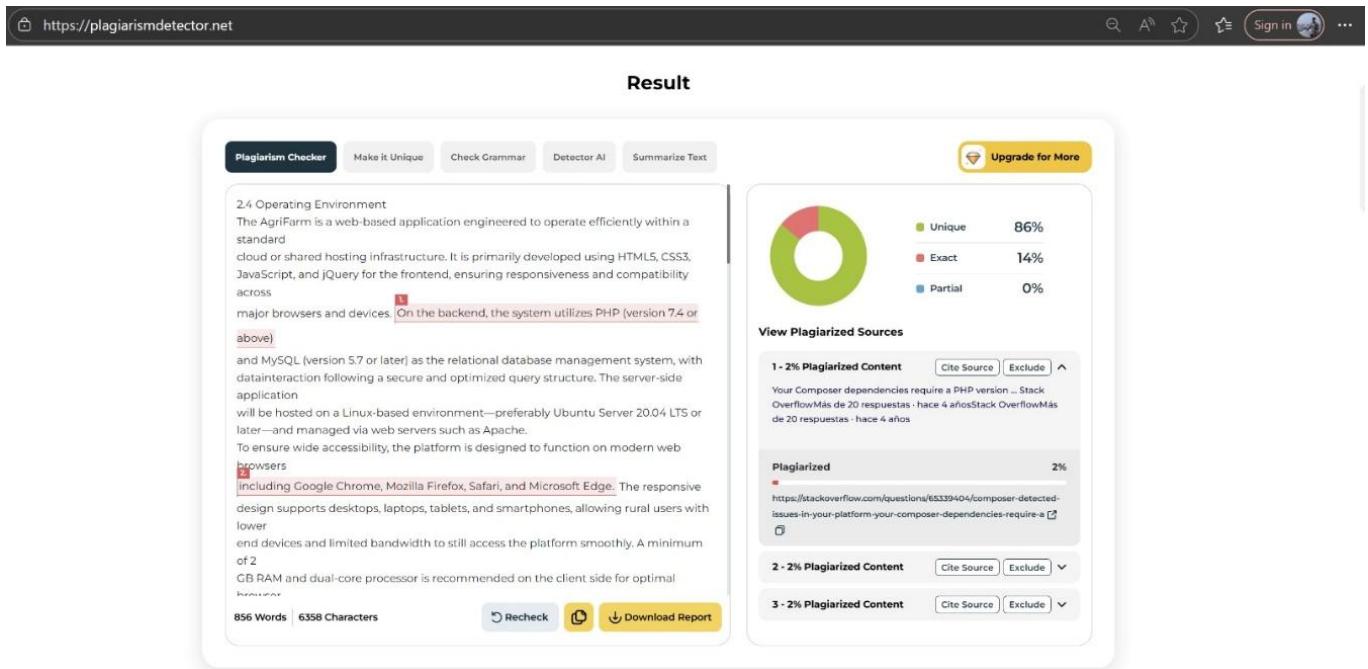
Appendix B – Plagiarism Report



CH-1: Introduction



CH-2.1 Product Perspective to CH-2.3 Users and Characteristics



CH-2.4 Operating Environment to CH-2.6 User Documentation

Appendix C – User Manual

1. Home Page

Welcome to AgriFarm

Connect with fellow farmers, share knowledge, and grow together in our sustainable agricultural community.

Get Started Learn More

61+ Farmers 123+ Resources 6+ Communities

Tractor icon

Our Products

Explore approved products uploaded by our farmers

Fresh Arrivals



Wheat



Rice



Juvar

Top Deals



AgriFarm

Growing communities, one farmer at a time.

Quick Links

- Home
- Features
- About
- Contact

Resources

- Farming Guides
- Best Practices
- Community Forum
- Expert Advice

Contact Info

- Email: agrifarm.helpdesk@gmail.com
- Phone: +91 73592 03622
- Location: Marwadi University, Rajkot

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2. Features

 AgriFarm

Home Features **About** Contact [Login](#) [Sign Up](#)

Why Choose AgriFarm?

Discover tools and community that transform your farming journey.



Community

Connect with experienced farmers and agri-experts. Share insights, ask questions, and grow together through knowledge exchange and collaboration.



Weather Dashboard

Access real-time weather updates and forecasts for your location



Product Marketplace

A transparent online platform where farmers can directly sell their crops and produce to verified buyers.



Secure User management

A safe and easy login system for both farmers and buyers



Mobile Access

Access AgriFarm anywhere, anytime with our mobile-optimized platform.



Crop Advisory Module

Receive AI-based farming suggestions customized to your crop type, soil, and weather conditions

 AgriFarm

Growing communities, one farmer at a time.

[Facebook](#) [Twitter](#) [Instagram](#) [LinkedIn](#)

Quick Links

- [Home](#)
- [Features](#)
- [About](#)
- [Contact](#)

Resources

- [Farming Guides](#)
- [Best Practices](#)
- [Community Forum](#)
- [Expert Advice](#)

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- [Address: Marwadi University, Rajkot](#)

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3. About

The screenshot shows the 'About' page of the AgriFarm website. At the top, there is a navigation bar with links for Home, Features, About (which is underlined), Contact, Login, and Sign Up. The main content area has a dark green background with the title 'About AgriFarm' in white. Below the title, a short mission statement reads: 'Our mission is to empower farmers through community, knowledge, and sustainable practices.'

Who We Are

AgriFarm is more than just a platform – it's a movement towards sustainable, community-driven agriculture. We believe that by connecting farmers, sharing knowledge, and fostering collaboration, we can create a better future for farming.

- ✓ Expert-led farming techniques
- ✓ Community-driven learning
- ✓ Sustainable practices



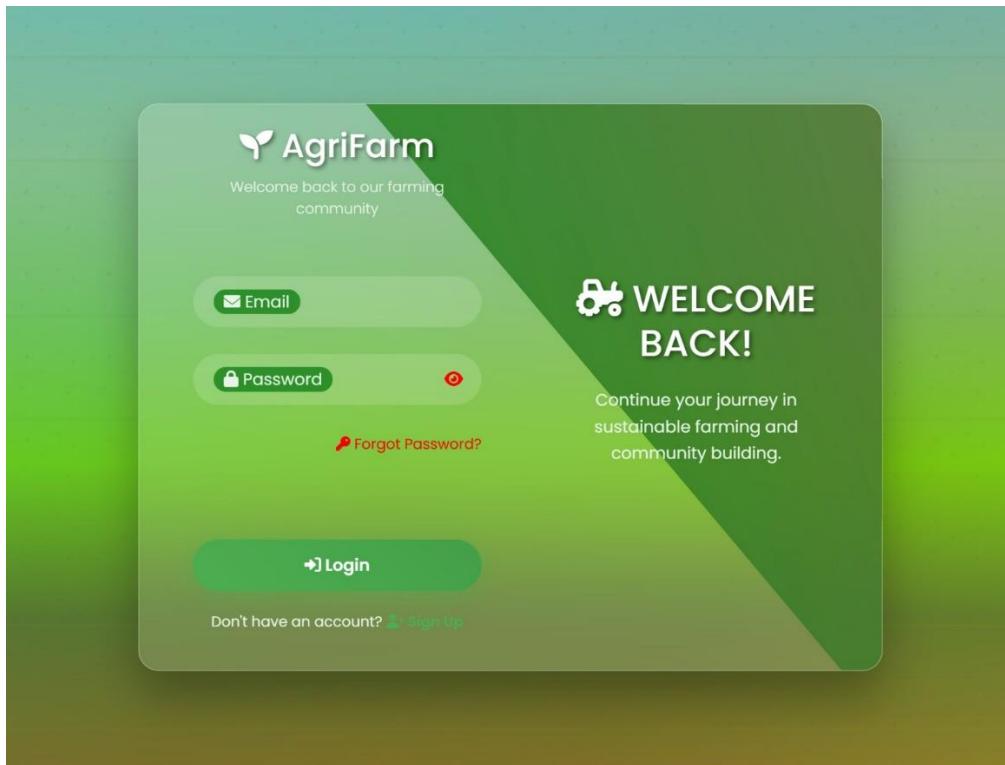
The screenshot shows the footer of the AgriFarm website. It includes the AgriFarm logo and tagline 'Growing communities, one farmer at a time.'. There are social media links for Facebook, Twitter, Instagram, and LinkedIn. Under 'Quick Links', there are links to Home, Features, About, and Contact. Under 'Resources', there are links to Farming Guides, Best Practices, Community Forum, and Expert Advice. Under 'Contact Info', there is an email address (agrifarm.helpdesk@gmail.com), a phone number (+91 73592 03622), and a location (Marwadi University, Rajkot). The footer also contains copyright information (© 2025 AgriFarm. All rights reserved.) and links to Privacy Policy and Terms of Service.

4. Contact

The screenshot shows the 'Get In Touch' page of the AgriFarm website. At the top, there is a navigation bar with links for Home, Features, About, Contact (which is underlined), Login, and Sign Up. The main content area has a dark green background with the title 'Get In Touch' in white. Below the title, a subtext says 'Have questions? We'd love to hear from you.' A large, light-colored contact form is centered on the page. It has fields for 'Your Name', 'Your Email', 'Subject', and 'Your Message'. A 'Send Message' button with a paper airplane icon is at the bottom right of the form.

The screenshot shows the footer of the AgriFarm website, identical to the one in the 'About' section. It includes the AgriFarm logo and tagline, social media links, quick links, resources, contact info, and legal links.

5. Login



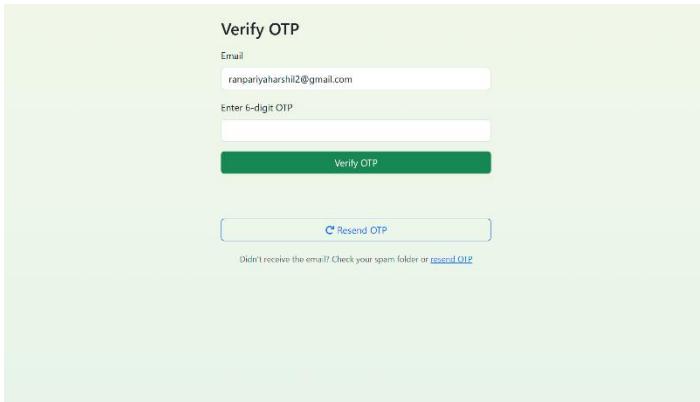
- Login page for user when you already have account then direct login.
- Don't have an account the click on "Sign Up"

6. Signup



- Signup page for user you don't have an account the first signup
- Enter the detail and verify with OTP

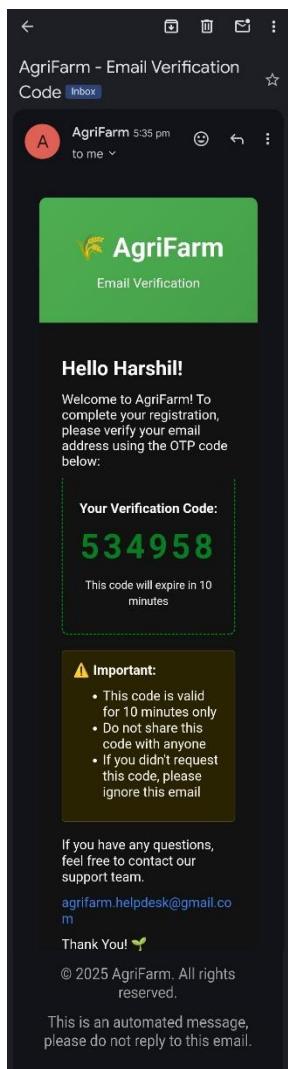
7. OTP Verification



A screenshot of an OTP verification interface. At the top, it says "Verify OTP". Below that is a "Email" field containing "ranpariyaharshil2@gmail.com". Underneath is a "Enter 6-digit OTP" field with a placeholder "000000". A green "Verify OTP" button is below the fields. At the bottom, there's a "Resend OTP" button with a circular arrow icon and a note: "Didn't receive the email? Check your spam folder or [resend OTP](#)".

- Enter your OTP

8. OTP on your mail



- This type will showing on your entered email

9. Farmer Dashboard (Add Product)

The screenshot shows the 'Farmer Dashboard' interface. At the top, there's a navigation bar with links for 'Farmer Dashboard', 'Add Product', 'Product Rating', 'Website Rating', 'Weather', 'Bidding', 'Return Products', and a user profile for 'Harshil'. Below the navigation is a summary card with counts for total products (6), approved products (4), pending products (2), and rejected products (0). A green button '+ Add New Product' is prominently displayed.

The main area is divided into two sections: 'Add New Product' and 'Your Products'.

Add New Product: This section contains fields for Category (dropdown: -- Select Category --), Sub Category (dropdown: -- Select Sub Category --), Product Name (text input: Enter product name or select subcategory), Price per 1kg (₹) (text input: Enter price for 1kg), Quantity (kg) (text input: Enter available quantity in kg), Description (text area: Enter product description), and Product Image (file input: Choose File, No file chosen). A note says 'Upload product image (JPG, PNG, JPEG)'. A green button 'Submit for Approval' is at the bottom.

Your Products: This section displays a table of current products:

Image	Name	Price (per kg)	Quantity (kg)	Status	Created	Action
	Pigeon Pea(Tuver)	₹ 100.00/kg	250 kg	approved	2025-11-24 10:51:33	<button>Edit</button> <button>Delete</button>
	Red Chili	₹ 80.00/kg	90 kg	approved	2025-11-24 10:49:59	<button>Edit</button> <button>Delete</button>
	Pearl Millet (Bajra)	₹ 20.00/kg	60 kg	approved	2025-11-24 10:48:04	<button>Edit</button> <button>Delete</button>
	Wheat	₹ 30.00/kg	100 kg	approved	2025-11-24 10:46:17	<button>Edit</button> <button>Delete</button>
	Onion	₹ 25.00/kg	30 kg	pending	2025-11-24 10:45:13	<button>Edit</button> <button>Delete</button>
	Mango	₹ 100.00/kg	200 kg	pending	2025-11-24 10:40:48	<button>Edit</button> <button>Delete</button>

At the bottom of the dashboard, a dark green footer bar contains the text '© 2025 AgriFarm. All rights reserved.'

- Farmer can add/delete/edit product

10. Farmer Dashboard(Product Rating)

The screenshot shows a section titled "Product Ratings & Reviews". It displays a single record: "Pigeon Pea(Tuver)" bought by "Paresh" with a rating of "★ ★ ★ ★ ★ (5/5)". There is no review provided, and the date is "Nov 24, 2025".

- When farmer click on the Product rating then farmer can see the rating of his products.

11. Farmer dashboard(Website rating)

The screenshot shows a "Website Feedback" form. It includes fields for "Your Name" (Harshil), "Your Email" (harshilkumar.ranpariya122650@marwadiuniversity.ac.in), "Subject" (Suggestion, Bug Report, Feature Request), and "Your Feedback" (Share your thoughts, suggestions, or report any issues...). Below these, there is an optional "Rate Your Experience (Optional)" field with a 5-star rating scale, which is currently at 4 stars. A green "Submit Feedback" button is visible at the bottom left of the form area.

- When farmer click on the Website rating then farmer can give rating and suggestion of the website.

12. Farmer Dashboard(Weather)

The screenshot shows the 'Farmer Dashboard' interface with a green header bar containing various buttons like 'Add Product', 'Product Rating', 'Website Rating', 'Weather', 'Bidding', 'Return Products', and a user profile for 'Harshil'. The main content area is titled 'Live Weather Monitoring' and displays the following information:

- Location:** Rajkot
- Current Weather:** Rajkot, IN | 27° (Feels like 27°C)
- Humidity:** 29% | **Wind:** 13 km/h
- Visibility:** 10.0 km | **Pressure:** 1017 hPa

Past 3 Days Weather:

Date	Condition	Temperature	Humidity (%)
Sun Nov 23	Partly cloudy	27°C	26.87073591736548%
Sat Nov 22	Sunny	27°C	26.10334163408939%
Fri Nov 21	Cloudy	26°C	33.553389839824575%

5-Day Forecast:

Date	Condition	Temperature	Humidity (%)	Rain (%)
Mon Nov 24	Clear sky	27°C	28%	13%
Tue Nov 25	Clear sky	22°C	31%	11%
Wed Nov 26	Clear sky	22°C	38%	11%
Thu Nov 27	Clear sky	23°C	35%	11%
Fri Nov 28	Clear sky	24°C	41%	12%

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- When farmer click on the Weather then farmer can see the weather of entered city .

13. Farmer Dashboard(Bidding)

The screenshot shows the 'Bidding Management' section of the dashboard. It displays a message 'Bidding enabled successfully!' and a table for 'Active Bidding Products'.

Product	Status
Red Chili	Live

Details for Red Chili:
Price: ₹80.00/kg | Qty: 90.00 kg
End Date: Nov 30, 2025 10:00
Min Bid: ₹80.00/kg
Bids Received: 0
Highest Bid: No bids yet

Buttons: View Bids, Disable

- When farmer click on the Bidding then farmer can add the Bid of his entered product.

14. Farmer Dashboard(Return Product)

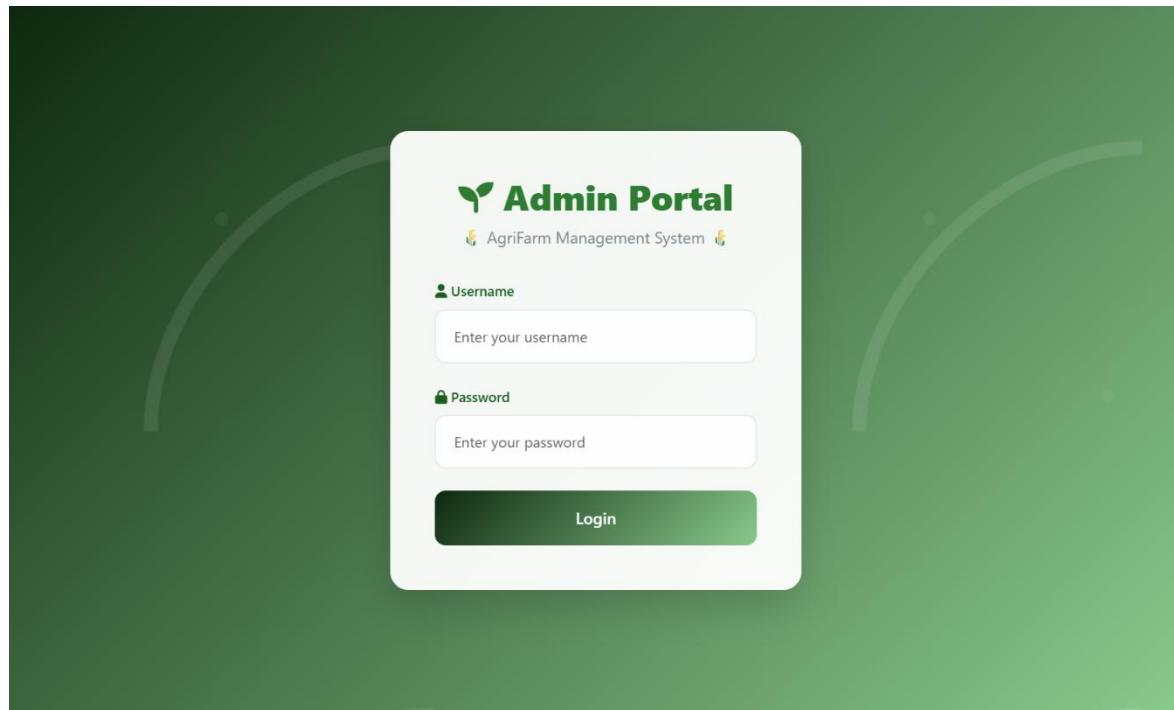
The screenshot shows the 'Return Products' section of the AgriFarm Management System. At the top, there are several navigation buttons: 'Add Product' (green), 'Product Rating' (orange), 'Website Rating' (purple), 'Weather' (blue), 'Bidding' (light blue), 'Return Products' (pink), and a user profile for 'Harshil'. Below this is a table titled 'Return Requests' with one row of data:

ID	Order	Product	Buyer	Quantity	Reason	Status	Date	Actions
#4	Order #16 Nov 24, 2025	Pigeon Pea(Tuver) ₹100.00/kg	Paresh paresh.katariya122563@marwadiuniversity.ac.in	3.00 kg of 6.00 kg	extra product	Approved	Nov 24, 2025	-

At the bottom of the page, a copyright notice reads: © 2025 AgriFarm. All rights reserved.

- When farmer click on the Return Product then farmer can see returned product.

15. Admin Login



- Login page for admin

16. Admin Dashboard(Home page)

The dashboard features a top navigation bar with links for Dashboard, Orders, Transactions, Return Products, and Logout. Below the navigation are four summary cards:

- Pending Products:** 2 (orange circle icon)
- Approved Products:** 4 (green checkmark icon)
- Rejected Products:** 0 (red X icon)
- Total Users:** 2 (green circle icon)

Pending Products: A table showing two entries:

ID	Image	Product Name	Farmer	Contact	Price (per 1kg)	Quantity (kg)	Date Added	Actions
#14		Onion	Harshil harshilkumar.ranpariya122650@marwadiuniversity.ac.in	7359203622	₹25.00	30.00 kg	Nov 24, 2025	<button>✓ Approve</button> <button>X Reject</button>
#13		Mango	Harshil harshilkumar.ranpariya122650@marwadiuniversity.ac.in	7359203622	₹100.00	200.00 kg	Nov 24, 2025	<button>✓ Approve</button> <button>X Reject</button>

Recent User Registrations: 2 total users

- Farmers (1):** Harshil (FARMER) - Email: harshilkumar.ranpariya122650@marwadiuniversity.ac.in, Phone: 7359203622
- Buyers (1):** Pares (BUYER) - Email: pares.katariya122563@marwadiuniversity.ac.in, Phone: 6355091497

Product Ratings & Reviews: No ratings yet.

Website Feedback:

From	Name	Email	Subject	Message	Rating	Status	Date
Buyer	Pares	pares.katariya122563@marwadiuniversity.ac.in	Features	Very Good	★★★★★	New	Nov 07, 2025 11:34

Quick Actions:

- [Refresh Dashboard](#)
- [Test Email](#)
- [View Website](#)

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- Admin can Approve/Reject product and check view website,test email
- Admin can see feedback of website and product review and rating

17. Admin dashboard(Order)

The screenshot shows the 'All Orders' section of the Agrifarm platform. At the top, there are four main statistics: '2 Total Orders' and '₹725.00 Total Revenue'. Below this, a table displays two specific orders. Each row includes columns for Order ID, Image, Product, Farmer, Buyer, Quantity, Price/kg, and Total Amount.

Order ID	Image	Product	Farmer	Buyer	Quantity	Price/kg	Total Amou
#16		Pigeon Pea(Tuver)	Harshil harshikumar.ranpariya122650@marwadiuniversity.ac.in 7359203622	Paresh paresh.katariya122563@marwadiuniversity.ac.in 6355091497	6.00 kg	₹100.00	₹600.0
#15		Onion	Harshil harshikumar.ranpariya122650@marwadiuniversity.ac.in 7359203622	Paresh paresh.katariya122563@marwadiuniversity.ac.in 6355091497	5.00 kg	₹25.00	₹125.0

At the bottom, a footer bar states '© 2025 Agrifarm. All rights reserved.'

- When admin click on order then admin can see a all orders.

18. Admin dashboard(Transaction)

The screenshot shows the 'All Transactions' section of the Agrifarm platform. It displays four summary boxes: '2 Total Transactions', '₹725.00 Total Revenue', '0 Card Payments', and '2 UPI Payments'. Below these, a table provides detailed transaction information.

Transaction ID	Order ID	Product	Farmer	Buyer	Amount	Payment Method	Date & Time
TXN17639623381341	#16	Pigeon Pea(Tuver) 6.00 kg	Harshil	Paresh	₹600.00	UPI	Nov 24, 2025 11:02
TXN17639623381341	#15	Onion 5.00 kg	Harshil	Paresh	₹125.00	UPI	Nov 24, 2025 11:02

At the bottom, a footer bar states '© 2025 Agrifarm. All rights reserved.'

- When admin can click on Transaction then admin can see all transaction.

19. Admin dashboard(Return product)

Return Products History
View all product return requests

Pending Returns: 0 (Orange icon)

Approved Returns: 2 (Green icon)

Rejected Returns: 0 (Red icon)

Total Refunded: ₹0.00 (Yellow icon)

ID	Order	Product	Buyer	Farmer	Quantity	Reason	Status
#5	Order #16 TXN: TXN17639623381341	Pigeon Pea(Tuver)	Paresh paresh.katariya122563@marwadiuniversity.ac.in	Harshil harshilkumar.ranpariya122650@marwadiuniversity.ac.in	3.00 kg of 6.00 kg	extra product	A
#4	Order #16 TXN: TXN17639623381341	Pigeon Pea(Tuver)	Paresh paresh.katariya122563@marwadiuniversity.ac.in	Harshil harshilkumar.ranpariya122650@marwadiuniversity.ac.in	3.00 kg of 6.00 kg	extra product	A

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- When admin can click on Return Products then admin can see all return products.

20. Buyer Dashboard

The screenshot shows the Buyer Marketplace dashboard with the following features:

- Header:** Includes a logo, "Buyer Marketplace" text, "Fresh farm products at your fingertips" tagline, and navigation buttons for Bidding, Product Rating, Website Rating, Return Product, Cart, and a user account for Paresh.
- Filters:** Lowest Price (₹20.00), Highest Price (₹100.00), and Active Farmers (1).
- Search Bar:** Allows users to search by name.
- Sort By:** Set to "Newest".
- Product Cards:**
 - Pigeon Pea(Tuver):** ₹20.00, In Stock. Available: 250.0 kg. Limit per buyer: 100.0 kg (40% cap). Remaining for you: 100.0 kg. Quantity selector: - 1.0 + kg. Buttons: View, Add to Cart.
 - Red Chili:** ₹80.00, In Stock. Available: 90.0 kg. Limit per buyer: 36.0 kg (40% cap). Remaining for you: 36.0 kg. Quantity selector: - 1.0 + kg. Buttons: View, Add to Cart.
 - Pearl Millet (Bajra):** ₹20.00, In Stock. Available: 60.0 kg. Limit per buyer: 24.0 kg (40% cap). Remaining for you: 24.0 kg. Quantity selector: - 1.0 + kg. Buttons: View, Add to Cart.
 - Wheat:** ₹30.00, In Stock. Available: 100.0 kg. Limit per buyer: 40.0 kg (40% cap). Remaining for you: 40.0 kg. Quantity selector: - 1.0 + kg. Buttons: View, Add to Cart.
- Product Price Comparison:** A section with a search bar for comparing products.
- Footer:** © 2025 AgriFarm. All rights reserved.

- Buyer can buy product.
- Buyer can compare the price of same product.
- Buyer can buy maximum 40% product.

21. Buyer dashboard(Product Rating)

The screenshot shows the 'Product Rating' section of the buyer dashboard. At the top, there's a navigation bar with icons for Home, Bidding, Product Rating (highlighted in yellow), Website Rating, Return Product, Cart, and a user profile for 'Paresh'. Below the navigation is a yellow header bar with the text '★ Rate Your Purchased Products'. The main content area contains two product rating forms. The first form is for 'Pigeon Pea(Tuver)' by Farmer: Harshil, with a 5-star rating and a review input field. The second form is for 'Onion' by Farmer: Harshil, also with a 5-star rating and a review input field. Both forms have 'Update Rating' and 'Submit Rating' buttons. To the right, a sidebar titled 'My Ratings' shows a summary for 'Pigeon Pea(Tuver)' with a 5/5 rating from Nov 24, 2025. At the bottom, a green footer bar displays the copyright notice: '© 2025 AgriFarm. All rights reserved.'

- When buyer can click on Product rating then buyer can give rating of product.

22. Buyer Dashboard(Website Rating)

The screenshot shows the 'Website Rating' section of the buyer dashboard. The top navigation bar is identical to the previous screenshot. The main content area has a purple header bar with 'Share Your Feedback'. Below it is a form for providing feedback, including fields for 'Your Name' (Paresh), 'Your Email' (paresh.katariya122563@marwadiuniversity.ac.in), 'Subject' (e.g., Great platform, Suggestion for improvement, etc.), 'Overall Rating' (5 stars), and an optional message area. A large purple button at the bottom says 'Submit Feedback'. To the right, a sidebar titled 'My Feedback History' shows a single entry for 'Features' rated 5/5 on Nov 07, 2025, at 11:34, described as 'Very Good'. The bottom green footer bar includes the copyright notice: '© 2025 AgriFarm. All rights reserved.'

- When Buyer click on the Website rating then Buyer can give rating and suggestion of the website.

23. Buyer dashboard(Return Product)

The dashboard features a central 'Request Product Return' form. It includes fields for 'Select Order' (dropdown menu showing '-- Select Order --'), 'Return Quantity (kg)' (input field with placeholder 'Select an order first'), 'Return Reason' (text area with placeholder 'Please explain why you want to return this product...'), and a 'Submit Return Request' button.

To the right, there is a 'Return History' section displaying a table of previous returns:

Order	Product	Qty	Status	Date
#16	Pigeon Pea(Tuver)	3.00 kg	Approved	Nov 24, 2025
#16	Pigeon Pea(Tuver)	3.00 kg	Approved	Nov 24, 2025

At the bottom, a footer note reads: © 2025 AgriFarm. All rights reserved.

- When buyer click on return product then buyer can return his product.

24. Buyer Dashboard(Bidding)

The dashboard shows a 'Live Bidding Products' section for 'Red Chili' by Harshil. Key details include:
Available: 90.00 kg
Base Price: ₹80.00
Highest Bid: ₹85.00
Min Bid: ₹80.00
Market Avg: ₹0.00
Bids: 1 | Ends: Nov 30, 10:00
Time Remaining: 6d 3h 29m

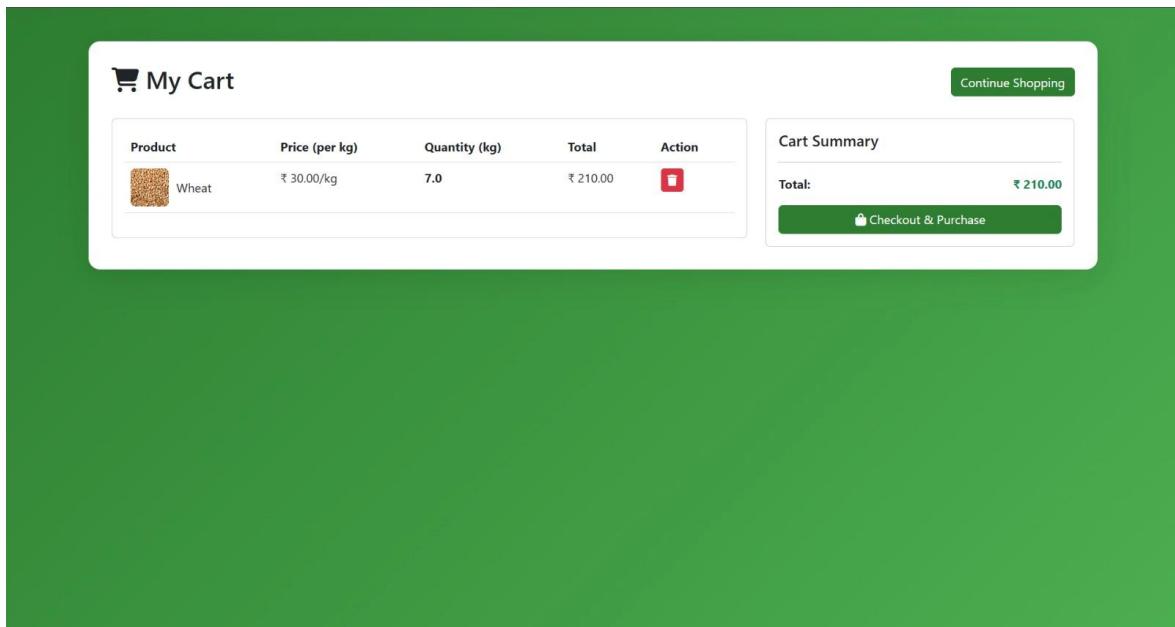
A green 'Place Bid' button is visible at the bottom of this section.

Below, the 'My Bids' section displays a table of current bids:

Product	My Bid (per kg)	Quantity	Total Value	Status	Date
Red Chili	₹4.25/kg	1.00 kg	₹4.25	Active	Nov 24, 2025 11:00

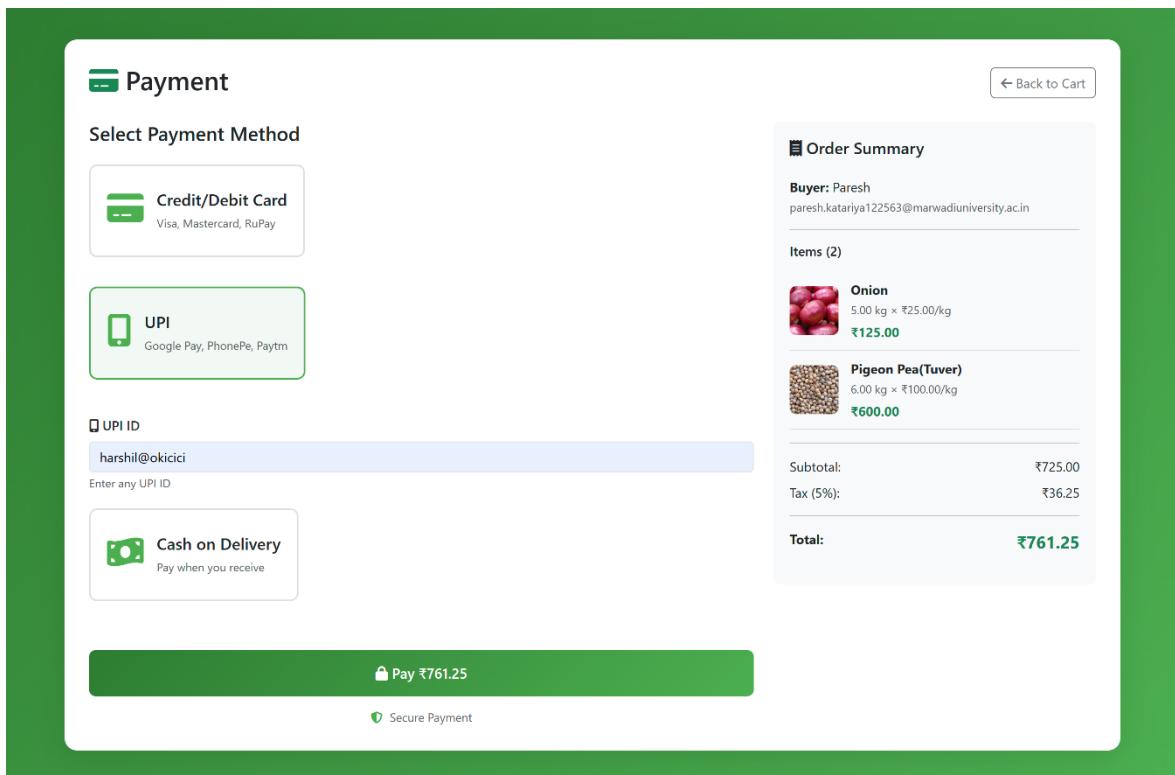
- When buyer click on bidding then buyer can place bid.

25. Cart



- Cart will shown on the this type.
- When click on “Checkout & Purchase” then you can directly go for the payment.

26. Payment



- Buyer can payment via Card, UPI and Cash on delivery.
- Click on “Pay” then your payment successful.

27. Payment Successful

 Print

Payment Successful!

Your order has been placed successfully. Thank you for your purchase!

Transaction ID: TXN17662381827652

AgriFarm

Invoice: TXN17662381827652
Date: 20 Dec 2025, 07:13 PM
Status: Paid

Order Details

Buyer:	Harshil
Payment Method:	Credit/Debit Card
Payment Status:	Completed
Order Date:	December 20, 2025 07:13 PM
Total Amount:	₹210.00

Ordered Items

Item	Farmer	Qty (kg)	Price/kg	Line Total
Wheat	Nirbhay	7.00	₹30.00	₹210.00

Subtotal: ₹210.00
Tax (5%): ₹10.50
Total (incl. tax): ₹220.50

[Continue Shopping](#) [View Cart](#)

Email Confirmation: A confirmation email has been sent to harshilkumar.ranpariya122650@marwadiuniversity.ac.in

- This is your payment successful receipt.
- Your payment successful will confirm on your mail.

28. Reset Password



- Reset password for User(Farmer and Buyer)