MINI PROJECT – II

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FarmerVarmer

Software Requirement Specifications

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Mini Project Guide

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1. Introduction

E-commerce is clearly beginning to have a major impact in the agricultural sector. The way people go about purchasing agricultural products is of great concern. Most of the time customers have to travel far distances to get agricultural products and getting the right quality is not ensured. Besides, farming is the prime occupation in India. Indiai people involved in farming are mostly cheated by the agents in today's market which leads to poverty. Our project aims to help farmers as well as customers for buying and selling agricultural products across the country using a computerized approach. The website will guide the farmers to access new farming techniques, compare current market rate of different products, the total sale and the earned profit for the sold products. The website builds a platform for farmers and agents to ensure greater profitability through direct farmer to farmer, farmer to agent and farmer to customer communication. The website will act as a unique and secure way to perform agro-marketing. E-farming will serve as a way for the farmers to sell their products across the country just with some basic knowledge about how to use the website. This project allows viewing various products available enables users to purchase desire products instantly by online payment. This website would be developed using web service as the communication infrastructure between the buyer and farmers and also products selling.

1.1 Purpose

Agriculture is the backbone of the Indian economy. This website helps farmers to cut costs and cycle time, raise efficiency and provide more information, choice and value to others. It is an open discussion portal used for farmers. Any general public can use this system for knowing the information about various crops, price and availability of those crops. During recent years, internet has found its way to the Agribusinesses in India. The internet continues to become more popular among people who deal with agricultural business of any type. Current prices of the markets are updated daily. It gives information regarding all the states in India.

This explains the scope of online shopping site (or e-commerce) to solve inherent problems and to help agribusinesses in rural India and describes the opportunities and challenges for online shoppers to tape the rural agriculture market in India. It also discusses scope, opportunities, challenges, benefits and adoption of online shopping in Agribusiness in India. Keywords: Agriculture, Agri-business, E-Commerce, Online Shopping, Internet Technology.

1.2 Scope and Overview

The benefits of this website and Information technology for the improvement and strengthening of agriculture sector in India are-

- Better marketing exposure, awareness & information, pricing, and spontaneous agricultural practices.
- Reduction of agricultural risks and enhanced incomes.
- Improved networking and communication.
- Facility of online trading and e-commerce.
- Management of returned and unused crops units.

1.3 Motivation

India is agricultural country. Majority of Indian people live on agricultural. So, Agricultural institutes, research bases agencies and other resources related to agriculture in India is vitally important. Now a day, the farmers have to go to the nearest market to hand over his product to a particular agent where agent sells the product to another agent or a dealer. After a specific time the agent gives the collected cash out of the sold products to the respected farmer but every Agent tries to cuts his commission out of the earned amount. The whole process is not transparent as there is no way for farmer to know about the deal and the exact amount at which their product was sold. No facility is present for the farmers to know the product rates at different markets where they can sell their products for achieving high profits. Our project aims to help farmers to sell their products in a transparent way.

1.4 Objectives

The main objective of this project is to build a platform for farmers to sell their product and track the sale. This platform is flexible which can maneuver the customer-farmer relationship in an effective manner. Farmer will get unique interface where they can avail everything right from learning to the market information. This website will act as unique and secure way to perform agro-marketing.

2. Existing Agricultural Websites

The contents of some agricultural websites in India are discussed below:

Farmer portal provides quality agricultural inputs supply, efficient irrigation management and production of high yielding seeds of different crops. It also provides the best use of surface water, irrigation efficiency by reducing logging and increasing irrigated areas and farmers to supply quality fertilizer. It is to develop an efficient, effective and sustainable system of agricultural research promoting to increase standard of living, which would be adequate for well-being of the people of India.

Ministry of Agriculture and Farmer Welfare is an autonomous organization under the Ministry of agriculture, that conducts research on all crops except rice, jute, sugarcane, and tea for which there are separate institutes.

2.1 Technological Background

To implement the project, some open source tools have been used such as Netbeans, XAMPP, CodeIgniter Framework, Apache as web server. The web programing language used to implement this project are HTML (Hyper Text Markup Language), CSS (Cascading Style Sheets), JavaScript, JQuery and PHP. MySQL is used as database server.

2.1.1 HTML

HTML is a markup language that are used to create electronic documents, especially pages on the World Wide Web that contain connections called hyperlinks to other pages. Every web page you see on the Internet, including this one contains HTML code that helps format and show text and images in an easy to read format. Without HTML a browser would not know how to format a page and would only display.

2.1.2 CSS

CSS is a style sheet language used for describing the presentation of a document written in a markup language. Although most often used to set the visual style of web pages and user interfaces written in HTML and XHTML, the language can be applied to any XML document, including plain XML, SVG and XUL, and is applicable to rendering in speech, or on other

media. Along with HTML and JavaScript, CSS is a cornerstone technology used by most websites to create visually engaging web pages, user interfaces for web applications, and user interfaces for many mobile applications.

2.1.3 JavaScript

JavaScript HTML and CSS, JavaScript is one of the three core technologies of World Wide Web content production. It is used to make web pages interactive and provide online programs, including video games. The majority of websites employ it, and all modern web browsers support it without the need for plug-ins by means of a built-in JavaScript engine. Each of the many JavaScript engines represent a different implementation of JavaScript, all based on the ECMA Script specification, with some engines not supporting the spec fully, and with many engines supporting additional features beyond ECMA. It has an API for working with text, arrays, dates, regular expressions, and basic manipulation of the DOM, but does not include any I/O, such as networking, storage, or graphics facilities, relying for these upon the host environment in which it is embedded.

2.1.4 Editor (NetBeans IDE 8.0.1)

NetBeans IDE [10] is the web development tool that lets you efficiently design, quickly & easily develop and maintain standards-based websites and applications. NetBeans IDE provides a powerful combination of visual layout tools, application development features, and code editing support.

3. System Analysis and Design

In this chapter, the architecture of the whole project is analyzed. System analysis is the process of defining the architecture, components, and data of a system to satisfy specified requirements. Design is a method of studying a system by examining its component parts and their interactions. Before implementation began the system was analyzed and designed. In this section, use cases, requirement analysis, and other part are described in details.

3.1 Requirement Analysis

Web service of farmer product required the following requirements. This has mainly four actors. Those are Admin, Customer, Farmer and Dealer. This website give service of farmer product to sell holder is known as customer and dealer.

3.1.1 Data Requirement

During requirement analysis the following data have been identified for a web service of farmer product system:

- At first each person need to register (without admin) himself/herself as a customer or a farmer or a dealer for accessing the user's necessary information. Each user requires an unique username or email Id and password to register in the website.
- Admin/Farmer need to login to the system to operate the system. Admin/Farmer has an individual or unique login user id and password. Through this user id and password admin/farmer can login to the system.
- A customer can select a product for buying and add to cart. Customer also can pay online or cash on delivery.
- Admin can update all the information of the registered users. Any registered member can be deleted by the admin. And also view all order and can download.
- Admin can update the category list of the product. An admin can edit or delete a category from the product category list.
- Admin can also insert a new category menu in the category list. Admin can also insert product with price and quantity.
- Farmer can add product with price. After add product farmer can edit, delete and publish of product. When farmer add product and publish then customer can buy the product from the web page.
- After get buying product Customer can get discount offer. Because of discount customer can buy low price from selected category which are available in the site.
- Dealer gets the product from website with low price. Dealer should be register for this service.

3.1.2 Process Requirement

The following process requirements are identified for system:

- A valid login is required for all process to be performed. A valid login is required for every registered users and admin. All of them have a valid user id and password. System will authenticate their valid login.
- After valid login Customer and Dealer can check his/her information, can see personal information and can check product history and buy product.
- Admin can login to the system. Admin can view, delete, publish and update all member's information and product info too.
- Admin can also enter new category in the list and insert new product. Farmer can login to the system.
- Farmer can view, delete, publish and update product info. Farmer can also enter new product in the list and insert new info.

3.2 Use Case Diagrams

A use case diagram is a graphical depiction of the interactions among the elements of a system that shows the relationship between the user and the different use cases in which the user is involved. It is a methodology used in system analysis to identify, clarify, and organize system requirements. A use case diagram can identify different types of users of a system in this chapter use cased.

3.2.1 Use case Diagram for Administrative Management

The use case Diagram for Administrative Management is shown below in figure 3.1

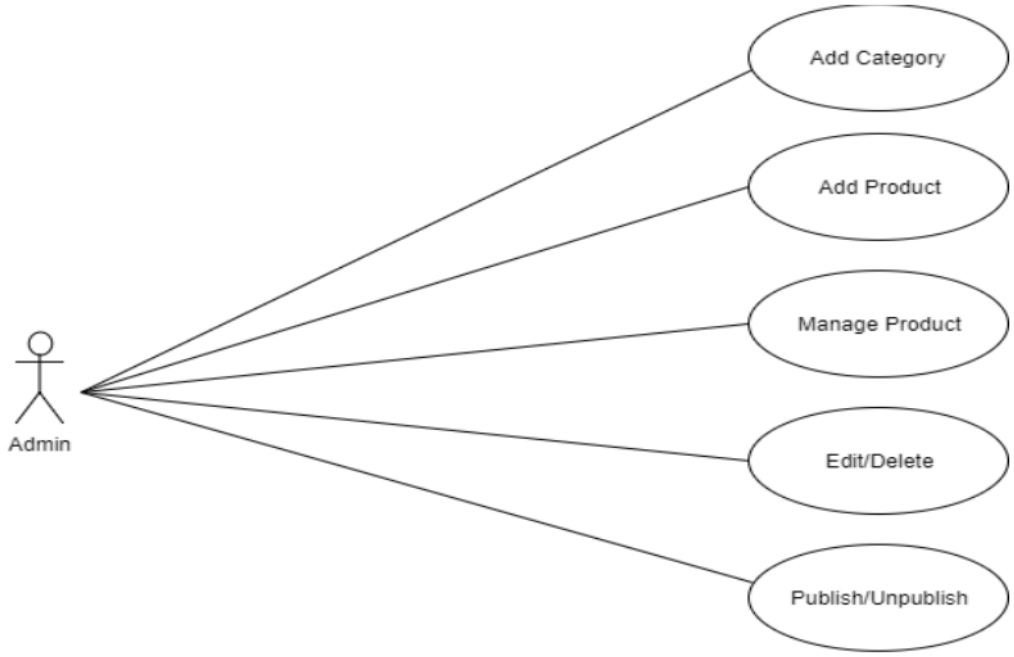


Figure 3.1: Use case Diagram for Admin

According to figure, Admin can perform following function:

- **Login:** Admin needs login to perform all administrative works from admin panel.
- **Add category:** Admin can add category of products in the system. To perform this action admin need to login to the system.
- **Add Product:** Admin can add product and a detail description of the product. Admin can also approve a product that has been added by a farmer.
- **Manage Product:** The description price and manufacturer of the product can be changed by admin at anytime. He/she has the capability to publish or unpublished of product.

3.2.2 Use case Diagram for Farmer Management

The Use case Diagram for Farmer Management is shown below in figure 3.2

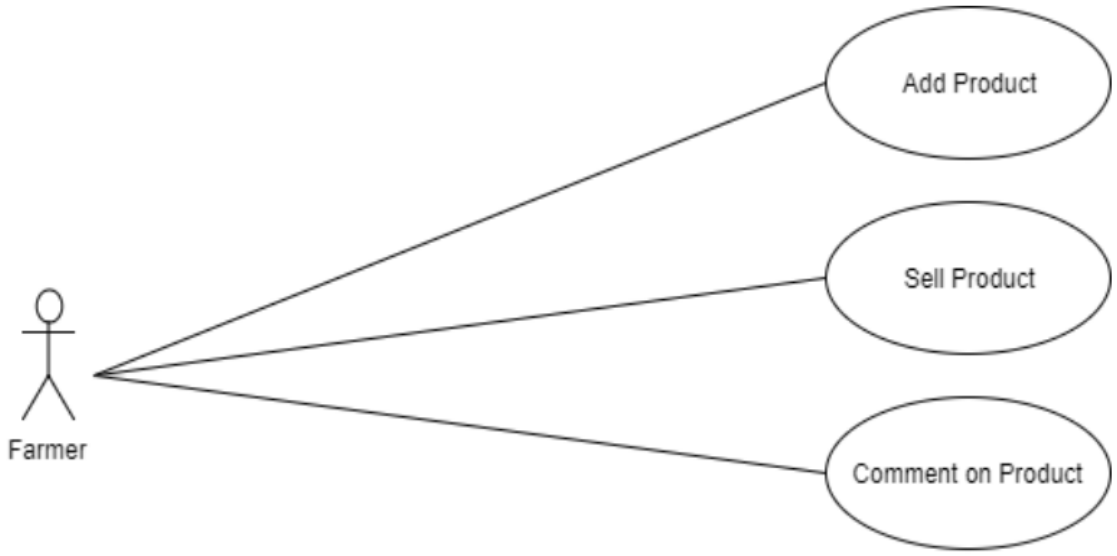


Figure 3.2: Use case Diagram for Farmer

According to figure, Farmer can perform following function:

- **Register:** The farmer can perform the general registration to access as registered farmer.
- **Login:** After completing registration farmer needs to login part to perform the necessary¬ actions.
- **Add Product and Farming Comments:** Farmer can add product add manufacturer of the product. Farmer can also comment about each product.
- **Edit Farmer's Profile:** The farmer can edit his profile. The farmer can update their name, and contact details.
- **Sell Product:** The farmer can sell all the products online which he added.

3.2.3 Use case Diagram for Customer Management

The Use case Diagram for Customer Management is shown below in figure 3.3:

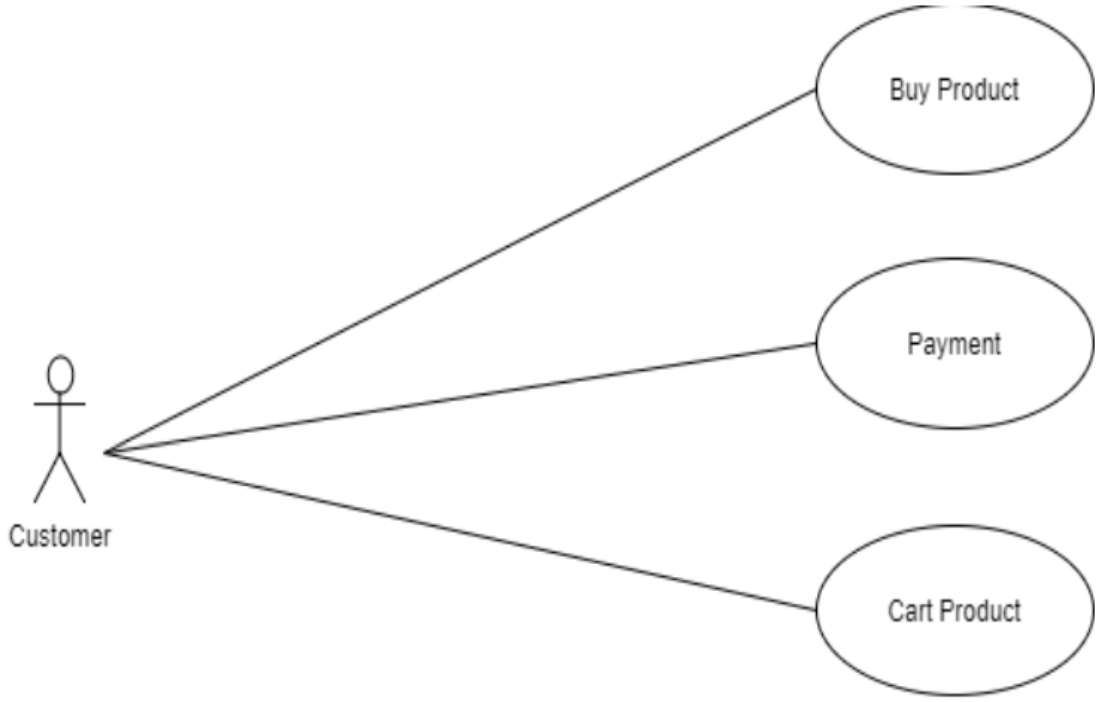


Figure 3.3: Use case Diagram for Customer

According to figure, Customer can perform following function:

- **Register:** The Customer can perform the general registration to have an access as registered customer.
- **Login:** After completing registration customer login to perform necessary job.
- **Add to Cart:** Customer can product to cart even they are not registered but they cannot pay the bill. Only a registered customer can avail the payment option.
- **Payment:** The customer can buy the product from website and pay online or cash.

3.2.4 Use case Diagram for Dealer Management:

The Use case Diagram for Dealer Management is shown below in figure 3.4:

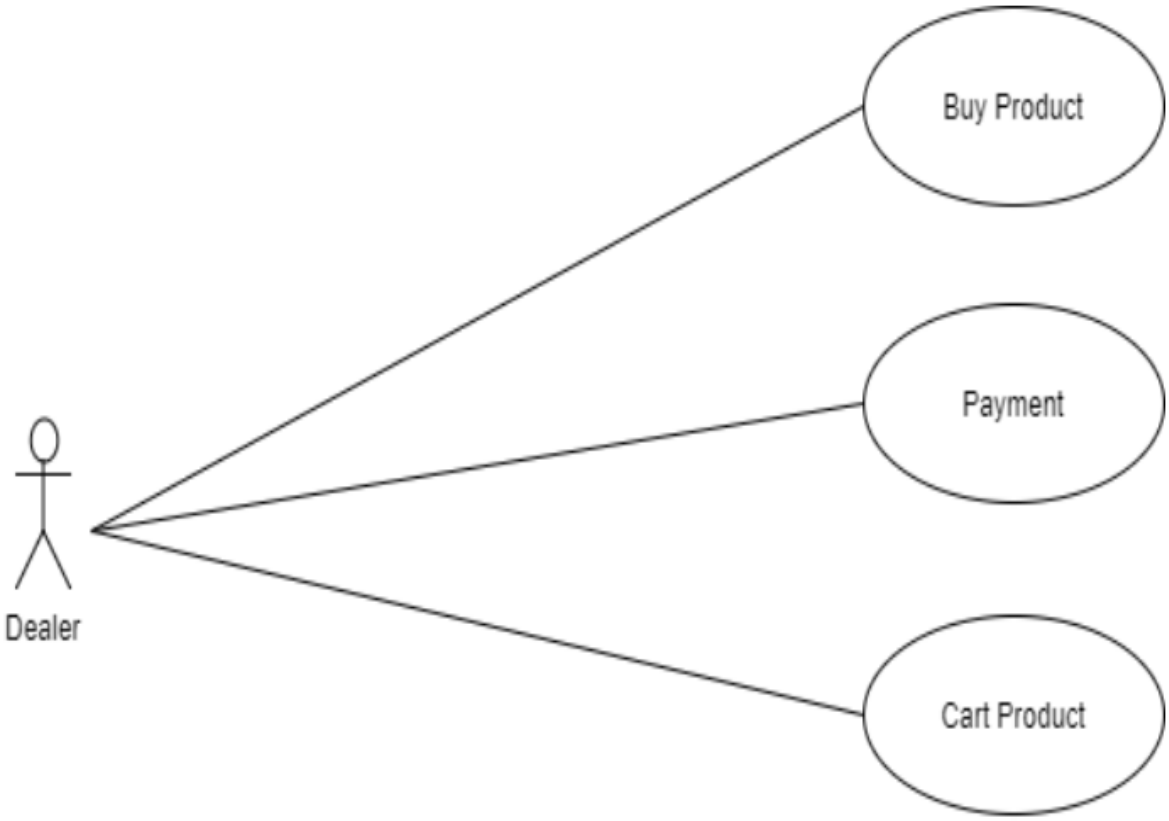


Figure 3.4: Use case Diagram for Dealer

According to figure, Dealer can perform following function:

- **Register:** The Dealer can perform the general registration to have an access as registered customer.
- **Login:** After completing registration customer login to perform necessary job.
- **Cart Product:** Dealer can product to cart even they are not registered but they cannot pay the bill. If they want pay bill than must be registered.
- **Payment:** The Dealer can buy the product from website and pay online or cash.

3.3 Entity Relationship Diagrams

An entity-relationship diagram (ERD) is a graphical representation of an information system that shows the relationship between people, objects, places, concepts or events within that system. In software engineering an ER model is commonly formed to represent things that a business needs

to remember in order to perform business processes. Consequently, the ER model becomes an abstract data model that defines a data or information structure that can be implemented in a database, typically a relational database. User (id, name, email, password, mobile_no) Admin (id, name, email, password) Product (id, name, price, status) Wish list (id, product_id, user_id) Shipping (id, name, email, address, mobile_no) Order (id, total, status, date, comments) Payment (id, type, status, date).

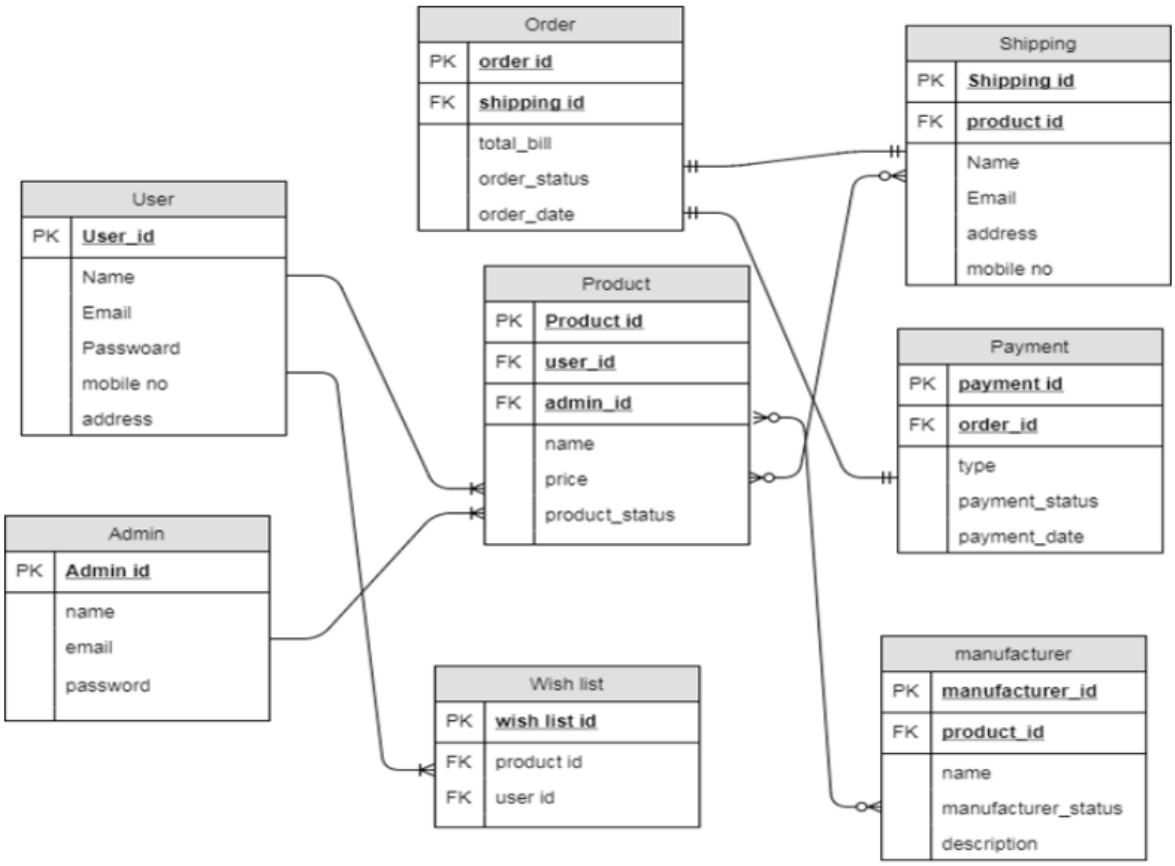
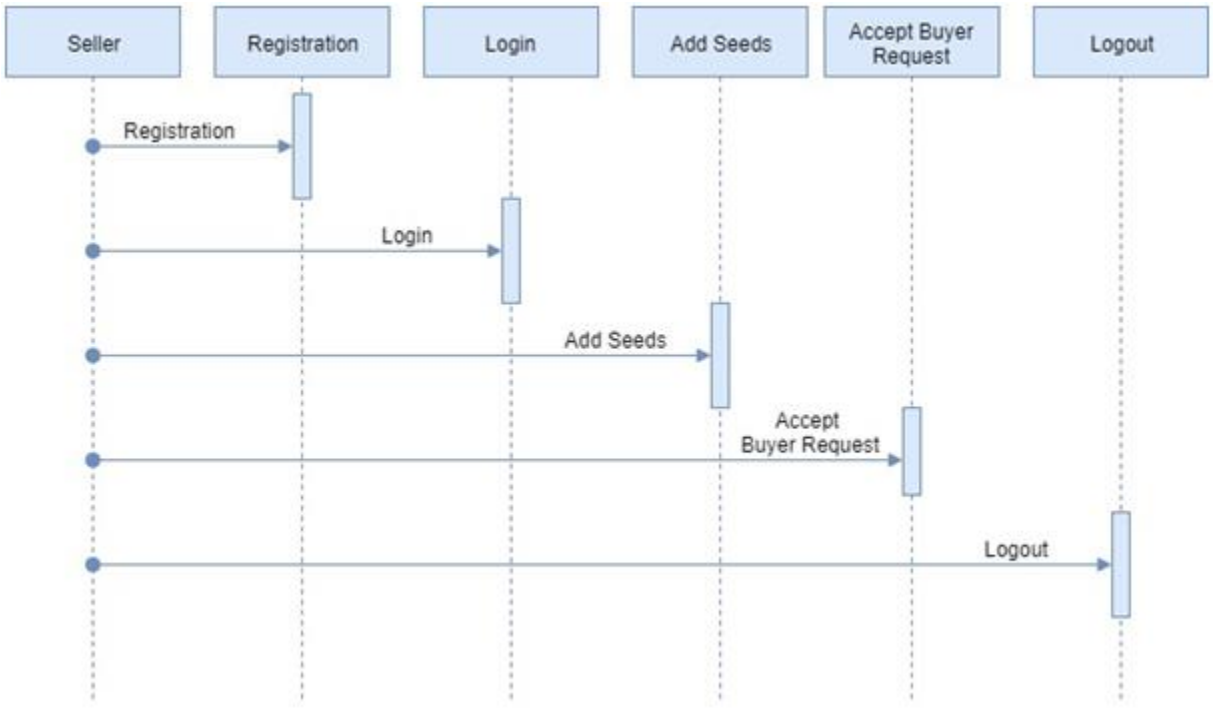
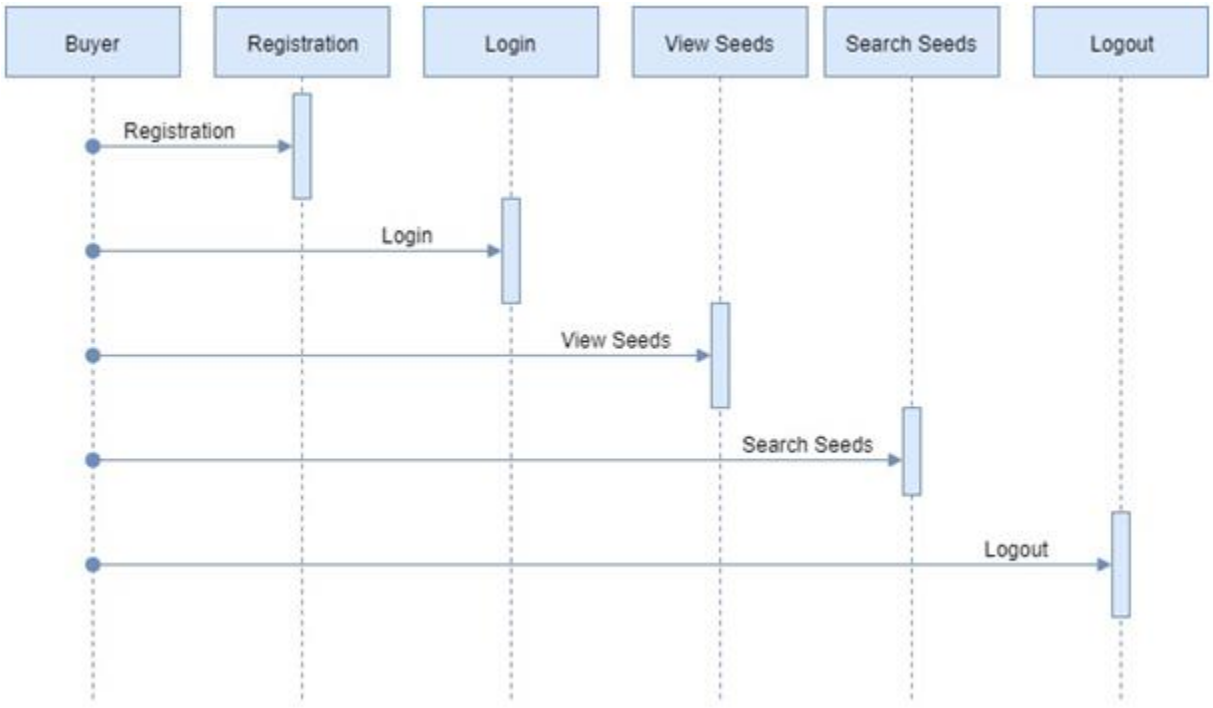


Figure 3.5: ER Diagram of the System

3.4 Sequence Diagram for Seller



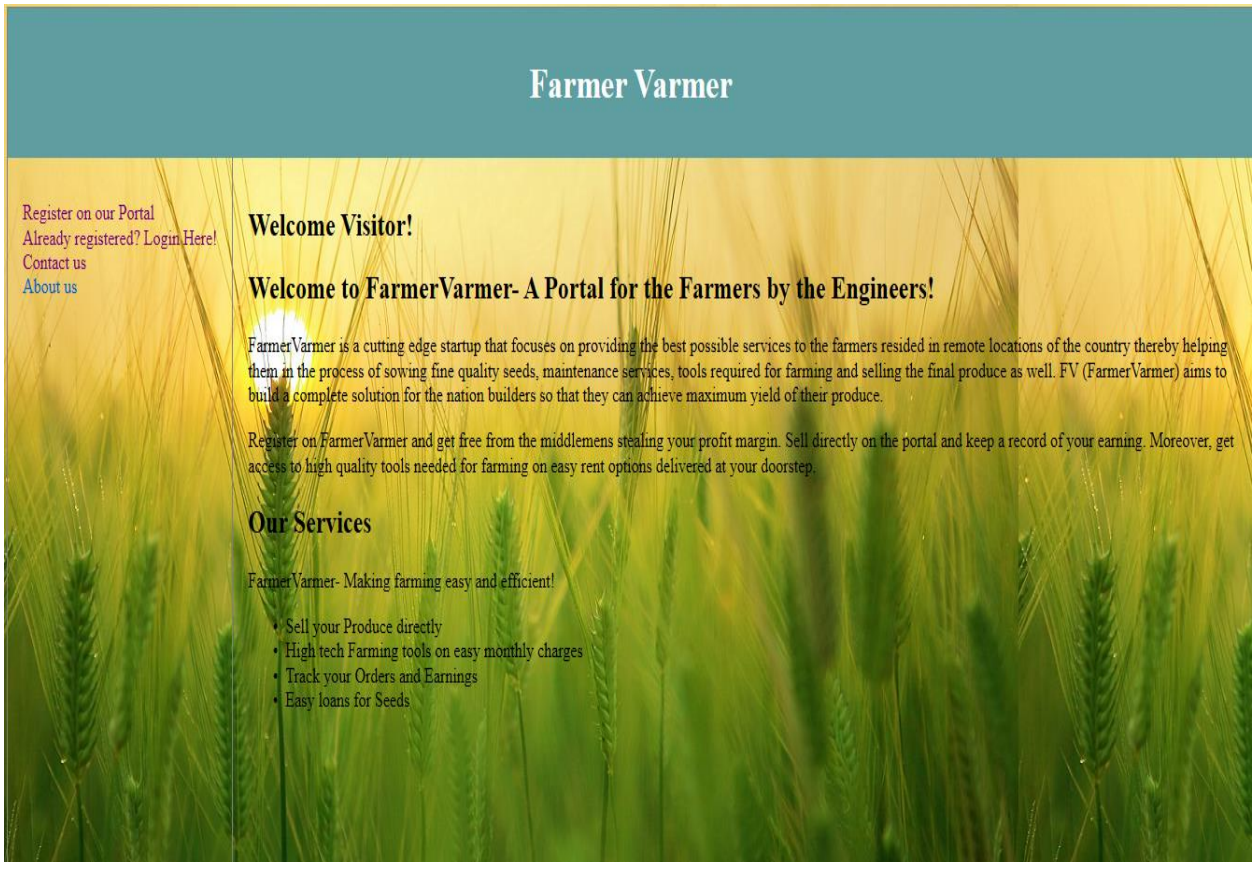
3.5 Sequence Diagram for Buyer



4. Interface

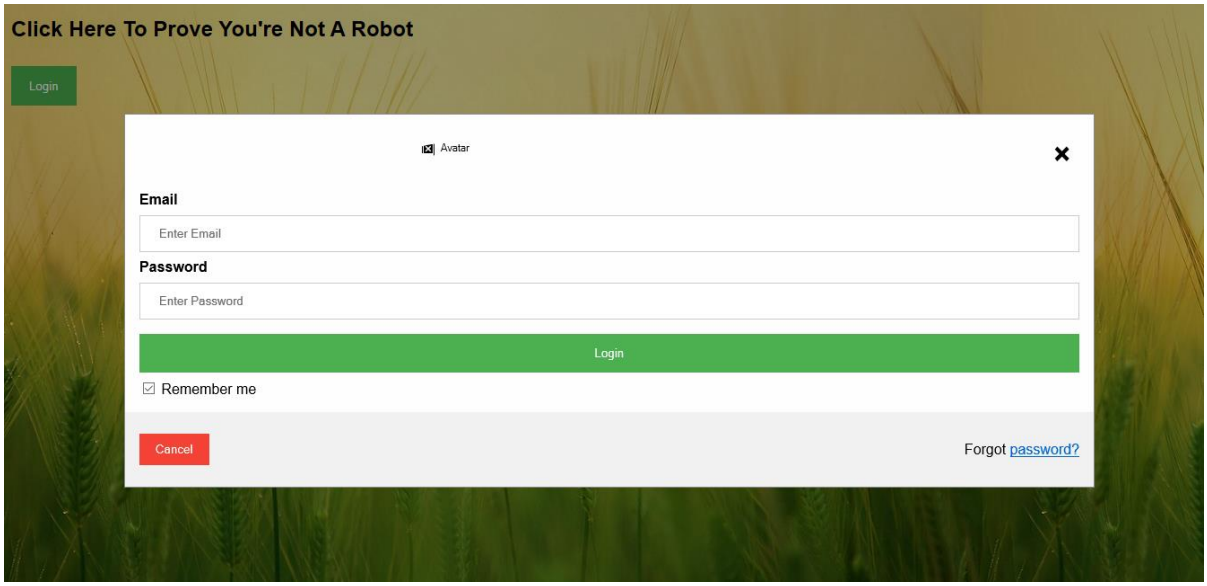
A critical aspect of systems design is to create the user interface to the new system. Input and output design focuses on the content of that interface – the specific fields that should be included in screens and reports that are viewed by the users. Once the content is determined, the format for human-computer interaction (HCI) is determined. The user interface (UI) is the way the system talks to the users, using screens/forms, reports, and error messages. During interface design developers identify procedures for each system activity and the required 21 inputs for those activities. These required inputs become screens or forms. User involvement is critical during these design activities.

4.1 Home page

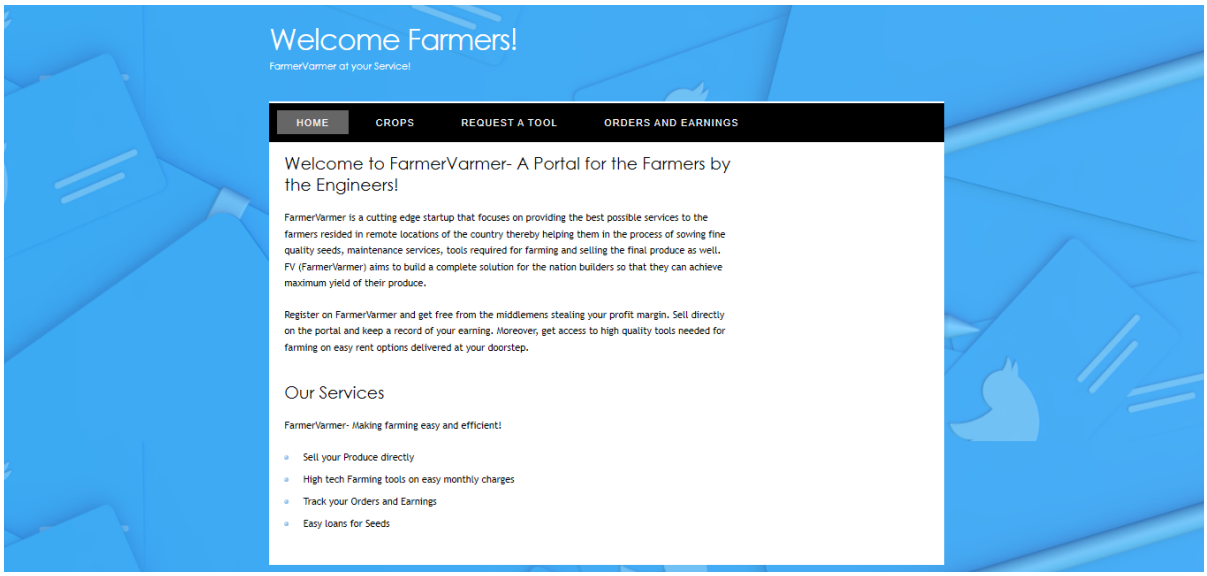


4.2 Logininterface:

User will login himself/herself to enter the website.



4.3 AfterLogin: This is the website



4.5 Other web pages:

Here are some other web pages of website.