Chapter 2

Software Requirement Specifications

1.1. Introduction

1.1.1. Purpose

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.

1.1.2. Document Conventions

<Describe any standards or typographical conventions that were followed when writing this SRS, such as fonts or highlighting that have special significance. For example, state whether priorities for higher-level requirements are assumed to be inherited by detailed requirements, or whether every requirement statement is to have its own priority.>

1.1.3. Intended Audience and Reading Suggestions

<Describe the different types of reader that the document is intended for, such as developers, project managers, marketing staff, users, testers, and documentation writers. Describe what the rest of this SRS contains and how it is organized. Suggest a sequence for reading the document, beginning with the overview sections and proceeding through the sections that are most pertinent to each reader type.>

1.1.4. Product Scope

E-Agriculture focused on the enhancement of agricultural and rural development through improved information and communication processes. More specifically, e-Agriculture involves the conceptualization, design, development, evaluation and application of innovative ways to use information and communication technologies (IT) in the rural domain, with a primary focus

on agriculture. E-Agriculture is a relatively new term and we fully expect its scope to change and evolve as our understanding of the area grows.

To enable Community members to exchange opinions, experiences, good practices and resources related to e-Agriculture, and to ensure that the knowledge created is effectively shared and used worldwide. But There is some advantages and drawback which reside in every technology.

1.1.5. References

<List any other documents or Web addresses to which this SRS refers. These may include user interface style guides, contracts, standards, system requirements specifications, use case documents, or a vision and scope document. Provide enough information so that the reader could access a copy of each reference, including title, author, version number, date, and source or location.>

1.2. Overall Description

1.2.1. Product Perspective

There is no computerized system for the farmer to sell their product. Currently, the farmer goes to nearest market handover his product to a particular agent, agent ask the farmer to visit the market after a specific time to collect the cash earned out of the sold product. Agent sells the product to another agent or a dealer at the cost of that market. Every Agent tries to cuts his commission out of that. There is no way for farmer to know about the deal and the exact amount at which their product was sold.

This will be a standalone system trying something new in the old ways of our lives and try to introduce a new technology in this growing technology era.

1.2.2. Product Functions

There are three main functionalities of our website.

1. Buy New agricultural equipment. (Like Buy a new Sprayer Machine.)

2. Get agricultural equipment and contact agricultural services providers. (Like contact the owner of a tractor to plow a field.)

3. Buy Second hand agricultural equipment. (Like Buy a second hand Cultivator).

1.2.3. User Classes and Characteristics

On this platform called (eFarmer) we will provide the following features.

Agricultural Services

- I want an agriculture service like Wheat harvesting.
- I want to avail an animal doctor for the treatment of animals.
- I want to contact the owner of a tractor to plow a field.
- I want to give the land on the contract.
- I want to contact a Fertilizer OR seed Provider.

Purchase and sale of new agricultural products with the help of

Like buy a new

- Tractor
- Harvester

Purchase and sale of Used (OR second hand) agricultural equipment (OR products)

- Cultivator
- Purchase/Sale of an animal

1.2.4. Operating Environment

The web portal will run on every system that supports internet weather its mobile or a computer. The specific requirements are given below:

Core-2-duo Computer

1GB RAM

A valid OS

Some valid Hard Drive to run the OS.

1.2.5. Design and Implementation Constraints

1.2.5.1. Internet Availability

To use this application, the internet is very important. Without internet this system will never work and run on system.

1.2.5.2. Account Registration

To use this system, the user must have an account to login and perform the task that are required of that user

1.2.5.3. Better Communication

Meet now must provide the facility of better communication using high speed internet connection.

1.2.6. User Documentation

Our portal will be online if any reader requires any help understanding the document they can obtain from there our emergency help line numbers are also provided on our website so they can contact with us in case of any emergency regarding our portal. In short any help required will be available on our portal.

1.2.7. Assumptions and Dependencies

Stream Confidentiality

Steam Confidentiality must be maintained ISU (independent stream unit). By this user have full control over streams.

Accurate Records

ISU must shows accurate records.

1.3. External Interface Requirements

1.3.1. User Interfaces

The user interface for the software shall be compatible to any browser such as Internet Explorer, Mozilla or Netscape Navigator by which user can access to the system. The user interface shall be implemented using any tool or software package like Java Applet, MS Front Page, EJB etc.

1.3.2. Hardware Interfaces

Since the application must run over the internet, all the hardware shall require to connect internet will be hardware interface for the system. As for e.g. Modem, WAN – LAN, Ethernet Cross-Cable.

1.3.3. Software Interfaces

1. The e-farmer system shall communicate with the Configurator to identify all the available components to configure the product.
2. The e- farmer shall communicate with the content manager to get the product specifications, offerings and promotions.
3. The e- farmer system shall communicate to credit management system for handling financing options.
4. The e- farmer system shall communicate with CRM system to provide support.
5. The e- farmer system shall communicate with Sales system for order management.
6. The e- farmer system shall communicate with shipping system for tracking orders and updating of shipping methods.
7. The e- farmer system shall communicate with external Tax system to calculate tax.
8. The e- farmer system shall communicate with export regulation system to validate export regulations.

10. The system shall be Verisign like software which shall allow the users to complete secured transaction. This usually shall be the third party software system which is widely used for internet transaction.

1.3.4. Communications Interfaces

The e-store system shall use the HTTP protocol for communication over the internet and for the intranet communication will be through TCP/IP protocol suite.

1.4. System Features

This subsection contains the requirements for the e-store. These requirements are organized by the features discussed in the vision document. Features from vision documents are then refined into use case diagrams and to sequence diagram to best capture the functional requirements of the system. All these functional requirements can be traced using tractability matrix.

1.4.1. Sell Configured to Ordered Products.

- The system shall display all the products that can be configured.
- The system shall allow user to select the product to configure.
- The system shall display all the available components of the product to configure
- The system shall enable user to add one or more component to the configuration.
- The system shall notify the user about any conflict in the current configuration.
- The system shall allow user to update the configuration to resolve conflict in the current configuration.
- The system shall allow user to confirm the completion of current configuration

1.4.2. Provide comprehensive product details.

- The system shall display detailed information of the selected products.
- The system shall provide browsing options to see product details.

1.4.3. Detailed product Categorizations

- The system shall display detailed product categorization to the user.

1.4.4. Provide Search facility.

- The system shall enable user to enter the search text on the screen.
- The system shall enable user to select multiple options on the screen to search.
- The system shall display all the matching products based on the search
- The system shall display only 10 matching result on the current screen.
- The system shall enable user to navigate between the search results.
- The system shall notify the user when no matching product is found on the search.

1.4.5. Maintain customer profile.

- The system shall allow user to create profile and set his credential.
- The system shall authenticate user credentials to view the profile.
- The system shall allow user to update the profile information.

1.4.6. Provide personalized profile

- The system shall display both the active and completed order history in the customer profile.
- The system shall allow user to select the order from the order history.
- The system shall display the detailed information about the selected order.
- The system shall display the most frequently searched items by the user in the profile.
- The system shall allow user to register for newsletters and surveys in the profile.

1.4.7. Provide Customer Support.

- The system shall provide online help, FAQ's customer support, and sitemap options for customer support.
- The system shall allow user to select the support type he wants.
- The system shall allow user to enter the customer and product information for the support.
- The system shall display the customer support contact numbers on the screen.
- The system shall allow user to enter the contact number for support personnel to call.
- The system shall display the online help upon request.
- The system shall display the FAQ's upon request.

1.4.8. Detailed invoice for customer

- The system shall display detailed invoice for current order once it is confirmed.

The system shall optionally allow user to print the invoice.

1.5. Other Nonfunctional Requirements

Functional requirements define the needs in terms of performance, logical database requirements, design constraints, standards compliance, reliability, availability, security, maintainability, and portability.

1.5.1. Availability:

- Application must be responsive and available at every time.
- Availability of high speed internet connection is the major requirement of the application.
- Application must be work on time efficiently.
- Application connectivity time must be good.

1.5.2. Maintainability:

- Making changes or upgradeability in the site will not be that much difficult. By having some knowledge of programming, some features of the application might be converted to a new version.
- It can be easily upgraded and admin should maintain their performance efficiently.

1.5.3. Performance:

- This application must perform the action on time without any long delay.
- Over Application through an output in time.
- This Application perform efficiently.

1.5.4. Security:

- This Application prevent from unauthorized modification of information.
- Security factors are very important in over Application.

1.5.5. Usability:

- This application fulfills the requirement of global User and Admin.
- All type of people must access of this application.

1.5.6. Portability:

- This is android server based application that is why there is no problem in portability process.

1.5.7. Supportability:

- This Application support and provide Information helpful for identifying and resolving issues when it fails to work correctly.

1.6. Other Requirements

- Database phpmyadmin is used as same database for web portal and for our android app.
- We used WAMP Server for database purpose.

Chapter 3

Use Case Analysis

2. System Analysis

An important part of the analysis phase is to drawing the diagrams of Use cases. They are used through the phase of analysis of a project to find and divide functionality of the application. Application is separated into actors and use cases. Actors play the role that are played by the application users.

2.1. Use Case Model

Use cases define the application behavior when one of the actors sends any particular motivation. This type of behavior can be described by text. It describes the motivation nature that activates use case, the inputs and outputs to some other actors and the behavior of conversion of inputs to the outputs. Usually the use case describes everything that can go wrong during the detailed behavior and what will be helpful action taken by the application.
Some of the use cases are as follows:

2.1.1. Use Case

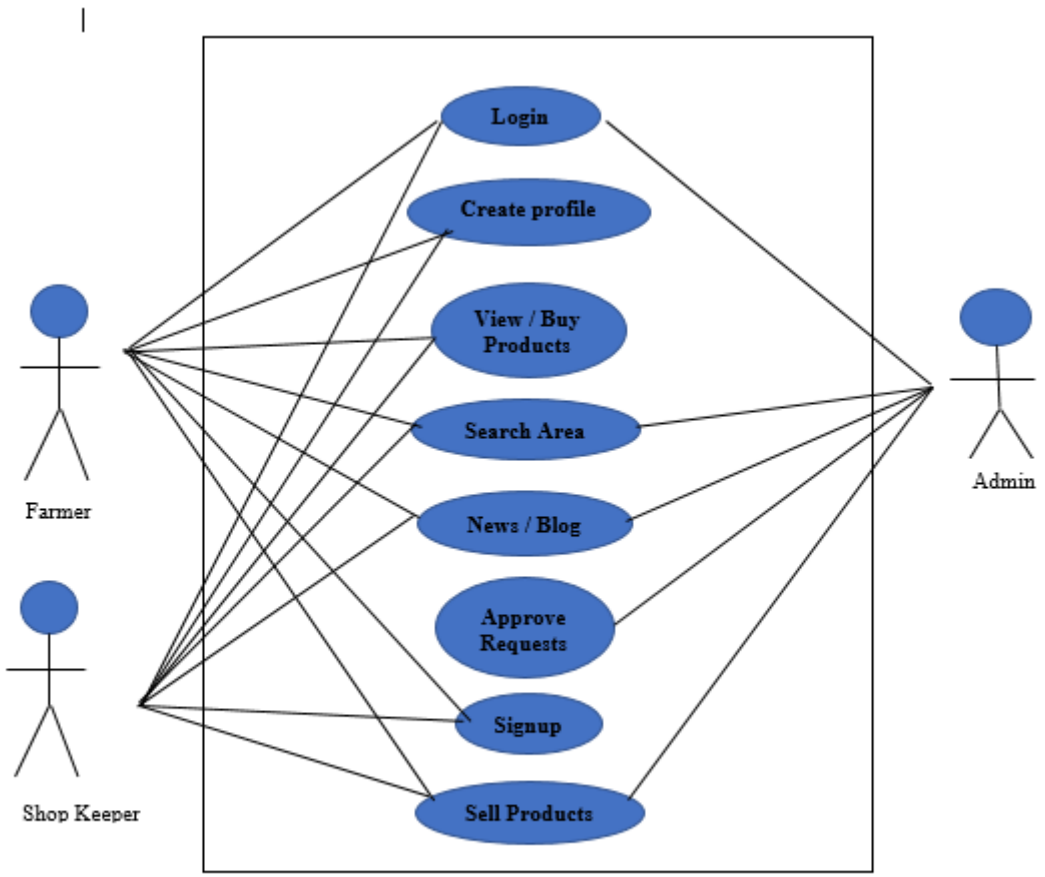

Figure 3.1 Use Case 1

2.1.2. Use Case

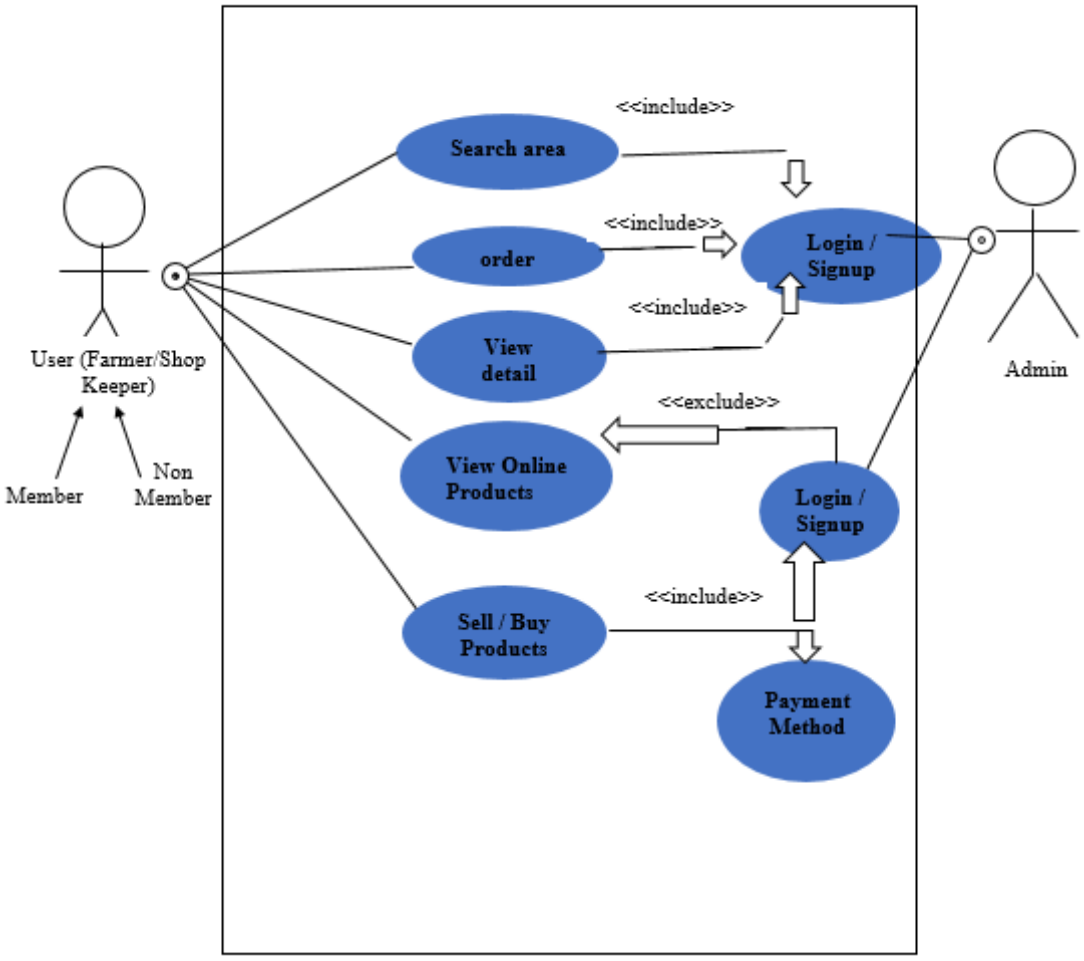

Figure 3.2 Use Case 2