Software Requirement Specification Document
On
FARMERS E-MARKETPLACE

1. Introduction

The Farmers e-Marketplace project is a collaborative effort to create a secure online platform to facilitate the direct sale of agricultural produce from the farmer to the consumer. This project is useful for farmers and general users to obtain information regarding various crops, tools used by the farmers, also provide one of the platforms for online selling and buying of the different types of products and the tools. Also provide the desire cost to the user or farmer.

The platform will provide farmers with an opportunity to market their produce to a wider consumer base and to receive fair prices for their goods. It will also provide an avenue for consumers to purchase fresh, locally produced food directly from the farmers. The Farmers eMarketplace project will allow farmers to list their produce on an online marketplace and to accept payment from customers directly. Customers will be able to view the produce available and make informed decisions about their purchase. This will help to create a direct connection between producers and consumers, reducing transaction costs and improving transparency. The main functionalities of the project are as follows:-

1. Admin Module
- Manage agricultural products
- Manage Farmers
- Manage Users
- Manage Orders
- Manage Payment Gateway
- Manage Shipping Details

2. User Module
a. Farmers (Sellers):-
- Register
- Login
- Logout
- Search Product
- Choose Product Category
- View product Order
- Add own products to the site for sale.
- Update Product

b. Users and Farmers (Buyers):-
- Register
- Login
- Logout

- Search Product
- Choose Product Category
- Add Product to Cart
- Delete Product From Cart
- Buy Product
- View Order
- Cancel Order

1.1 Purpose of the project

The Farmers' e-Marketplace Project is an initiative to create an online platform for farmers to access markets and to increase their ability to compete in the global market. The project seeks to increase the efficiency and transparency of agricultural markets, reduce transaction costs and risks, and improve information exchange. By connecting farmers directly to buyers and providing an online marketplace for the sale of agricultural products, the project seeks to increase farmers' incomes and improve their livelihoods. The project also aims to strengthen the capacity of smallholder farmers to access markets and improve their market access.

1.2 Intended Audience

The intended audience of a farmers e-marketplace project would be farmers and consumers looking to purchase fresh local produce.

1.3 Intended Use

The project would be of interest to local businesses and organizations looking to support local farmers and increase the availability of locally sourced produce.

1.4 Scope

The scope of a farmers e-marketplace project would depend on the specific goals of the project. Generally, however, the scope of farmers e-marketplace project would include designing and developing a digital platform that allows farmers to sell their products online, creating a payment system for customers to pay for their purchases, and creating a user-friendly interface.

2.Overall Description
2.1 User Needs

- As a guest, I need to have the facility to register with the system as a user, able to select user role (buyer and seller)
- As a registered user, I need the option to login
- As an admin, I should get the admin home page
- As a normal user(buyer), I need to get the user home page
- As a farmer(seller) I need to get seller home page
- As an admin, I need the provision to add, modify
- As admin, I need to add/remove menu options for user roles

2.2 Assumptions and Dependencies

Assumptions:
1. The farmers have access to the internet and basic computing skills.
2. The farmers have access to a smartphone or any other mobile device.
3. The farmers have access to a payment method (e.g. debit/credit card, PayPal, etc.).

Dependencies:
1. A reliable web hosting provider.
2. A content management system (CMS) to manage the web pages.
3. A database management system (DBMS) to store and manage the data.
4. A web app to enable users to access the marketplace on their mobile devices.

3. System Features and Requirements
3.1 Functional Requirements

- Access Website (Farmers and Users):

    User should be able to access web-application through either an application browser or similar service on the mobile phone or computer. There should not be any limitation to access web-application

- Registration (Farmers and Users):

    Given that user and farmers has accessed web-application, then both should be able to register through the web-application. The user must provide first name, last name, email, contact number, username and password.

- View Profile (Farmers and Users):

    In which both can see their current profile status.

- View Product Details (Farmers and Users):

    Farmers and Users can see the product details by login to the webapplication. e.g., Product category, Product items, Qty, etc.

- User log-in (Farmers and Users):

    Given that the user has registered, then the user should be able to login to the web-application. The login information will be stored on the database for future use.

- Search product in product list:

    Specific product can be viewed in the product list. Users and farmers can search their product by using product category.

- Update product in product list:

    Specific product can be viewed in the product list. Users and farmers can update their products.

- Shopping cart:

    This feature enables users and farmers to add products to their cart and generate bill.

- Social Network Integration:
  Platform should be integrated with popular social networks such as twitter, Instagram, Facebook, etc.

3.2   External Interface Requirements

The system is basically running on the official website of the Farmers EMarketplace. Mainly the system provides some advance features to the farmers and users and admin. If the admin logs in, the system interface provides some features to the admin.

- User Management: The admin should be able to add/edit/delete users from the platform

- Product Management: The admin should be able to add/edit/delete products from the marketplace

- Security: The admin should be able to set up two-factor authentication for the users, and also have access to the database.

If the farmer (Seller) logs in, the system will provide following features,

- Change login password.

- Add/update/delete products. • Edit personal contact details.

- Withdraw name from the system.

- Inventory Management: Keep track of their stock levels.

If the Farmers and users (Buyers) logs in, the system will provide following features,

- Change login password.

- Secure payment gateway

- Easy to use user interface

- Comprehensive product catalog

- Ability to contact sellers

- Ability to access historical records

- Ability to schedule orders

- Ability to create custom orders

- Ability to handle multiple payment methods

- Support for multiple device platforms

- Ability to manage orders and invoices

3.3 System Features

The project's aim is to provide a website for Farmers E-Marketplace which is containing J2EE (Platform independent), React JS, REST APIs for users.

➢ **Technology Used:-**

- BACKEND
  Spring Boot Hibernate.
  MYSQL for storage of data API
- FRONT END
  React Js
- Browser Platform: Web Development: J2EE Spring Boot, React, MySQL.

➢ **Hardware Interface Requirements:-** ☐
  Hardware required : PC, Mobile.
  ☐ Supported device type : Windows 32 bit or 64 bit, etc.

➢ **Software Interface Requirements:-**
  ☐ The software is developed for android, iOS, windows 7, windows 8, windows 10, etc.

3.4 Non-functional Requirements

- Availability:
  The system including the offline and online components should be available 24/7.

- Reliability:
  If there is extensive damage to a wide portion of the database due to catastrophic failure, such as a disk crash, the recovery method restores a past copy of the database that was backed up to archival storage (typically tape) and reconstructs a more current state by reapplying or redoing the operations of committed transactions from the backed-up log, up to the time of failure.

- Security:
  Security systems need database storage just like many other applications. However, the special requirements of the security market mean that vendors must choose their database partner carefully.

- Correctness:
  The product sold by seller must be matched with the product requested by the user.

- Maintainability:
  The Product Inventory Manager should maintain correct records of the Product Inventory Stock.

- Usability:
  Web-Application should be Easy to use and understandable to all the users.

- Extensibility:
  Requirements for website extensibility in case there is a need to add new functional requirements.