Software Requirement Specification

FOR

RURAL REACH

Version 1.3

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14 MARCH 2023

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1. Introduction

1.1 Purpose

This project was taken up as part of the curriculum course, Mini Project. The key objective is to enhance academic knowledge and implement the knowledge to solve real world problems. The project aims to create a platform for local farmers, small scale household industries etc to sell products and consumers to buy those without the involvement of middlemen.

1.2 Document Conventions

Each and every requirements are given equal priority. IEEE standard template is used to build the SRS document.

1.3 Intended Audience and Reading suggestions

Readers include the panel of professors and the team members consisting of developers and documentation writers, users, testers.The document consists of a detailed description of all the functional and non-functional requirements and various perspectives of the product. It has all the features that is to be implemented in the product.

1.4 Project Scope

The scope of this project includes the development of a mobile app platform for Android and iOS devices using the Flutter framework.The app will allow users to register and create profiles, browse products, view product details, make purchases, and sell products. This project uses a strategic business model and aims to fulfill the requirements in a simple and feasible manner.

1.5 References

https://www.perforce.com/blog/alm/how-write-software-requirements-specification-srs-document

https://web.cs.dal.ca/~hawkey/3130/srs_template-ieee.doc

https://docs.flutter.dev/development/ui/widgets

Revision History

Name	Date	Reason For Changes	Version
Rohith cm	1-03-23	Change in Functional Requirement	1.0
Fazeel	4-03-23	Delivery option removed from functional requirement	1.1
Aslah	22-03-23	Modification in security requirements	1.2
Roshan	1-04-23	Design constraints changed	1.3

Overall Description

1.6 Product Perspective

Most of products available today are product delivery Apps and there are only some products available to directly connect farmers and house hold industrials with consumers.Our idea is a culmination of various ideas and a replacement of already existing applications in the market like **Agri Mandi Trade Online**,**Marketyard** *(which only aim farmers and agricultural products)etc. However, the vision of this product is similar,it can implement more functionalities and have a smooth and clean user interface.*

1.7 Product Features

Key features include:

- User-Friendly Interface:
- Product Catalog
- Search Functionality
- Delivery Options
- Reviews and Ratings
- User Profiles
- Customer Support
- Notifications

1.8 User Classes and Characteristics

Different users are identified on the basis of review process of the document. It is listed as follows:

1. *Customers*

    a. *Since it is an academic project, it is been evaluated by the Kerala Technical University.*
    b. *Other*

2. *End Users*

    a. *Buyers:*

These are users who are interested in purchasing products from local farmers and small-scale producers. They may be individuals or businesses looking for fresh produce or handmade goods. Restaurants and other foodservice businesses looking to source high-quality produce for their menus.

    b. *Sellers:*

These are users who are interested in selling their products to buyers on the platform. They may be local farmers, small-scale producers, or home-based businesses looking to expand their customer base. Sellers will be able to manage their inventory, update product information, and track sales.

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3. *Developers*

    a. *These involve the team members who will refer this document for technical clarifications. They are:*
        i. *Aslah*
        ii. *Fazeel Anwar*
        iii. *Muhammed Roshan P*
        iv. *Rohith C M*
    b. *Other developers for study or elaborating purposes.*

1.9   Operating Environment

Rural Reach is a mobile application that will work on all Android and iOS enviornment. The device must require Wi-Fi or mobile data to work efficiently and should allow asked permissions.

1.10   Design and Implementation Constraints

❖ *Hardware constraints*
  ➢ *It works only on Wi-Fi or Mobile data*

❖ *Tool specifications*
  ➢ *Functional*
    ▪ *Flutter plug-ins*

  ➢ *IDE*
    ▪ *Android Studio/VS Code*

  ➢ *Framework*
    ▪ *Front-end: Flutter*
    ▪ *Back-end: Nodejs*

❖ *Programming standards*
  ➢ *Readable and maintainable code*
  ➢ *Must follow indentation*
  ➢ *Must follow proper exception handling mechanism*
  ➢ *Variables should be named using camel case*

- ➢ *Class names should start with a capital letter*

- ❖ *Language requirements*
  - ➢ *Front-end: Dart*
  - ➢ *Back-end: Nodejs*

1.11 User Documentation

The document will be distributed to customers and developers as soft-copy in pdf format as well as a manual.
The end users (target) would be provided a tutorial video available in the Google Play Store while installing the app.

1.12 Assumptions and Dependencies

Assuming that the Android phone follows all the hardware constraints.

2. Functional Requirements

3.1 Register

The users including buyers and sellers can can register in app using their credentials.

3.2 Login

The login functionality is given to those users including buyers and sellers who already registered.

3.3 Seller and Buyer functionalities

➢ **Seller functionalities**

1.Create or Update profile:

The sellers can create profile with their description of selling item and they can tag themselves as identifying selling names.This profile can be updated at any moment. .

2. Add product:

The sellers can add products by clicking add button with their description of selling item.They can also specify items with price,image,minimum amount buying constrains,quantity etc.

3. Manage Products

The added products can be edited.

4.Orders cart

The total orders that the seller got are listed in this page. The order status is also updated in real time.

➢ Buyer functionality

1.Product Catalog

The buyer can see a list of products available for sale in this page with image .The buyer can see the the description, price, seller name

(which is the link to the seller profile) in the main interface itself .This will be the home page of the project

2.Search Functionality

A search tab is given in the home page itself which enables the buyers to search with product key names ,seller name etc

3. Review and Ratings

The users can rate the seller in the real time based on their experience and also can write short review .This enables other users to get the opinions and also helps to avoid frauds in selling.

4.Call or chat

The users can chat or call with the seller to have additional information and for related queries.

5. Cart
The total orders that the buyer made are listed in this page.The order status is also updated in real time.

6.Pickup station
Users would be given a choice to either pickup the product directly from the seller or choose a nearby pickup station.

Non-Functional Requirements

4.1 Performance Requirements

The performance of the app is quite fast. A simple design is chosen as the UI for easy understanding and less storage consumption. Also *the app should be scalable and able to handle large volumes of data and traffic as the number of users and transactions increase over time*

4.2 Security Requirements

The app stores data of all user. App require a database to store these data. The app should be secure and protect user data from unauthorized access. The app should also provide secure payment options.

4.3Software Quality Attributes

a. Reliability:

The app should be reliable and should have a low failure rate. The app should also have a backup and disaster recovery plan in case of system failures.

b. Usability:

The app should be user-friendly and easy to navigate. The app should also be accessible for users with disabilities.

c. Compatibility:

The app should be compatible with all devices of specified operating systems.

d. Maintenance:

The app should be easy to maintain and update. The app should also be designed with future updates in mind.

e. Performance under load:

The app should be able to handle multiple users using it simultaneously without affecting performance.

f. Availability:
The app should be available 24/7 and should not experience any downtime.

g. Accessibility:

The app should be accessible to users with disabilities, such as those who are visually or hearing impaired.

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Appendix A: Glossary

Appendix B: Issues List

Issues in following sections:
1.
2.

Appendix C: To Be Determined List