Software Requirements Specification

for

"Agri Market" Agriculture Development Mobile Application Project

Agri Market

Prepared by Group B

ICE Batch 6

Sri Lanka Technological Campus

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Table of Contents

1. Introduction

1.1 Purpose

In this document we describe the software requirements for the Agriculture Development mobile application "Agri Mart". As part of this application we will automate and facilitate the whole process of agricultural marketing. This mobile application will be provided to farmers with valuable information that can help them improve their marketing. Mobile app can be access anywhere with low budget requirements compared to desktop web applications. Generally, intermediaries are getting the most benefit from agricultural marketing, but this application will largely alleviate that disadvantage. Farmer can be connected with buyers directly.

1.2 Document Conventions

UI – User Interface

UX - User Experience

API **-** Application Program Interface

SRS - Software Requirement Specification

1.3 Intended Audience and Reading Suggestions

This project is a prototype for the agricultural mobile application and it is restricted within the college premises. This has been implemented under the guidance of college professors. This project is useful for the Farmers and buyers as well as to the transporters. They can be connected directly by this application system.

1.4 Project Scope

The Scope of this SRS document is to define the functional requirements for the Agricultural mobile application and its component like User management, Content management and Management System, Farmers' database, etc. Introducing an online mobile platform to local farmers, buyers and transporters to market their agricultural food items where all the related money transactions and communications can be done.

- Farmers and buyers will able to Share their market information through this application.
  - o Generally, intermediaries are getting the most benefit from agricultural marketing, but this application will largely alleviate that disadvantage. Farmer can be connected with buyers directly.

- Facility of getting all the updates of daily market prices and other details.
  - Selling is the biggest challenge for any farmer. We can close the gap between farmers and potential buyers from this application, that helps farmers by providing information on prices, marketplaces, and next links in the big supply chain. This means creating a whole marketplace for farmers where they'll be able to compare and control market prices for different products and also get more opportunities to promote and market themselves.

- Any of user will able to find nearby transport agent through this application.
  - Because of lack of management in today transportation mechanisms, the quality of the sales is highly affected by time. To do transport sales efficiently, this app manages all the sales transports through registered transporters.

- Agriculture experts can engage with farmers Q and A forums
  - This app comes with the Educational Guidance Forum which aims on the developing farmer's agricultural knowledge. In this forum every user can share their knowledge through using Question and Answer forum.

- Vegetables, Fruits, Rice and cereals crop harvest marketing
  - Agri Mart Mobile Application provides easier user interface which makes the shopping easy for customers, farmers and also makes the delivery of products easy and less time-consuming. Offers a wide range of vegetables, fruits, cereals, Agricultural Equipment.

It also defines user interfaces, user characteristics, etc. It also covers the non-functional requirements like performance, reliability, availability, security, maintainability etc.

1.5 References

https://www.techrepublic.com/article/top-10-web-service-security-requirements/
https://reqtest.com/requirements-blog/functional-vs-non-functional-requirements/
https://www.ooportal.com/project-life-cycle/module5/pre-conditions-post-conditions.php
https://www.stayonsearch.com/5-biggest-challenges-you-need-to-face-in-website-creation

2. Overall Description

2.1 Product Perspective

This mobile application is a new solution to facilitate more efficient agriculture marketing service and develop Sri Lankan local agricultural economy. Buyers, sellers and transporters are able to come together in a transparent manner procuring agriculture commodities and services through a listing mechanism.

Agri Mart Mobile Application provides easier user interface which makes the shopping easy for customers, farmers and also makes the delivery of products easy and less time-consuming. offers a wide range of vegetables, fruits, cereals, Agricultural Equipment. In further, this app comes with the Educational Guidance Forum which aims on the developing farmer's agricultural knowledge. In this forum every user can share their knowledge through using Question and Answer forum.

2.2 Product Features

2.2.1 User Account System

In this application all users have to create a legal user account by agreeing our terms and conditions. There are 3 types of roles in user accounts.

1. Seller

2. Buyer

3. Transport Operator

Each role must be registered with suitable details and user confirmations.

2.2.2 Selling and Buying System

Sellers and buyers can sell buy products through this feature. Each product is listed and included with the options of categories, sorting, preordering, placing bids, discounts, favorites etc. And when buying buyers can buy with exact amount with desired measuring unit. Seller can keep updated info about their stocks.

2.2.3 Economy analytics

In each time period, this feature will show the price analytics of each product categories

2.2.4 User Review System

Buyers can give each seller a review. This will keep the quality of the products.

2.2.5 Online Payment System

We will provide secure payment system with multi payment method support and availability.

2.2.6 Contact the Developers and Feedback report system

Users can immediately contact and send their feedback and problems to developer team.

2.2.7 Delivery Service locate System

This service locates each transport delivery operators in real time to give the exact location of the orders through satellite GPS technology.

2.2.8 Chat system

All users can chat with each other user and have discussions.

2.2.9 Agriculture Consultancy Service System

Agriculture consultants are able to provide guidance to the Farmers and maintain a Q and A forum.

2.3 User Classes and Characteristics

User Class	Frequency of use	Product functions use	Technical expertise	Educational level
Buyer	high	User Account System Selling and Buying System Economy analytics User Review System Online Payment System Contact the Developers and Feedback report system Delivery Service locate System Chat system	low	varies
Seller	high	User Account System Selling and Buying System Economy analytics Online Payment System Contact the Developers and Feedback report system Delivery Service locate System Chat system	low	varies
Transporter	high	User Account System Online Payment System Contact the Developers and Feedback report system	low	varies

		Delivery Service locate System Chat system		
Developer	high	All Features	high	high
Consultant	low	Contact the Developers and Feedback report system Chat system	high	high
Unregistered User	high	User Account System	low	Varies

2.4 Operating Environment

Minimum Software hardware Requirements

- Mobile OS Version – Android 8 Oreo or higher version (Minimum API 26)
- Ram – 2GB
- Disk Memory space – 70- 120MB
- Connectivity – 5Mbps
- Screen Size – 5 inch or higher
- Sensors – GPS Sensor
- App Distribution Platform – Google Play

2.5 Design and Implementation Constraints

- App should work to multiple Oss and devices
- Device screen compatibility - UI must support for all mobile screen sizes
- Usability UI should be easy and have a nice flow
- Security for online payments
- Marketing application for exact audience
- Long time period for development
- Lack of knowledge and experience in developing apps, multiple programming languages, database systems, communication protocol management in developers
- App has to support to GPS system.
- The phone having the application should either over Lan or internet.

- Sign in and password is used for the identification of user. so, these have to identify by system correctly by correct input methods and characters.

2.6 User Documentation

User documentation refers to the documentation for a product or service provided to the end users. The user documentation is designed to assist end users to use the product or service. This is often referred to as user assistance. The user documentation is a part of the overall product delivered to the customer

User documentation is important because it provides a avenue for users to learn:

1. how to use your software
2. features of your software
3. tips and tricks of your software
4. how to resolve common problems with your software

Without user documentation, a user may not know how to do the above things.

So, we are providing

- Manual document.
- Video tutorials

These are helpful to user to understand about this app.

What does user documentation usually include?

- Minimum hardware and software requirements
- Installation guide
- How to start the system
- How to use different features of the system
- Screenshots explaining main features of the system
- Example inputs and outputs

Explanations of error messages and troubleshooting guides

2.7 Assumptions and Dependencies

Users of this application are any Android device user that loads this application to their devices. All of the users are in the same class, only one type of user exists. Operating environment is, as just mentioned above, is an Android OS mobile device. An android device that can support basic dependencies of the application is expected for proper user experience. On the other hand, our database server and services can operate on any OS like Windows or Ubuntu that can supply the database server's fundamental dependencies and needs. One important constraint is privacy and security. Users should be accessing only the authenticated data.

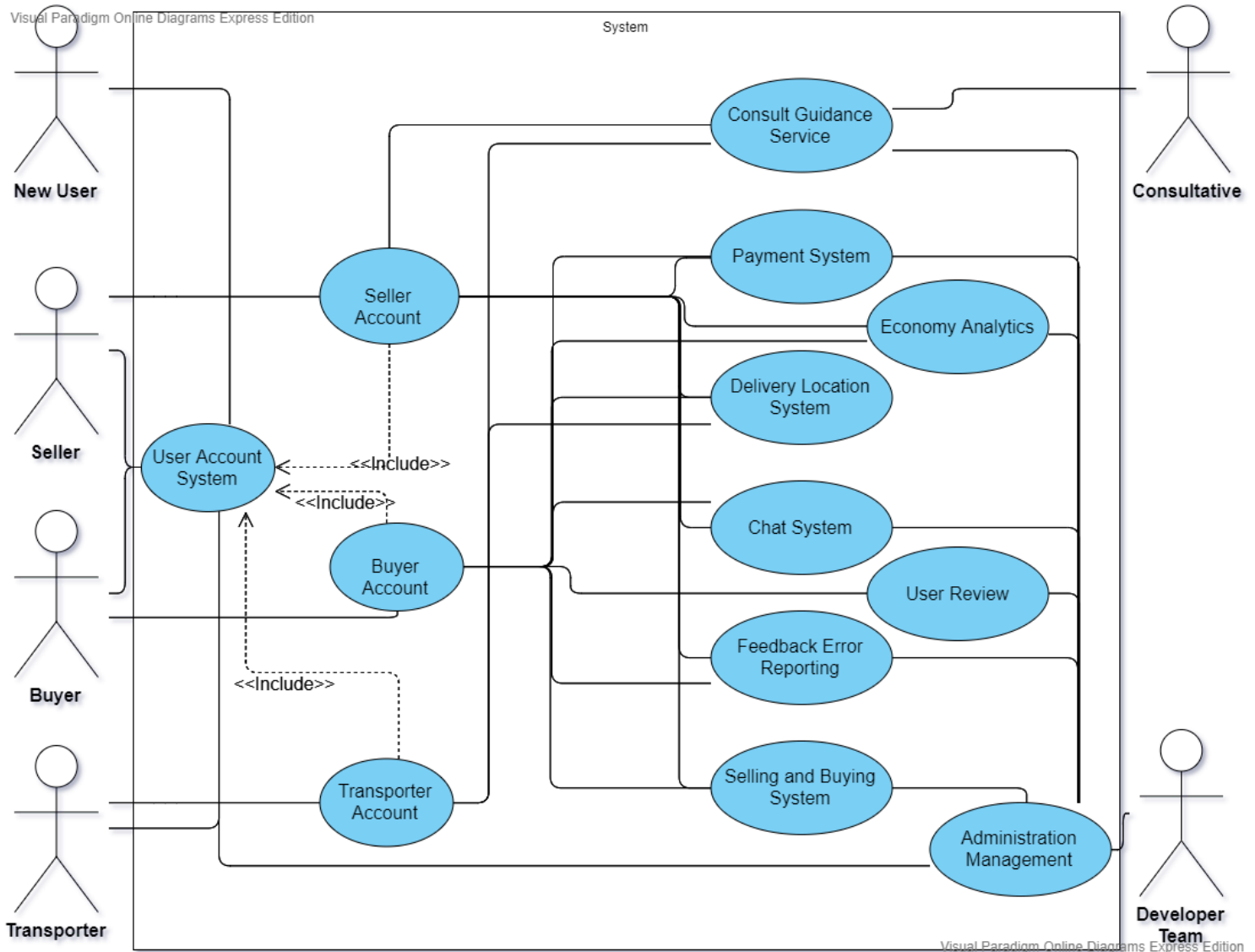The product does require back-end data base server MYSQL for storing the username and password for different type of user of the system as well as various database regarding various insurance information.

Assumptions

- User must be trained for basic computer functionalities.
- User must have the basic knowledge of English.
- The system must be able to respond to database software within responsible time.

3. System Features

- User Case Diagram with Features

System

New User

Consultative

Seller

Buyer

Transporter

Seller Account

User Account System

Buyer Account

Transporter Account

Consult Guidance Service

Payment System

Economy Analytics

Delivery Location System

Chat System

User Review

Feedback Error Reporting

Selling and Buying System

Administration Management

Developer Team

<<Include>>

<<Include>>

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3.1 System Feature 1

- Agriculture consultancy service system

3.1.1 Description and Priority

This is the feature can have between the seller(farmer) and consultant, through producers and the products to transport, bio energy and policy, consultant are the only specialist

agribusiness information provide converting the whole value chain with trusted proprietary data, authoritative analysis, accurate forecasts and tailored consulting.

	Ratings(0-9)
Priority	9
Benefit to the user	9
Cost	3
Risk	5

3.1.2 Stimulus/Response Sequences

Use case name	Contact with agriculture consultative
Assumption	The actor has been authenticated so the user details already known to the system.
Pre-condition	The user has to register to make use of this feature
Initiation	"Use case when starts when." The actor chooses this option
Main flow of event	• User must login using email and password or register a basic user account by entering basic details where email and password are compulsory • The use case provide list of consultative. • The actor selects a consultative. • The actor has request to consultative. • The use case give permission • The actor make conversation
Exceptional flow of the event	
Post-conditions	The actor got advice from consultative The system displays the suitable UI and login successfully to selected role Save the activities in the system log
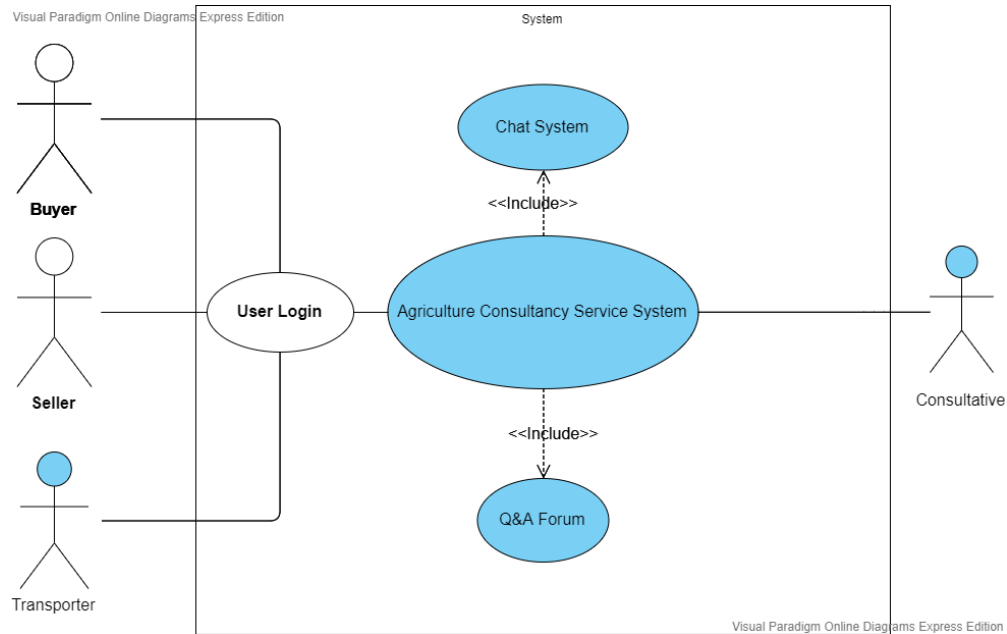
3.1.3 Functional Requirements

- **Customer Database**
  This data base contains customer details and save their detail when they register as a new customer, Application will access these dates when needs.
  Customer Database **divide** as Buyer Database, farmer Data base, Delivery service Data base.

- **agriculture consultative**
  This data base contains agriculture consultative details, Application will access these dates when needs.

3.2 System Feature 2

- Delivery Service locate System

3.2.1 Description and Priority

This feature can mostly target the farmers and transport service owners, when a farmer wants to sell his own product to a market or whole sale buyer or other buyers, farmer must need a transport facility to sell his product to them, so farmer can find a transport service owner through the application and can find the location of the transport service owner and transport service owner also can easily find the location of the farmer and reach the location and transport the products to the correct location.

And also buyers can locate the order with option.

	Ratings(0-9)
Priority	8
Benefit to the user	8
Cost	1
Risk	8

3.2.2 Stimulus/Response Sequences

Use case name	Delivery Service locate System
Assumption	The actor has been authenticated so the user details already known to the system.
Pre-condition	The user has register to make use of this feature and user needs GPS hardware and software facility
Initiation	"Use case when starts when." The actor(buyer) chooses this option
Main flow of event	1. User must login using email and password or register a basic user account by entering basic details where email and password are compulsory 2. Then users can browse to the orders section and use location service
Exceptional flow of the event	If transporter turned off location, app show unable to find message

Post-conditions	The actor(buyer) Got to know about GPS point The system displays the suitable UI and login successfully to selected role Save the activities in the system log
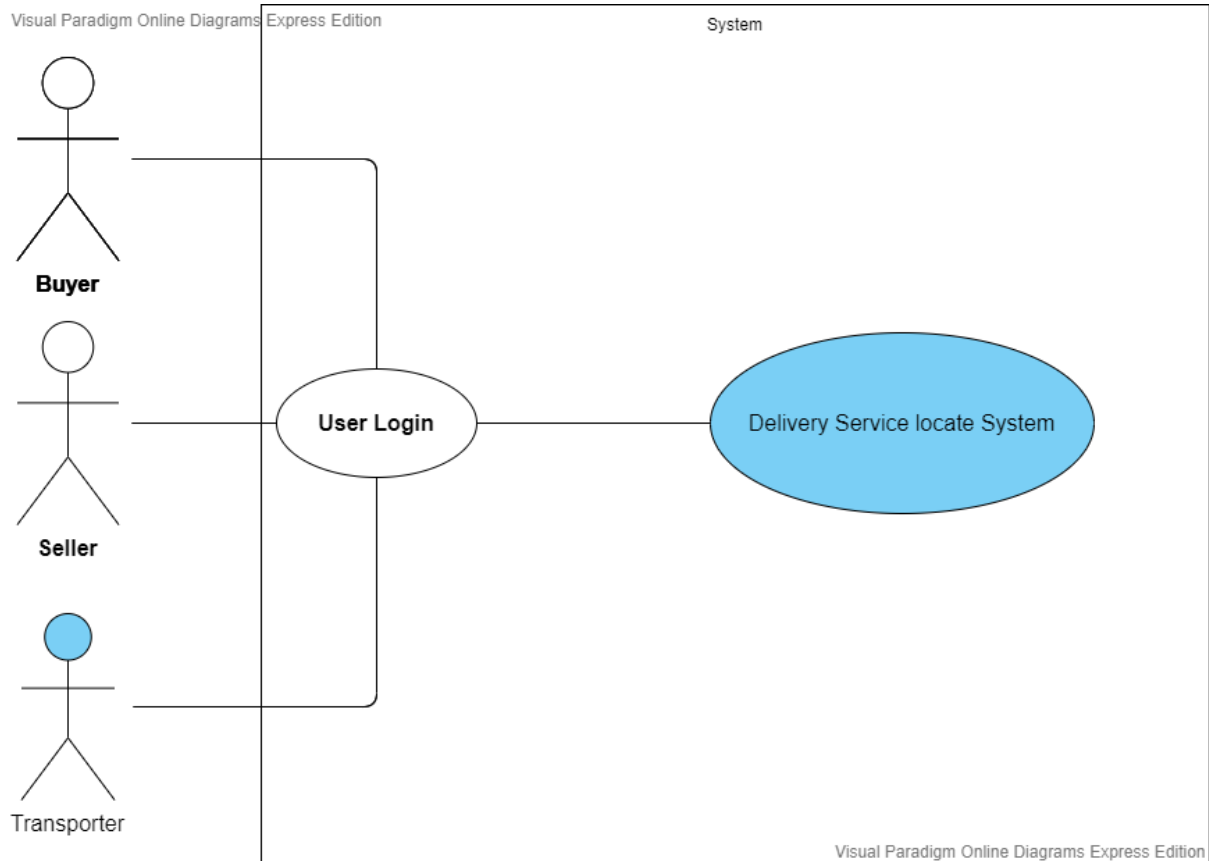
3.2.3 Functional Requirements

- **Buyer Database**
  This data base contains buyer details and save their detail when they register as a new customer, Application will access these dates when needs.

- **Delivery service Database**
  This data base contains delivery service details and save their detail when they register as a new customer, Application will access these dates when needs.

- **GPS facility and access**
  This requirement needs to access GPS point of user to detect location.

3.3 System Feature 3

- User Review System

3.3.1 Description and Priority

This feature can mostly between the buyer and seller. This will facilitate the buyers to share their experience on sellers.

	Ratings(0-9)
Priority	8
Benefit to the user	8
Cost	0
Risk	4

3.3.2 Stimulus/Response Sequences

Use case name	User Review System
Assumption	The actor has been authenticated so the user details already known to the system.
Pre-condition	The user has register to make use of this feature
Initiation	"Use case when starts when." The actor(buyer) chooses this option
Main flow of event	- The actor(buyer) search product. - The actor(buyer) select the product - The actor(buyer) Pay the product - The actor(buyer) give ratings and reviews on next screen about the experience
Exceptional flow of the event	
Post-conditions	Adding user review to sellers' profile The system displays the suitable UI and login successfully to selected role Save the activities in the system log

System

User Account

Payment Checkout

User Review

Buyer

Seller
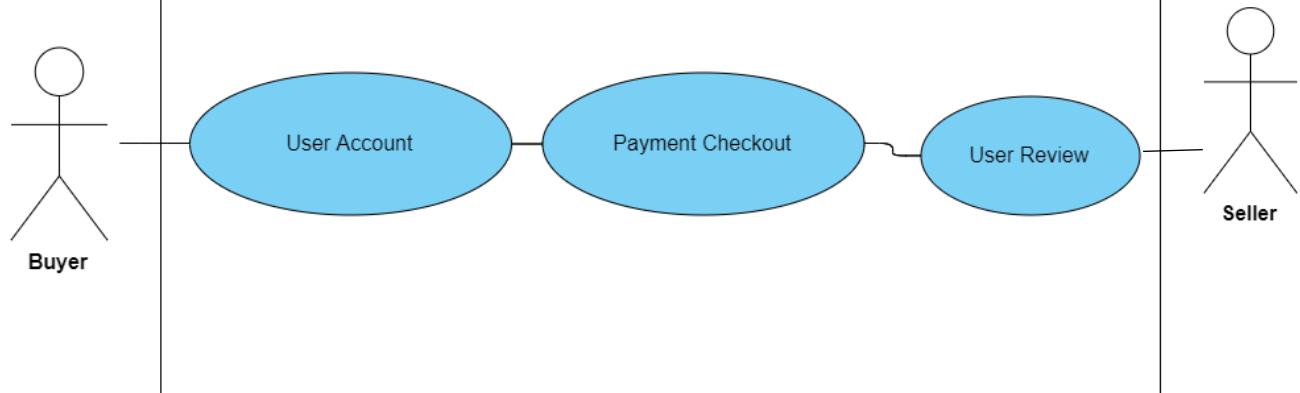
3.3.3 Functional Requirements

- **User Account Database**
  This data base contains all users' personal details with emails and passwords encrypted.

- **Bank Access**
  This requirement needs to deal online payment in online so bank needs give permission to customer and app to use bank resources.
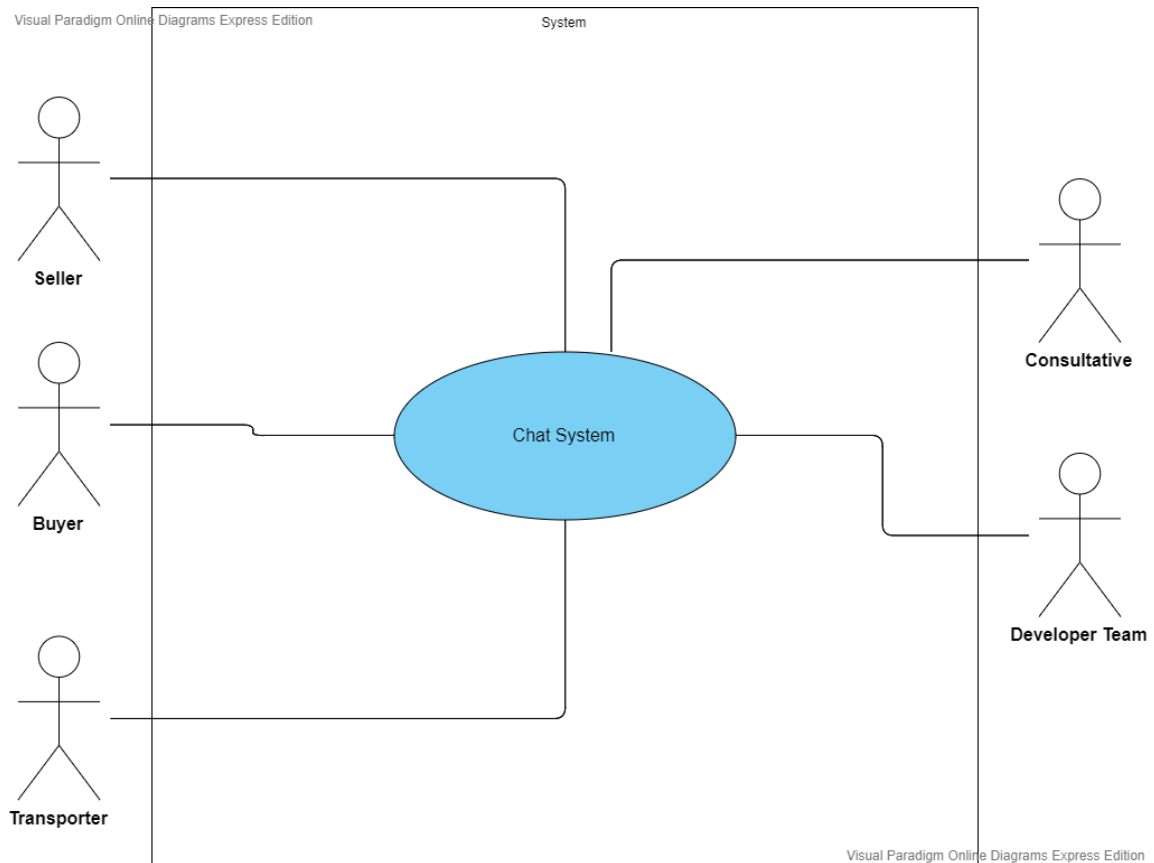
3.4 System Feature 4

- Chat System

3.4.1 Description and Priority

This feature can between all the users of the application. They can get connected with each other's while chat option. A farmer to a farmer, a farmer to a seller, a farmer to a delivery service owner, delivery service owner to a seller, etc. they can share their information such as delivery product, delivery location, costs and etc. through the chat option in the application.

	Ratings(0-9)
Priority	8
Benefit to the user	8
Cost	0
Risk	4

3.4.2 Stimulus/Response Sequences

Use case name	Chat option within farmers, sellers and delivery service
Assumption	The actor has been authenticated so the user details already known to the system.
Pre-condition	The user has register to make use of this feature
Initiation	"Use case when starts when" The actor chooses this option
Main flow of event	- Login to user account and select role - The actor selects the actor who wants to speak - The use case give permission - The actors make conversation through forum
Exceptional flow of the event	
Post-conditions	The Actors made conversation within them. The system displays the suitable UI and login successfully to selected role Save the activities in the system log

System

Seller

Buyer

Transporter

Chat System

Consultative

Developer Team

3.4.3 Functional Requirements

- **Chat Massages Database**

  Stores every Chat massages done by users

- **User Account Database**
  This data base contains all users' personal details with emails and passwords encrypted.

3.5 System Feature 5

- Contact the Developers and Feedback report system

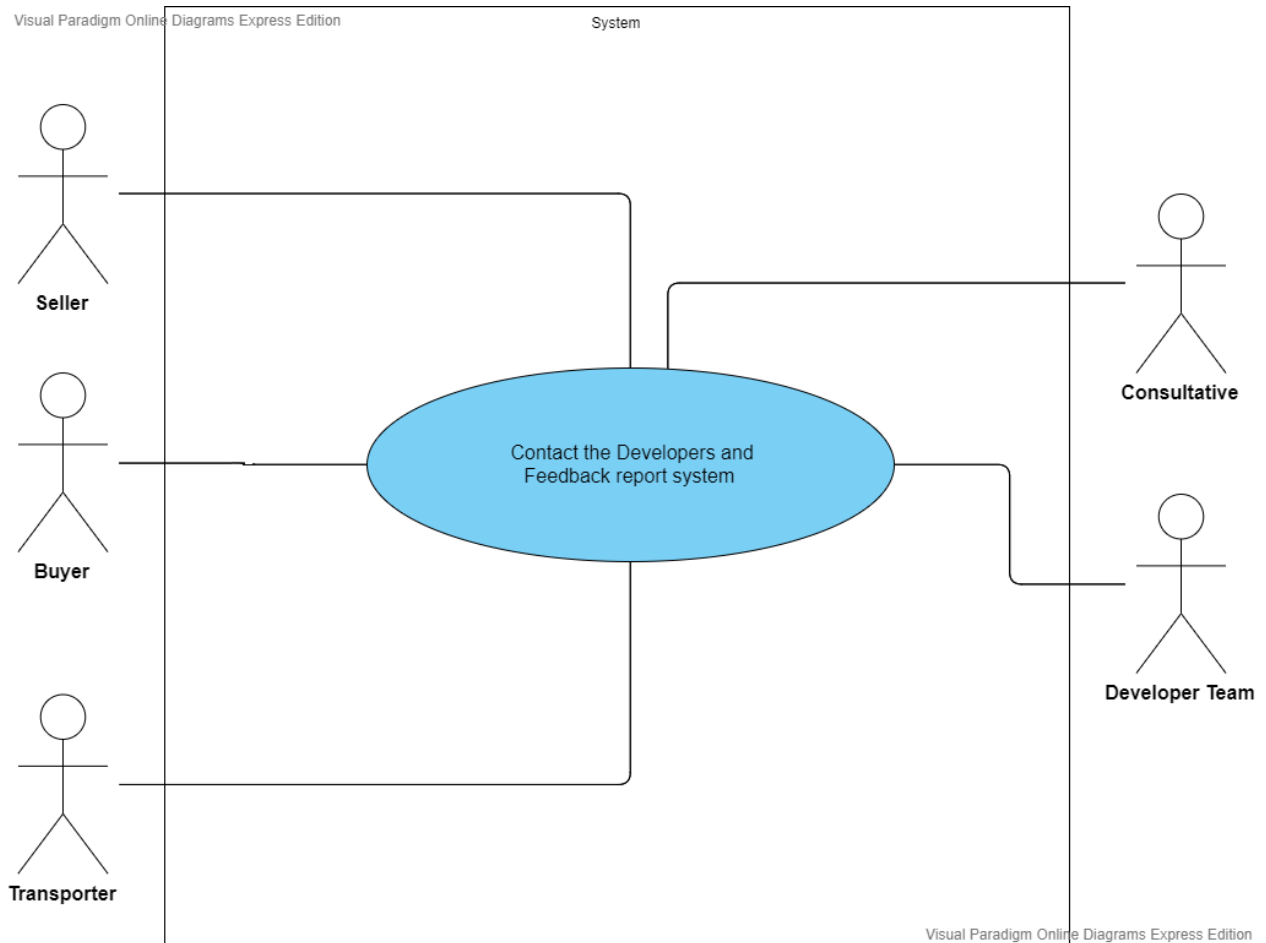### 3.5.1 Description and Priority

This feature can mostly between the all users of the application and the app maintainers. If the users of the application have any problem in using the application such as network quality, any complaints, any inquiries they can easily get connected with the app maintainers through the forum.

	Ratings(0-9)
Priority	8
Benefit to the user	8
Cost	3
Risk	4

3.5.2 Stimulus/Response Sequences

Use case name	Contact the Developers and Feedback report System
Assumption	The actor has been authenticated so the user details already known to the system.
Pre-condition	The user has register to make use of this feature
Initiation	"Use case when starts when." The actor chooses this option
Main flow of event	• Login to user account • Go to the feedback option • Report the issues or appreciations
Exceptional flow of the event	
Post-conditions	The Actor made conversation with maintainers The system displays the suitable UI and login successfully to selected role Save the activities in the system log

	The system displays the suitable UI and login successfully to selected role Save the activities in the system log

System

Seller

Buyer

Transporter

Consultative

Developer Team

Contact the Developers and
Feedback report system

3.5.3 Functional Requirements

- **User Account Database**
  This data base contains all users' personal details with emails and passwords encrypted.

- **product Database**
- **Transaction & Marketing Database**
  System must keep every detail of transactions and store in each product category and every financial occurs.

3.6 System Feature 6

- Online payment

3.6.1 Description and Priority

This feature allows customers to make payment in online.

Customer can use Debit card, Visa card or Credit Card or PayPal service

	Ratings(0-9)
Priority	8
Benefit to the user	8
Cost	3
Risk	4

3.6.2 Stimulus/Response Sequences

Use case name	Online payment System
Assumption	The actor has been authenticated so the user details and payment details already known to the system.
Pre-condition	The user has register to make use of this feature
Initiation	"Use case when starts when" The actor chooses this option
Main flow of event	- User login - Browse cart - The actor selects an option - Use case ask payment details - The actor enters the details - The actor provides payment receipt. - Final Confirmation and checkout
Exceptional flow of the event	

Post-conditions	The transaction is registered in the daily activity log. The system displays the suitable UI and login successfully to selected role Save the activities in the system log
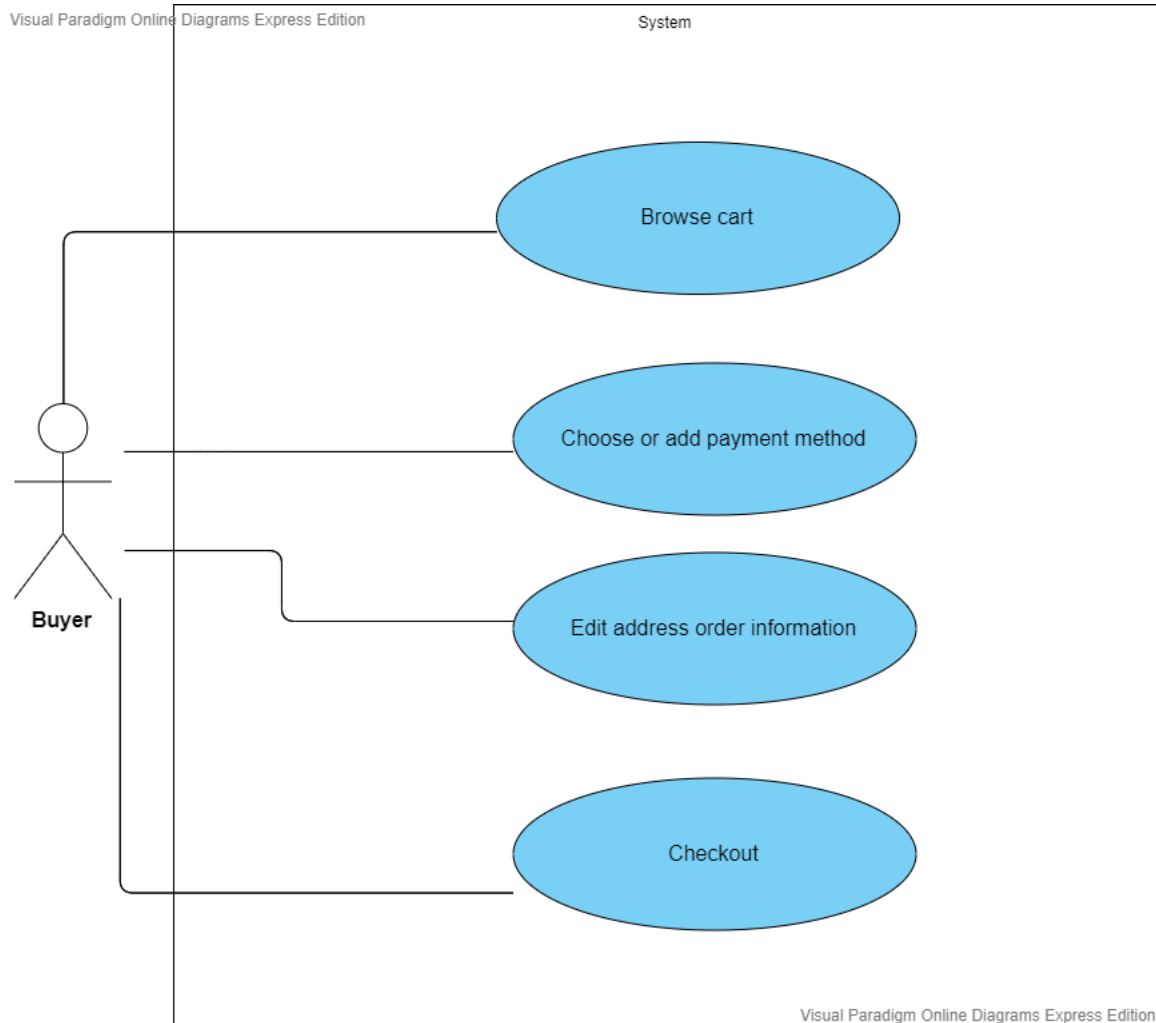
3.6.3 Functional Requirements

- **User Account Database**
  This data base contains all users' personal details with emails and passwords encrypted.

- **Transaction & Marketing Database**
  System must keep every detail of transactions and store in each product category and every financial occurs.

3.7 System Feature 7

- User Account System

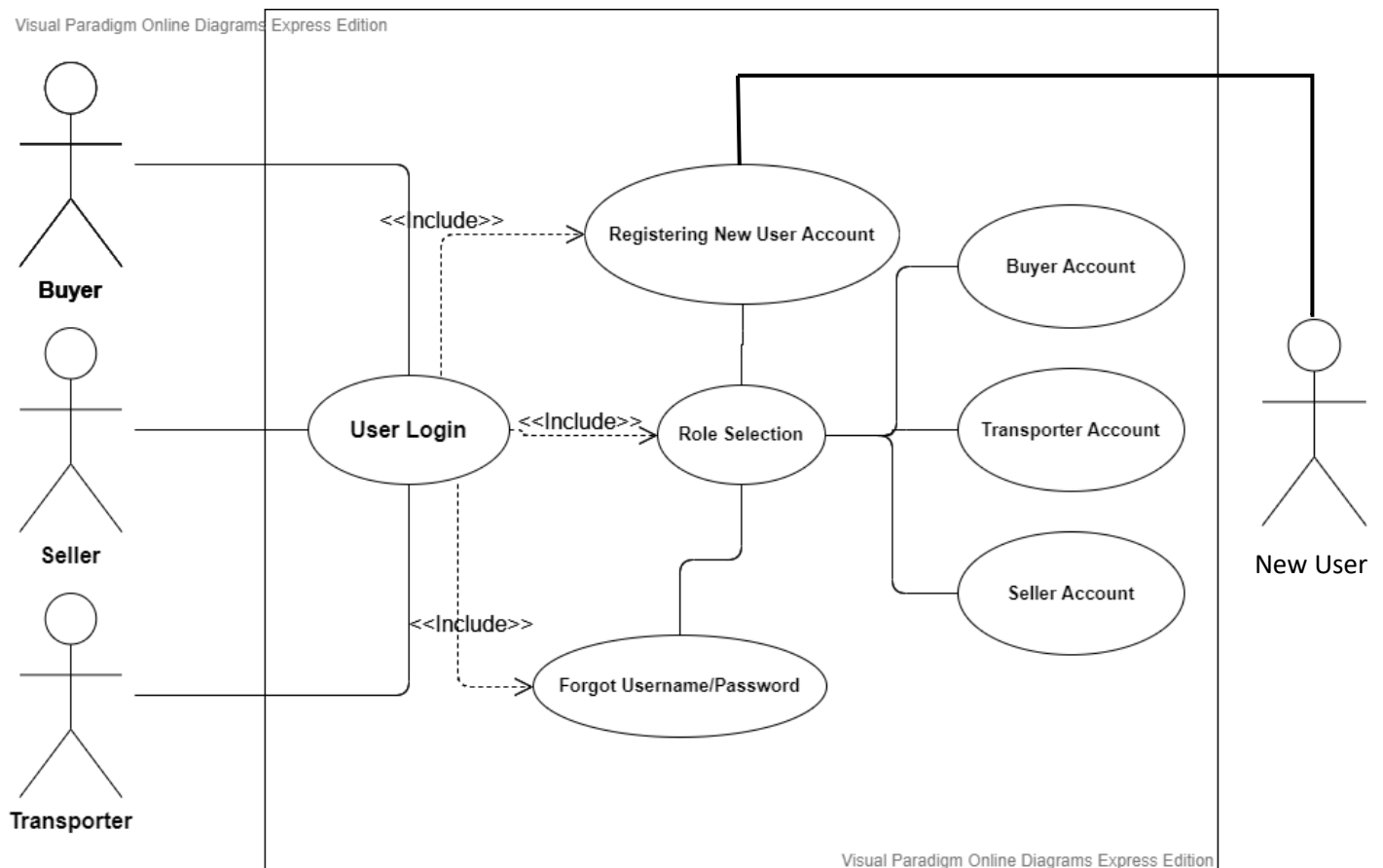### 3.7.1 Description and Priority

This feature allows customers to browse each service correctly. As application is used by main 3 types of customers sellers, buyers, transporter operators. Each account has its own facilities. This is the gateway that divides the users.

	Ratings(0-9)
Priority	9
Benefit to the user	9
Cost	4
Risk	4

3.6.2 Stimulus/Response Sequences

Use case name	User Account System
Assumption	The actor has able to use the desired function of each roles by registering an account with personal details
Pre-condition	The user has to install app and choose a language
Initiation	"Use case when starts when" The actor chooses this option

Main flow of event	1. User must login using email and password or register a basic user account by entering basic details where email and password are compulsory
	     o User must agree to the terms and conditions
	     o And create account
	     o login again
	 2. The system verifies the username and giving the access to choosing a role
	 3. User can select and register with desired roles as Seller, Buyer, Transporter

Exceptional flow of the event	1. Missing username or password • The system displays forget username & password • System generates temporary password and send to email/mobile SMS. • Use case resumes at main flow step 1 2. Invalid username or password • The system displays invalid username or password • The system prompts for correct username & password • Use case resumes at main flow step 1
Post-conditions	The system displays the suitable UI and login successfully to selected role Save the activities in the system log

Visual Paradigm Online Diagrams Express Edition

Visual Paradigm Online Diagrams Express Edition

3.6.3 Functional Requirements

- **User Account Database**
  This data base contains all users' personal details with emails and passwords encrypted.

3.7 System Feature 8

- Economic Analytic System
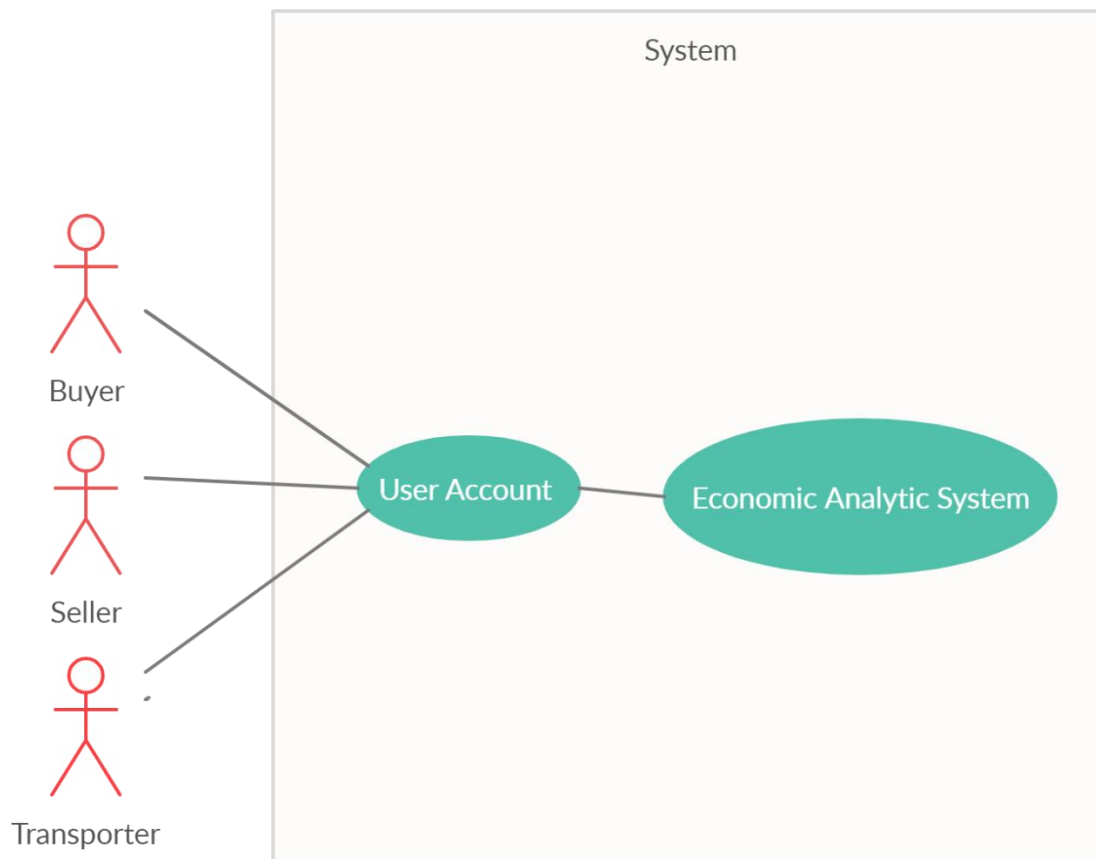
3.7.1 Description and Priority

This feature allows customers to browse each product category and see the market price variations and new trends. This will help the customers to define their product prices and retake decisions.

	Ratings(0-9)
Priority	7
Benefit to the user	9
Cost	3
Risk	4

3.6.2 Stimulus/Response Sequences

Use case name	Economic Analytic System
Assumption	The actors able to browse each product category and see the market price variations and new trends.
Pre-condition	The user has to login to a user account
Initiation	"Use case when starts when" The actor chooses this option

Main flow of event	1. User must login using email and password or register a basic user account by entering basic details where email and password are compulsory 2. The user must browse the features and go to the economic analytic section 3. User can select the desired product category to see the information.

Exceptional flow of the event	3. Missing username or password
	    • The system displays forget username & password
	    • System generates temporary password and send to email/mobile SMS.
	    • Use case resumes at main flow step 1
	
	4. Invalid category of products
	    • The system displays invalid category

Post-conditions	The system displays the suitable UI and login successfully to selected role Save the activities in the system log

3.6.3 Functional Requirements

- **Transaction & Marketing Database**
  System must keep every detail of transactions and store in each product category and every financial occurs.

- **Economic Algorithms**

  Using every details of transactions and use algorithms to calculate price evaluations and present it in graphs

3.7 System Feature 9

- Selling and Buying System

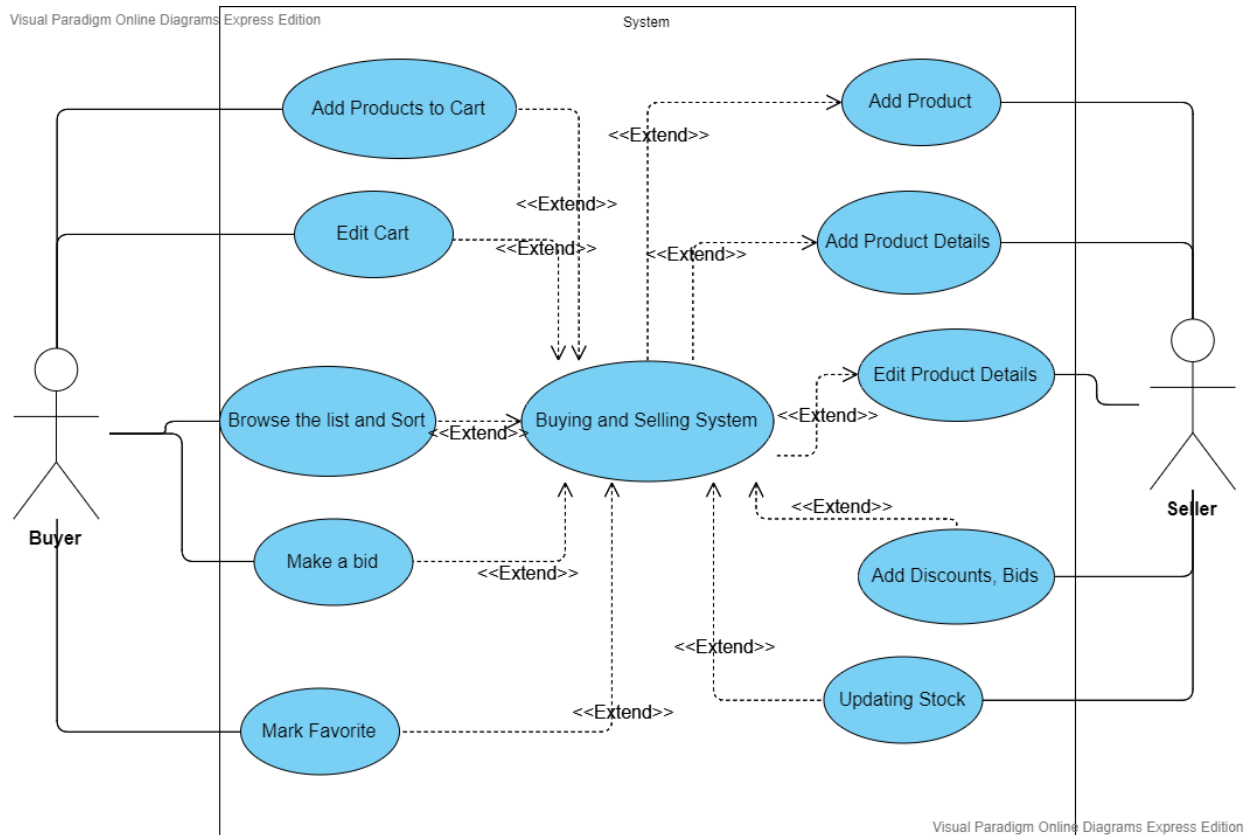### 3.7.1 Description and Priority

This feature allows customers to browse each product category and see the market price variations and add to the desired amount to the cart and go for payment option. And the sellers are able to manage their stocks with prices, bids, discounts and market their sales.

	Ratings(0-9)
Priority	9
Benefit to the user	9
Cost	3
Risk	5

3.6.2 Stimulus/Response Sequences

Use case name	Selling and Buying System
Assumption	The actors able to browse each product category and add to cart and list down your stocks with correct details with measuring units.
Pre-condition	The user has to login to a user account and to a desired role

Initiation	"Use case when starts when" The actor chooses this option

Main flow of event	1. User must login using email and password or register a basic user account by entering basic details where email and password are compulsory
	2. Then users must register to a desired role. Users can select Buyer role
	    a. The user must browse the features and go to Market section.
	    b. User can select the desired product category to see the product list
	    c. User can select the desired product sorting option in category to see the product list clearly.
	    d. User can select place a bid option
	    e. User can bookmark favourite sellers
	    f. Users can cancel orders
	3. Users can select seller role
	    a. Then users are able to upload their product information with pictures, delivery status, remaining stock.
	    b. Users can change prices with discount and stock status
	    c. Users can add bid option to pre order facilitates.
	    d. Users can cancel orders

Exceptional flow of the event	1. Missing username or password
	    • The system displays forget username & password
	    • System generates temporary password and send to email/mobile SMS.
	    • Use case resumes at main flow step 1
	
	2. Invalid category of products
	    • The system displays invalid category

Post-conditions	The system displays the suitable UI and login successfully to selected role Save the activities in the system log

System

3.6.3 Functional Requirements

- **User Account Database**
- **Product Database**
- **Transaction & Marketing Database**
  System must keep every detail of transactions and store in each product category and every financial occurs.

- **Economic Algorithms**

  Using every details of transactions and use algorithms to calculate price evaluations and present it in graphs

4. External Interface Requirements

4.1 User Interfaces

Agri Market

Choose a Language

- Sinhala
- Tamil
- English

Login

Enter Your Details

E-Mail

Password

☐ Remember me

Login

WELCOME

Agri Market

Register

Login

Register

Enter Your Details

First Name

First Name

Gender

Address Line 1

Address Line 1

E - mail

Password

Retype Password

Create Account

- This application contains all the languages.

- So, there will be no difficulty in usage in all the island in different cultures.

- Everyone has to create a user account in order to use the application by entering basic details.

Market

Cucumber 100 Pcs Japanese mini cucumber vegetable for home NO-GMO ...
LKR 110.63
LKR 290.17 -62%
Free Delivery
5.0 ★ 452 Sold

Vegetable Potted Tomato Dwarf Edible Balcony Garden-Plant Sweet Big-...
LKR 43.53
LKR 108.82 -60%
Delivery LKR 400
4.8 ★ 1254 Sold

Sale! 100 Pcs/bag Giant Tomato plants Organic Heirloom plants Vegetables Per...
LKR 38.09
LKR 179.54 -79%
Free Delivery
4.9 ★ 2186 Sold

Bonsai Potted-Plants Chili Vegetable-Fruit DIY Home Garden Long Gaint Red for He...
LKR 38.09
LKR 179.54 -79%
Delivery LKR 540
5.0 ★ 747 Sold

Fullstar vegetable cutter Kitchen accessories Mandoline Slicer Fruit Cutte...

Find Location

Search Google Maps

See travel times, traffic and nearby places

Agri Guidance

තවාන් පාත්ති සැකසීම

මේ සඳහා තෝරා ගත යුත්තේ තරමක සෙවනක් ඇති ස්ථානයකි. වැලි, මඩුවට පස්, කාබනික පොහොර, සහ දහයියා අනුරු 2:2:2:1 අනුපාතයට මිශ්‍රකර කර සෙ.මී. 10 ක පමණ උස මීටර් 01 පළල තවාන් පාත්ති සකස් කර ගන්න.

මෙම පාත්ති වලට වර්ග මීටරයකට සාන්ද්‍රතය සුපර් පොස්පේට් (TSP) ග්‍රෑම් 450 – 500 ක් පමණ මිශ්‍ර කළ යුතුය.මෙසේ සාදගත් පාත්ති වල සෙන්ටි මීටර් 5 – 6 පමණ ගැඹුරට සෙන්ටි මීටර් 10 පරතරයට කුඩා කාණු සාද ගත යුතුය.

කැඩලි තවාන් කිරීම

ප්‍රතිකාර කර ගත් අන්නාසි කඳන් කැඩලි කැපුම් මුහුණත යටට සිටින සේ තිරස් ලෙස තැන්පත් කර හොඳින් වසන්න. ඉන්පසු ජල සම්පාදනය කර තරමක සෙවනක් යටතේ පවත්වා ගැනීම අවශ්‍ය වේ.

Agri Market

- In the market UI, users can scroll and browse the products using the list. All the essential details like price, delivery fees, seller are displayed in the product description.
- In the Delivery location find UI, users can take a look at map position of transport operator
- In the consultancy service, users can scroll and browse more detailed guidance service to educate themselves about modern trends. This is a very easy UI.

My Account

App Settings   Edit Profile Details

Profile Picture

User Name

Access Roles

Transporter

Access

Seller

Access

Buyer

Access

Access Seller Account

Enter Your Details

First Name

Last Name

Gender

Address Line 1

Address Line 2

ID Number

Password

Seller Type

Access

Access Buyer Account

Enter Your Details

First Name

Last Name

Gender

Address Line 1

Address Line 2

ID Number

Password

☐ Agree Terms and Conditions

Access

Access Transporter Account

Enter Your Details

First Name

Last Name

Gender

Address Line 1

Address Line 2

ID Number

Password

Vehicle Capacity

Vehicle ID

Access

After Account creation, users can access their desired roles with functions

Product add screen for sellers

Seller Account

Add Product to Sale

Description

Unit Price

Unit

Stocks left

Category

Expire date

Upload Picture   +

☐ Agree Terms and Conditions

Add

My Cart

Product Picture	Product Description
	Delivery Fees Free/Paid
	Units · Price

Product Picture	Product Description
	Delivery Fees Free/Paid
	Units · Price

Product Picture	Product Description
	Delivery Fees Free/Paid
	Units · Price

Total   Rs $$$$.$$

Proceed To Checkout

Go Back

Buyers shopping cart where they can add products to checkout Cart

Chat System

Profile Picture

User Name
New Massage

Profile Picture

User Name
New Massage

Profile Picture

User Name
New Massage

4.9/5

★★★★★

Rate Now
☐ Stars

★★★★★ —— 10
★★★★★ - 1
★★★★★ 0
★★★★★ 0
★★★★★ — 2

User Review System

Add Payment Card

Enter Your Details

Name

Card Code

CSC

Expire Date

Address

Password

Add

Add Bank Account

Enter Your Details

Name

Account Number

Bank

Branch

Address

Password

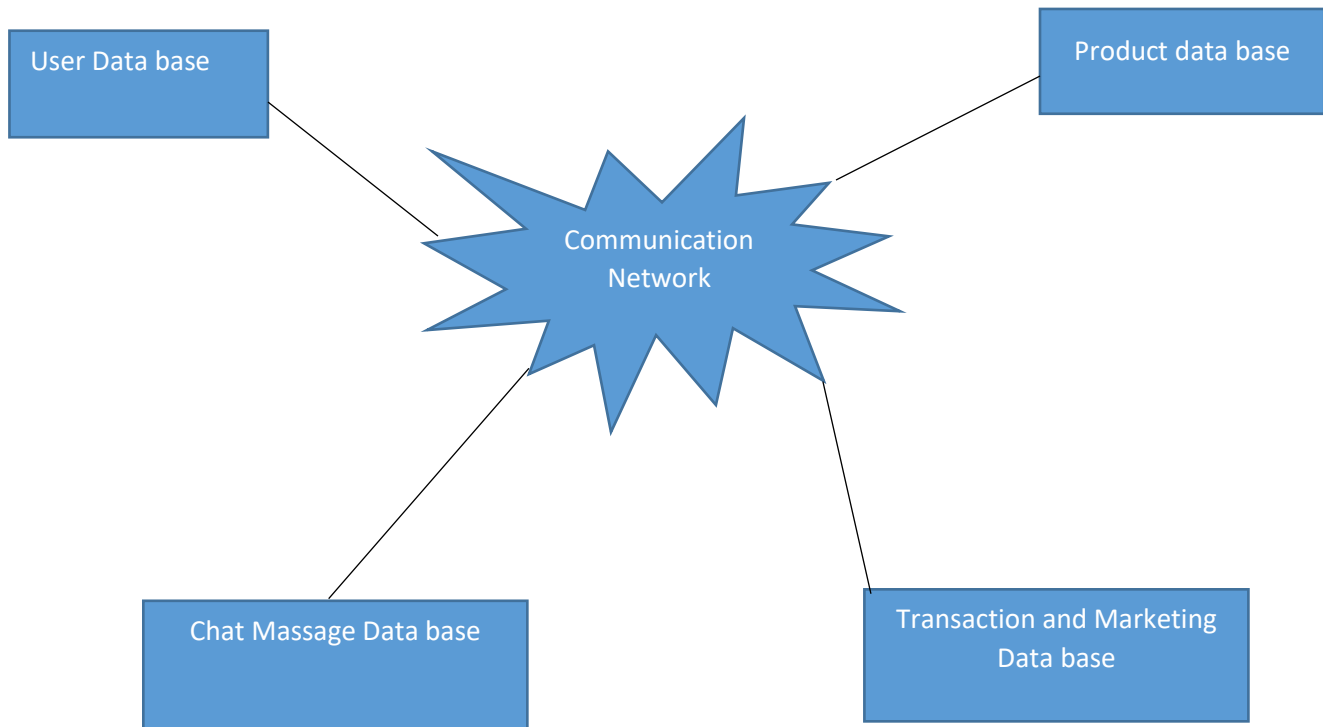**Add**

4.2 Hardware Interfaces

GPS Location for Transport Operators

Requirements

Smartphone with GPS Sensor
Agri Mart app

4.3 Software Interfaces

Client database implies that a single application should be able to operate transparently on data that is spread across a variety of different databases and connected by a communication network as shown in below figure.

User Data base

Product data base

Communication Network

Chat Massage Data base

Transaction and Marketing Data base

4.4 Communications Interfaces

The term client/server refers primarily to an architecture or logical division of responsibilities, the client is the application (also known as the front-end), and the server is the DBMS (also known as the back-end).
A client/server system is a distributed system in which,

- Some sites are client sites and others are server sites.
- All the data resides at the server sites.
- All applications execute at the client sites.

5. Other Nonfunctional Requirements

When we creating a mobile application there should be some minimum criteria that should be taken care for smooth performance of the application. This is where we using Nonfunctional Requirements.

Basically, nonfunctional requirements can be defined as requirement that specifies criteria that can be used to judge the operation of a system, rather than specific behaviors.

5.1 Performance Requirements

- The performance of the Application based on its responsive time. Responsive time means time that application takes to complete the given task.
- As an example, when application is made to start up it shouldn't take more than 3 second to load initial screen.
- And switching between menus also should be less time with low time animations.
- Must be responsive to input and outputs, UI should give smooth experience to user by loading animations
- Must have a good usability with easy flow of windows and home, back/previous window options
- When performance fail and system crashes, system must handle the crash and error report system
- Must fit to any device screen ratios over minimum requirements
- Availability must be high with using correct popular Distribution platform like google play
- Must use the resources according to system capacity
- Must save data before immediate close and switch between apps.
- Must handle packet lose and server response time

5.2 Safety Requirements

All the app data should be secured and be encrypted with minimum needs so that it's protected from outside environment also from internal attack.

Keeping standby developer team with user error feedback responses.

Performing security checks weekly or frequently.

5.3 Security Requirements

Users info like personal details, payment methods should be protected and should not be accessible to unauthorized personals and also there should not be a way for user to manipulate the application for their gain or bypass necessary means.

Must use network-based security strategies to prevent unauthorized accesses.

Asking for correct minimum permissions from users' device.

Using internal storages for critical data storage and encrypt them.

5.4 Software Quality Attributes

Reliability

The system provides storage of all databases on redundant computers with automatic switchover. The reliability of the overall program depends on the reliability of the separate components. The main pillar of reliability of the system is the backup of the database which is continuously maintained and updated to reflect the most recent changes. Thus, the overall stability of the system depends on the stability of container and its underlying operating system

Availability

The system should be available at all times, meaning the user can access it using web browser, only restricted by the down time of the server on which the system runs. In case of a of a hardware failure or database corruption, a replacement page will be shown. Also, in case of a hardware failure or database corruption, backups of the database should be retrieved from the server and saved by the administrator. Then the service will be restarted. It means 24 X 7 availability

Maintainability

A commercial database is used for maintaining the database and the application server takes care of the site. In case of a failure, a re-initialization of the program will be done. Also, the software design is being done with modularity in mind so that maintainability can be done efficiently.

Portability

The application is HTML and scripting language based. So, the end-user part is fully portable and any system using any web browser should be able to use the features of the system, including any hardware platform that is available or will be available in the future. An end-user is using this system on any OS; either it is Windows or Linux. The system shall run on PC, Laptops, and PDA etc.

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