A MOBILE PHONE BASED AGRO MARKET MONITORING SYSTEM

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APPROVAL

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DECLARATION

We hereby declare that, this project has been done by us under the supervision of **Dr. Fizar Ahmed, Associate Professor, and Department of CSE,** Daffodil International University. We also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

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ABSTRACT

Our main goal is to create an app that will inform users about the prices of products in the market. The Agro Market Monitoring System is an application that will break down markets into divisions, districts, and upazilas. There will be the name of the upazila and the market price for products. When there is an increase or decrease in product prices, the application will let users know about it. Users benefit from this app by being able to track prices for goods and see recent data for all products in the market at one time. With this app, users can see the past 30 days' product prices so they can make better choices for their lives. Additionally, this information can be helpful in saving time. This is a valuable tool for users, so it's great that it's available in this app.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

Agro Market Monitoring System is a mobile base project. This is an online application. Through this app will be informed about the prices of various products in the market. Like rice, dal, eggs and onions, etc. By using this application on a smartphone, we can find product prices quickly and easily. Nowadays all people are using smartphones. Through this app, users can know the price of products for the last 30 days. Users can also check product prices on smartphones and users can go to the market.

1.2 Motivation

Everyone at the moment is very aware of their time. They wanted to avoid wasting their time. Going to the market to look at the prices of the goods is challenging. Customers can therefore use this app while at home to easily learn the product's market pricing. We also realized that it was impossible to accurately value all markets' prices. We are inspired to complete this project as a result. Where users can use this application for markets. The app's users will be able to keep track of market prices for goods. Based on all of this, we developed this application.

1.3 Objective

The main objective of our project is to provide assistance in evaluating the price of products in various markets. We can easily go to that market and buy according to our demand by looking at the price from this app.
Most generally, these are referred to as the following specific objectives:
Users save time, don't have to put in extra effort, and assist in determining a fair price for the product.

1.4 Expected Outcome

- Easy to find the price of a product at home.
- Know the price of all market products.
- Help to find accurate prices.
- Regular product prices are updated in this application.
- It will help users and save them time.
- When product price increases or decreases, notify all users.

1.5 Report Layout

We have arranged our report into 7 chapters. A summary of what has been discussed in each chapter is given below:

Chapter 1: In this chapter, we discussed the Motivation, Objectives, and Expected Outcomes of our project.
Chapter 2: In this chapter, we discussed the Background of our project.
Chapter 3: In this chapter, we discussed the Design Specification of our project.
Chapter 4: In this chapter, we discussed the Development management of our project.
Chapter 5: In this chapter, we discussed the Requirement Specification of our project.
Chapter 6: In this chapter, we discussed the Implementation and testing of our project.
Chapter 7: In this chapter, we discussed the Conclusion and future development of our project.

CHAPTER 2

BACKGROUND

2.1 Introduction

This application is online-based. First register in this app and then log in. Users can see their details and edit the information if they want. Only those who register and log in can access the app.

2.2 Similar works

There are many such apps. Like Chaaldal, Bazar Mama Bashundhara.

Chaldal: The product is sold through this mobile application. But no idea is given about the price of the product in the general market. This app is an e-commerce based app.

Bazar Mama Bashundhara: This application also sold the products. There is no registration page and login page. This app also is an e-commerce based app.

2.3 Comparative Analysis

With our app you can see the current price of the product in any market. But cannot purchase any product through our app.

Table: 2.3.Comparative Analysis

	Chaldal	Bazar mama bashundhara	Agro Market Monitoring System
1. Register system	No	No	Yes
2. Login system	Yes	No	Yes
3. Date wise product price	No	No	Yes
4. Buy product	Yes	Yes	No

2.4 Scope of the problem

It is not possible for any human to save the prices of market products manually. If someone writes it down on paper it will get lost. Our app stores the previous 30 days' data. If anyone wants to know the previous price of the products then they can easily know it.

There is an option to see the price of the product by date-wise. Another option is to see the price of each product based on the market. If one clicks on a market it will show the 30 days price of that product.

2.5 Challenges

- In This app, cannot keep the product price for more than 30 days.
- Users cannot buy and sell any product.
- For now, some products have been working on this app.
- At this time, markets of all divisions have not been added.

CHAPTER 3

DESIGN SPECIFICATION

3.1 Front-end Design

Front-end design is very important for any mobile or web application. Users can see the front-end design. Front-end design must be user-friendly. Users don't want to use that app if it is not user-friendly. So developers try to make the front end more attractive. We used dart language for front-end design. Now Dart language is a very popular language.

3.2 Back-end Design

Back-end structure can only be seen by developers, not by users. This is very important for any project. It stores all the data of the project and shows the front according to the user's demand.We use the firebase database at the back-end. A database is a place where we kept data digitally on a computer system. Where data is quickly accessed, changed, updated, and controlled.

3.3 Design Requirements

Before creating an app, developers need to create a design. This design must be user-friendly for consumers to use it without difficulty. We have worked on two designs to simplify the app.

- Use case diagram and
- State diagram

3.3.1 Use Case Diagram

With the help of this diagram, we have shown how clients and administrators contribute to the project.

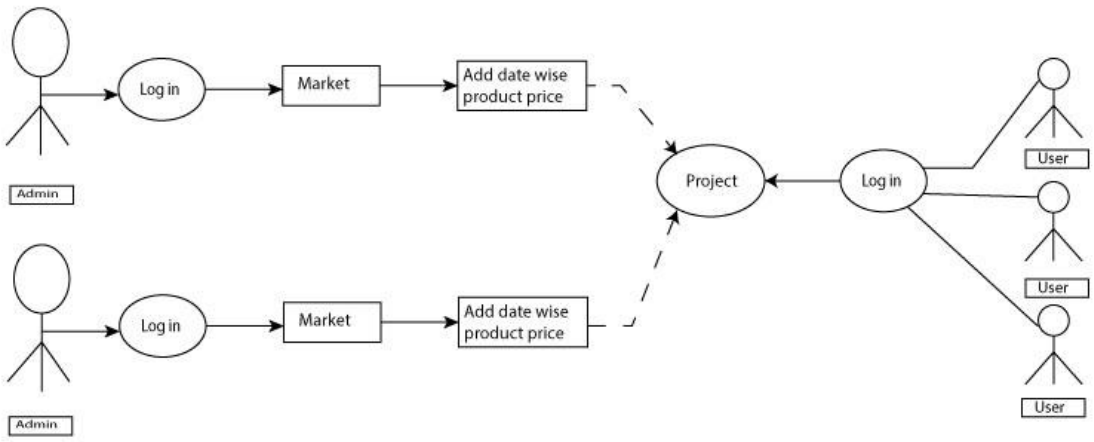

Figure: 1 Use Case Diagram

3.3.2 State Diagram

This figure indicates how a user may operate it.

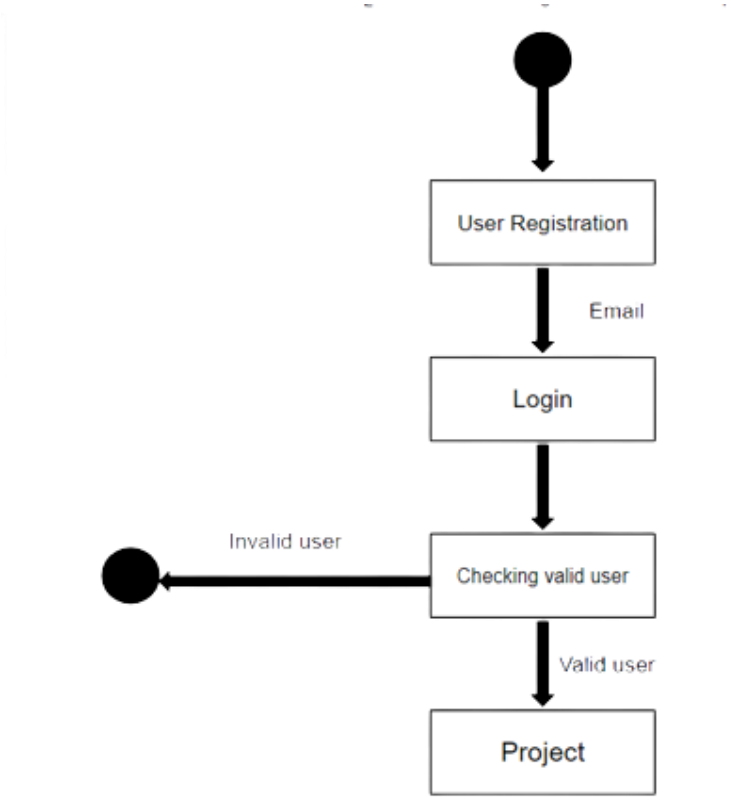

Figure: 2 State Diagram

CHAPTER 4

DEVELOPMENT MANAGEMENT

4.1 Development Planning And Scheduling

It is important for a developer to maintain planning and schedule, otherwise the project cannot be completed on time. Plans and schedules must be maintained to complete work on time.

4.2 Time Management

Shown how we manage our project time:

Table: 4.2.2 Time management

Arranging	3 weeks
Layout	6 weeks
Coding	3 months
Evaluation and Utilization	1 month

4.3 Lifecycle of Software Development

The six stages of the software development lifecycle are as follows:

1. Analysis
2. Design
3. Implementation
4. Testing
5. Release
6. Maintenance

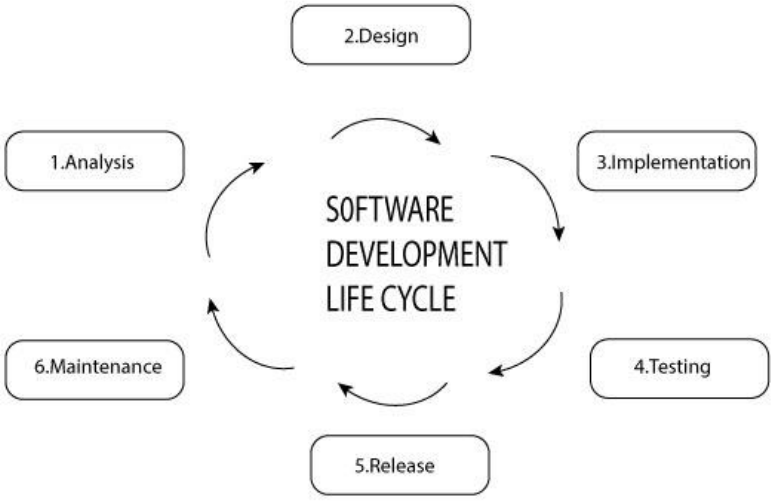

Figure: 3 Lifecycle of Software Development

CHAPTER 5

REQUIREMENT SPECIFICATION

5.1 Requirement Collection And Evaluation

Our Agro Market Monitoring System Project is based on the product price in the market. We had to obtain a variety of market-related data. We had to go to various locations, operate at various locations, and use various online data in order to obtain this information. The following are the main concerns with our data collection:

5.1.1 Marketplace

Agro market being the main focus of our project, we need all markets to know about them. Where we can easily get all the prices of the products.

5.1.2 Admin

Our project will have an area base admin who updates the product's price daily.

5.1.3 Products

We include these types of products whose prices constantly increase and decrease. Such as Rice, Egg, Onion, Garlic, Ginger, etc.

5.2 Hardware Requirement

Processor: Core i5 processor.

Ram: 16 GB

Hard Disk: 1 TB

SSD: 500 GB

5.3 Software Requirement

Operating System: Windows 10

Software: Android Studio.

Language: Dart.

Database: Firebase

Framework: Android.

Browser: Google Chrome.

CHAPTER 6

IMPLEMENTATION AND TESTING

6.1 Database Implementation

We save our data and information using the Firebase database. It is a well-known database for data storage. Data between users is saved and updated according to it. Additionally, we registered users using Gmail and passwords and submitted other data to the Firebase database.

6.2 Description of the Database Implementation

We talked about the system's operation here.

6.2.1 Firebase Verification Page

The user data here will be stored in the Firebase database on the login page. Only those who have registered may access the system.

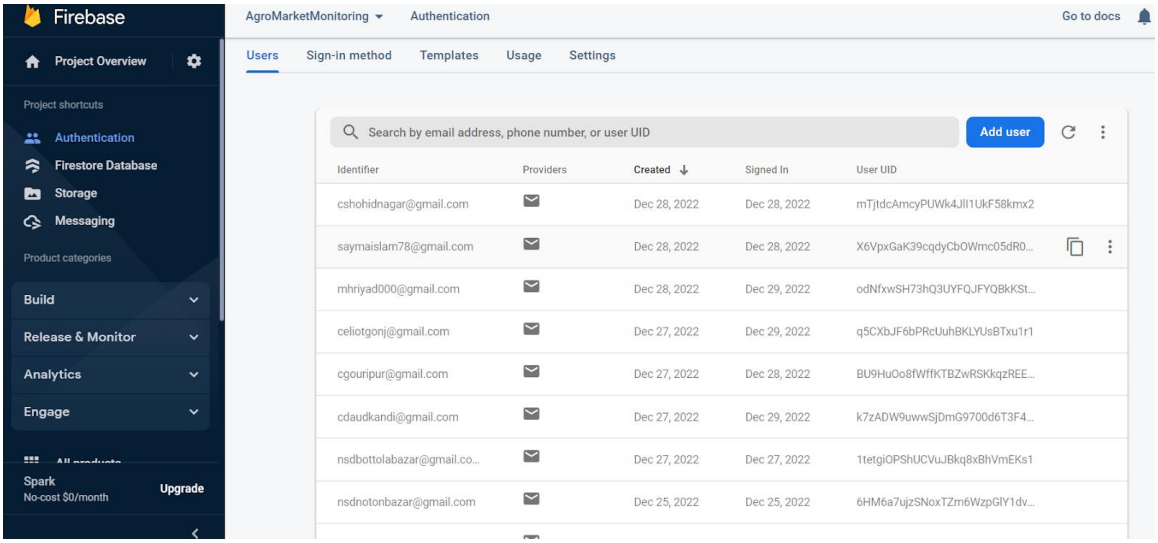

Figure:4 Verification Page

6.2.2 Firestore Database

A collection is created here to hold user data.

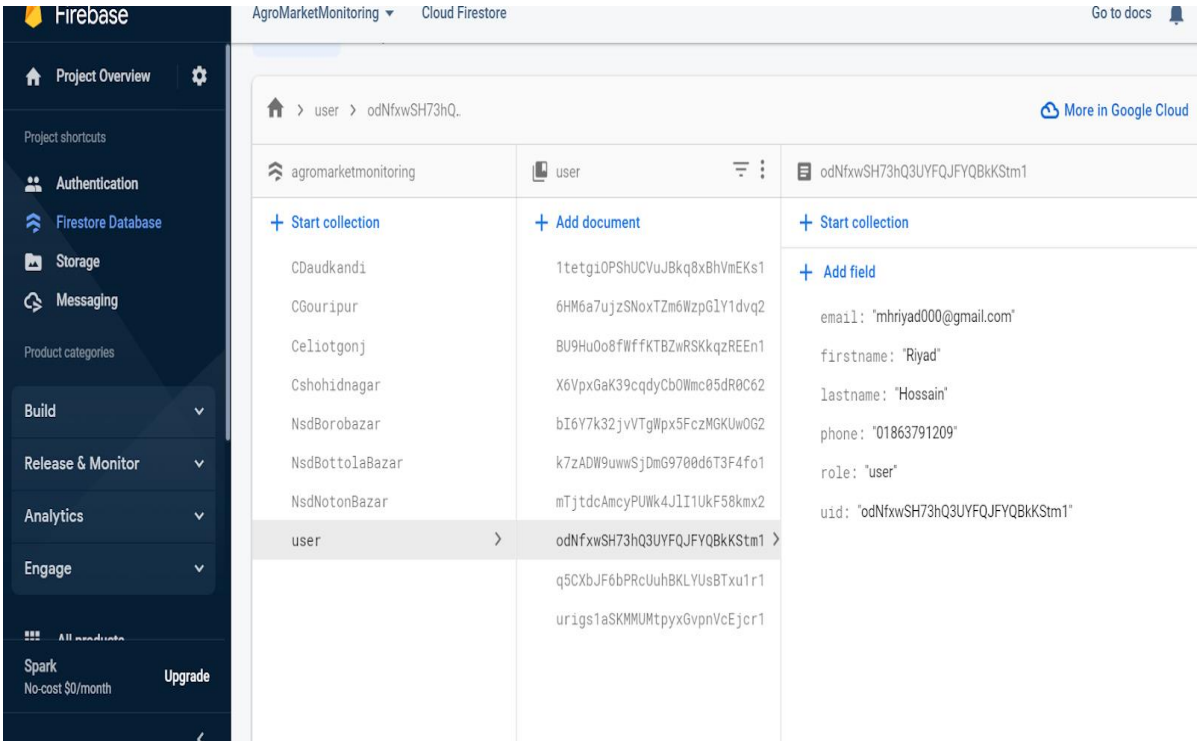

Figure:5 Firestore Database Page

6.2.3 Firestore Database

Create some collections in the Firestore for the admin for various markets.

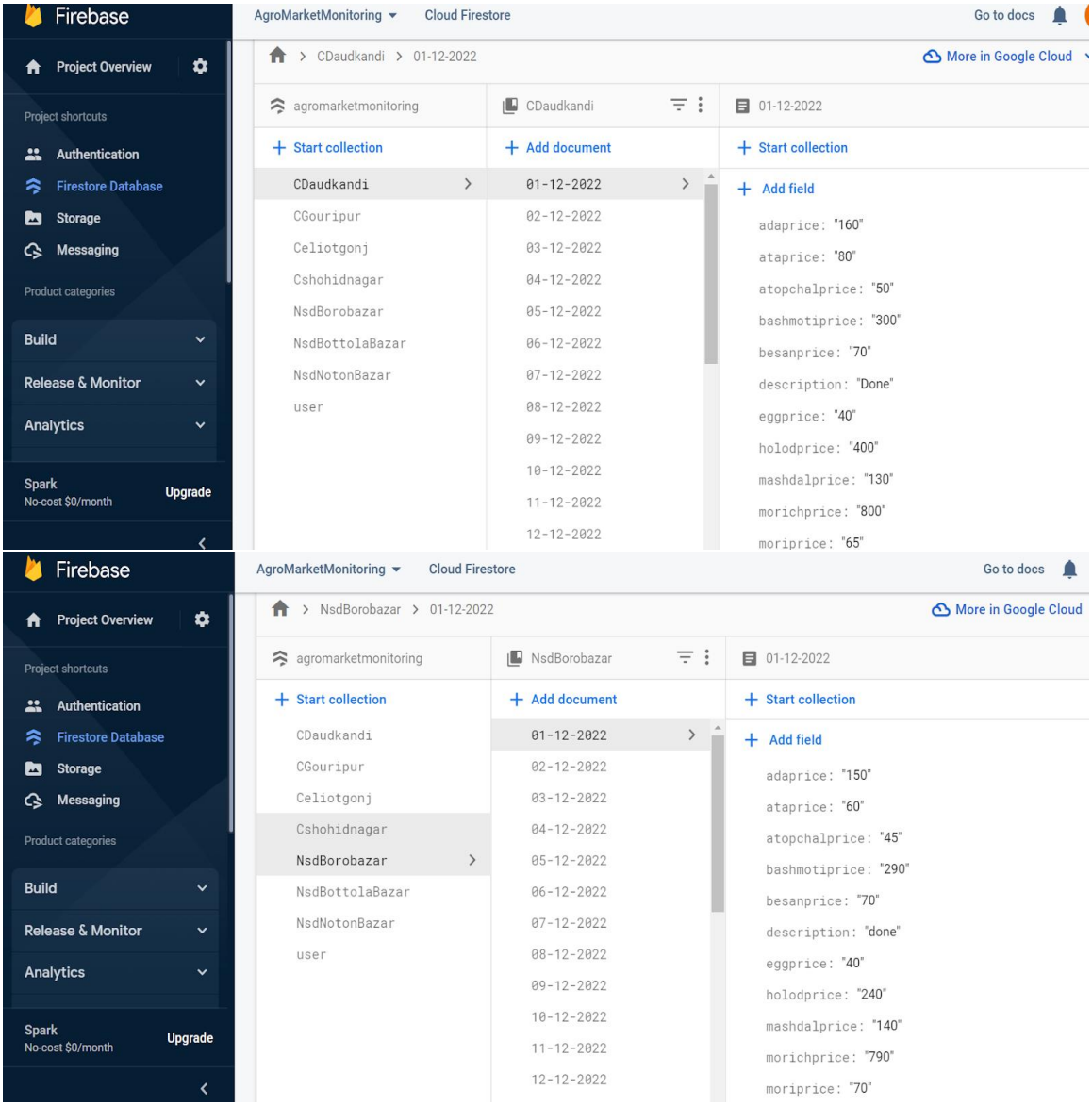

Figure: 6 Firestore Database Page

6.3 Testing Implementation of Frontend Design

There are different attributes and possibilities in our project for the agro market monitoring system. To evaluate our project, we must verify that all of the functions and settings in our application are active. We put the choices to the test and evaluated the outcomes to what was planned.

Navigation bar:

-Follow Us

-Contact Us

-Call

-Mail

-Share

-Log out

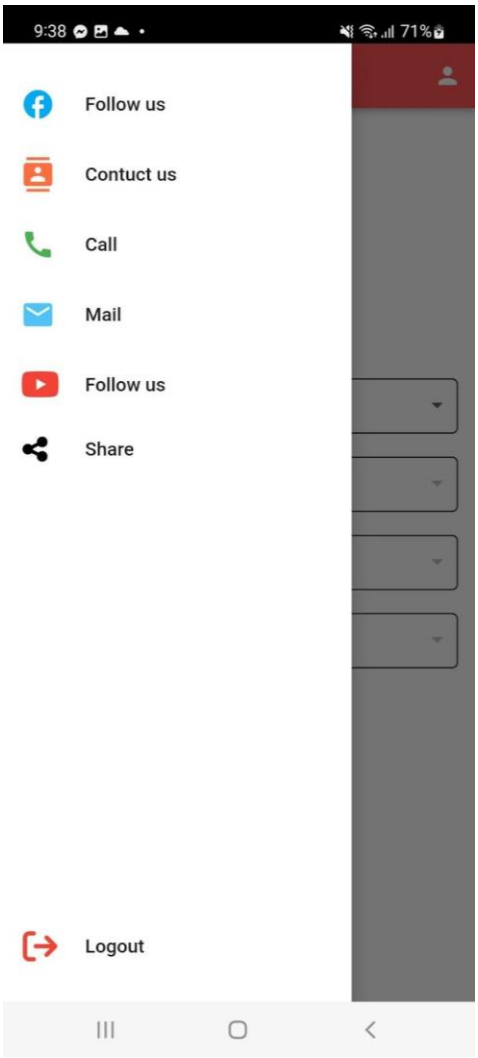

Figure: 7 Navigation Bar

Follow Us: This option allows users to follow us.

Contact Us: In this option the user contacts us.

Log Out: This option allows users to log out.

Share: This option allows users to share this application with others.

6.3.1. Users Pages

User views of our application. Below are details:

6.3.1.1 Sign Up Page

Every user needs to register with Email before using this app:

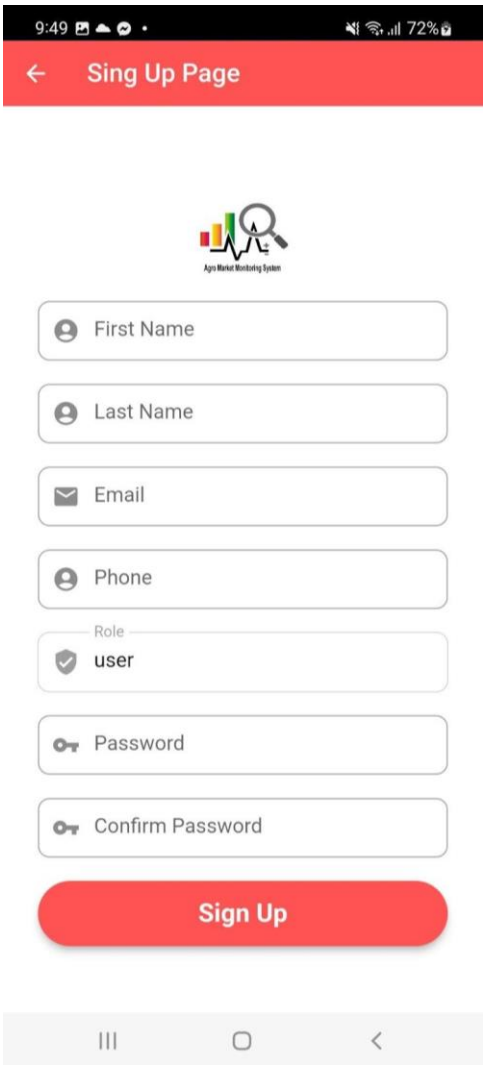

Figure:8 Sign Up Page

6.3.1.2 Login Page

Every user needs to log in with the Email and password which is registered before using this app.

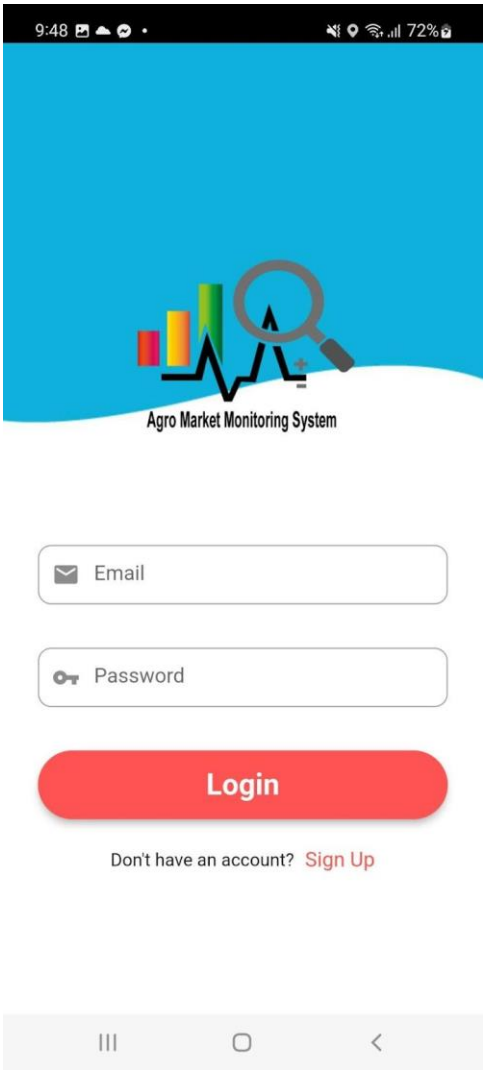

Figure:9 Login Page

6.3.1.3 User Details Page

Users can view their information and edit some of their information:

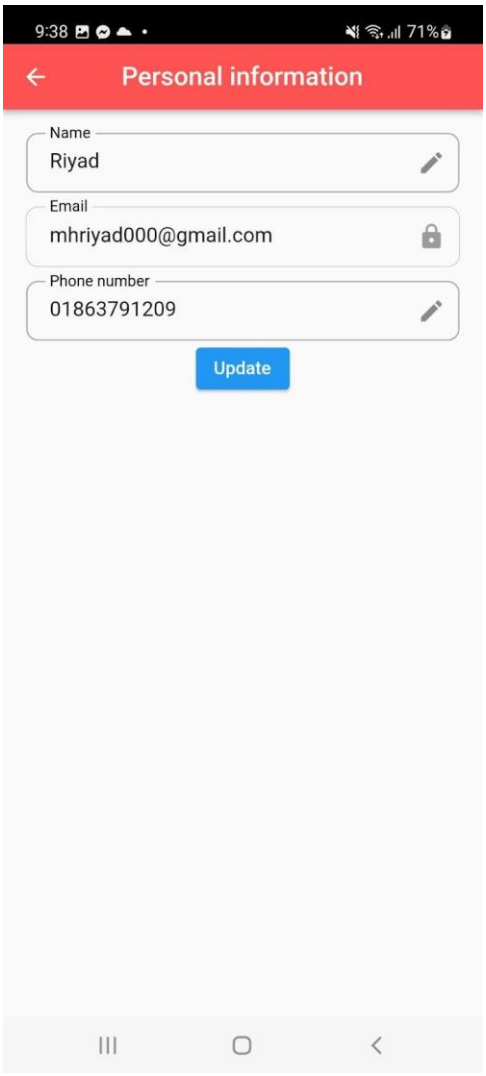

Figure:10 User Details Page

6.3.1.4 Home Page

On this page users can select division, district, upazila, and market.

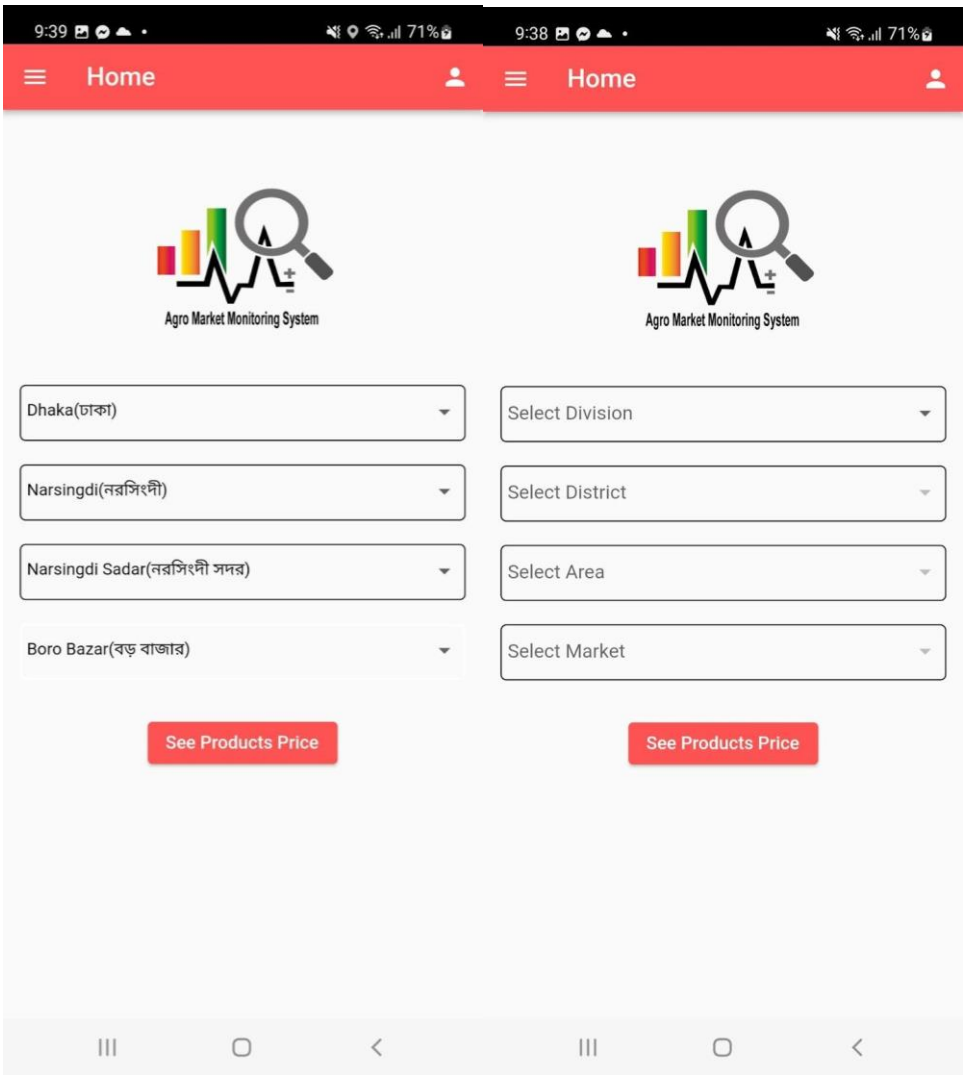

Figure:11 Home page

6.3.1.5 Date Wise Product Price Page

When the user selects the date then all products prices will show date-wise:

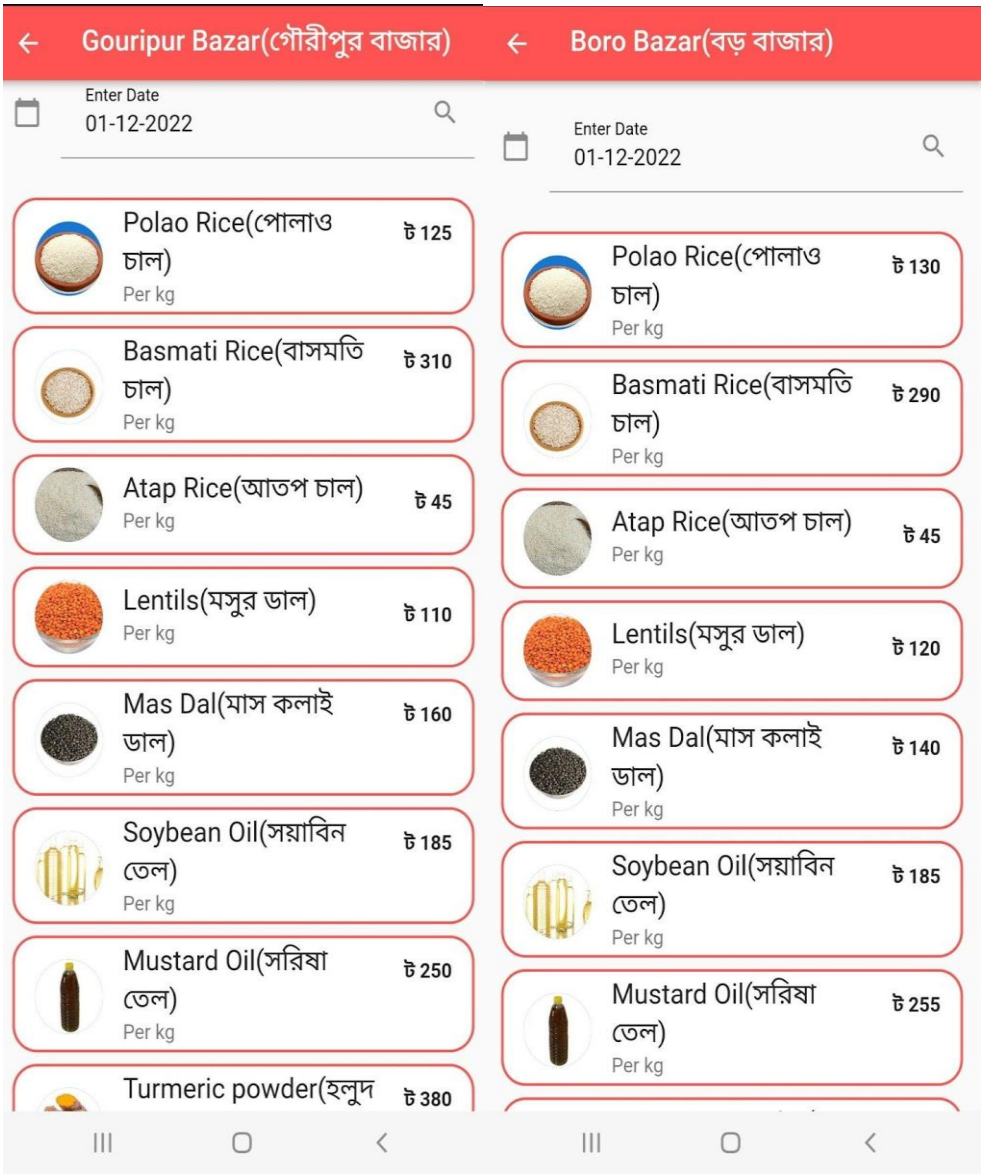

Figure:12 Date Wise all products

6.3.1.6 Individual Product Prices Page

Users can know the price of a product in all the markets of his area:

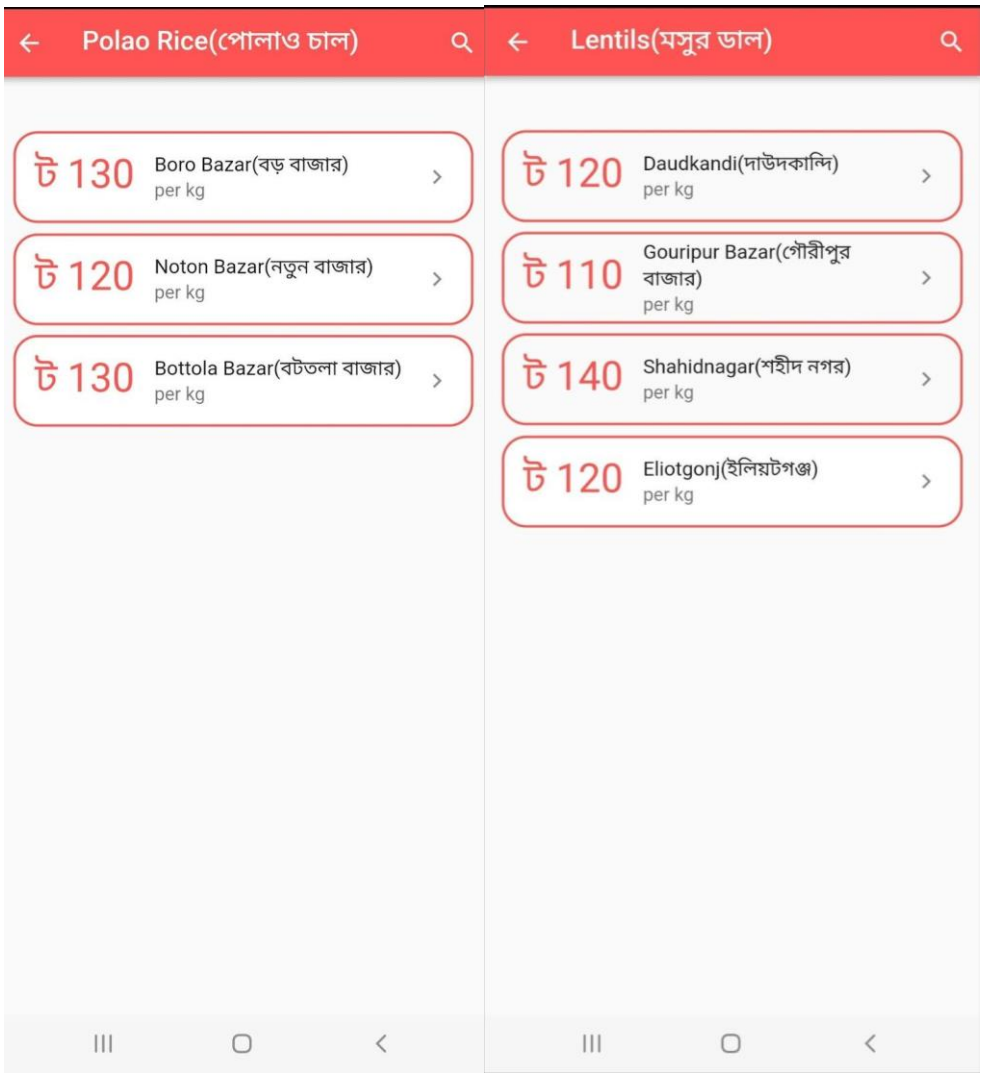

Figure:13 Individual Product Prices Page

6.3.1.7 Bazar-Based Product Price:

When the user clicks on a market, show the last 30 days' price of that product:

Figure:14 Bazar based price Page

6.3.2 Admin

Only Admin can access this page. Admin can contribute data into Firebase through this page.

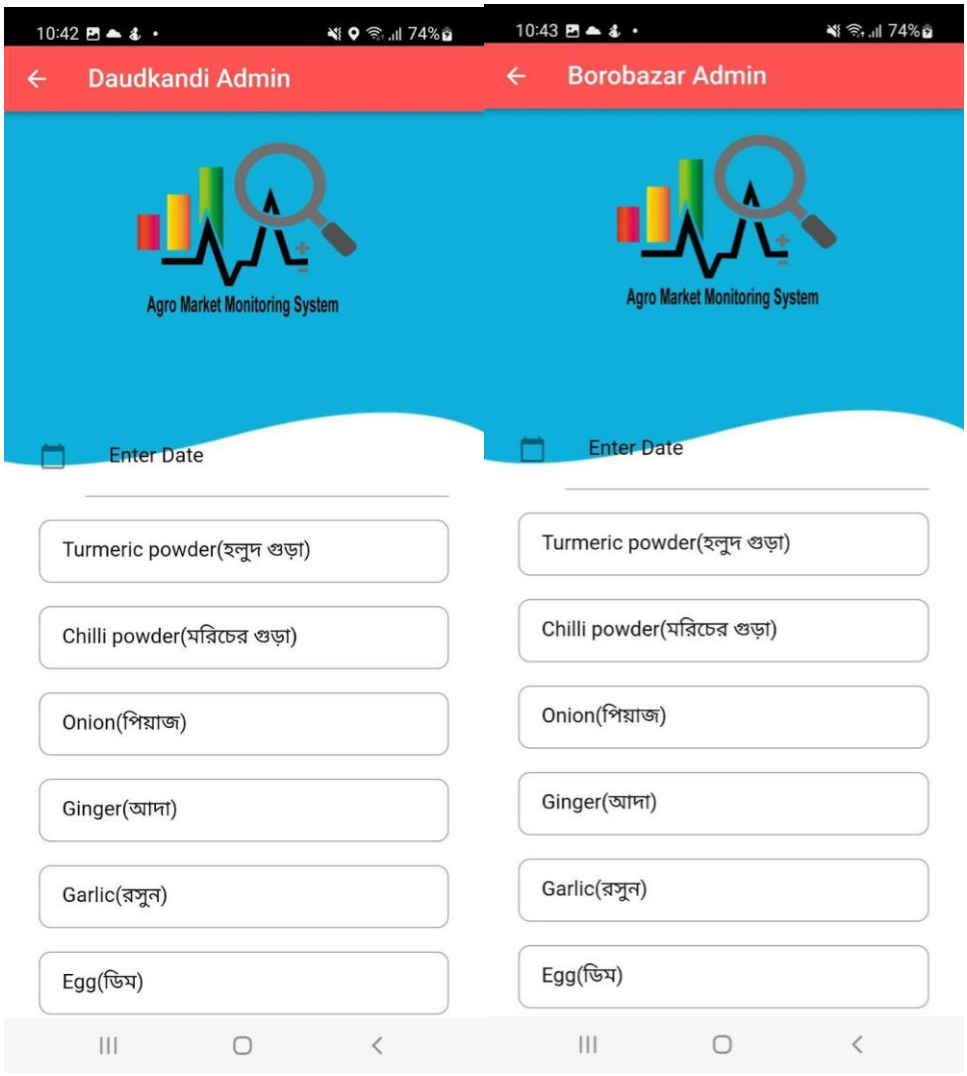

Figure:15 Admin

The implementation of admin/developer data is on this page. Market-based, Add date-wise product prices, Update prices. Every admin option's criteria are the same.

6.4 Test Result and Report

A test report is a structured summary of a test's objectives, methods, and results. It is created and applied to aid users in appreciating product quality. Detailed information about the testing process is included in a test report summary. Reports, files, diagrams, or even changes to the final product based on the outcome of testing. Ensure the system is bug-free. Test the application to detect problems.

- Friendly to use
- Simple and attractive

CHAPTER 7
CONCLUSION AND FUTURE DEVELOPMENT

7.1 Discussion and Conclusion

In this situation product prices increase and decrease constantly and all markets do not have the same prices for all products. People of all ages regularly go to the market for their families. Because All people are independent in their life. Users of our app will be able to monitor these prices and obtain the appropriate concept about agricultural market product pricing. Limitation also has this app only for android.

7.2 Scope For Future Development

Future developments of this project may include product pricing and marketplace information from all areas. We are aware that product prices change continuously and that not all marketplaces have equal pricing for all products. Future additions will include more areas. Users may quickly locate the low-cost product marketplace and view all product prices from the comfort of their homes. In the future, all product prices include this app. Nowadays no one wants to go to the market and check the price to buy. And they buy products in huge amounts.

- In the future will provide web and ios applications.
- Will add more functions to this app.

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