

KRISHOKER BOUNDHU: AN ANDROID BASED MOBILE APPLICATION

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This Report Presented in Partial Fulfillment of the Requirements for the
Degree of Bachelor of Science in Computer Science and Engineering

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DHAKA, BANGLADESH

JANUARY 2022

APPROVAL

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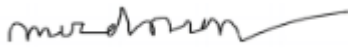


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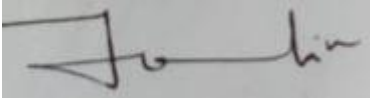


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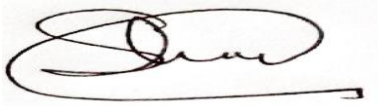
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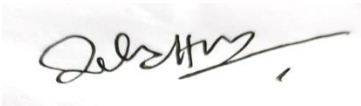
We hereby declare that, this project has been done by us under the supervision of **Sharmin Akter, Lecturer, Department of CSE** Daffodil International University. We also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

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ACKNOWLEDGEMENT

First we express our heartiest thanks and gratefulness to almighty God for His divine blessing makes us possible to complete the final year project/internship successfully.

We really grateful and wish our profound our indebtedness to **Sharmin Akter, Lecturer**, Department of CSE Daffodil International University, Dhaka. Deep Knowledge & keen interest of our supervisor in the field of “*Web Application, Data Mining, Machine Learning (ML), Internet of Things (IoT), Android Application, Embedded System, Mobile Application (Game Development), Database, Blockchain, Game Development*” to carry out this project. His endless patience, scholarly guidance, continual encouragement, constant and energetic supervision, constructive criticism, valuable advice, reading many inferior drafts and correcting them at all stage have made it possible to complete this project.

We would like to express our heartiest gratitude to Sharmin Akter, Md. Zahid Hasan, and Head, Department of CSE, for his kind help to finish our project and also to other faculty member and the staff of CSE department of Daffodil International University.

We would like to thank our entire course mate in Daffodil International University, who took part in this discuss while completing the course work.

Finally, we must acknowledge with due respect the constant support and patients of our parents.

ABSTRACT

With the improvement of time and information technology, it has grow to be greater easy to use cellular apps for our day by day works. The technology turns into greater superior to our agriculture also. This assignment “KRISHOKER BOUNDHU” an Android primarily based cell utility is developed for the high-quality support for our farmer those who are new at farming. They may have right guiding principle to clear up the critical hassle. Consumer can recognize the cultivation manner for the preferred crops. They can combat from the vegetation disorder that abate the vegetation. The utility has a use friendly user interface. This application is in Bengali Language. So those who can examine Bengali, it is straightforward to recognize. The mission is evolved with the assist of Android Studio and Firebase has been used because the core database for the application. With this application, I hope the humans will be a whole lot benefitted. They don't ought to use conventional manner to domesticate or panic for the crops disorder. More than thirty confirmed agriculture comprehensive information is offered in this application. About nine thousand images were used to detect disease in certain plants. There is also section for suitable crops.

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Chapter 1

Introduction

1.1 Introduction

Agriculture is the main occupation for the greater part of the population of Bangladesh. More than 70 % of the population of Bangladesh depends entirely on the agriculture sector for their livelihood. The main challenging task for farmers is to access and manage information for Amount of data and the complexity of operations in precision agriculture. data for agriculture such as crop life cycle details, seeds, crop selection, and crop operations Weather, pesticides, fertilizers, etc. can be accessed from many different sources such as Newspapers, print and audio media, mobile, television, Internet, visual aids, etc. Data structures and formats are different. So, it is very difficult for the farmer to do this Get accurate information and know a variety of information distributed from various sources. Sometimes several manual steps are necessary to distribute Data to translate data from one format to another format. This app helps farmers by providing essential information such as comprehensive information on crop production, plant protection and all related agricultural services in Bengali.

1.2 Motivation

Agriculture is the largest sector in our country. Our largest part of GDP comes from Agricultural sector. 16% of country's GDP comprises the total labor force of 63% as of estimated in 2018. But our agricultural sector is the most neglected and its system is backdated. As we are in the vision of 2021 to digitalize our country, it is must to develop our agriculture also. So, it's the time to take a proper step to look after towards our farmers, our agriculture. We have that, our most of farmers still follows the traditional ways for production the crops. So, most of them don't know about our new technologies. So, our application is for the most of this farmer to know the new technique a scientific way to produce more crops and protect from diseases. When the Idea becomes in my mind, I thought about our farmers those who are new to agriculture specially our young generation

to introduce our agriculture. And this Application is in Bengali Language so it is also helpful those illiterate farmers who can only read.

1.3 Objective

Our application has such basic features like –

- An intro on crops
- It`s cultivation method
- It`s diseases
- It`s remedies and
- Pesticide`s list
- Using weather application
- Using expert system
- Disease Detection using image
- Prescription Reader

As a consumer, each farmer can choose from seeds, vegetables, or individual crops such as lentil seeds and different varieties. The user can then see a summary of the desired crop and the application shows the ideal way to grow it. Then you will see a list of all possible diseases, and the app will show you the minor ones and provide you with a list of pesticides. The government website has a referral service where consumers can ask questions about agriculture.

1.4 Expected Outcome

This application is intended mainly for our farmers also the new farmers of our younger generation. Because the farmers of the future must enter a new era of technology-based agriculture. And in this application, our farmers can collect all the information about their crops. And we can learn how to grow and how to protect yourself from all kinds of diseases. And this is the key to increasing food supply for our country. We farmers lose every year because we don't know how to grow and protect plants. This app will help you produce more crops and lower production costs. And we believe that our government is taking the right steps towards agriculture. Expanding these services to farmers across the

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country could change the future of farmers and countries. Farmers can easily cultivation method, disease information, remedies and pesticide list. They can get many other necessary information in the app.

Chapter 2

BACKGROUND

2.1 Introduction

Our app is a farmer based mobile application that provides you a lot of information about farming. To develop this Android app, we are using Android Studio and Firebase also using Tensor flow which is a machine learning platform. The most important things in these apps are the information. If I want to complete the entire project, we have to gather a lot of information. I have to study more and more about agriculture or a related subject to gather information. I also discuss the problem and the explanation. It also helps that person who reads the newspaper.

2.2 Related Work

Our project is made on the premise of some software however those are not same as mine. A few examples are, Krisoker Janala[1], Bd krishan[2], Krisi Somossa o Somadhan[3], pesticides Prescriber [4], Fosoler rog balai o protikar[5] .Here are the front views of their apps:

2.2.1 Krishoker Janala:

Krisoker Janala is the most successful app in our country. Basically, our government approved this application. But this application has some limitations. Krisoker Janala is user friendly but not included all features.



Figure 2.2.1: Krishoker janala

2.2.2 BD Krishan:

Bd Krishan is another mobile application for agriculture. This application is more informative than Krishoker Janala but in this application they do not include all features



Figure 2.2.2: BD Krishan

2.2.3 Krisi Somossa o Somadhan:

It is another application. It offers simplest the issues of crops to the consumer. Different data is missing right here.



Figure 2.2.3: Krisi somossha o somadhan

2.2.4: Pesticides Prescriber:

This application is also another government task. But it could only the pesticides. No longer all the capabilities which have been protected.

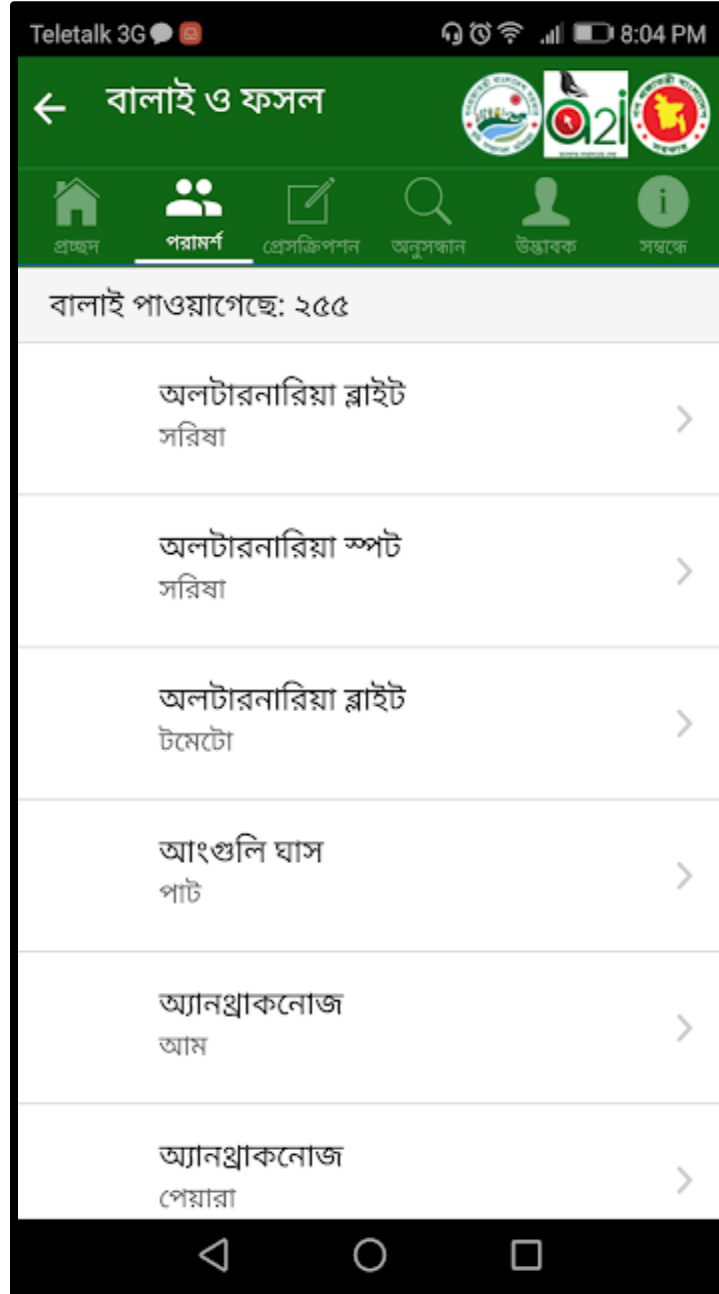


Figure 2.2.4: Pesticides Prescriber

2.2.5: Fosoler rog balai o protikar:

Here it is another software that have all type of statistics like cultivation technique, diseases, but the statistics is limited.

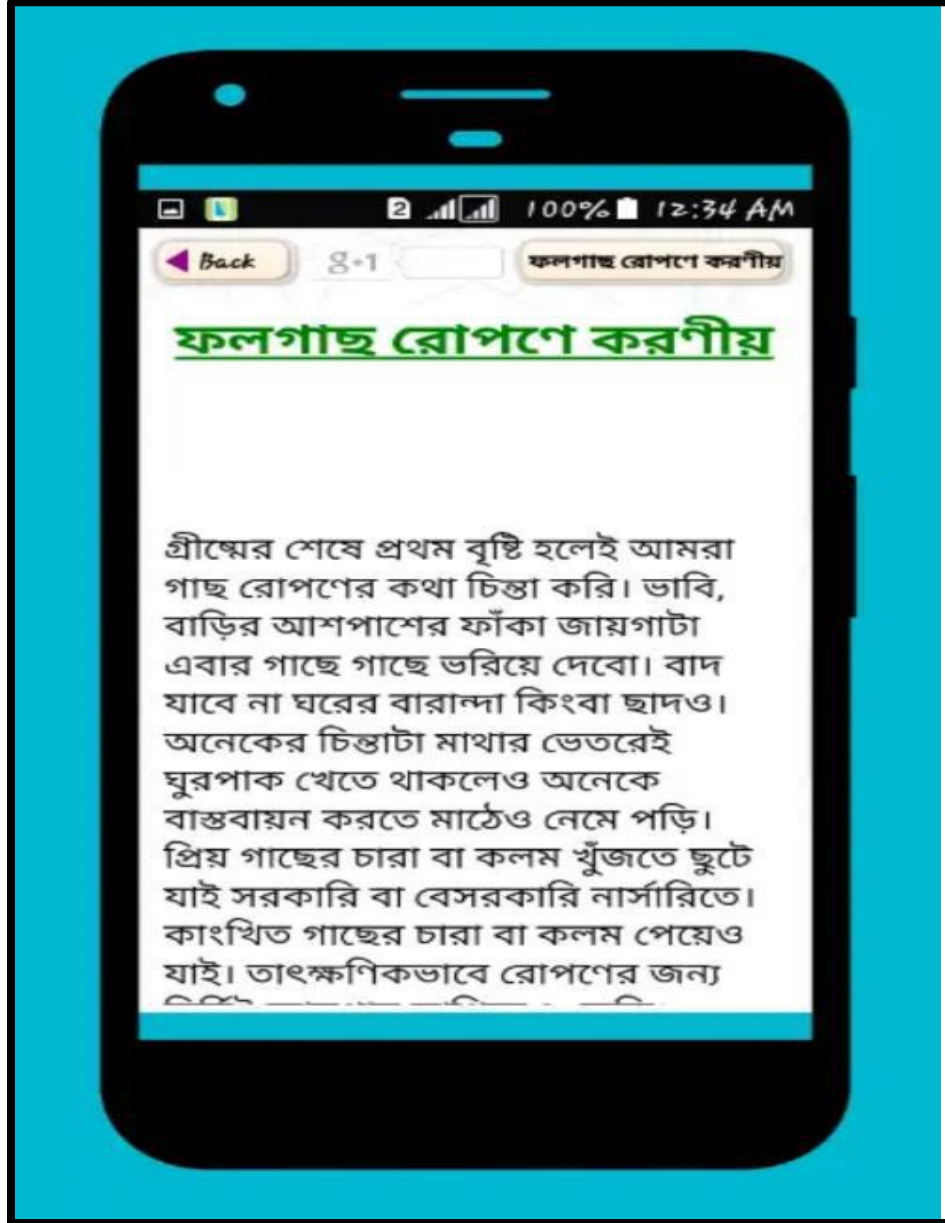


Figure 2.2.5: Fosoler rog balai o protikar

2.2.6: Shak Sobji chas:

Shak-Sobji Chas is every other cell application that handiest gives the facts of veggies handiest. It gives the cultivation system of greens, not the opposite data that we needed.



Figure 2.2.6: SHAK SHOBI CHAS

2.3 Comparative Studies

Other applications are useful for a certain type of information, and they are not entirely useful. Our project offers a whole bunch of very useful information. If you compare other apps, some of them just give you the process of growing crops, some give you crop diseases, some give you treatments for specific crops or some give you pesticides for them. Therefore, our app offers a complete package like crop information, diseases, treatments and pesticides as well. So, there is no doubt that this application will provide the best need for the farmer or the user. My system is completely controlled by the administrator but I have a plan in the future to implement user efficiency for further improvement.

2.4 Scope of Problem

There were a lot of problems to complete this project. Some issues were resolved or some were too difficult to deal with. After hard work finally, most of the problems are solved to create a suitable system for our user. To complete a project, one man is to quit working with the schedule. Applying the perfect schedule is much more difficult than you think. The data was not very reliable. So, it gives me extra trouble or effort to collect data.

2.5 Challenges

To provide our farmer or user with the best solution that can help us with some challenges. Take a look at these challenges:

- User Interface and Feature Design
- Accurate data collection
- Give all relevant information
- User-friendly operation
- To present the application to the user
- Time scheduling
- Lack of experience

CHAPTER 3

REQUIREMENT SPECIFICATION

3.1 Business Process Modeling

A business process model (BPM) is a form of flowchart creation cost. This will create a model that will provide a decent demonstration of the data flow from start to finish. Basically, any process of an engineering project can be accelerated by using business process models and work speed when developing or implementing a project. A business process model is always a flexible design for both users and developers.

3.2 Requirement Collection & Analysis

The first step is to collect the requirements and analyze the application development. It is impossible to provide clear information without project requirements, which is very important to complete the work for the smooth progress of the project. Otherwise, the work of the project may be spoiled and not analyzed properly. The internal tasks that application software can perform are called functional requirements. Functional requirements such as admin, login. Therefore, it is very important to successfully capture and analyze project requirements.

3.2.1 Functional Requirement

It can be thought of as an internal activity of an application that can fulfill functional requirements. This is similar to the admin panel in the login area, which only administrators have access to, and the control panel, which stores the admin profiles. The control panel contains many parts by plant type, and there are several types of plants to choose from. In the future, administrators will have the opportunity to comment on questions over and over again, and we will add a message board as well as information on fishing and livestock. And there will be a part that calls the national support center to the support center.

3.2.2 Non-functional Requirement

Non-functional requirements determine the performance of an application and its effectiveness. It also defines the behavior of the application. Non-functional requirements help more efficiently. This means it loads faster, runs smoother, and builds apps more efficiently.

3.2.3 Feasibility Study

The most important part is developing a feasibility study for our application. This application fully meets your analytical development needs. This application is very flexible and useful for farmers. Various features such as call center, pricing and some parts will be added for the development of future applications.

3.3 Use Case Modeling and Description

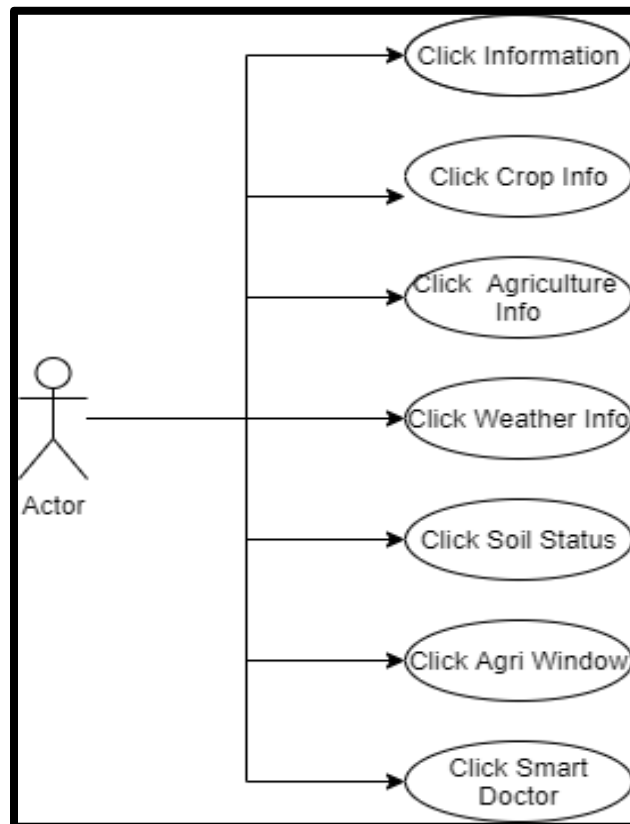


Figure 3.3: Use case Diagram.

Use case Description:

Primary Actor: User

Precondition: None/Internet connection

Entry Condition: Click Enter Button

Exit Condition: Click the cross button

3.4 Logical Data Model:

A logical data model is a procedure that is used to specify the BPM's required support. It also gives more details detail on the data, but without the practical implementation in the database. The logical data model is similar to the entity Relationship with Attribute. The ER diagram may be considered to depict the logical structure of a database and it delves quite deep into the data model.

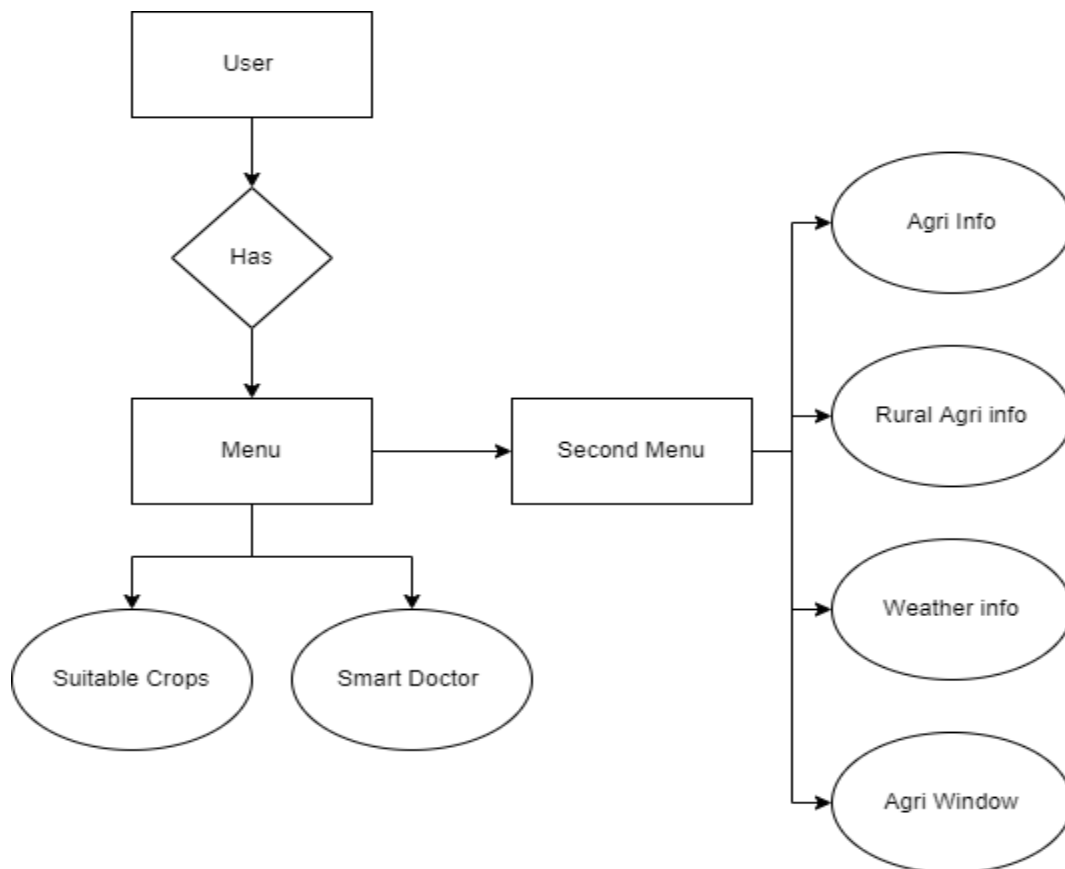


Figure 3.4: Entity Relationship diagram.

3.5 Design Requirements

Every system for the front end & back-end design play a vital role to run smoothly. And these are some requirements:

Efficiency:

It should be easy to use. In other words, the system must be neat. And remember that performance can vary from device to device. Therefore, the system must be designed so that all devices can operate without delays or laggings.

Compatible with multiple Android versions:

Many versions of the Android SDK are in development. The SDK currently on the market is PIE, released on August 6, 2018 [8]. And this application has been developed to the latest version.

User-friendliness:

The application is designed with a user-friendly interface. Users can easily find expected information.

- Our application has no authentication.
- Administrators can add and update information.
- Information in Bengali for a better understanding of the functions.
- This app works on any Android device without lag or delay.
- There is also a talkback function for Reading prescription.

CHAPTER 4

DESIGN SPECIFICATION

The section "Design specifications" shows the process of developing or implementing the system. This section is a detailed document containing information about projects that developers will discover. In this section, the structure of the system is created. Now that we provide the front and back design of the application, this is a tool that can be used in the application being developed.

4.1 Front-end Design

The ultra-modern version of Android Studio (4.4) has been used to increase the application. The front quit of the application **KRISHOKER BOUNDHU** is developed on this version of Android Studio. Our predominant moto is that the person gets person friendly interface to apply the application. Right here are the demo of our software-



Figure 4.1.1: Main menu

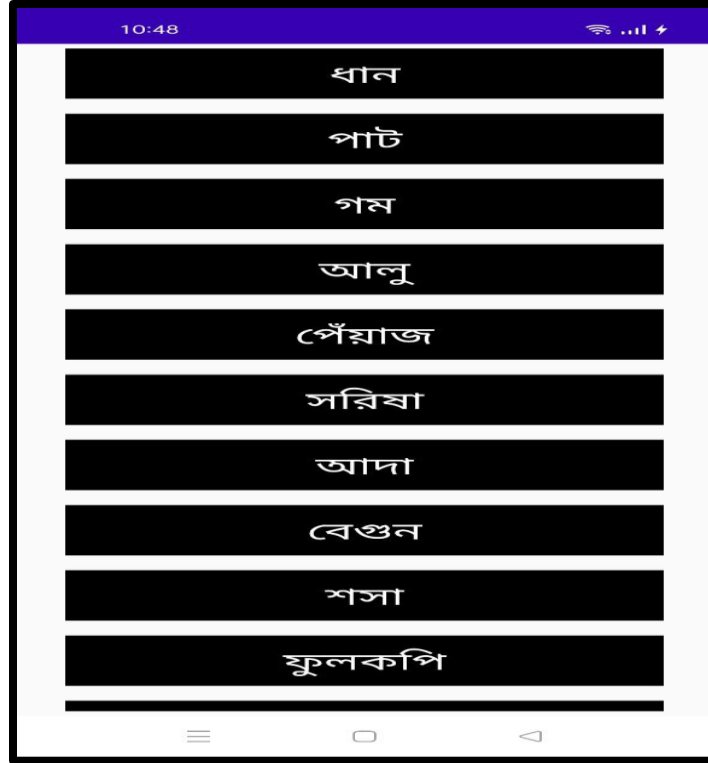


Figure 4.1.2: Crops Information Selection Window.

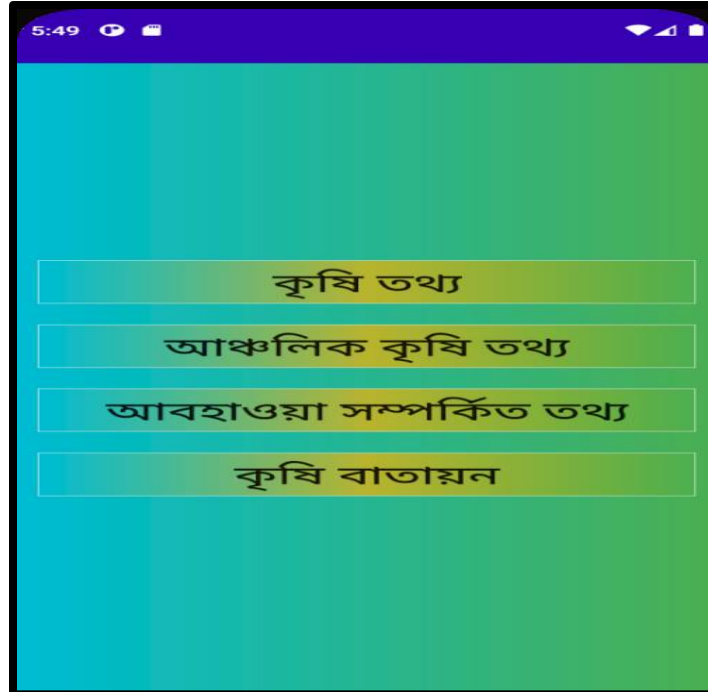


Figure 4.1.3: Detail information clickable button.

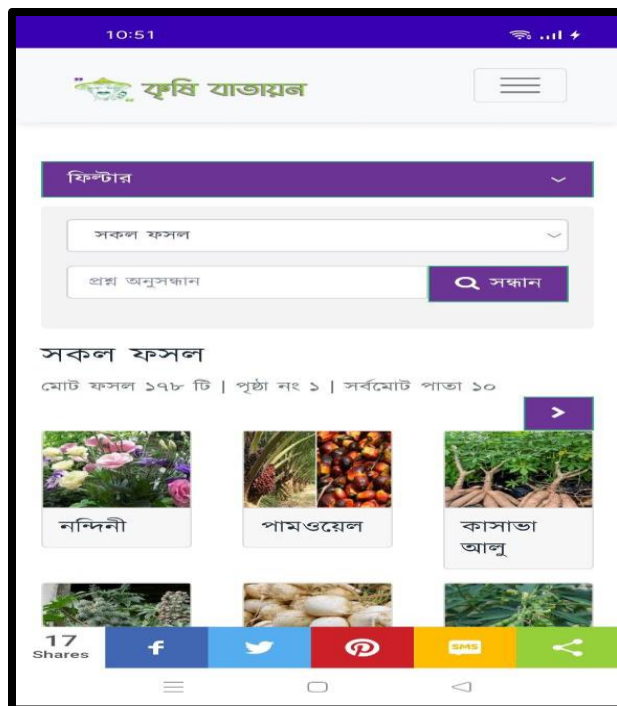


Figure 4.1.4: Choose your crop

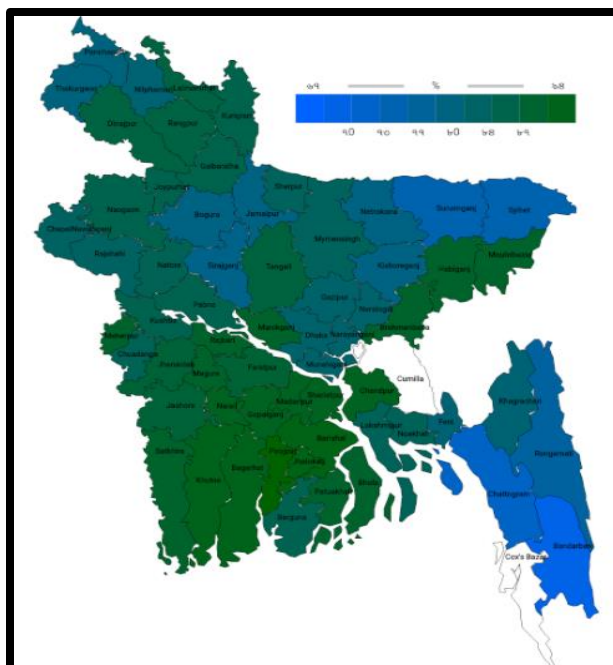


Figure 4.1.5: Weather report

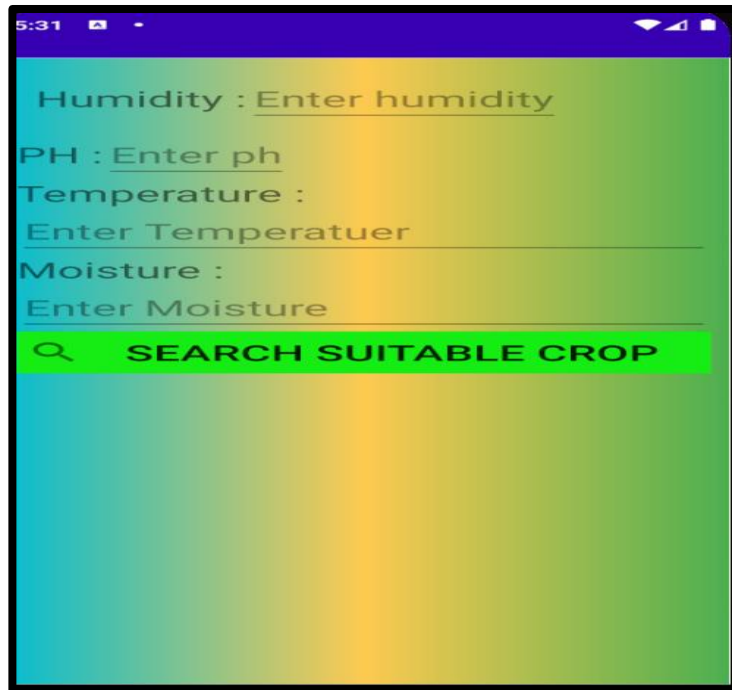


Figure 4.1.6: Suitable crop

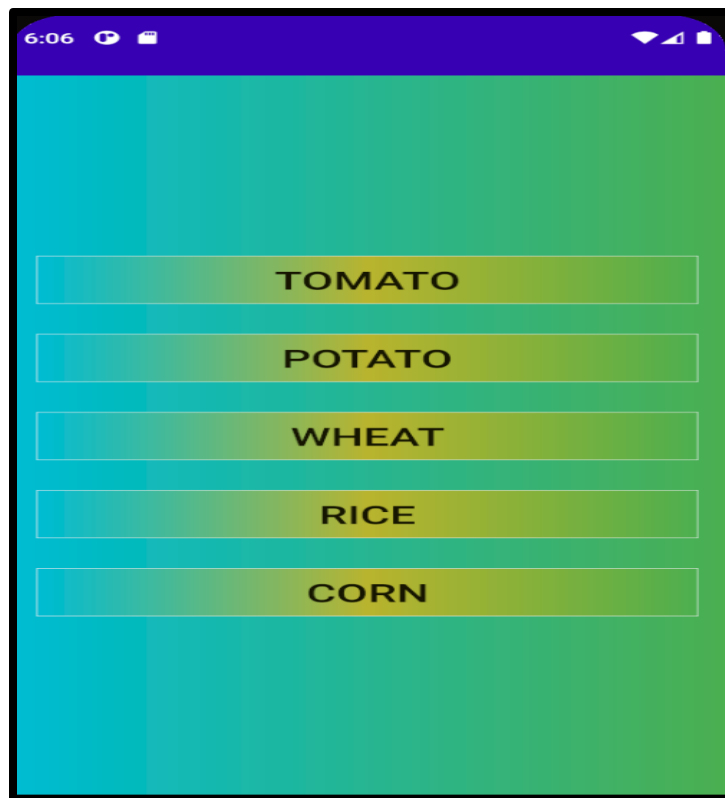


Figure 4.1.7: Detect disease by image.

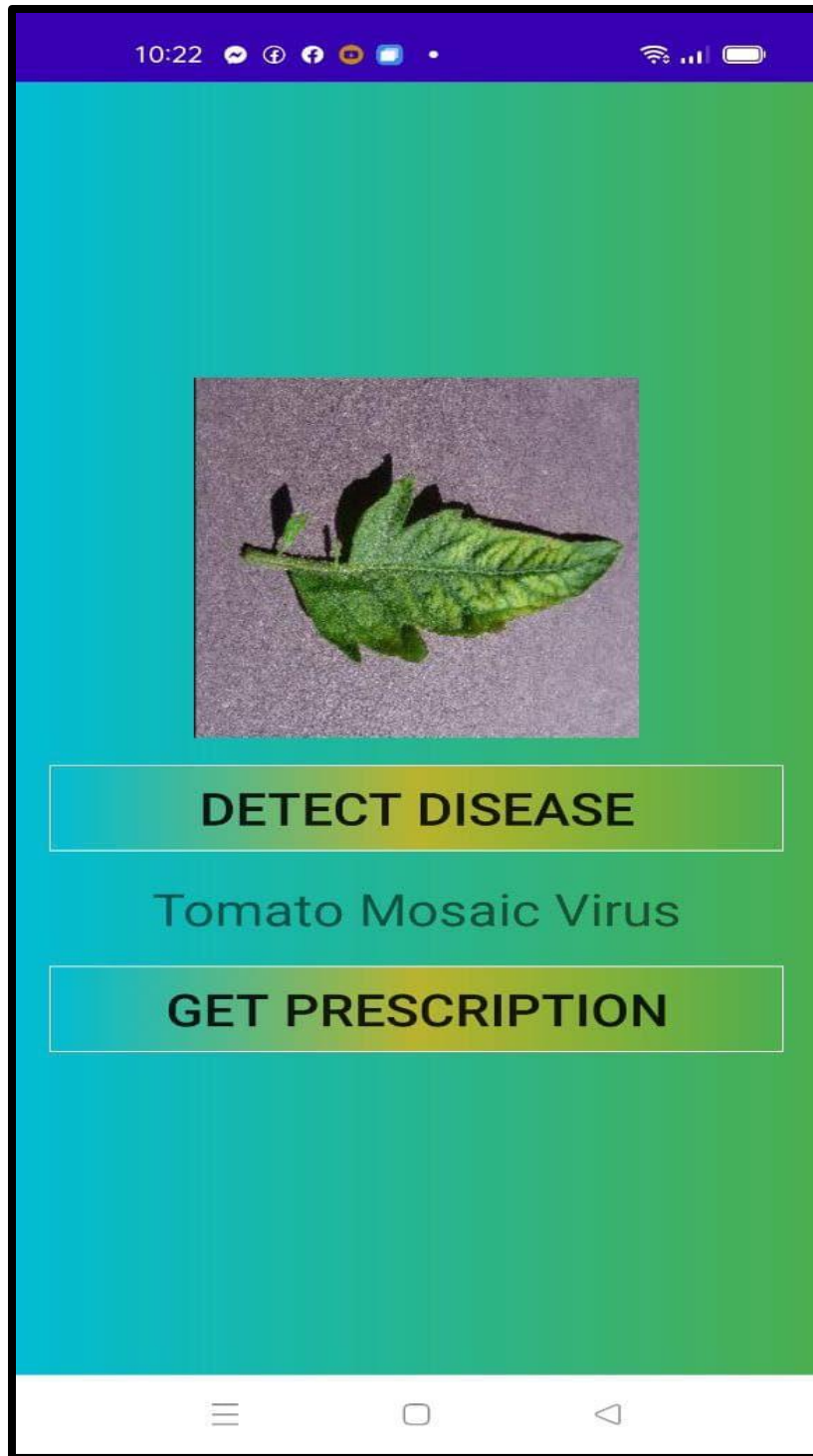


Figure 4.1.8: smart image disease classifier

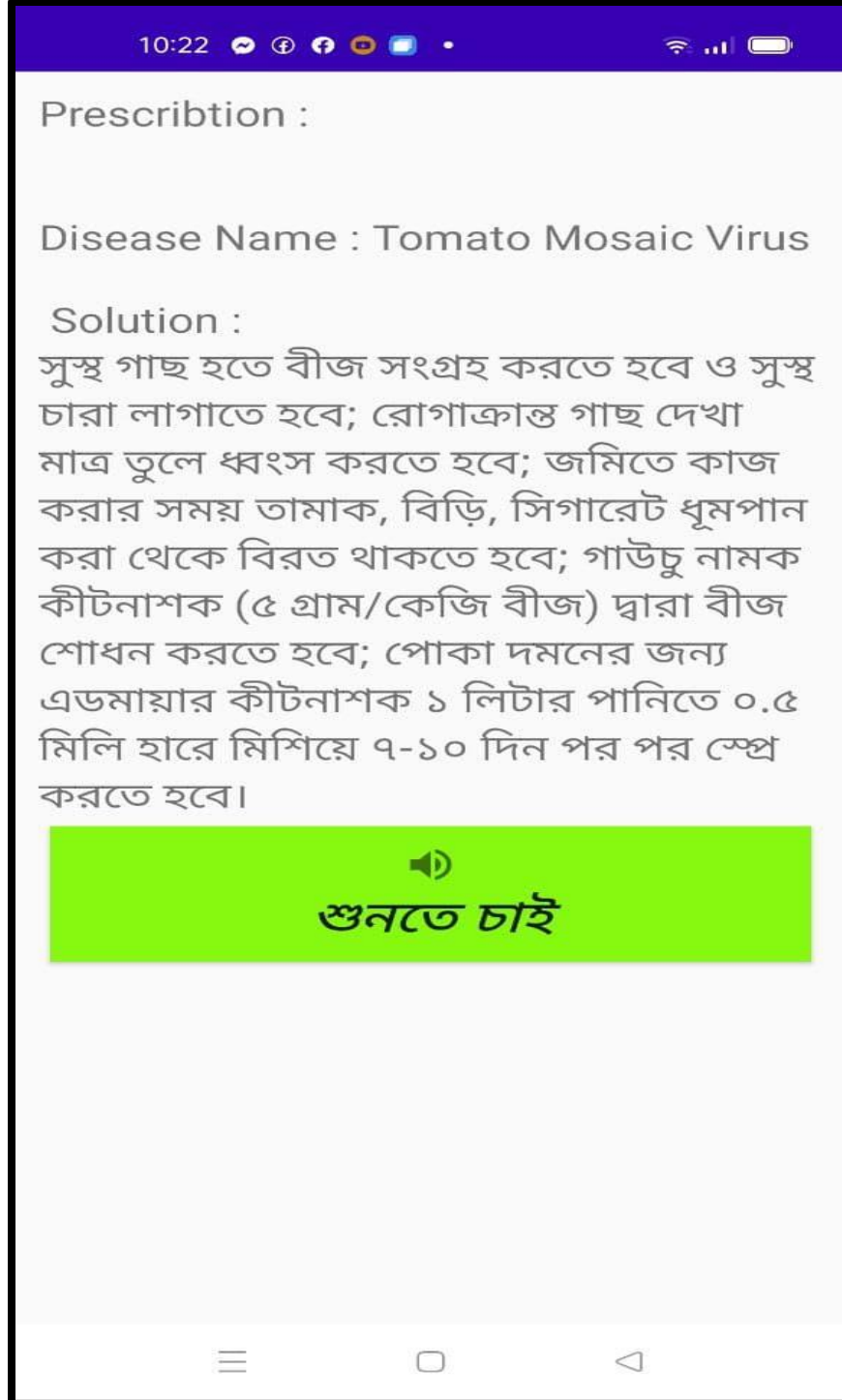


Figure 4.1.9: Prescriptions from smart doctor.

4.2 Back-end Design

From everywhere in the again-stop layout is the difficult element and most essential. How each single part of the logical part will be completed is made in this layout part. How the software paintings or it behave and how it is going to be represented to the user that's all elements depend on this segment. The language, the database, the safety and the authentication all other settings are associated with the again-stop layout. For my development I used the middle language XML and Java. Firebase has been used to represent the statistics that's an actual time database.

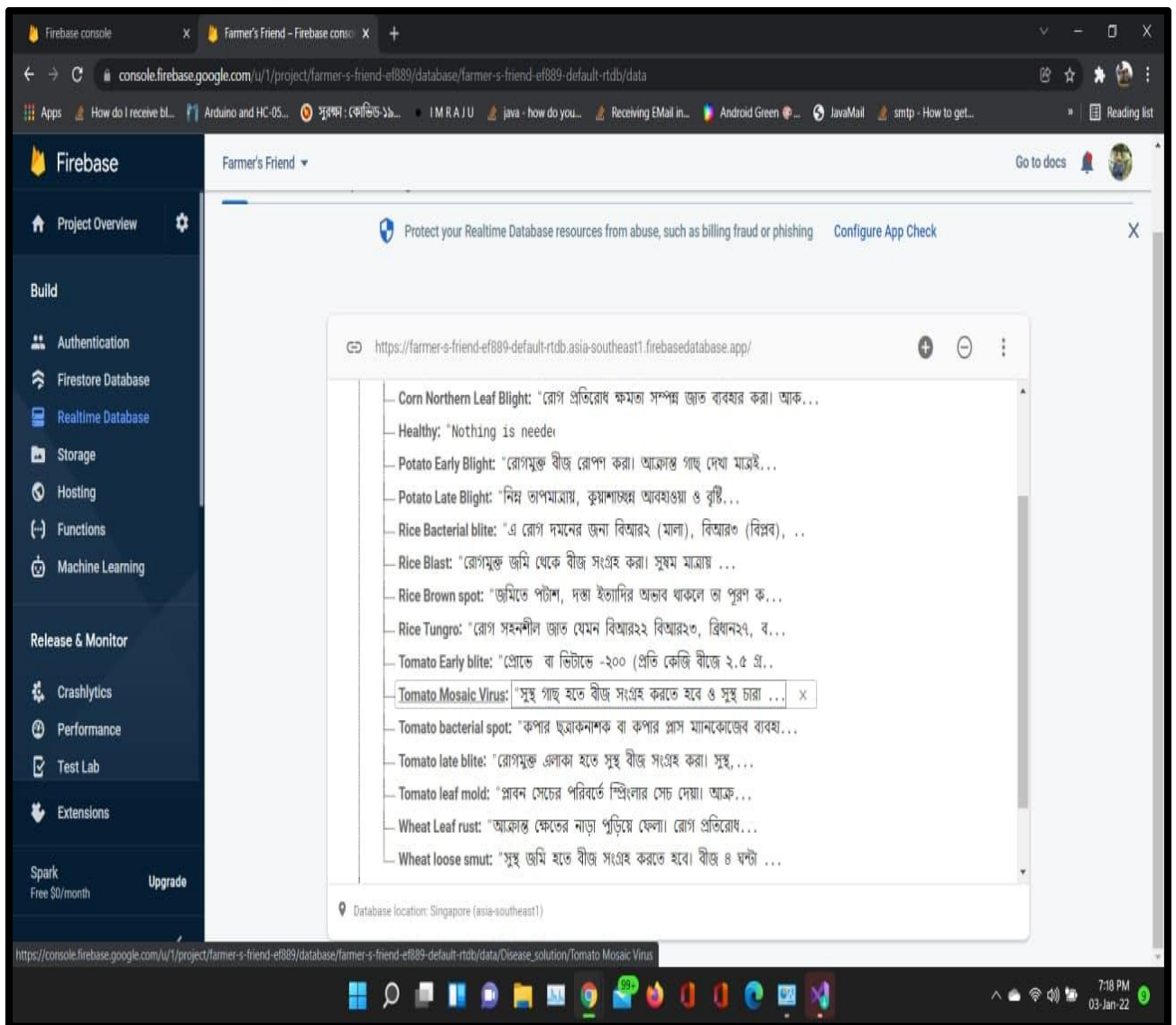


Figure 4.2.1: Firebase database.

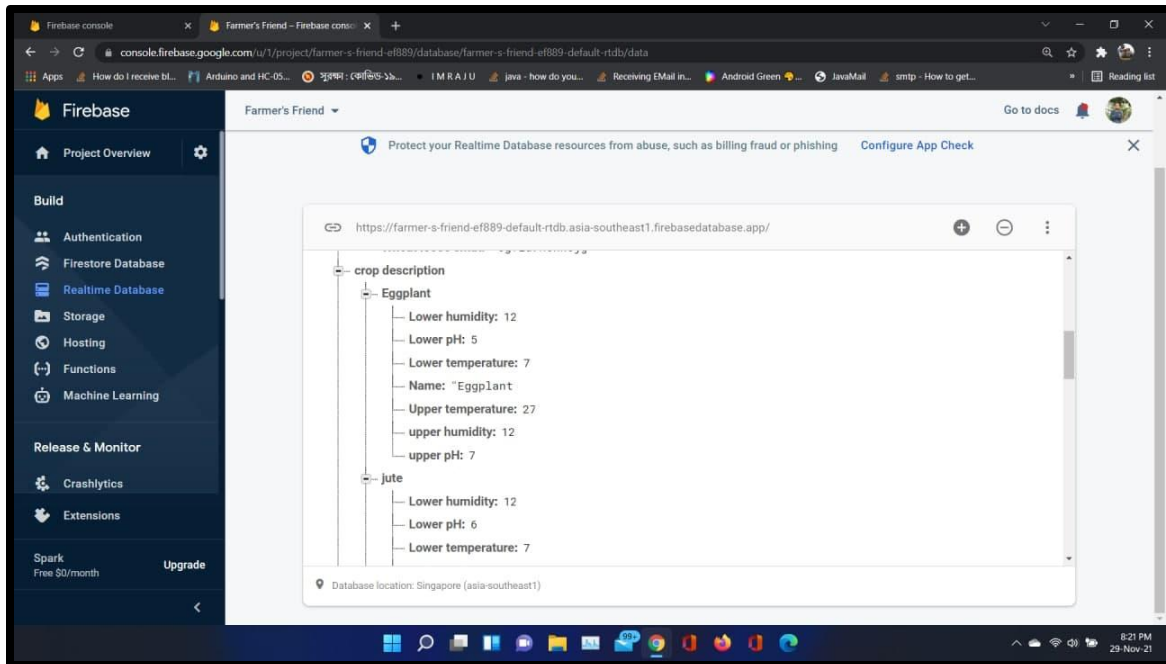


Figure 4.2.2: Firebase Database.

4.3 Interaction Design and UX

Interaction design is IxD, the interactive design of digital products, environments, systems and services. And the digital side of the claim is correct, and interactive design is useful for creating real products. This design represents the interaction between the user and the system. It will also help you understand the issues that are stored and processed for a better experience. Interaction design often overlaps with the design of products, system services, and environments. The digital side of this statement is correct, but interactive design is also useful for creating designs. Building physical products and learning about systems is the interaction between systems and users. If there is a problem with what data is stored and how it is processed, Interaction Design can help you identify and process the data. Interaction design is the key to success in improving proportions. So this part is very important to the project. After completing the project, I asked several people and my classmates to check it out, and they rated it and asked for advice. They personally recommend adding some features like user complaints and call center. You say the user interface is familiar enough but needs improvement. In the end, they were pleased with my efforts and recommended the app to others.

4.4 Implementation of Requirements

This project is made by android studio along with Java and XML coding, the project Krishoker Bondhu designed by Adobe Photoshop and Illustrator for UI design. And for data management used Firebase for the database. This project some file is store in the online so that the real time database included, so the active internet connection must need. Operating system (windows) is required to develop this project. More than ten thousand images required for train the deep learning model. TensorFlow is used for crops disease recognizer. Huge amount of crops data included in offline section for easy access. Suitable crops finder uses Realtime value from firebase for give the best output.

CHAPTER 5

IMPLEMENTATION AND TESTING

5.1 Implementation of Database

During the execution phase, the DBMS must install the necessary tools. Optimize your database with the best hardware and software. It creates local data in the database and implements and optimizes application connections to it. Database design is the process of creating a detailed data model of a database. This data model contains all the necessary logical and physical design features. Data Definition Language is a physical storage setting required to create a project that can be used to create a database. Databases are usually the main component of information systems, especially in business modeling design systems. A data model with all properties contains detailed properties for each object. Hence, the design of the database is part of the design of the system. A new warehouse database is created to retrieve data. Physical storage parameters are required to create the database. These are the physical storage parameters for which you need to create these definitions. Database design is part of system design. Good design starts with a list of the data that everyone wants in each database, and what can be done with the database later. Without Firebase, all of this could be written in their language. Database design is the process of creating a detailed data model. So, designing a database is part of development and is a kind of information system, similar to a business modeling system. Good database design starts with a good list of data streams. Includes two default settings for the database:

In our database management system, we used Firebase.

Firestore Realtime Database:

The Firestore Realtime Database is an online NoSQL database. Create serverless apps with real-time data storage and synchronization for all of your users.

Firestore Storage Database:

It's a standalone system for uploading user-generated content from a mobile device to Firestore Storage, such as images and movies. The standard Firestore technique does not need the use of a server.

5.2 Implementation of Front-end Design

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Users are impressed with the look. When a good design comes out, users are waiting for this app. To make a good impression, the look must be simple and easy to use. Users are impressed by the good design of the front panel. An impression is the last impression. But the biggest challenge is making the app more attractive. Another problem is that they are all different sizes. We designed the app in such a way that it is user-friendly so that users visiting it from other phones or tablets do not experience problems viewing the app and have a good user experience. Therefore, we needed to make it easier to understand and reflect the different tastes of people.

5.3 Implementation of Interactions

Response uses a user interface to make the application more interactive, and I know that individual buttons are better for the general public and better than text buttons. To do this, you must use the call button and the site you visited. However, this proved to be impossible due to lack of time. But of course, we will do it in the future.

5.4 Testing Implementation

The objective of testing the software is to evaluate the compatibility and smoothness of the program. For testing a system is another level of software testing where a whole software is evaluated. It is required for the creation of software. Problems or defects can be detected and fixed by effective testing. As a result, we had several people test our program "Krishoker Bondhu."

Test No	Test Input	Expected Outcome	Obtained Outcome	Pass/Fail	Tested Date
1.	Information	Valid information	Valid information	Pass	20.9.2021
2.	Input Various Data	Successfully get the desire info	Successfully get the desire data	Pass	20.9.2021
3.	Disease recognizer	Successfully recognize	Successfully recognize	pass	20.9.2021

4.	Solution & talkback	Successfully get solution & talkback	Successfully get solution & talkback	Pass	20.9.2021
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5.5 Test Results and Reports

The end result of the trying out of the application are accrued collectively to put together the exceptional report. The report describes the reflection of the trying out formally. It statistics the records acquired from the evaluation of the software and assist to overcome the troubles. It is a super assist to attain the targets of the development task.

There are various types of testing like:

- UI interaction
- Usability
- Capability
- Regression
- Security
- Overall performance
- Localization
- Scalability

After completing all methods of testing, it is finally ready to launch, allowing us to get the following result as a result of usable testing:

- The system is more user-friendly.
- For new users of this system, it is simple to use.
- Improved user interface for interaction.
- Our application's quality has improved.

CHAPTER 6

CONCLUSION AND FUTURE SCOPE

6.1 Discussion and Conclusion

We are happy to have finally completed such a wonderful project. While developing this application, we learned a lot of things that will come in handy in future areas of my life. And it's a lot of fun to create a project like this that will be very useful for our farmers and our new generation of farmers. We are honored to dedicate this application to common people. We sure that our farmers will greatly benefit from this application. We thank God for the blessing to complete this project. We would also like to thank to our ma'am for his help getting the job done and additional help. And we thank the authorities for giving us the opportunity to prove ourself.

6.2 Limitation

The main limitation of my project is Live chat option with agricultural officers. User can only call to the help center 16123. We are working on the live chat option. In future we will add this option in our app.

6.3 Scope for Further Developments

This application is in beta version. The upcoming version will be a full package of features. The application features added with lots of information like call center, visiting web site etc. So here are some future developments is given below:

- It is possible to build for the iOS platform.
- The information in the database will be more accurate.
- Livestock and fisheries have already been incorporated, but information will be supplied soon.
- Information on fruits, flowers, and vegetables will be added.
- A help center, similar to a call center, will be introduced, as well as the ability to ask questions.
- The app may be enhanced with new features.
- It will be possible to provide ratings and make suggestions.

- In the future, user login features may be implemented.

Appendices

Appendix A: Project Reflection

The purpose of this appendix is to provide an introduction to Project reflection. This project was very challenging for us.

We enjoyed to develop it. We understand many things in the time of developing. We constantly developing my ideas. It was fascinating just how we completed my project in a short time. The time seemed to fly. So, we got to managed to help along the way towards the endpoints of having a sustained policy.

Table A1: Comparison of feedback and Usability

SL No.	Name	Feedback
1	Krisoker Janla	-Overall good -Very useful
2	Pesticides Prescriber	-Thanks for this application -Very useful
3	Krishi Somossa o Somadhan	Overall good -Useful and essential
4	Bd Kisan	-User Friendly -Easy to use -Useful and essential

5	Krishoker Bondhu	-Easy to use -Many feature -Essential for new comers -User friendly
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References

- [1] “Krishoker Janala” available at: <<<https://www.infokosh.gov.bd/>>>, last accessed on 25-7-2021 at 11.00 AM.
- [2] “Digital Agriculture” available at:<< <https://www.dae.gov.bd/site/>>>, last accessed on 25-7-2021 at 11.00 AM.
- [3] “Pesticide’s prescriber” available at:
<<<https://www.google.com/search?q=Pesticides+Prescriber/>>>, last accessed on 25-7-2021 at 11.00 AM.
- [4] “Prescribers” << available at: <https://play.google.com/>>>, last accessed on 25-7-2021 at 11.00 AM
- [5] “Use case Modeling” available at:
<<https://www.cs.uct.ac.za/mit_notes/software/htmls/ch03s05.html>>>>, last accessed on 20-8-2021 at 10.00 AM
- [6] “Android version” available at:<< <https://www.howtogeek.com/345250/whats-the-latest-version-of-android/>>>, last accessed on 10-1-2021 at 9.00 AM.
- [7] “Digital Agriculture” available at: <<<https://www.dae.gov.bd/site/>>>, last accessed on 12-11-2021 at 02.00 pM.
- [8] “Krishoker Janala” available at: <<<https://www.infokosh.gov.bd/>>>, last accessed on 1-12-2021 at 03.00 PM.
- [9] M. S. G. Mane, D. K. R., and Chhatrapati Shahu Institute of Business Education and Research, Kolhapur, Maharashtra, India, “Review on: Design and development of mobile app for farmers,” *International Journal of Trend in Scientific Research and Development*, vol. Special Issue, no. Special-FIIIPM2019, pp. 179–182, 2019.
- [10] S. Sharma, V. Patodkar, S. Simant, C. Shah, and S. Godse, “E-Agro Android Application (Integrated Farming Management Systems for sustainable development of farmers),” 2015.

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