FARM TO KITCHEN

Done by,

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ACKNOWLEDGEMENT

Our team would like to thank Dr Sameena Begum Pathan ma'am and Mrs Divya Rao ma'am for their tireless efforts and valuable feedback without which this project would not have been completed.

We would also like to use this opportunity to express our gratitude towards them for letting us work on this project.

ABSTRACT

This app basically aims to connect restaurant owners with farmers or farmers' markets in the vicinity via the 'Farm To Kitchen' platform.

The platform is based on a 2 way transactional model, that is the farmer/restaurant can buy as well as sell their produce. The platform consists of a login page, a display page (where you can see the items currently being sold) and will also have options for deleting certain items that have already been sold.

The login page consists of the email ID and password fields that have to be entered in order to use the app. There's a welcome page preceding the login page.

The display pages' UI consists of items that are up for sale along with their price per kg, quantity, name of the item and an image of the same. Items can be deleted as well.

Keeping in mind the very theme that our app revolves around, that is agricultural produce, we have made sure to include color combinations that are indicative of the same.

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INTRODUCTION

The 'Farm To Kitchen' app basically strives to directly connect the producers (farmers) with the end users (restaurant owners) directly.

In this app we begin first with the welcome page which welcomes users to the app.

Following the welcome page, is the login page which takes the email ID and password from the user as inputs and if you're not already registered, then you can register yourself first.

The second page consists of the virtual marketplace where you can see all products that are currently on sale along with their total quantity, price per kg and name. An image of the item is also included for illustrative purposes. The rates of the products are taken from real world rates in order to give a more realistic feel to the app.

On the top left hand corner of the page is the navigation bar. Clicking those will give you the options to create and delete ADs, logout and go back to home page option. The user can also click the profile photo in order to view his/her profile details.

OBJECTIVES

- To directly connect farmers/farmers' markets with restaurant owners
- To make use of Android Studio to develop the frontend and Firebase for the backend
- Inclusion of prices for agricultural produce that match with those of the real world in order to give a realistic app
- Create a neat and clean UI to enable easy app maneuverability for the end-user

PROBLEM DEFINITION

WHY THIS APP?

There are many farmers across our country who get frustrated every year due to the unfair amount received for their crops, out of many reasons the major one being the presence of the middle man who charges a ‘small fee’ from the farmer in order to get their produce to the end users (example – markets).

Seeing this particular plight of the farmers, we decide to create an app where we could cutout this middle man from the entire logistics scenario and put the power back into the hands of the farmers who could decide whom to sell their produce to, at what rate, what quantity and at what price. This way they are able to reap the profits that they deserve.

Business owners also profit from this app in the sense that they can directly connect with farmers and even negotiate prices (or find existing best deals) and form relationships for future business requirements. If the businesses have any surplus produce, they can resell it on the app’s virtual marketplace.

DESIGN

FRONTEND

The frontend part was designed using Android Studio.

It can be divided into 4 major parts,

1. Welcome page
2. Login page
3. Virtual marketplace
4. Side dashboard

WELCOME PAGE

This is just a simple with full green background welcoming users to the app.

LOGIN PAGE

The login page consists of 2 text field areas,

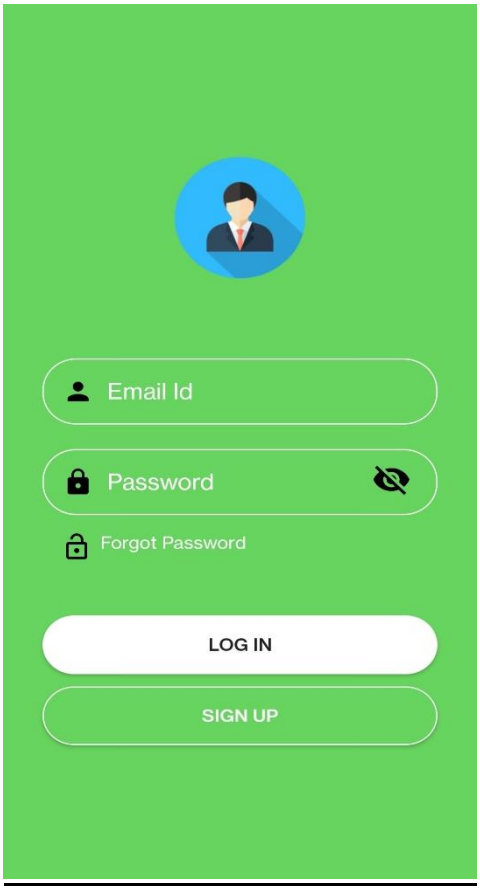
- Email ID
- Password

The background is green in color.

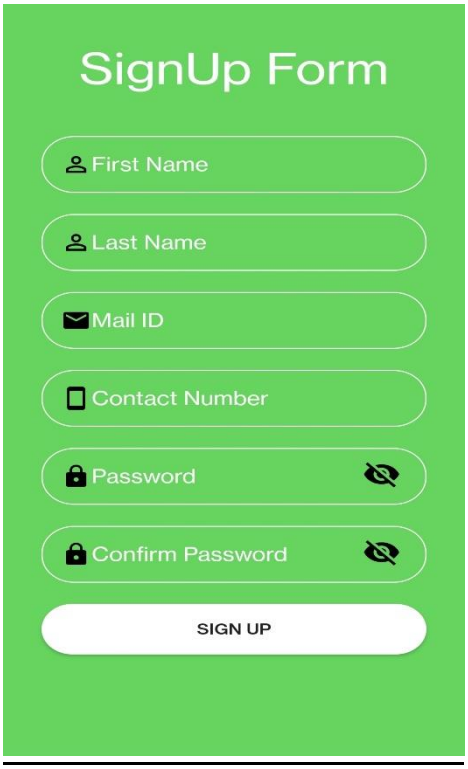
If you're a new user, you'll have to sign up first. You will be asked for your first name, last name, mail ID, contact number, password and then the app will ask you to reconfirm your new password before signing you up finally.

There's also a 'forgot password' option in case the user has forgotten his/her password.

LOGIN PAGE (EXISTING USER)



LOGIN PAGE (NEW USER)

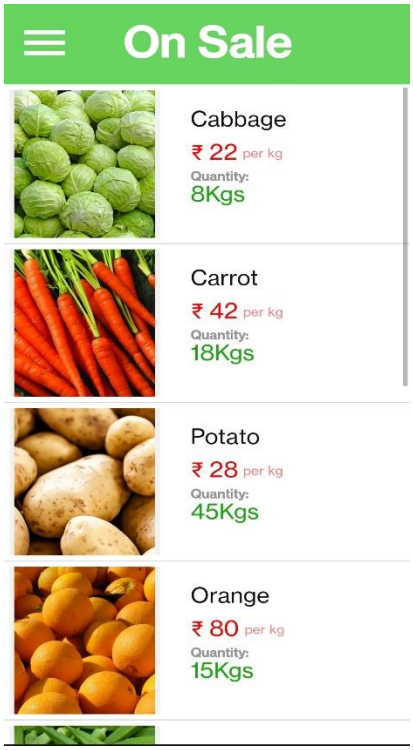


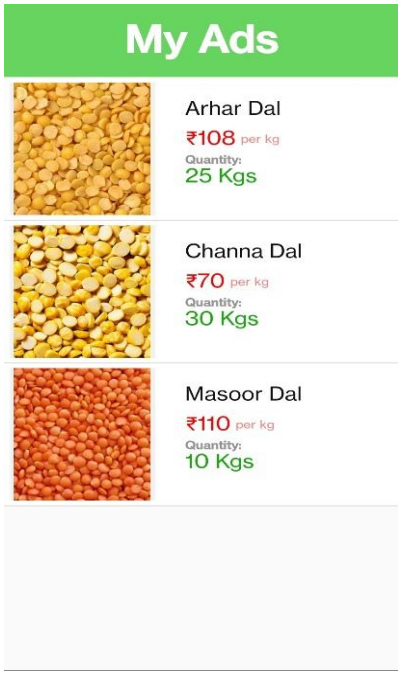
VIRTUAL MARKETPLACE

This is the feature around which the whole app revolves around. In this section you will find the produce that is offered by various farmers /farmers ' markets or restaurants looking to resell their surplus stock.

It was basically designed in such a way that the page is divided in rectangular sections and each of those rectangular sections consist of an image of the item along with it's price per kg, quantity and it's name. The images are clickable and upon being clicked they show the product and seller details.

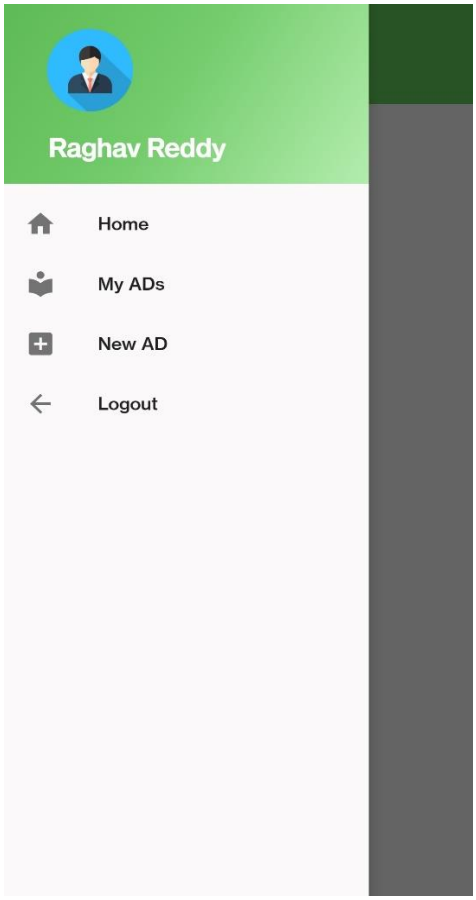
Some of the color combinations used in this page are very indicative of our app's agricultural theme.


On Sale
Cabbage
₹ 22 per kg
Quantity:
8Kgs
Carrot
₹ 42 per kg
Quantity:
18Kgs
Potato
₹ 28 per kg
Quantity:
45Kgs
Orange
₹ 80 per kg
Quantity:
15Kgs


My Ads
Arhar Dal
₹108 per kg
Quantity:
25 Kgs
Channa Dal
₹70 per kg
Quantity:
30 Kgs
Masoor Dal
₹110 per kg
Quantity:
10 Kgs

SIDE DASHBOARD

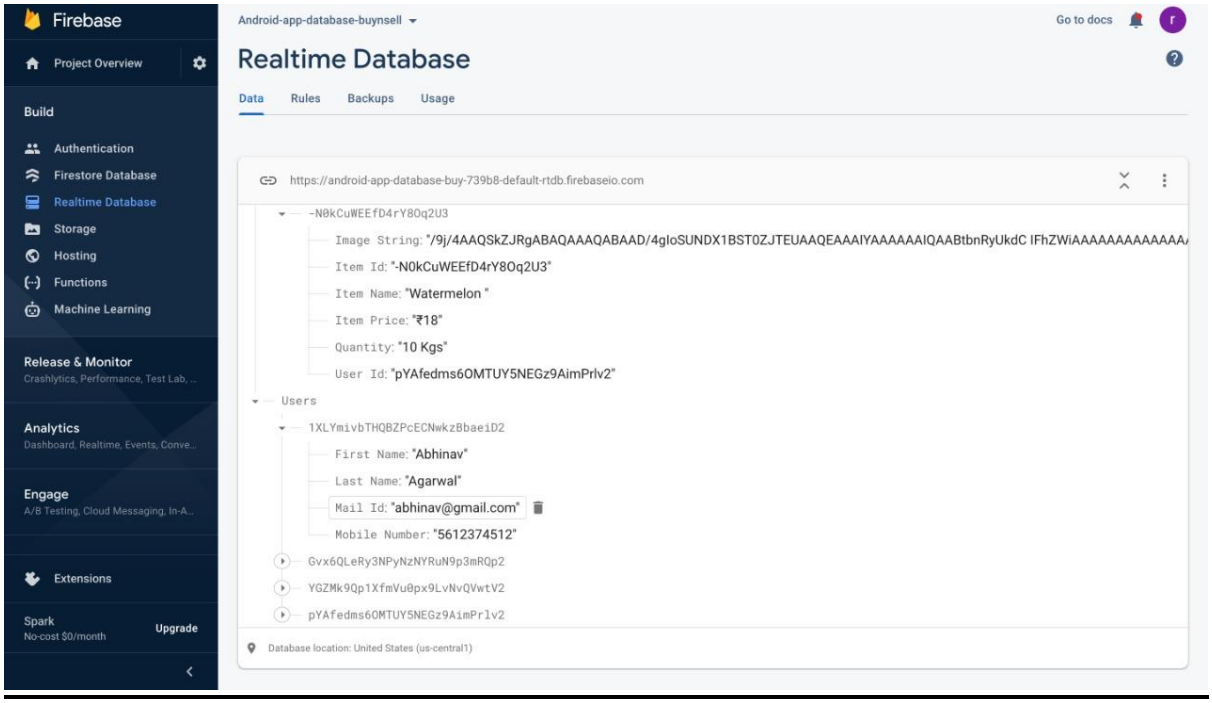
A dashboard becomes visible upon clicking the navigation bar on the left hand corner of the virtual marketplace page. In the dashboard, there'll be a small default profile photo (below which will be the username) along with options to logout, delete an item that was previously on sale but has been sold already, go back to home page, view your items on sale (known as ADs) and an option to create a new AD. The user will also be able to view his/her profile details by clicking on the image.


Raghav Reddy
Home
My ADs
New AD
Logout

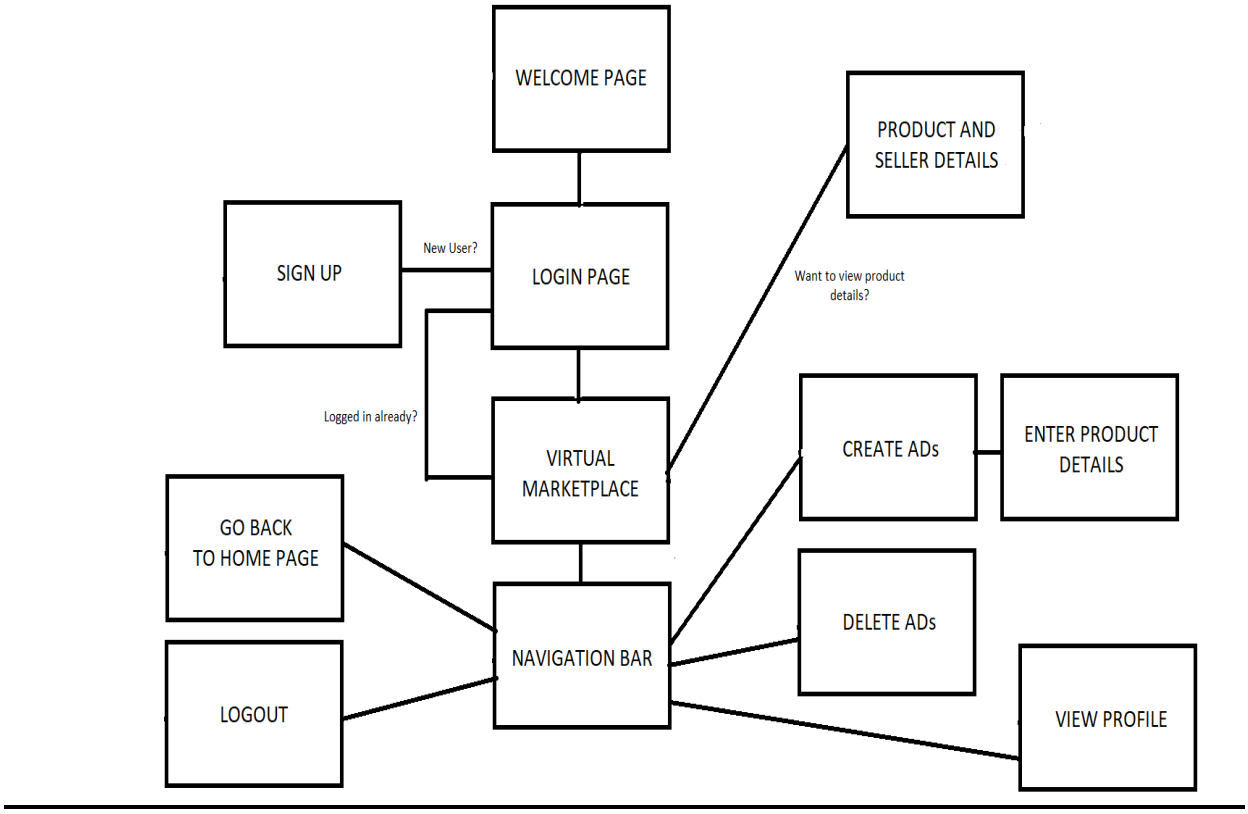
BACKEND

FIREBASE DATABASE

The backend of our project is made up of a firebase database which takes in values in real time and stores them. The database was connected to each input field like first and last name, mail, mobile number, item price, quantity and item name in order to be able to store all the data in the database. Each item has a unique item ID associated with it in the database.



FLOWCHART

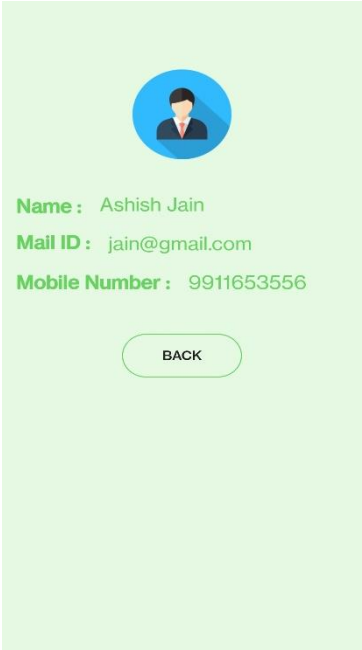

WELCOME PAGE
PRODUCT AND SELLER DETAILS
SIGN UP
New User?
LOGIN PAGE
Want to view product details?
Logged in already?
CREATE ADs
ENTER PRODUCT DETAILS
VIRTUAL MARKETPLACE
GO BACK TO HOME PAGE
DELETE ADs
NAVIGATION BAR
LOGOUT
VIEW PROFILE

RESULTS

a) PRODUCT DETAILS

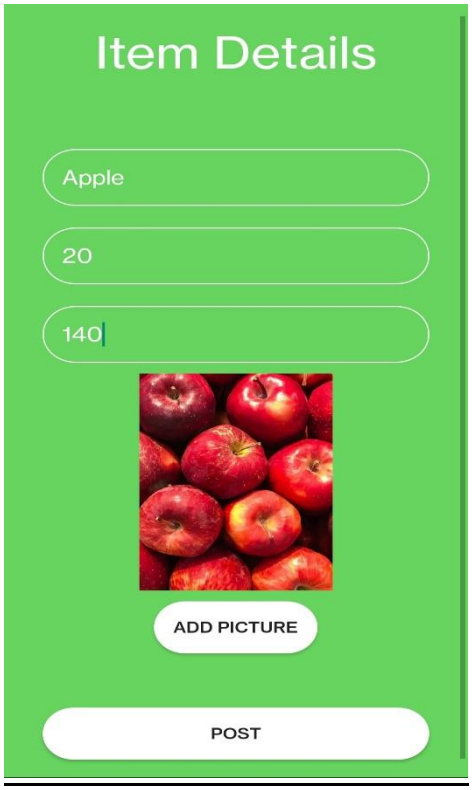
In the above picture, as you can see, the product details are given along with those of the seller's. A call and message option is also there in case the restaurant owner wants to communicate with the farmer/farmers' market and speak about a business proposal or forming a new business relation.

b) PROFILE DETAILS



The above image portrays the profile details of a particular user.

c) ENTERING ITEM DETAILS



Over here, the user is entering the details of his/her product. The first textfield is for the name of the product (in this case apples), the second field is for the quantity and the third field being for price.

There's even an option to add a picture of the product. Once the user is done with all this, they can post their AD on the virtual marketplace.

REFERENCES

1. https://stackoverflow.com/
2. https://firebase.google.com/docs/storage
3. https://www.geeksforgeeks.org/