

# FILL ME UP: Grocery System using flutter technology, firebase for database & using dart language

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**Abstract** - We are proposing an android application which will help user to shop from its local stores or nearby its home. This application can even provide stores new customers. Here our main moto is to reach to the nearby or local stores and how to increase its sales. User can even set a particular time range on which its product needs to be refill.

**Index Terms** - Grocery System, Android Application, Local Stores, Purchase rate.

## I. INTRODUCTION

There is primary two major reasons that motivated us to take this up. The first being Covid-19. With this pandemic affecting all of the surrounding, everything has come to a protection environment. Markets have been incurred with loss. Huge number of people have lost their lives. But we still have to go through this storm. With all of this ongoing we can't stop living our daily lives, can we? Thus, we came up with this application which could help people at least get their daily groceries on time and in a safe manner

Shopping for food is viewed as a drawn-out and less intriguing assignment by numerous yet a definitive action to be embraced as it is an essential part in human way of life. Straightforward strategies are utilized in helping to complete these exercises, some of them being bringing down the things to be bought on a paper or on the cell phone or most ordinarily making a psychological rundown.

Here we present 'Fill Me Up' mobile application and a portable programming arrangement where housekeeper or house wife shopping for food experience or grocery store no sweat of conquering the above confusions. The Application comprises of a few

modules; Interactive Shopping List where the client can add/eliminate/cross things, Shop Locator which help the client to track down the best store to go to so that a large portion of the things can be purchased in one spot, or you can register your local grocery store for daily needs, Items Recommender controlled with Apriori calculation to help the client to remember any conceivable missing things or things he might be keen on, which is a text-to-application component to divide the shopping records among the clients.

## II. LITERATURE SURVEY

We've all been there. You are standing at the line in front of grocery store with a handwritten list in your hand. It used to be pretty normal before the pandemic hit us, but situation during the pandemic were gone worse. For the health maintenance includes our groceries too. As per the rules social distancing was necessary so it took a long time to get our items within the list.

Grocery reminder will let you create a digital list of your item and directly send it to the shopkeeper of the grocery store via WhatsApp. You can set a reminder that when products are about to finish, so when the items are about to finish you will get a notification about it.

Upon the execution, it was seen that extremely solid outcomes were created from the information mining calculation from the related information, just as solid ease of use input given by the clients displaying 82% of beta clients being profited from the arrangement. Above talked about setting has been a solid foundation which purposes behind 'The Smart Shopping List' to turn into a difficult task and as a clever idea not just

the in the field of social way of life yet in addition as far as Data Mining, Geo-Location and versatile innovation also.

This can improvise the working culture of following things:

- The purchase decision making process in traditional retail environments.
- The purchase decision making process in online retail environments.
- Grocery shopping in traditional stores.
  - Pre-decisional stages.
  - In-store buying decisions.
- Grocery shopping in online stores
  - Adoption and buying motivations
  - Buying, browsing and search patterns.
- Main conclusions & conceptual framework.

### III. PROPOSED SYSTEM

The arrangement of information that is associated with any project is characterized utilizing information prerequisites. For this project, the principal information required is the login data to enroll the application and the thing's data. Without this data the application can't handle the exchange.

#### Functional Requirement

Functional prerequisites are properties that should exist in the last framework. For any portable application. To utilize the application, the client needs to enlist and login to the application in the wake of introducing by giving login data. Once, the individual in question logs into the application, they can utilize every one of the highlights.

#### Validations

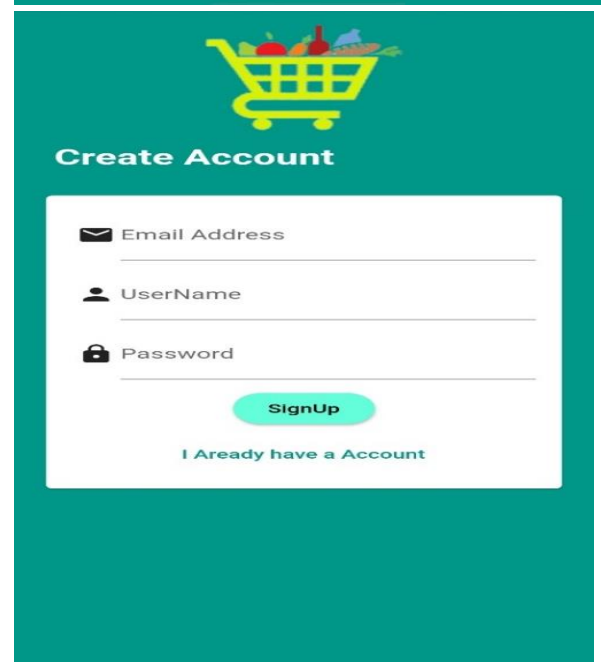
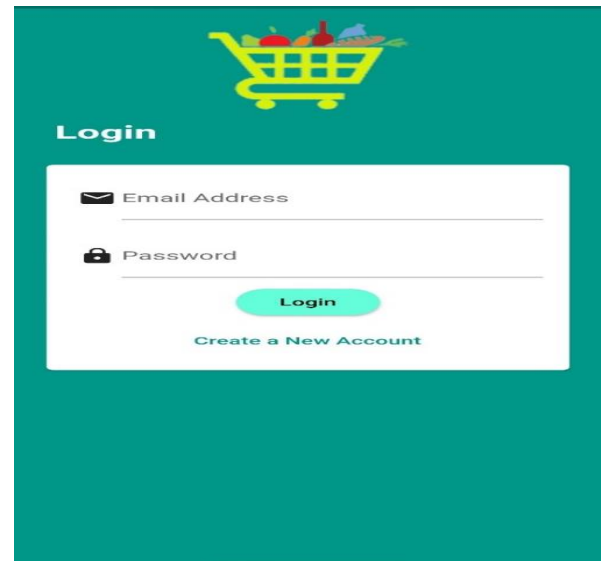
Approving any application is a significant measure prior to delivering the application to the clients. In the event that there is no validation, the data entered by clients might be repetitive, designed improperly and can't be kept up with. For instance, we can approve versatile number such that it should utilize just digits and letters. Assume, in the event that the approval isn't done, there are opportunities for the client to enter an off-base telephone number and save it.

If there should be an occurrence of any crisis issues, the approved individual can't contact the separate individual. Additionally, approvals for every one of

the fields that are utilized to save data in any application are profoundly important. In this application, we have completed a few approvals in the Login Page and Home Page.

In the Login Page, we have approved all the login data that is needed for the client to pursue the initial time. Fields like username, email, secret phrase, versatile number are

approved properly by showing blunder messages. The username ought not contain any digits, secret word ought to be least of six letters, the email ought to be a legitimate location and assuming the email id is as of now enlisted, a blunder message is shown saying that email id exists.



The portable number ought to contain just digits, when examining the thing, filter activity ought to be done appropriately to bring the standardized tag number, if not a message is shown.

#### IV. PROJECT DESCRIPTION

This undertaking depends on the practical plan approach, which helps in understanding the plan of the project in an easier manner by clarifying its stream, use cases, and execution more like a measured methodology. For instance, there are various modules in this project which have separate usefulness and, other sub functionalities/modules. Every one of the modules are planned, executed and incorporated together to make a faultless working application.

##### Detailed Design:

The detailed design including modules and sub modules of the application is as follows:

##### 1. User Registration:

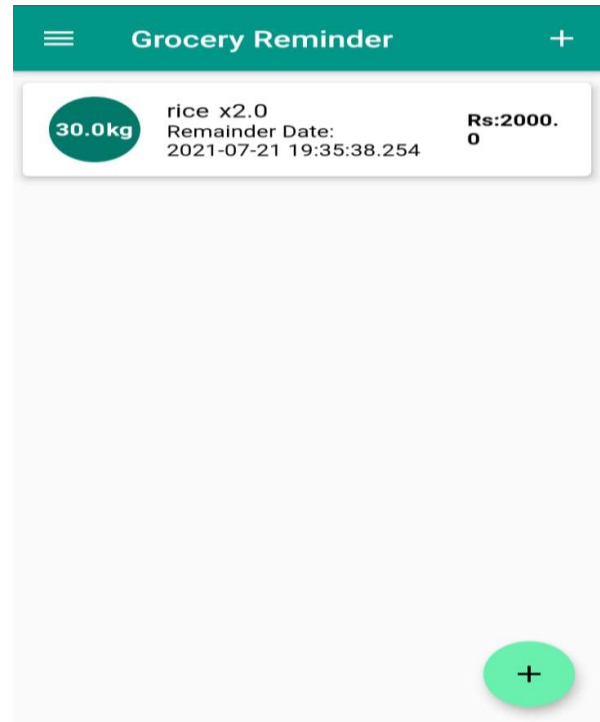
If the user wants to use the "Fill me up", they will have to download the application from the play store, install and register it by providing login information. Once, they register the registered information is stored on the server that is in firebase and can be validated, checking the valid credentials for the next time he logins with the application.

This is interface where user have to provide his/her login credential.

##### Adding Local store:

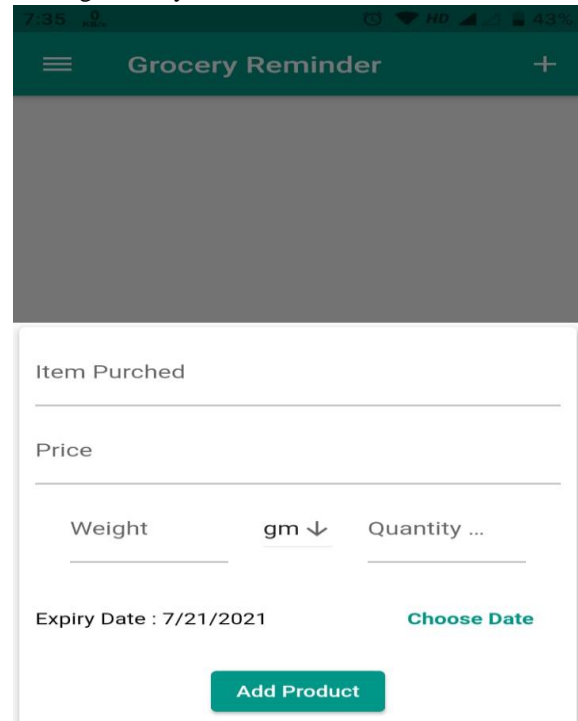
UI Design for any application ought to be exceptionally straightforward. We ought to have a couple of snaps or route among the highlights when utilizing the application to keep away from problem. In this application, there are two primary screens, the Login and Home screens.

The login page is the primary page which seems when the client utilizes the application. In that page, assuming he is another client, he can join or on the other hand on the off chance that he is a current client, he can login with the certifications.



Here with the addition of item you can even add your local store details and notify him/her about your grocery which will be having close ending date.

##### Adding Grocery:

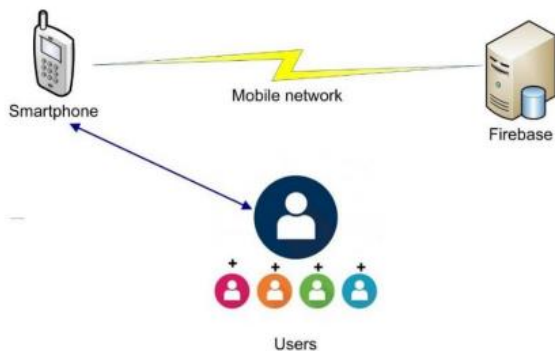


This feature helps people by allowing them to that is available on the item. Once the user add the item, they

can see all the information about the item like quantity, name, price, net price, ending date, weight and serial number. Users can scan any number of items they wish and keep adding to their physical shopping cart. Later, they can purchase any item they want by checking the items in the cart or by sending this reminder list to your local store.

Below flowchart show the user process where user will go through following steps.

As the user login through the smartphone the details will be store in the firebase( firebase which will only be login through admins account). This data will only be seen by admin and can handle it.



If any item is added then the user will only see the expire date i.e. the time duration that item should be repurchase from the store. Now from here user can send this list to your nearest store which will be evaluated by the store person if all the items are their then he can simply click on available button or else they can let customer know which will not be available.

Below image explain the interaction between the shopkeeper and the customer. Where even same list can be verified through shopkeeper.

## V. PROJECT IMPLEMENTATION

To start things off, I expected to gain proficiency with the essential construction of Android's structure. When you initially make an essential action utilizing Android engineer, there are a couple of things that are made what get you going with a default format, like a "hi world" program in C++ or another language. You initially have a "Main. Dart" record which controls what you need your application to do at the point when the client communicates with it. Furthermore, you have the different .dart file document, which is the thing that is considered when

the application is first dispatched from the client's gadget. This are the files we are importing different screens

```

import 'package:firebase_auth/firebase_auth.dart';
import 'package:flutter/material.dart';
import 'package:firebase_core/firebase_core.dart';
import
'package:grocery_project/screens/addnotes.dart';
import
'package:grocery_project/screens/notestitle.dart';
import 'package:provider/provider.dart';
import './screens/home_screen.dart';
import './screens/auth_screen.dart';
import './provider/functions.dart';
    
```

This sets up the application into its underlying state, which you can indicate by changing the pre-characterized code inside the show document. Finally, you have another file that compares to your primary movement and controls the visuals and format of that specific action. To add things to that action, as I do, you would launch them in this document.

Since we've started to comprehend the overall design of Android applications, I could at last start to make my venture. From that point, we made the alter text object, and had the option to change the size of the text box by hauling the sides of the crate utilizing the plan tab inside Android Developer. Low and view, very much like that I had a text field where clients could make their basic food item records.

In below code we have shown the elements which we are taking from user and even the production the way it is going to show. Where every detail has been reflected to user and authentication is done in auth\_screen.dart file.

```

1 class ItemModal {
2   final String id;
3   final String title;
4   String unit;
5   final double quantity;
6   double amount;
7   final double weight;
8
9   DateTime expiryDate;
10  ItemModal({
11    required this.id,
12
13    required this.title,
14    required this.amount,
15    required this.weight,
16    required this.unit,
17    required this.quantity,
18    required this.expiryDate,
19  });
20 }
    
```

Every screen plays its significance role to make the user interface more interactive and helpful to fulfill their daily needs. The most important of it is your sign in and sign-up page where you can even have your family account and verified account.

## VI. CONCLUSION

As it's been said we actually should move alongside time, move alongside the pattern and attempt to make the world a superior and productive spot to live in. As the years pass by there will be a lot more basic food item applications and the genuine supermarkets may ultimately close down. Assuming that you take a gander at it these applications save a ton of time, they save a great deal of energy and they do even set aside some cash. This is the eventual fate of Online Shopping. Through this exploration we have had the option to resolve a couple of issues of shopping basic food item. The most significant of all is remaining at home and protected as opposed to taking a chance with your lives by going out to purchase your food in this pandemic. Our dear Government has spoken to us to remain at home and this is the least we can do to save our lives just as others. Our point was to foster an easy-to-understand application to arrange food and we have been fruitful in it.

The accompanying elements could be carried out in our future works for this application.

- We plan to make the User interface considerably less difficult for the senior age to utilize.

- We will attempt to advance this application as it could contact an ever-increasing number of individuals.
- Generate invoice for every order.
- We additionally expect on taking customized orders and so on for specific clients.
- To add other shops and malls for recommendation for new user with even local stores.
- In future we can integrate google assistance and Alexa that remind you about the expiry of your products and let you add products via voice message.

## REFERENCE

- [1] <https://www.irjet.net/archives/V8/i4/IRJET-V8I4678.pdf>
- [2] <http://ieeexplore.ieee.org/document/8311745/>
- [3] [https://www.researchgate.net/publication/38178214\\_Online\\_grocery\\_shopping\\_The\\_influence\\_of\\_situational\\_factors](https://www.researchgate.net/publication/38178214_Online_grocery_shopping_The_influence_of_situational_factors)
- [4] <http://www.warse.org/IJATCSE/static/pdf/file/ija-tcse55852019.pdf>
- [5] <https://sites.sju.edu/afm/files/2017/06/The-Peck-Fellowship-Year-2-Research-Report-FINAL.pdf>
- [6] <https://firebase.google.com/products-build>
- [7] <https://flutter.dev/?gclid=ds&gclid=ds>
- [8] J. M. C. da and S. Penim, Online grocery shopping: An exploratory study of consumer decision making processes, 2013.
- [9] R. Bassett, B. Beagan and G. E. Chapman, "Grocery lists: connecting family household and grocery store", Br. Food J, vol. 110, no. 2, pp. 206-217, Feb. 2008.
- [10] P. Nurmi, E. Lagerspetz, W. Buntine, P. Floréen and J. Kukkonen, "Product Retrieval for Grocery Stores", Proceedings of the 31st Annual International ACM SIGIR Conference on Research and Development in Information Retrieval, pp. 781-782, 2008.
- [11] [https://www.researchgate.net/publication/323713789\\_The\\_smart\\_shopping\\_list\\_An\\_effective\\_mobile\\_solution\\_for\\_grocery\\_list-creation\\_process](https://www.researchgate.net/publication/323713789_The_smart_shopping_list_An_effective_mobile_solution_for_grocery_list-creation_process)
- [12] J. Polaski. We Know You Want It: Perspectives on Predictive Shopping, Honors Thesis in Management Bridgewater State University, 2015.
- [13] N. Katuk, T. Jayasangar, and Y. Yusof. Design and Development of Smart List: A Mobile App

for Creating and Managing Grocery Lists,  
Baghdad Science Journal, vol. 16, pp. 462-476,  
2019

[14]L. M. Sloat. Commentary: The Impact of  
Digitization on Grocery Retailing: Why Shopping  
Lists Might Be a Valuable Tool for Brick-and-  
Mortar Grocery Retailers, Journal of the  
Association for Consumer Research, vol. 3, pp.  
410-411, 2018.

[15]A. Stabel, "Daily Living Skills," in Encyclopedia  
of Autism Spectrum Disorders, F. R. Volkmar,  
Ed., ed New York, NY: Springer New York,  
2013, pp. 839-840.