A PROJECT REPORT ON

Online Grocery Application

Submitted in partial fulfillment of the requirement in

B.Tech. Information Technology

From

Department of Computer Sciences & Engineering

Institute of Advanced Research,

The University for Innovation

Academic Year 2023 – 24

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Co-Guide
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Department of Computer Sciences & Engineering

Certificate

This is to certify that the project work entitled

Online Shopping App

submitted in partial fulfillment of the requirement for the course in

B.Tech. Information Technology
of the
Institute of Advanced Research

is a result of the bonafide work carried out by

Ronak Nileshbhai Patel

during the academic year 2023-2024

Dr. Harish Morwani
Faculty Guide

Dr.Brijesh Jajal
Head of Dept.

ACKNOWLEDGEMENT

It is indeed a great pleasure to express my thanks and gratitude to all those who helped me. No serious and lasting achievement one can ever achieve without the help of friendly guidance and co-operation of so many people involved in the work.

I am very thankful to my faculty guide **Dr. Harish Morwani** the person who makes me follow the right steps during project work. I express my deep sense of gratitude to his guidance, suggestions and expertise at every stage. Apart from that his valuable and expertise suggestion during documentation of my report indeed helped me a lot.

I am also thankful to my Head **Dr.Harish Morwani** and **Dr.Vishal Vyas** for their support as and when required. I would like to extend my gratitude towards all who directly or indirectly supported and helped me to accomplish my project work.

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Chapter 1

Introduction

Project Summary & Profile

- Project name : QUICK PICK
- The Aim of This Project :- Buy vegetable & grocery online

Purpose

- The purpose of this project is to make shopping easier for our customers and they don't need to waste their time
- The main purpose of this to deliver our product in 45 minutes
- In this app user can pay using COD only because online transaction are very risky (Carding issue).

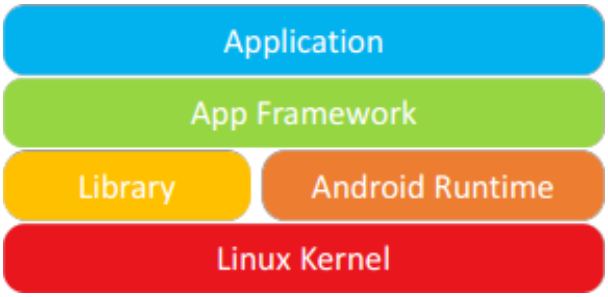
Scope & objective

- After login users can buy any product easily
- The process will be between us and Users there will be no other third party involved in it.

Technology

- **Flutter**
-

- **Android:-** This app is a android app. This app is developed by FLuuter .



(Figure 1) Android Architecture

- Firebase:
    - Firebase is a product of Google which helps developers to build, manage, and grow their apps easily.
    - It helps developers to build their apps faster and in a more secure way.
    - No programming is required on the firebase side which makes it easy to use its features more efficiently.
    - It provides services to android, ios, web, and unity.
    - It provides cloud storage.
    - It uses NoSQL for the database for the storage of data.

Chapter 2

Project management

Project Planning

- Project planning is one of the major tasks that are performed during the development of the project. Using project planning, the task of finding the size of the project is done and with that total amount of time and cost required for the project is calculated.
- The approach to developing the software system should follow some systematic way
- i.e. Software Development Life Cycle. Using the upper-level analysis and the environment of the project, which lifecycle model would fit properly for this project was judged. After deciding the proper software development lifecycle model, the development of this project according to the model was done.

2.1.1 Project Development Approach

How to choose the right approach for a project is a large topic. The methodology you choose can depend on many things, including the structure and location of the project team, the technologies being used on the project, and the degree to which collaboration is a part of the company's culture.

- The project is done based on the decided development life cycle model. We decide the *Iterative Waterfall Model* for our application

Iterative Waterfall Model

- In a practical software development project, the *Classical Waterfall Model* is hard to use. So, the Iterative waterfall model can be thought of as incorporating the necessary changes to the classical waterfall model to make it usable in practical software development projects. It is almost same as the classical waterfall model except some changes are made to increase the efficiency of software development.

"The iterative waterfall model provides feedback paths from every phase to its preceding phases, which is the main difference from the classical waterfall model."

- Feedback paths introduced by the iterative waterfall model are shown in the figure below.

(Figure 3) Iterative Waterfall model

- Figure 3 Iterative Waterfall model Feedback paths introduced by the iterative waterfall model are shown in the figure below.
- When errors are detected at some later phase, these feedback paths allow correcting errors committed by programmers during some phase. The feedback paths allow the phase to be reworked in which errors are committed and these changes are reflected in the later phases. But, there is no feedback path to the stage – feasibility study, because once a project has been taken, it does not give up the project easily.
- It is good to detect errors in the same phase in which they are committed. It reduces the effort and time required to correct the errors.
- **Phase Containment of Errors:** The principle of detecting errors as close to their points of commitment as possible is known as Phase containment of errors.

Advantages of Iterative Waterfall Model

- **Feedback Path:** In the classical waterfall model, there are no feedback paths, so there is no mechanism for error correction. But in iterative waterfall model feedback path from one phase to its preceding phase allows correcting the errors that are committed and these changes are reflected in the later phases.

- **Simple:** The Iterative waterfall model is very simple to understand and use. That's why it is one of the most widely used software development models.

Drawbacks of Iterative Waterfall Model

- **Difficult to incorporate change requests:** The major drawback of the iterative waterfall model is that all the requirements must be clearly stated before starting the development phase. Customer may change requirements after some time but the iterative waterfall model does not leave any scope to incorporate change requests that are made after development phase starts.
- Incremental delivery not supported: In the iterative waterfall model, the full

software is completely developed and tested before delivery to the customer. There is no scope for any intermediate delivery. So, customers have to wait long for getting the software.

- Overlapping of phases not supported: Iterative waterfall model assumes that one phase can start after completion of the previous phase, But in real projects, phases may overlap to reduce the effort and time needed to complete the project.
- Risk handling not supported: Projects may suffer from various types of risks. But, the Iterative waterfall model has no mechanism for risk handling.
- Limited customer interactions: Customer interaction occurs at the start of the project at the time of requirement gathering and at project completion at the time of software delivery. These fewer interactions with the customers may lead to many problems as the finally developed software may differ from the customers' actual requirement.

- **Risk Management :-**

Risk Identification

- Risk is an inevitable concept of the softer project and it mainly concerns future happenings. We want to produce a well working system; therefore, we must consider all the possible defects and unexpected conditions.

Following the possible risk of our project…

1. Schedule Risk

Project schedule get slip when project tasks and schedule release risks are not addressed properly. Schedule risks mainly affect a project and finally on company economy and may lead to project failure.

Schedule Risk occurs due to following reasons.

- Wrong time estimation
- Resources are not tracked properly. All resources like staff, systems, skills of

individuals.

- Failure to identify complex functionalities and time required to develop those functionalities.
- Unexpected project scope expansions.

2. Budget Risk

- Wrong budget estimation.
- Cost overruns
- Project scope expansion

3. Operational Risks

- Risks of loss due to improper process implementation failed system or some external events risks.

Causes of Operational risks:

- Failure to address priority conflicts
- Failure to resolve the responsibilities
- Insufficient resources
- No proper subject training
- No resource planning
- No communication in the team

4. Technical risks

- Technical risks generally lead to failure of functionality and performance.

Causes of technical risks are:

- Continuous changing requirements
- The product is complex to implement.
- Difficult project modules integration.

5. Programmatic Risks

- ❖ These are the external risks beyond the operational limits. These are all uncertain risks are outside the control of the program.

These external events can be**:**

- ➢ Running out of the fund.
- ➢ Changing user product strategy and priority

- ➢ **Risk Analysis**

- ➢ Risk analysis is the important aspect of the system planning whenever planning the Application, programmer always should consider the risk of system which he might face in the Website. Risks are of two types…

1. Protective Risk

- ➢ Protective Risk magement attempts to reduce the tendency of any accident happening in future by identifying the boundaries of activities, where a breach of the boundary can lead to an accident.
- ➢ Protective Risk management combines a mixed method of past, present and future prediction before finding solutions to avoid risks.

2. Reactive Risk

- ➢ Reactive risk management attempts to reduce the tendency of the same or similar accidents which happened in past being repeated in future.
- ➢ Reactive risk management solely depends on past accidental analysis and response.

Chapter 3

System Requirement Study

Software & Hardware Requirement:-

- Hardware Requirement:-
  - Smart phone
  - 1 GB RAM
- Software Requirement:-
  - Only Android Operating System
  - Android 4.4(KitKat) and above Android
  - Download: Play Store, MI store, realme Store

User Characteristics:-

- User characteristics are useful source of information that helps designers to faster such as understanding of target users and the product in development. When designing for a specific user group, the 'user characteristics' helps you to better understand the target group and predict usability problems in practice.

- We define characteristics of each user below:-

- **Customer:-**
  - Customer can do Login.
  - Customer can do buy product.
  - Customer Watch the product.
  - Customer Take the details.

- **Admin :-**
  - Admin can do update the app.
  - Admin can update item daily.

Chapter 4

System Analysis and designing

- **Feasibility Study:-**
  - Feasibility study is carried out when there is a complex problem or opportunity. It is considered as the primary investigation which emphasizes on "look before You Loop" approach to any project.
  - A feasibility study is undertaken to determine the possibility of either improving the existing system or developing a completely new system.
  - **In feasibility study there three type of study takes place:-**
  -

1. Technical Feasibility study

2. Economical Feasibility study

3. Operational Feasibility study

1. Technical Feasibility study

- In this type of study the current technology in used in an organization such as the existing software, hardware, and personnel staff to determine whether it will work for the proposed system or completely new once is to be used.
- The technology that was important in developing a new system such as development tools, block-end database system were available from within the organization.
- The proposed system is capable of adding, changing, enhancing the functionality, features etc. the proposed system is capable large storage of data.
- The back-end front-end technology has greater important for providing an accurate, error-free, frequencies of data to be used.

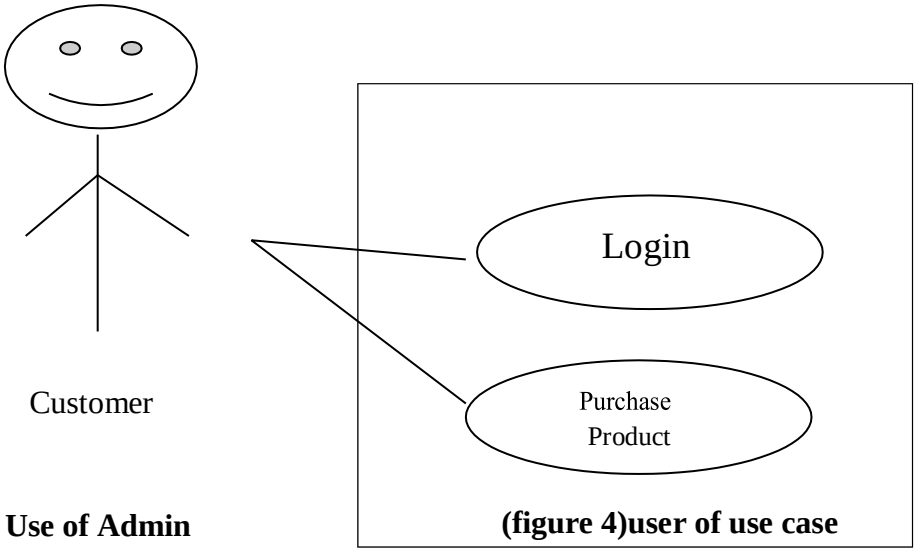
2. Economical Feasibility study

- For proving that system development is economical, the feasibility study takes place to check the cost of developing a system against the benefits that it provides. If the costs are less and benefits are than we can define our system to be economical developed.
- The registration processing is speedier than the registered manually.
- The saving of papers as all data are stored computerized.
- The record is of free of human error as there is less chance of mistakes.
- The above benefits are in terms of saving time, minimize error and provide efficiency in work done.

3. Operational Feasibility study

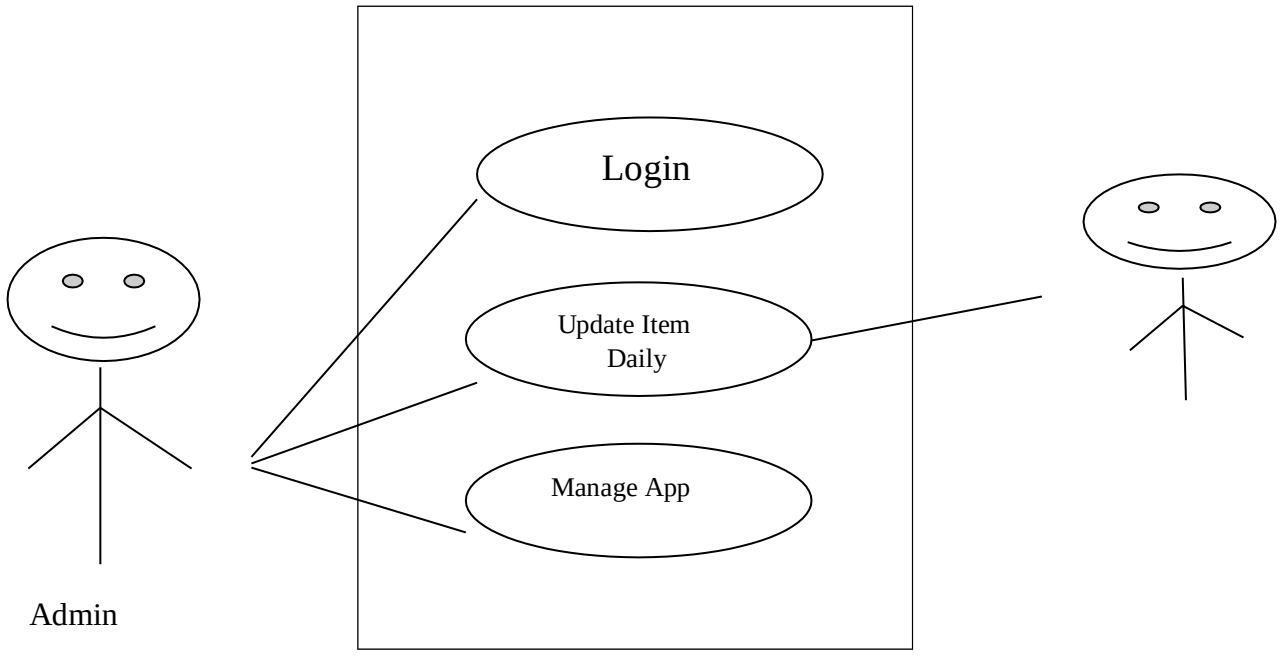
- The operational feasibility is concerned with the operability of the system after it has been installed. That is some programmer may not like changes in their routing method of work of has fear that they will lose their peer group.
- The following areas will have the operational feasibility in proposed project.
- The organization has approved this system as their working system.
- The user of the System has accepted the proposed system as their new working system and realized the benefits of it.
- The system will work in a proper way after it has been installed and the installation process is easy to use.

- **Function of the System:-**
  - **UseCase diagram**
  - **Use of customer**



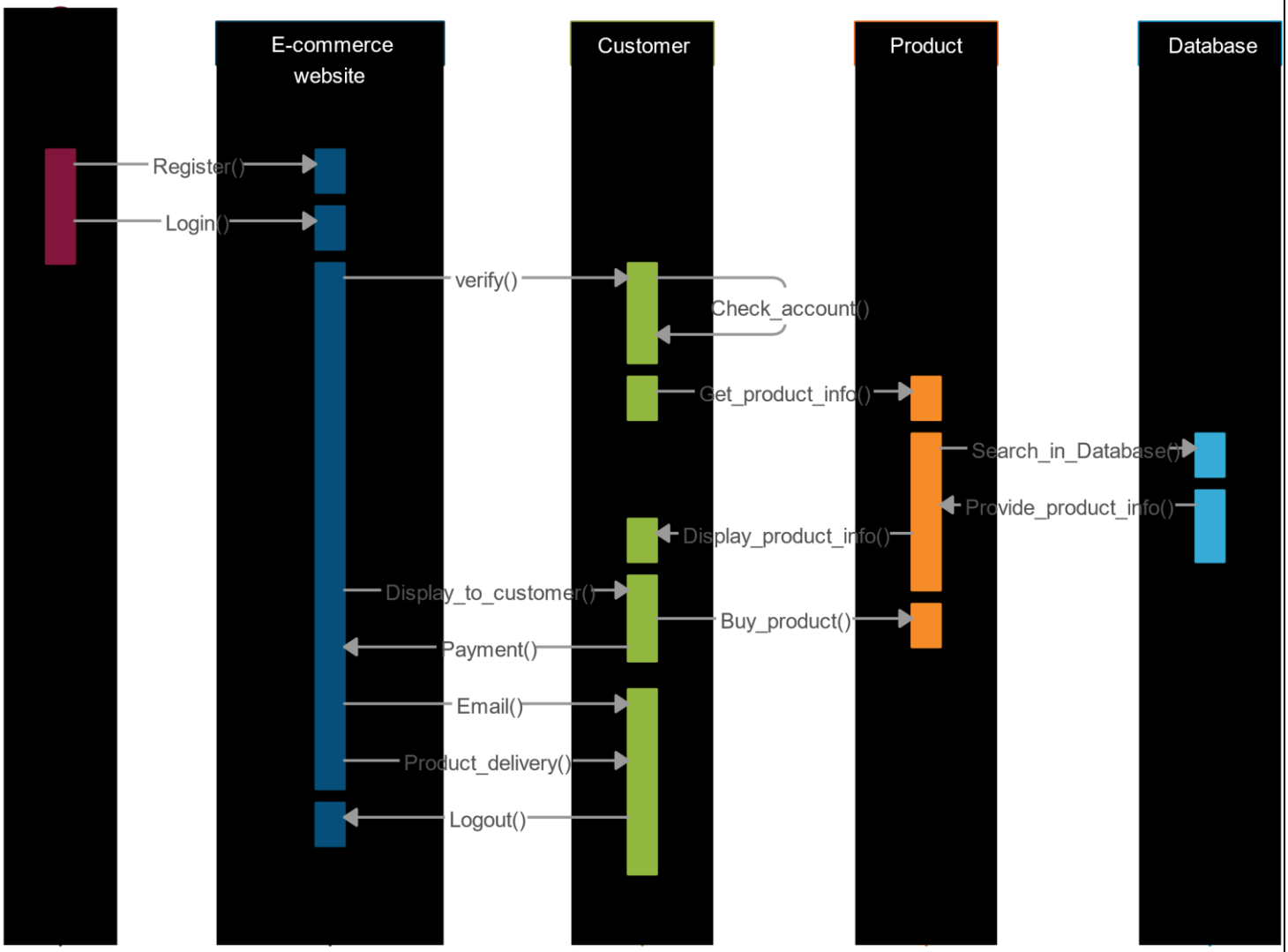
Use of Admin

(figure 4)user of use case



Figure(5)admin of use case

- **sequence case diagram**



➢ Data Dictionary:-

❖ Customer Registration Database:------

Field name	Data type	Data Size	Constraints
User_Name	Varchar	15	Not null
User_id	Int	5	Primary key
Google ID	Varchar	40	Not null
Password	Varchar	7	Not null

Table (3) Customer Registration database

❖ Product Detail Database:------

Field name	Data type	Data Size	Constraints
Prod_Name	Varchar	30	Not null
Prod_Price	Int	100	Not null

Table (5) Product Detail database

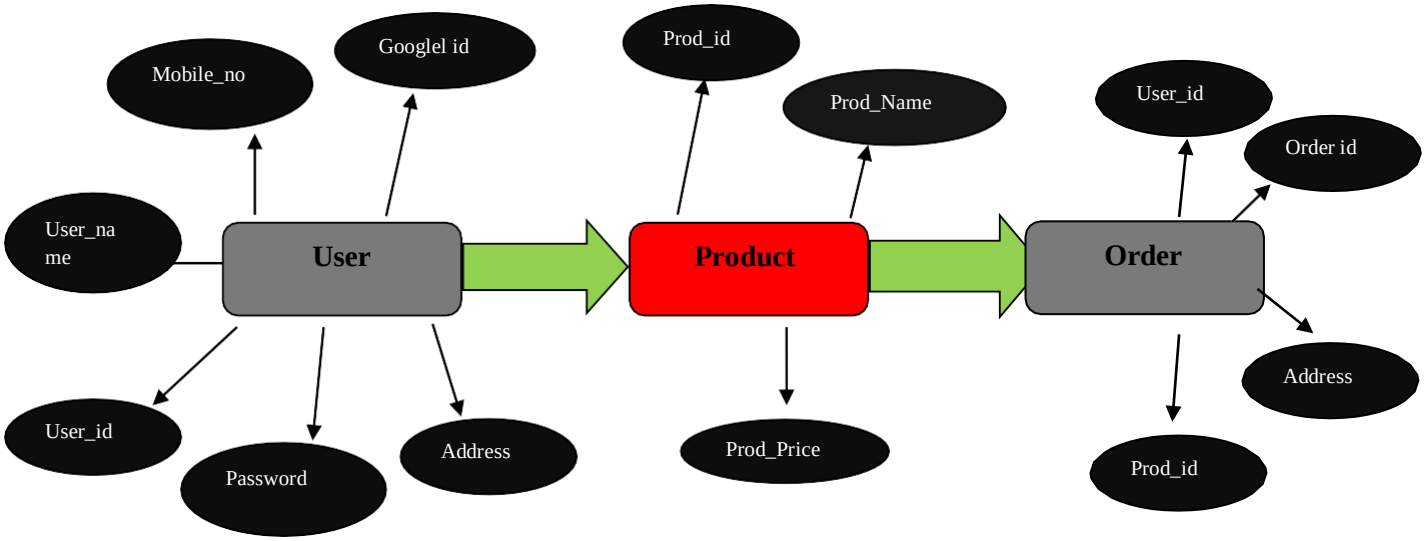
❖ Order detail Database:------

Field name	Data type	Data Size	Constraints
User_id	Int	5	Foreign Key
Prod_id	Int	15	Foreign Key
Order no.	Int	100	Not null

Table(6) order Detail database

➢ **E-R Diagram:--**

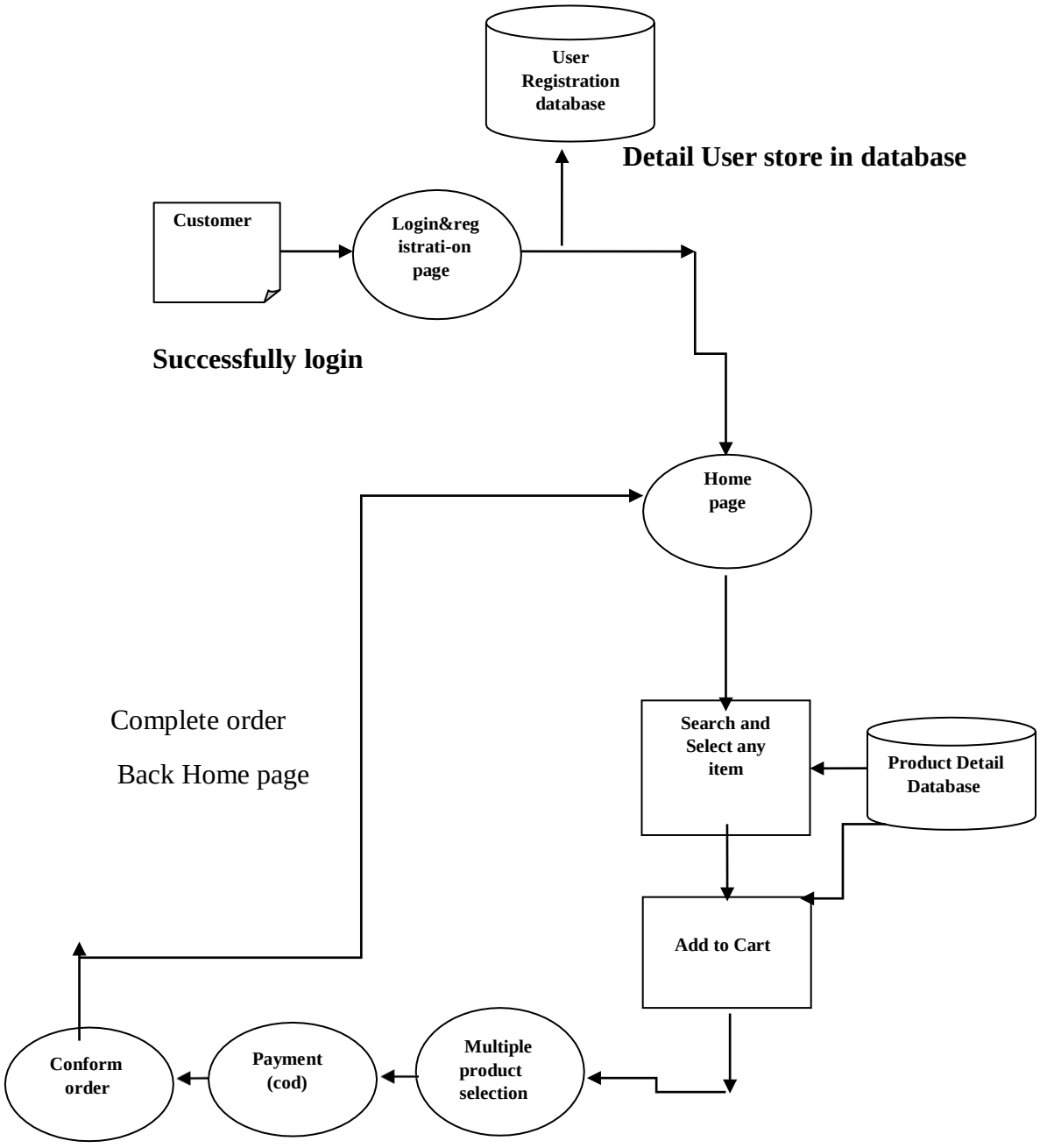
Figure (6) E-R Diagram



- **Activity Diagram:-**

Customer activity Diagram: ------

Figure (7)- Customer Dataflow Diagram



✓ **Admin activity flow Diagram:-----**

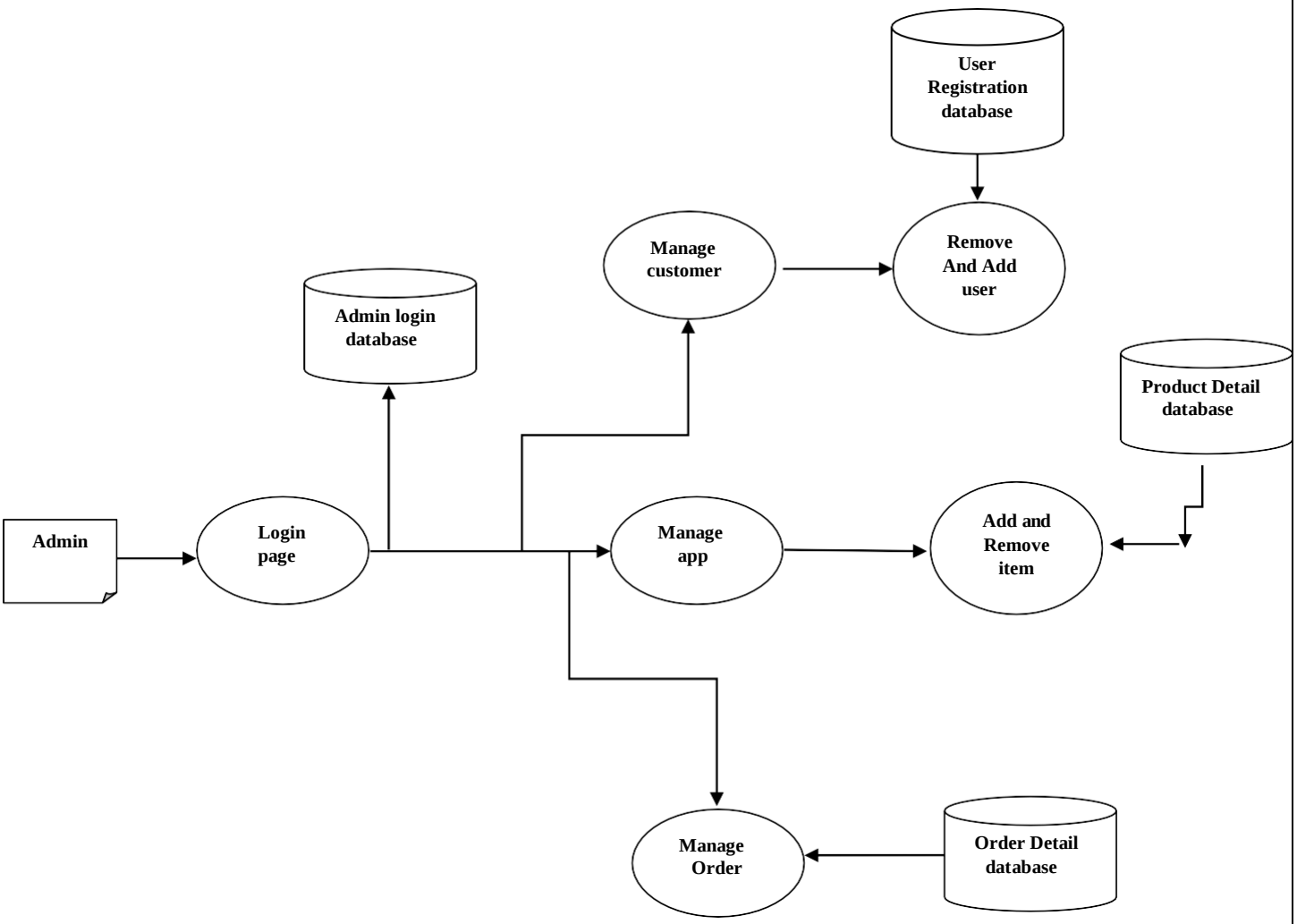
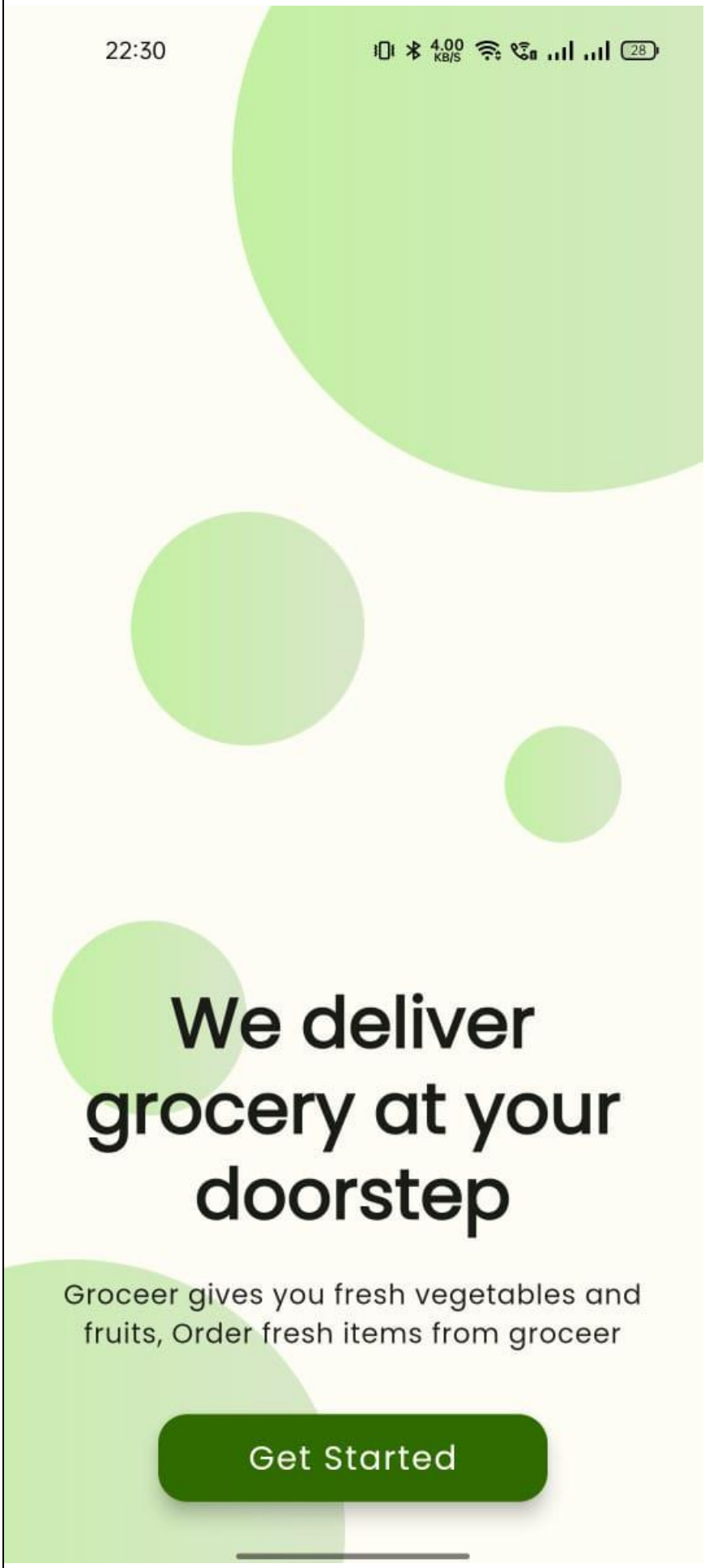
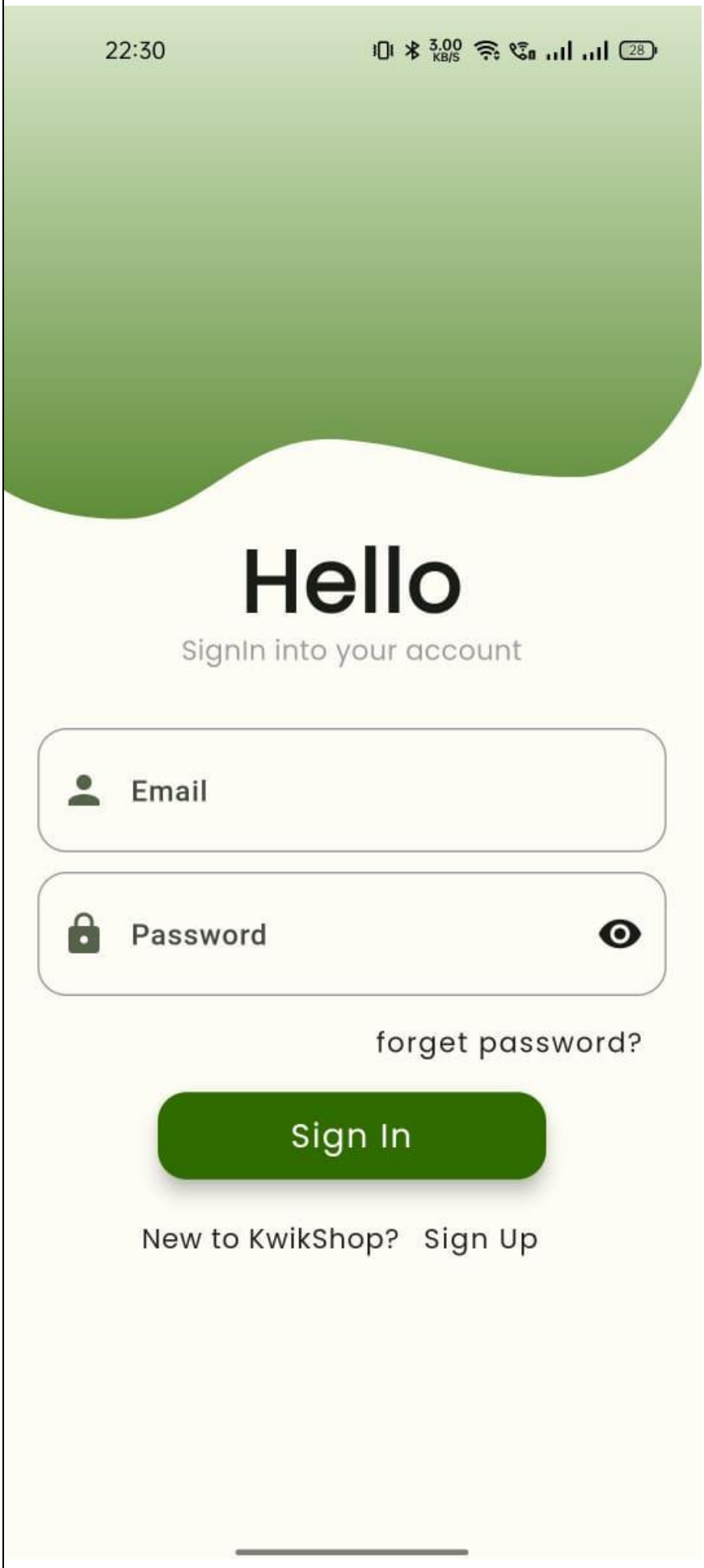
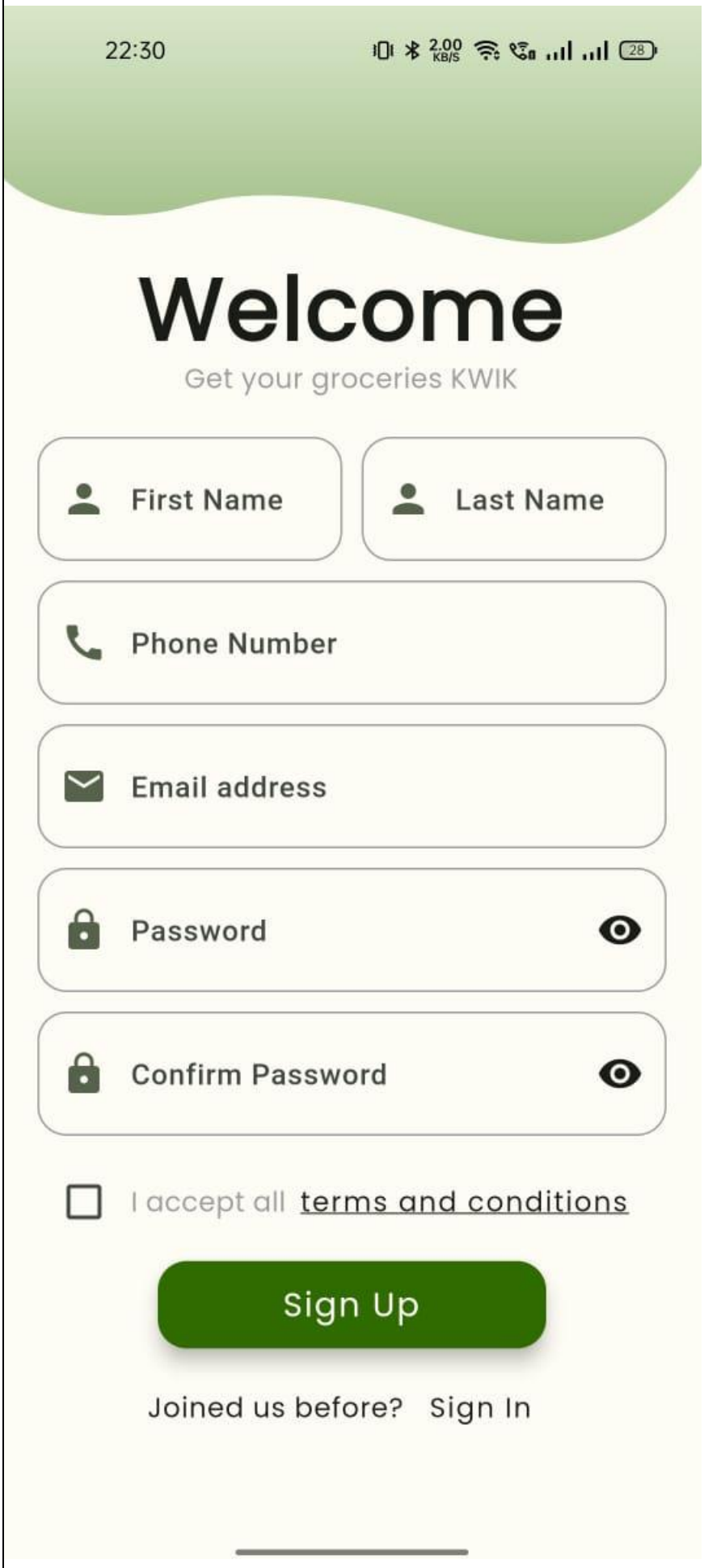


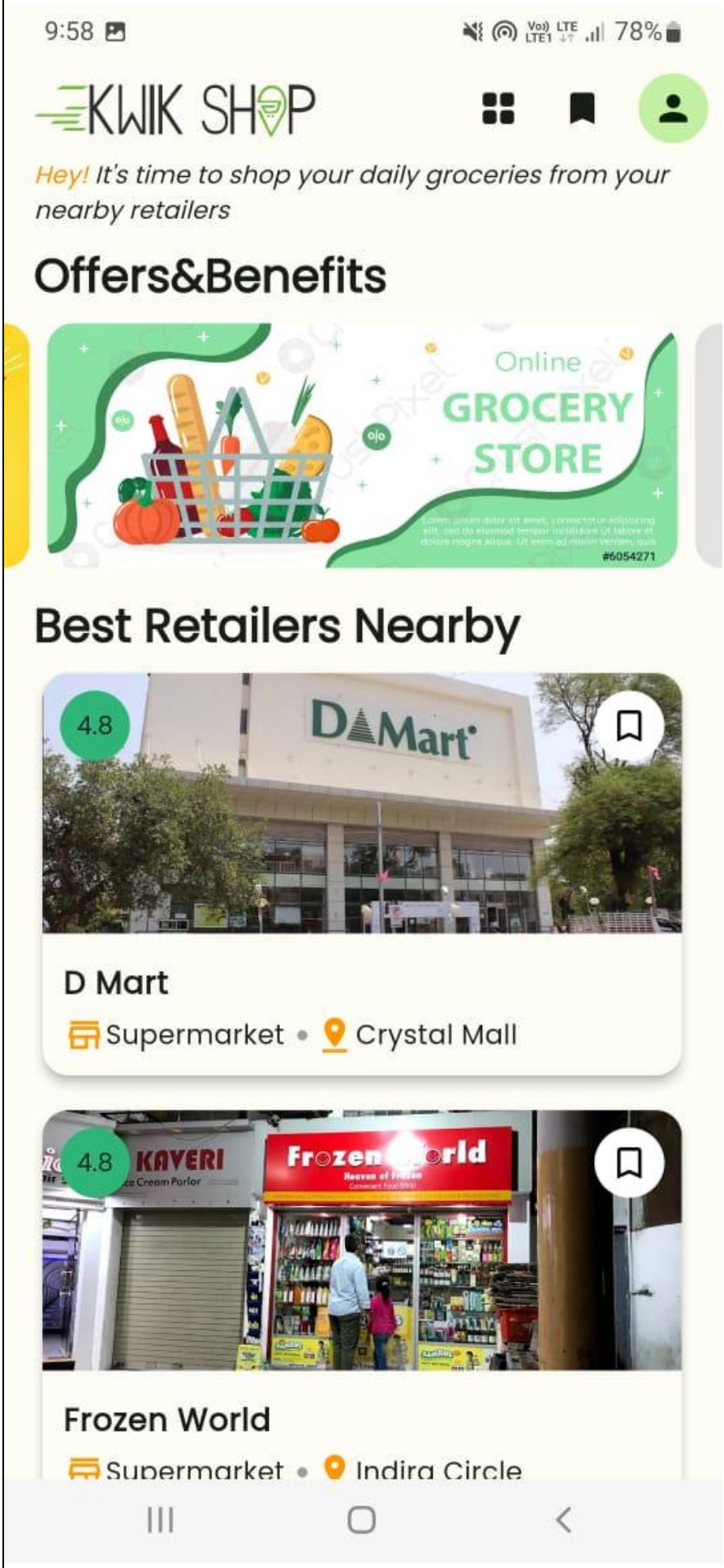
Figure (8)- Admin Dataflow

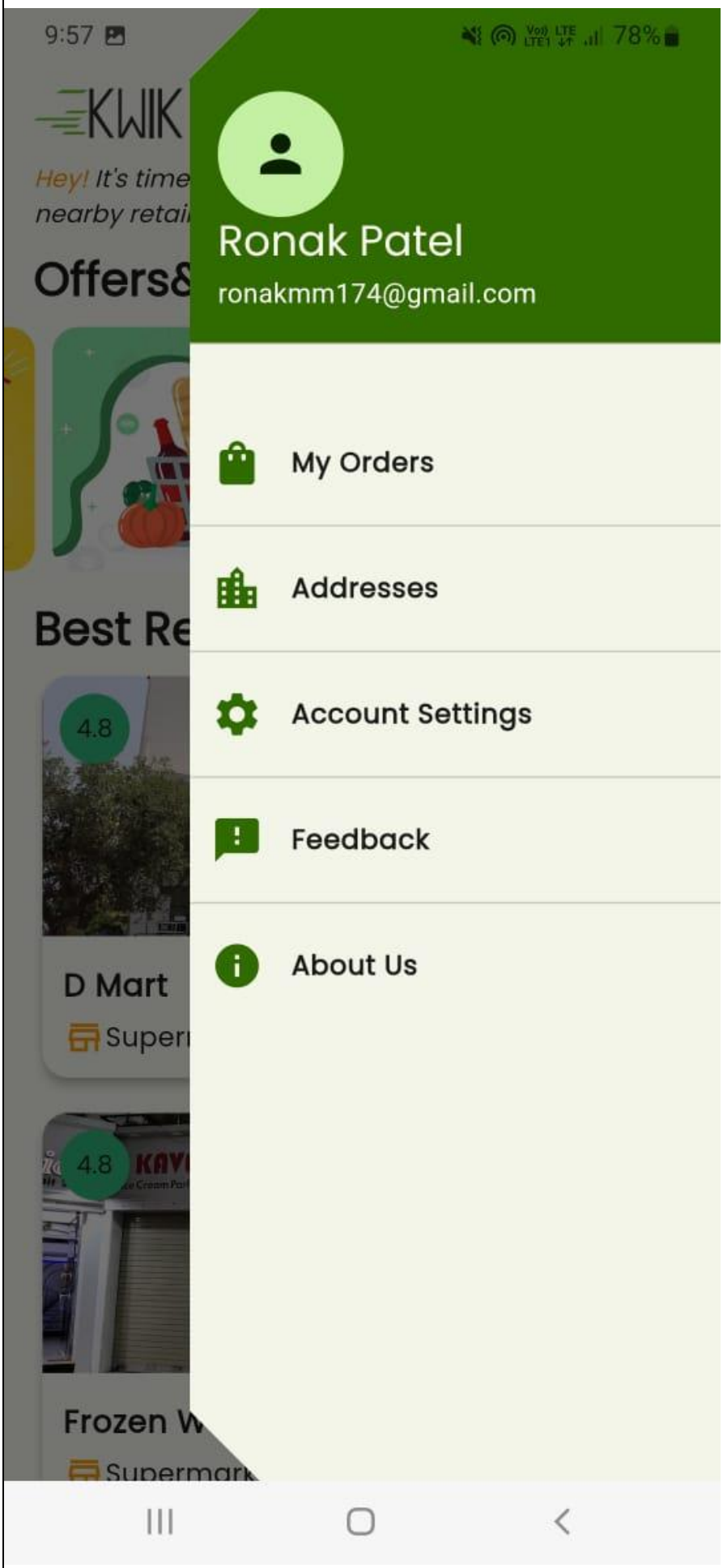
Chapter 5
Screenshot of UI


22:30
We deliver grocery at your doorstep
Groceer gives you fresh vegetables and fruits, Order fresh items from groceer
Get Started


22:30
Hello
SignIn into your account
Email
Password
forget password?
Sign In
New to KwikShop? Sign Up


22:30
Welcome
Get your groceries KWIK
First Name
Last Name
Phone Number
Email address
Password
Confirm Password
I accept all terms and conditions
Sign Up
Joined us before? Sign In


9:58
78%
KWIK SHOP
Hey! It's time to shop your daily groceries from your nearby retailers
Offers&Benefits
Online
GROCERY
STORE
#6054271
Best Retailers Nearby
4.8
D Mart
D Mart
Supermarket • Crystal Mall
4.8
KAVERI
Frozen World
Frozen World
Supermarket • Indira Circle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KWIK
Hey! It's time
nearby retai
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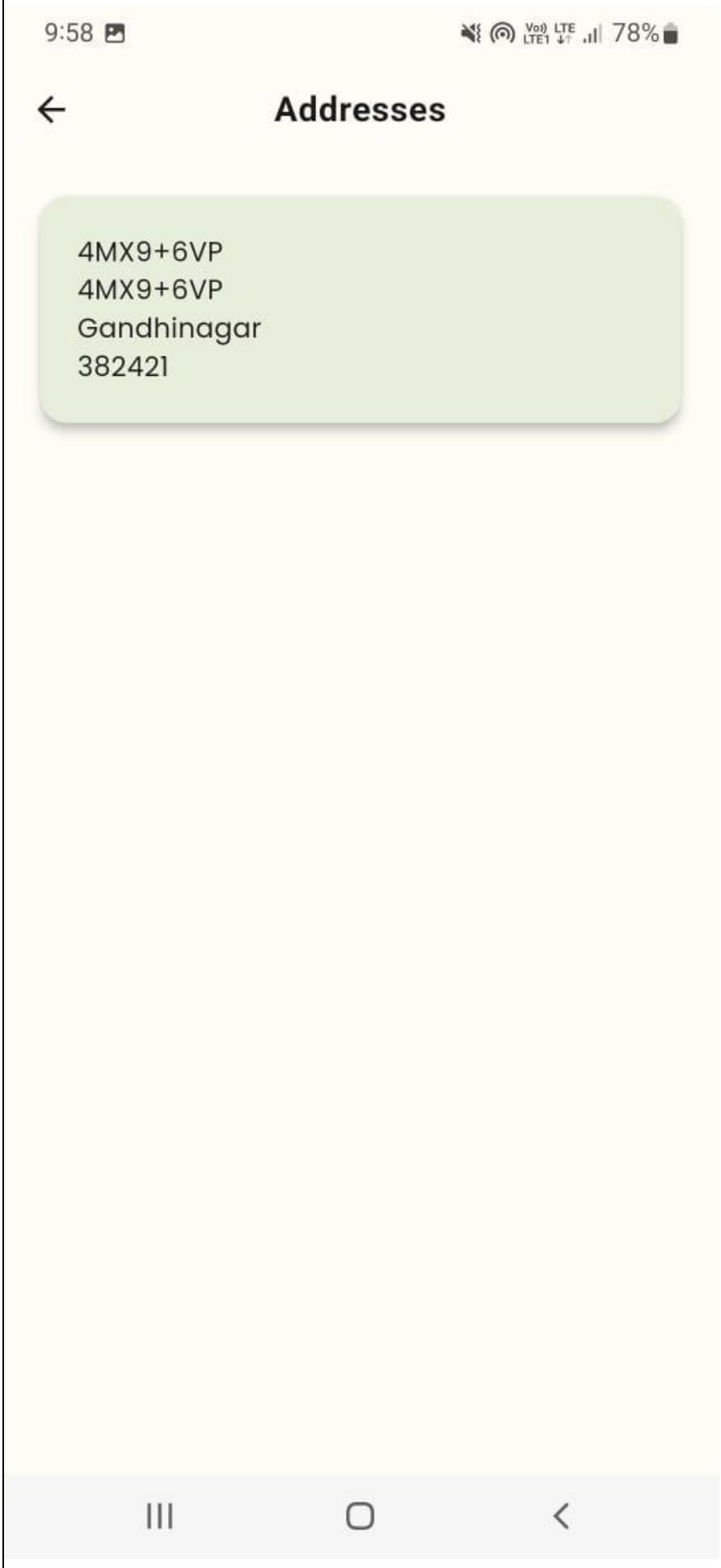
Feedback
About Us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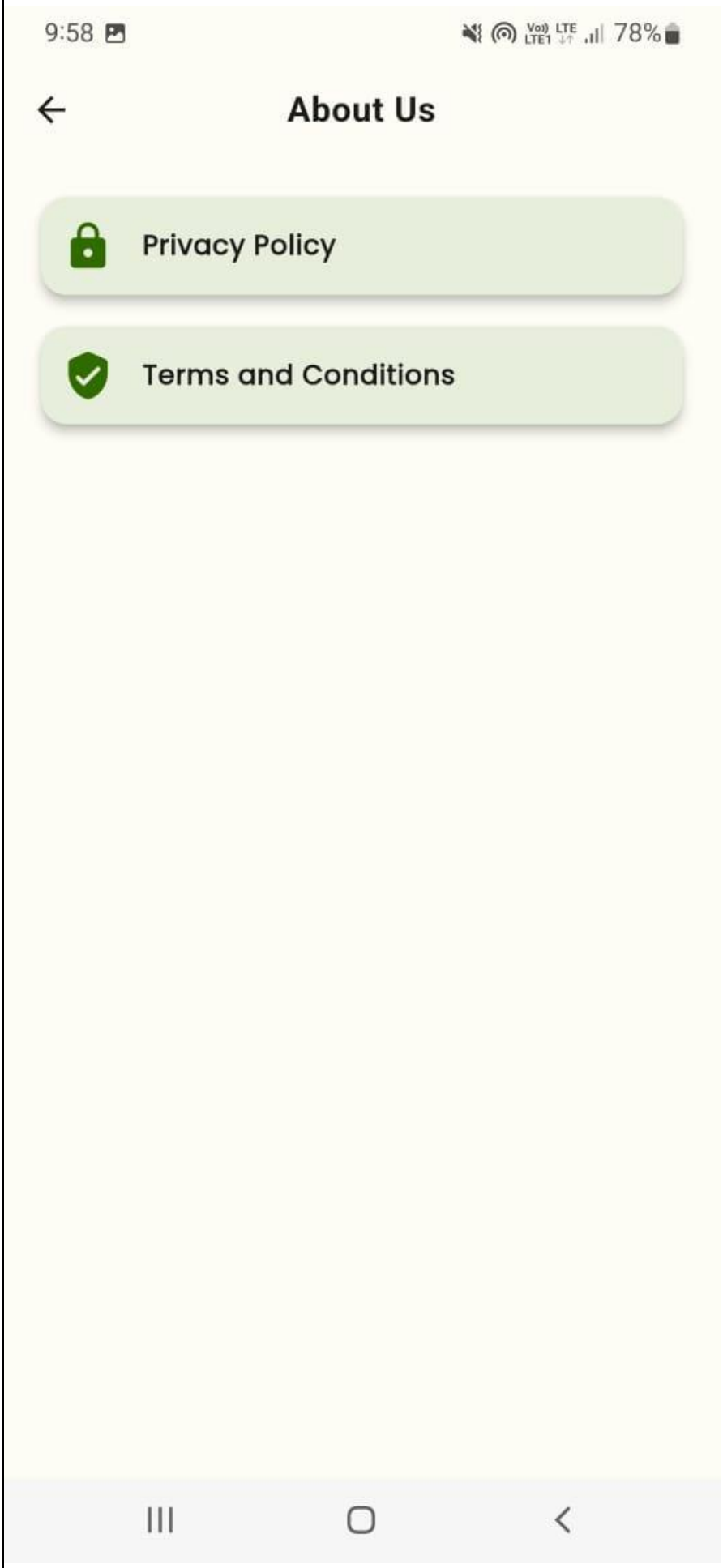
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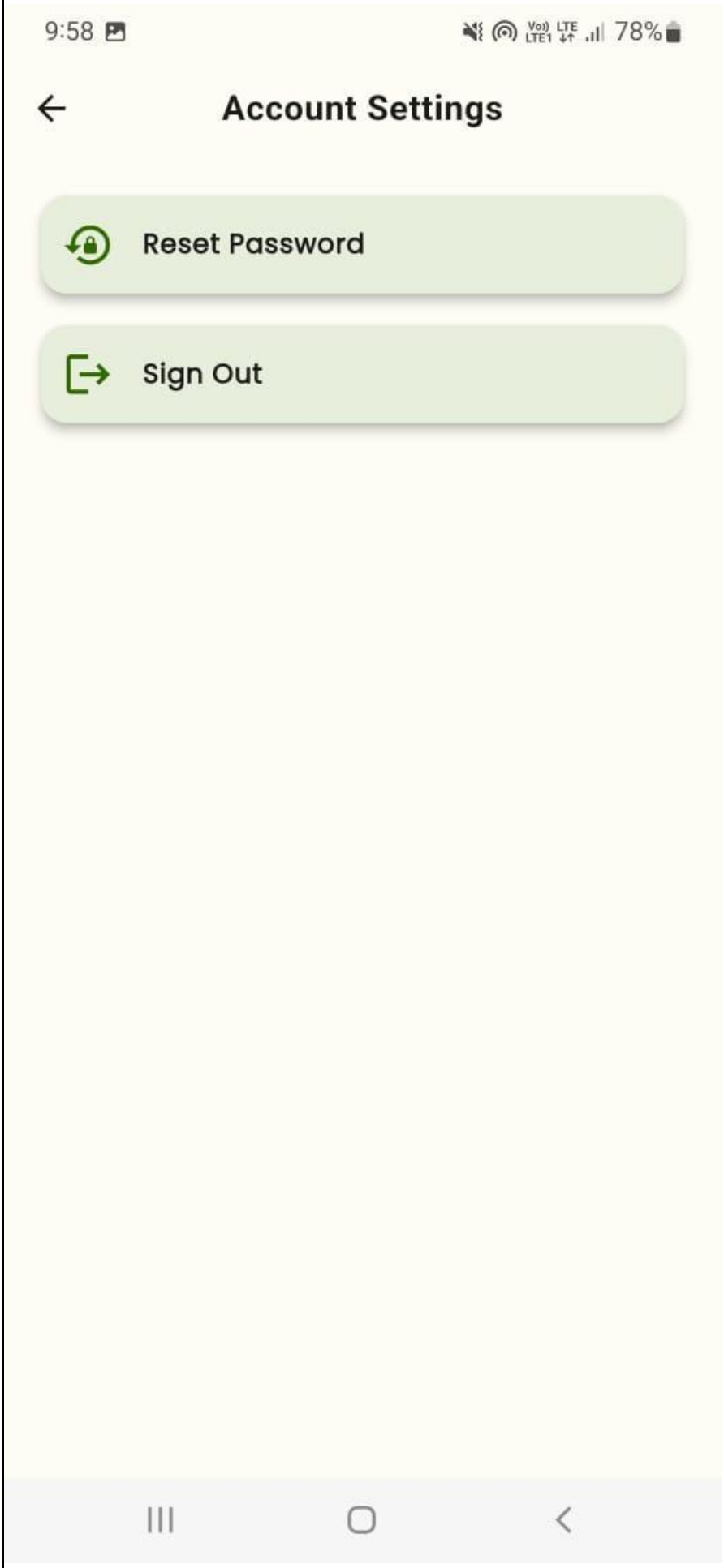
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Account Settings
Reset Password
Sign Out


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Reset Password
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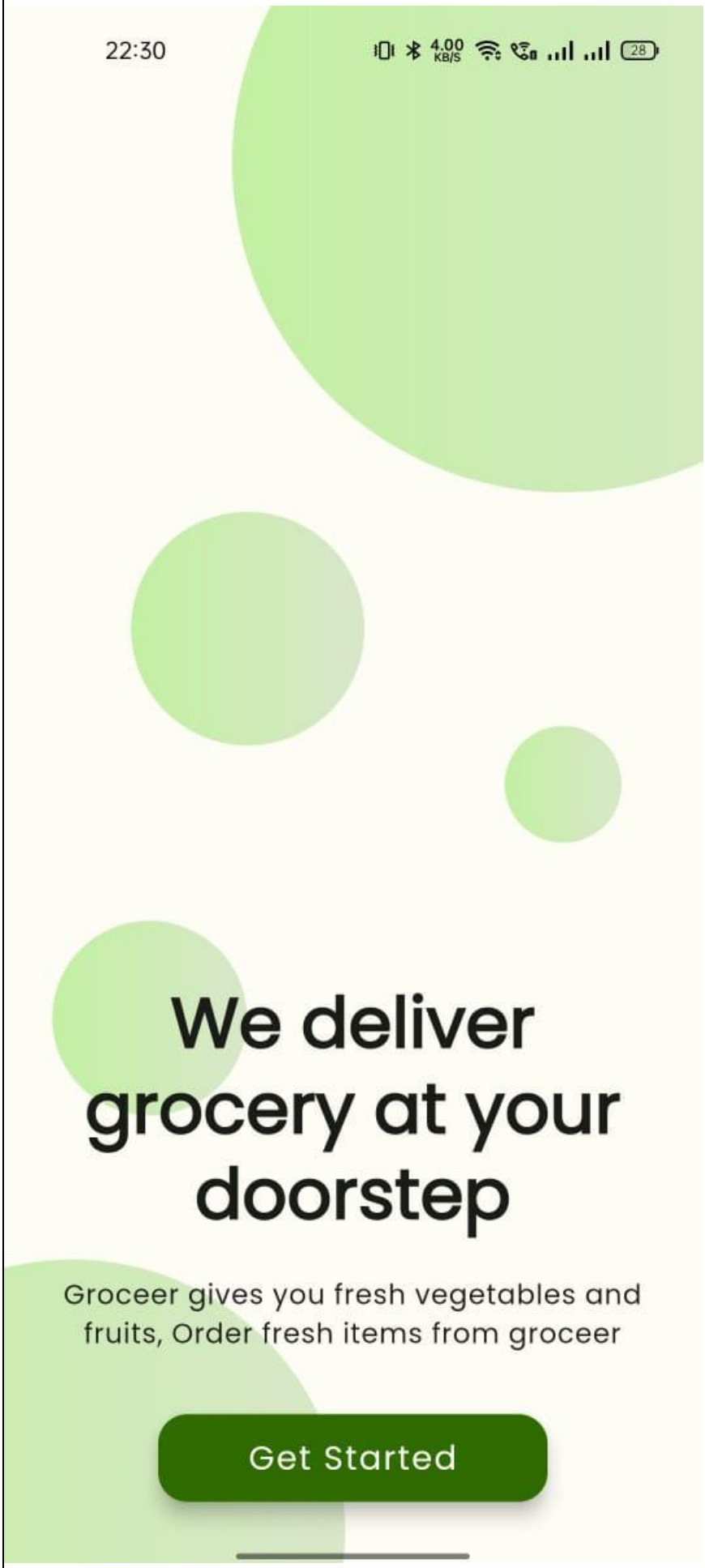
Chapter 6
Testing of application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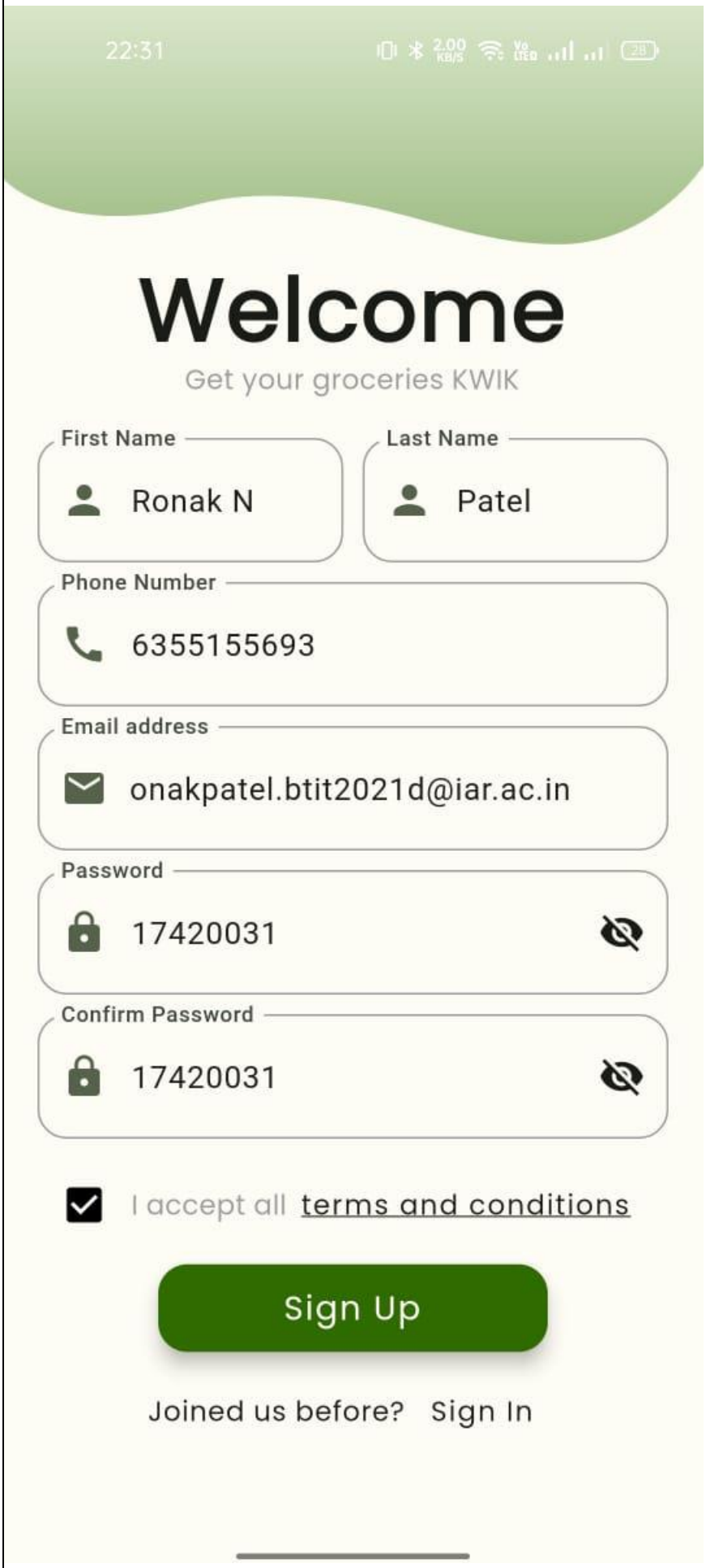
4.00 KB/S
28
We deliver grocery at your doorstep
Groceer gives you fresh vegetables and fruits, Order fresh items from groceer
Get Started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Get your groceries KWIK
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Last Name
Patel
Phone Number
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Email address
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Password
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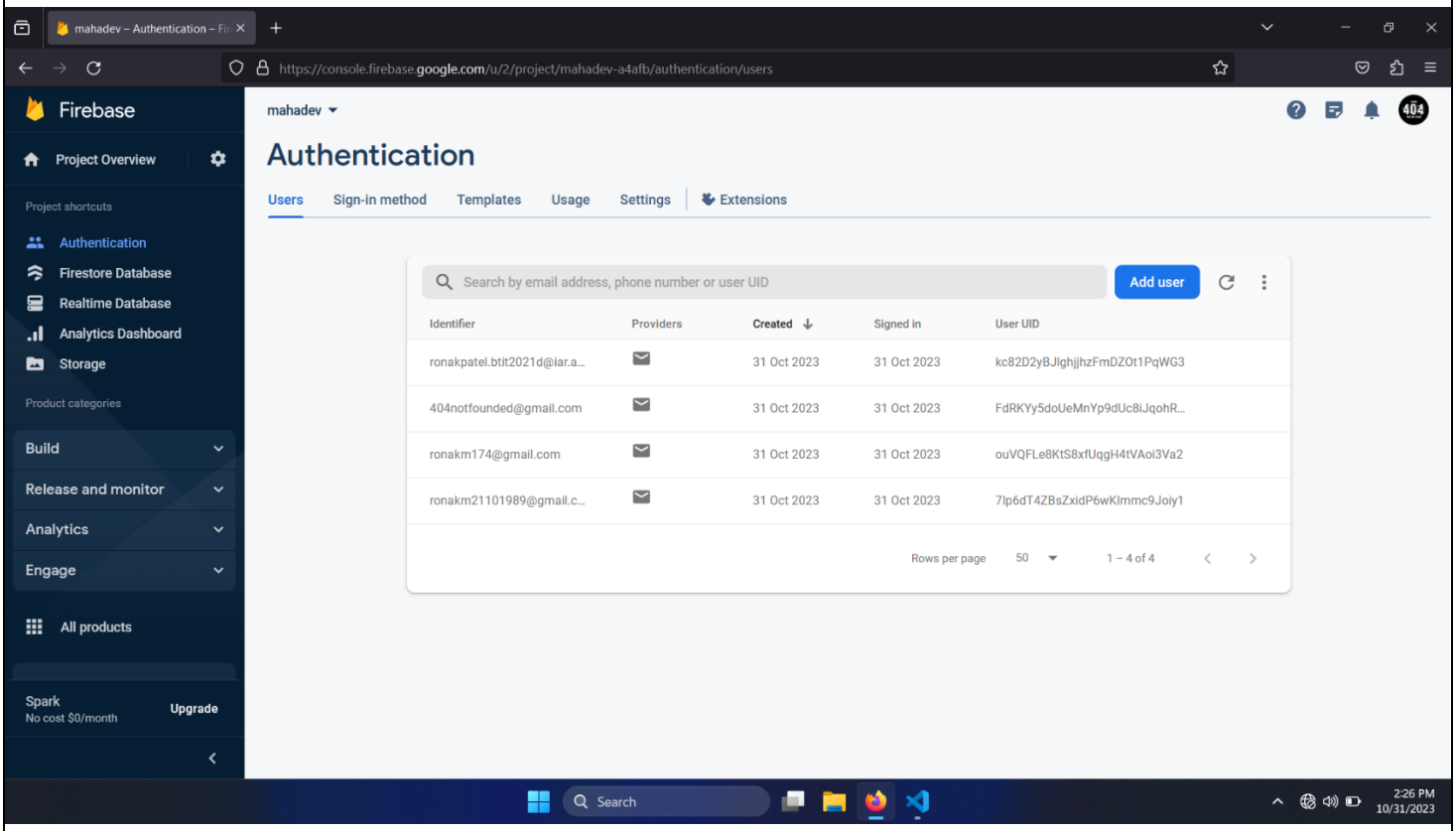
Confirm Password
17420031
I accept all terms and conditions
Sign Up
Joined us before? Sign In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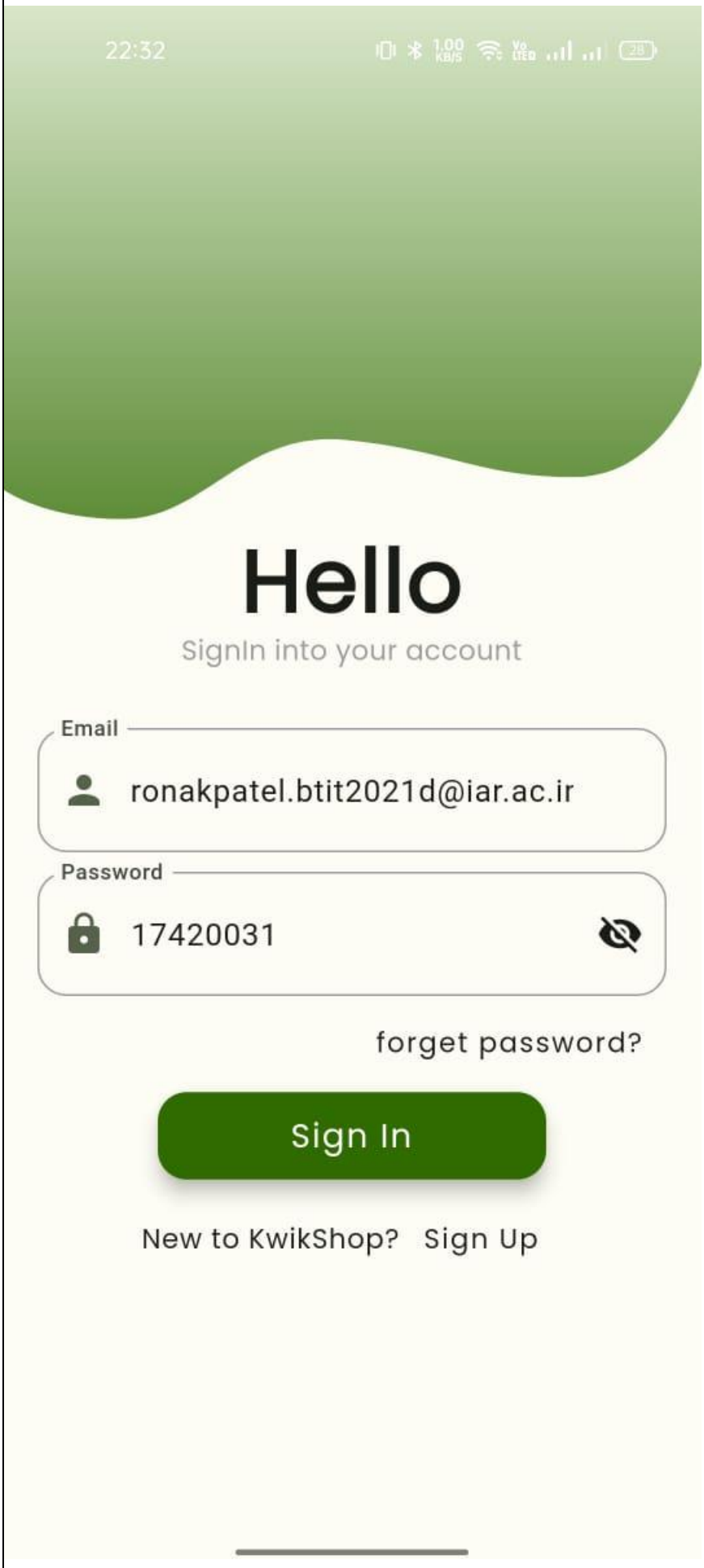
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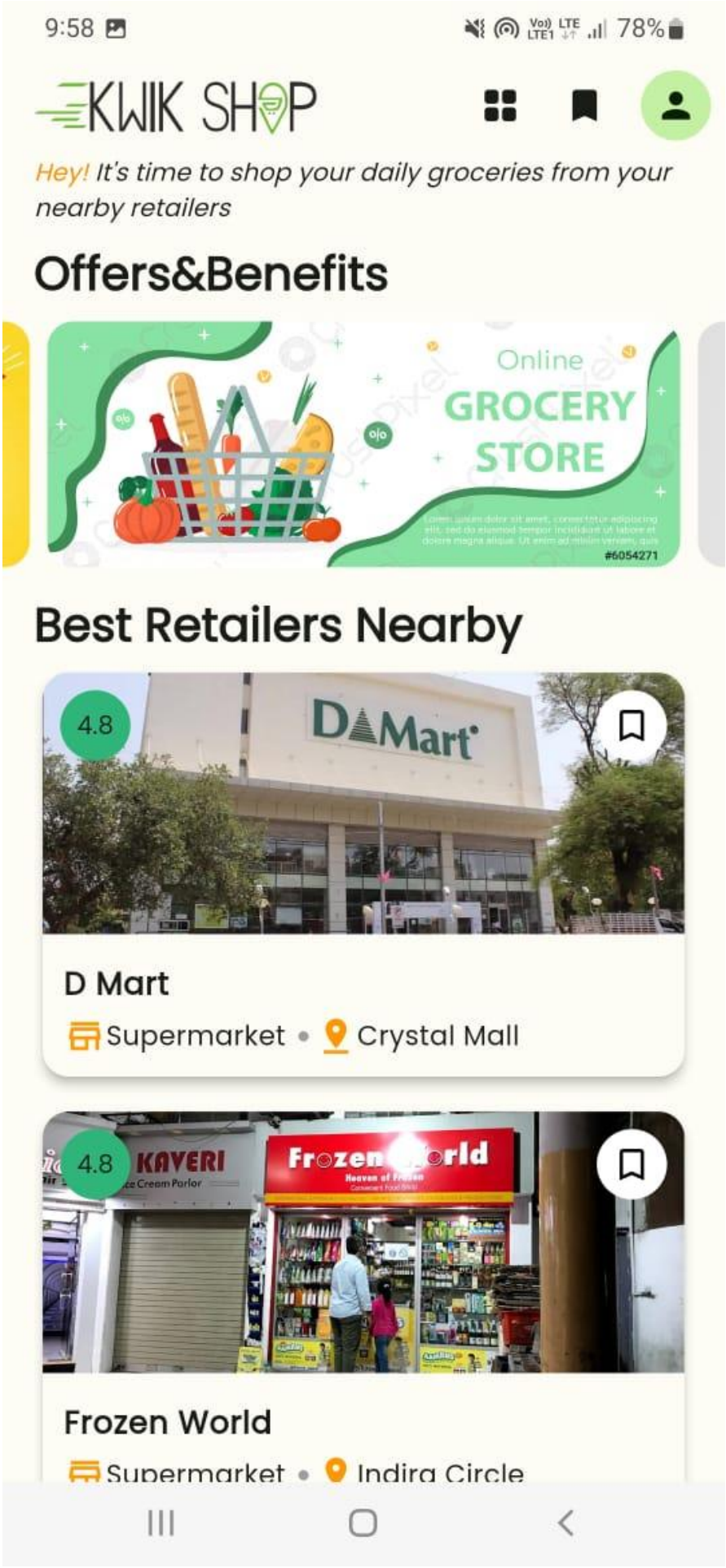
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KWIK SHOP
Hey! It's time to shop your daily groceries from your nearby retailers
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D Mart
D Mart
Supermarket • Crystal Mall
4.8
KAYERI
Frozen World
Frozen World
Supermarket • Indira Circle


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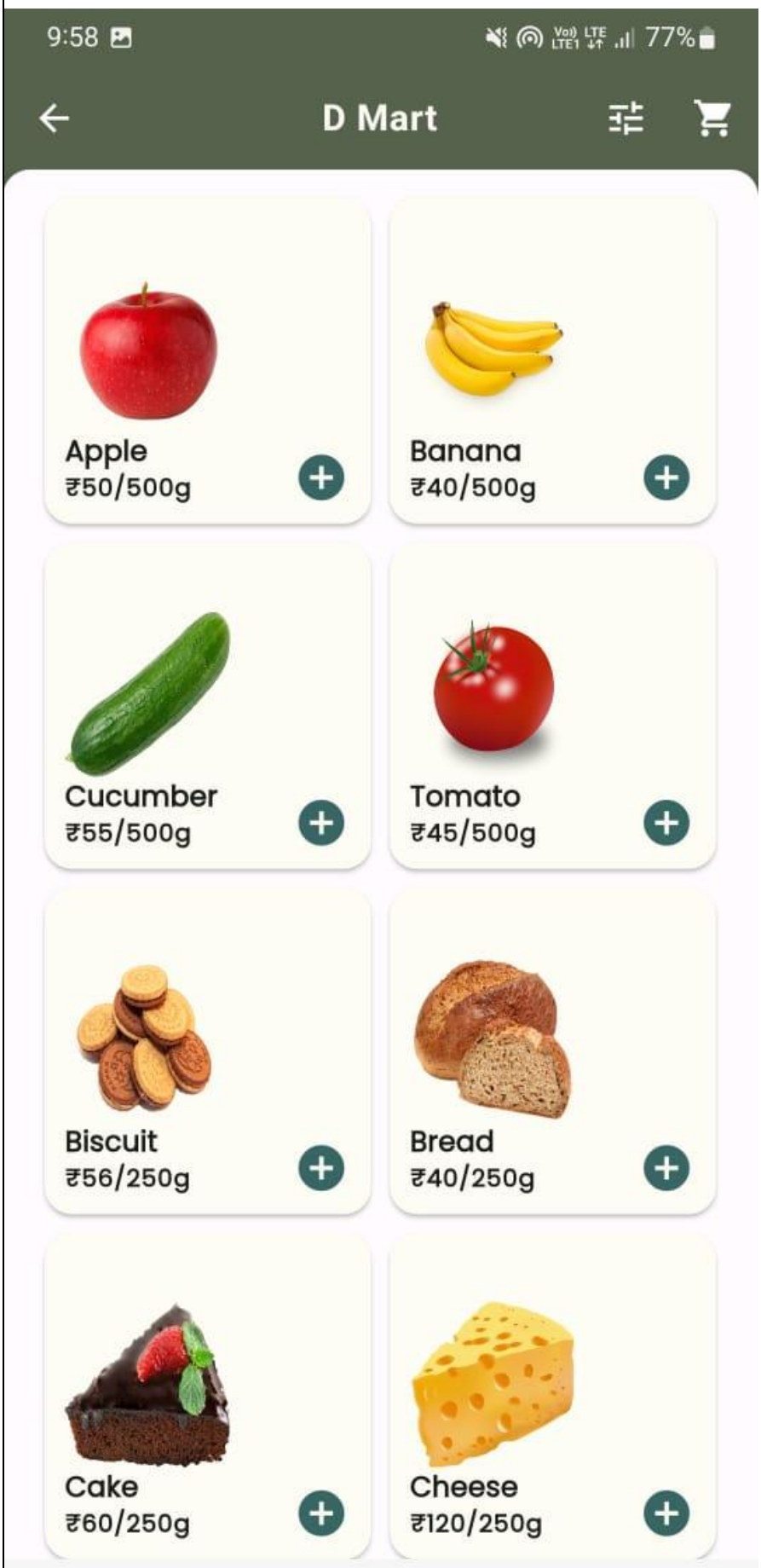
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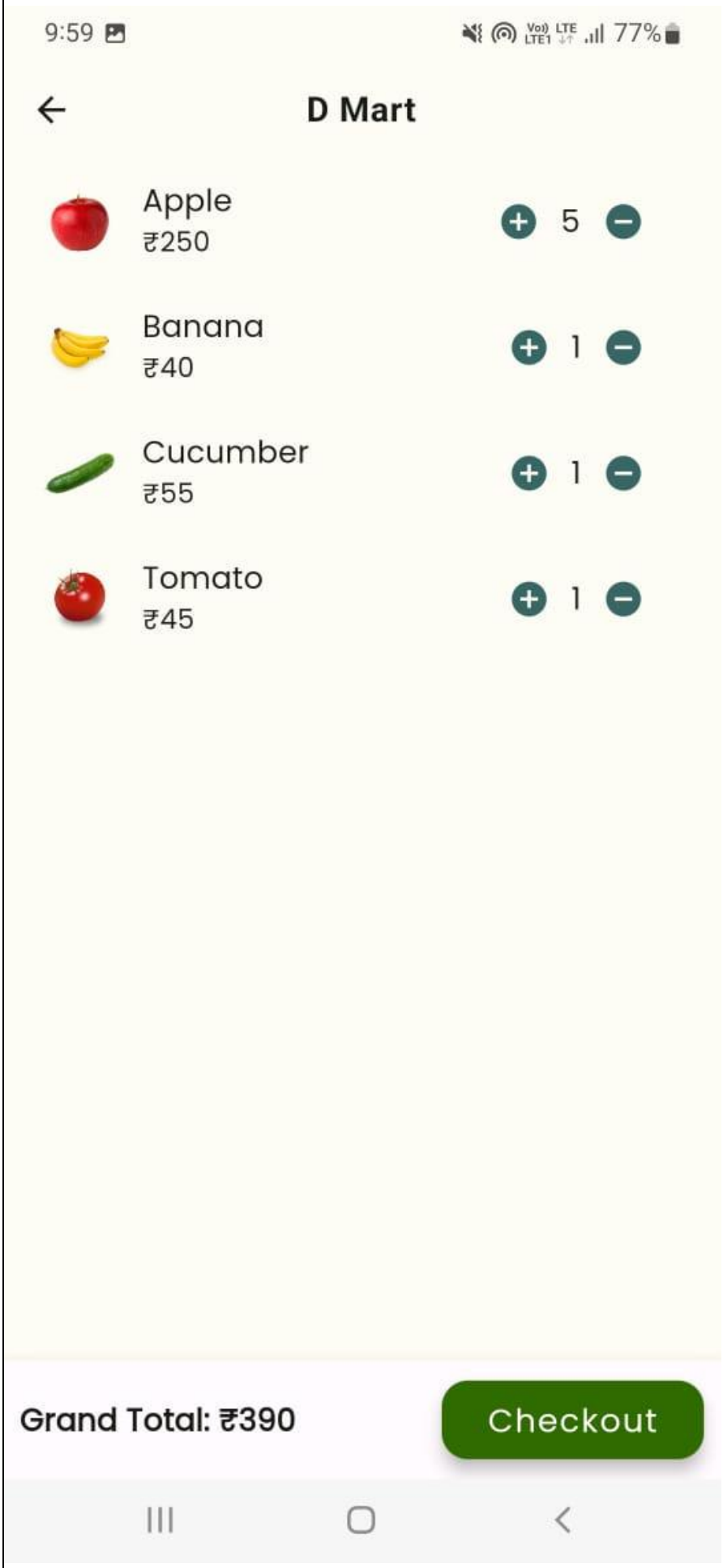
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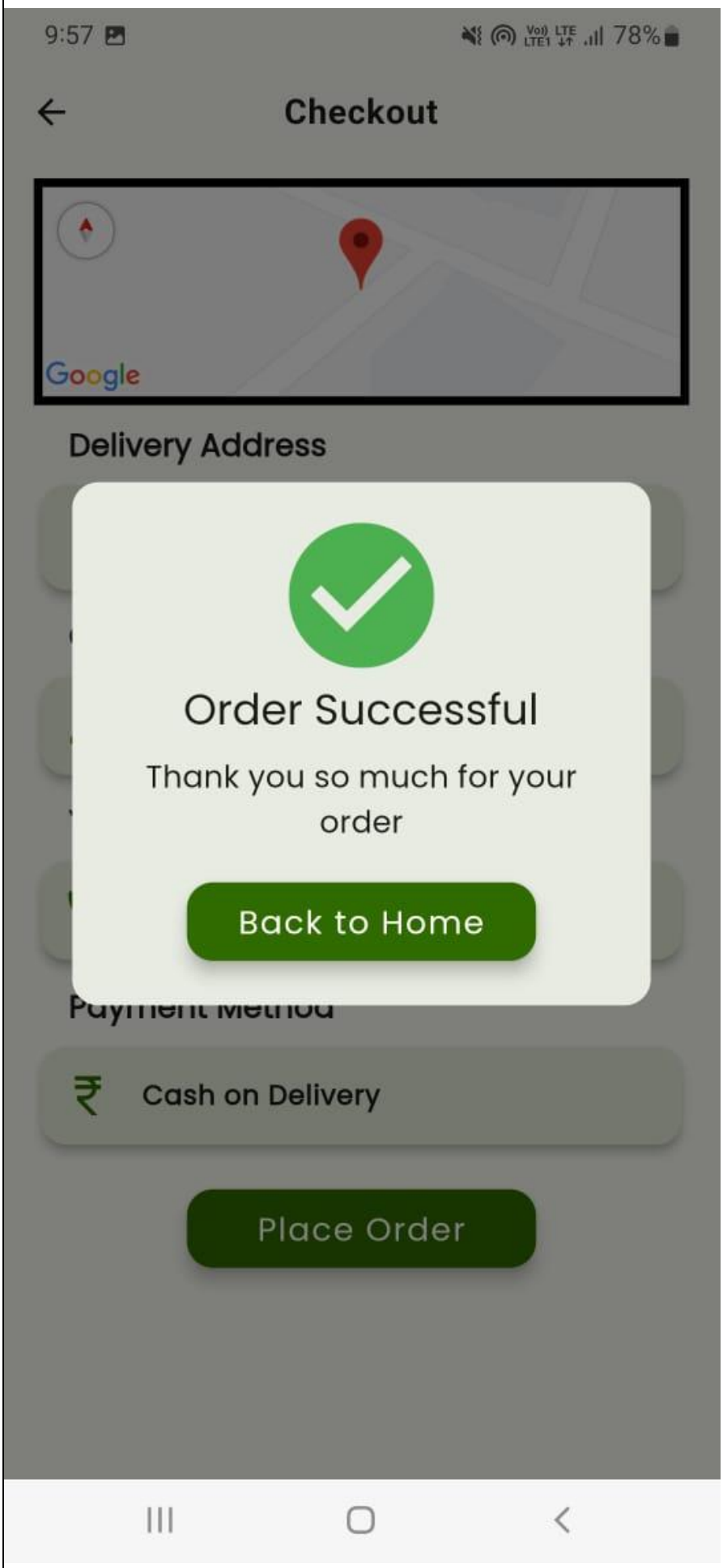
9:57
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Google
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Thank you so much for your order
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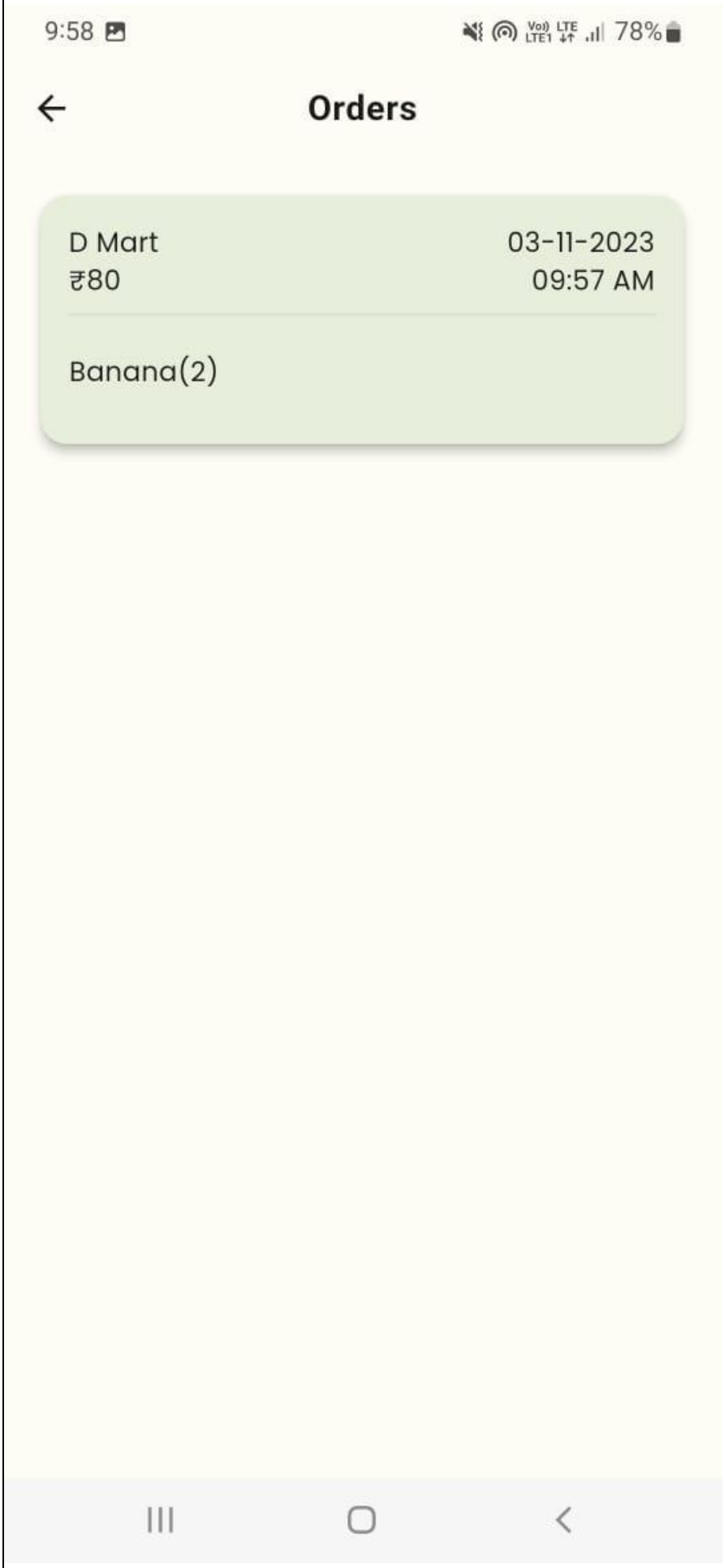
Payment Method
Cash on Delivery
Place Order


9:58
78%
Orders
D Mart
03-11-2023
₹80
09:57 AM
Banana(2)

- **User function flow and behavior of UI ::-**

    1) **First is a user registration.**
    2) **This data are stored in real time database (firebase)**
    3) **User already registration then login.**
    4) **User are login successfully (This data are matched the authenticate database , it the data are right then login successfully)**
    5) **User enter a home page.**
    6) **Showed UI of home screen and navigation bottom are showed are Home , search ,Setting , notification.**
    7) **Home:: in the show of product and order product of user.**
    8) **Setting :: contect , term and condition and password change and order history in a setting.**
    9) **user are select item and shopping item .**
    10) **this order are stored in order database.**

- **Admin function flow and behavior of UI::-**

    1) **Admin has only one email and password to login (matched are authenticate database).**
    2) **Admin panel open.**
    3) **Admin can add the product.**
    4) **Admin can see order product by user (Database).**

- **NOTE::**
- **IN This app in change database , before app development sql required but , after Firebase are used in Application.**

- **Conclusion:-**

This is my first attempt in developing a mobile application which gave me a basic understanding of development and challenges of mobile application development. The main aim of the project is to provide an easy to shopping in market. The application has been implemented and tested on real devices.

- **References:-**

- **www.google.com**
- **www.javatpoint.com**
- **www.wikipedia.com**