LeftOver's

PROJECT REPORT

Developed & Presented By:

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MASTER OF SCIENCE

in

Information Technology

Department of Animation & IT

(2020-23)

Date Of Submission: 20th May 2023

GUJARAT UNIVERSITY

DEPARTMENT OF ANIMATION,

IT IMS & MOBILE APPLICATION

Certificate

Enrolment No: 202019600034

This is to certify that Mr. Pratham P. Shah student of M.Sc. IT Software Development (Integrated) Semester – 6, has duly completed his Term work for the semester ending in 2023, in the subject of Project towards partial fulfillment of his Degree of Master program.

Date of Submission

Mentor (s)

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Certificate

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ACKNOWLEDGEMENT

We would like to express our sincere gratitude to everyone who assisted me with the creation of LeftOver's. Their assistance, direction, and knowledge have been helpful throughout the whole endeavor.

First and foremost, we would like to thank our supportive mentor Mrs. Tarjani Shah for their unwavering support and valuable insights. Their guidance and encouragement have been instrumental in shaping the direction of this project.

ABSTRACT

LeftOver's is an Android-based smartphone application that attempts to bridge food providers, such as caterers and restaurants, with volunteers who are concerned about reducing food waste and hunger. The program acts as a platform for food producers to give excess food effortlessly, and volunteers to quickly collect and deliver it to people in need.

Food providers can use the app to register and create listings for surplus food items by providing some basic information. On the other hand, volunteers can browse through the available listings, select the food items they can collect, and coordinate the pickup with the food providers.

Overall, LeftOver's is a smartphone application that uses technology to develop an efficient food redistribution solution. We hope to positively influence the environment, communities, and persons in need by empowering food suppliers and volunteers.

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Introduction

Among many issues in society, food waste and hunger are two critical ones. Ironically, both food production and famished people are increasing simultaneously. Companies and people discard vast quantities of perfectly edible food every day, leading to environmental damage and increasing the issue of food shortage. At the same time, many individuals are hungry and lack access to nutritional meals. LeftOver's is designed to tackle these dual issues by allowing the effective redistribution of surplus food to the famished.

The app has a Self-explanatory interface that allows food suppliers to easily add their extra food products, including details such as quantity, type of food, and pickup location. On the other side, volunteers can browse through the available listings, select the food items they can collect, and coordinate the pickup with the food providers. This smooth process ensures that surplus food is quickly redirected to those in need.

Aim and Objectives

By serving as a platform for collaboration and social responsibility, LeftOver's aims to create a positive impact on our environment, communities, and the lives of individuals facing food insecurity. The app encourages a sense of shared responsibility among food providers, volunteers, and society at large, instilling a culture of compassion and sustainable practices.

Tools & Platform Used

Hardware:

Processor: Intel(R) Core(TM) i5-10210U CPU @ 1.60GHz 2.11 GHz

Random Access Memory: 12 GB

Hard Disk: 238 SSD and 930 HDD

Monitor: Colour Monitor

Keyboard: 104 keys keyboard

Mouse: Standard Mouse

Software:

Operating System: Windows 10 Home Single Language

Supporting tools: Microsoft Word for documentation

Front End: Android

Back End: Firebase

Programming Language: Java

Software: Android Studio

UML Diagrams

System Flow Diagram

- A system flow diagram is a visual representation of the flow of information, materials, or energy through a system. It is commonly used in systems engineering, process analysis, and project management to identify the major components of a system, the relationships between them, and the flow of inputs and outputs.

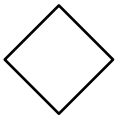
- A typical system flow diagram consists of a series of interconnected boxes or nodes, each representing a component or process in the system. Arrows or lines connecting the boxes indicate the direction of flow between components. Inputs are typically shown on the left side of the diagram, and outputs on the right side.

- The system flow diagram can be used to illustrate a wide range of systems, from simple linear processes to complex interconnected systems. It can be used to identify inefficiencies or bottlenecks in a system, to analyse the impact of changes to the system, or to communicate the design of a system to users.

- These are the Symbols which are used in System Flow Diagram:

Flow Line (Arrow, Connector)


Terminator (Terminal Point, Oval)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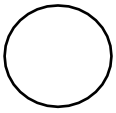
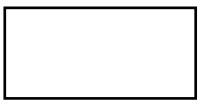
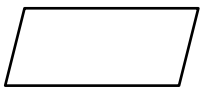

Connector (Inspection)


Process


Document / Report

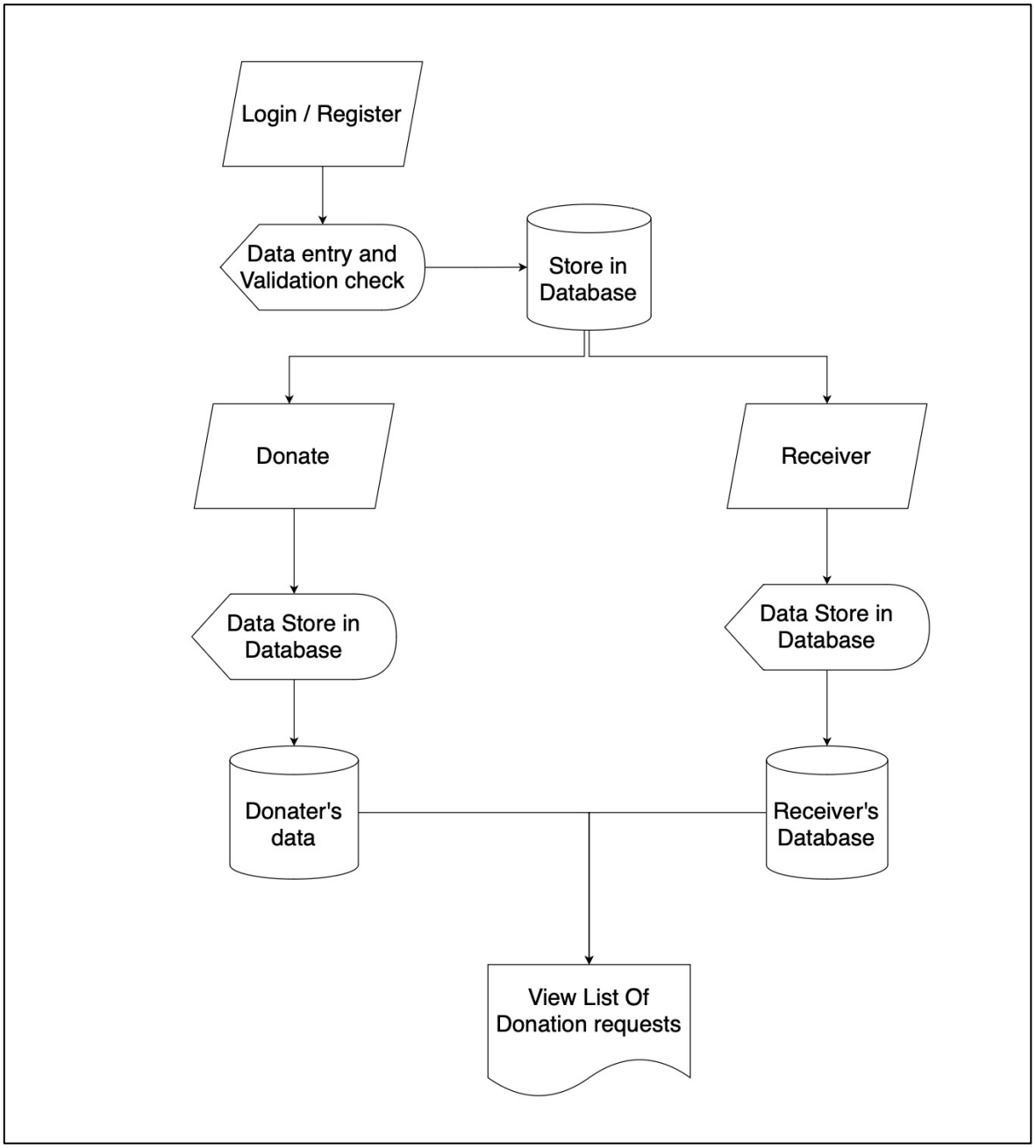


Figure 1 System Flow Diagram

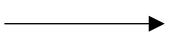
Data Flow Diagram

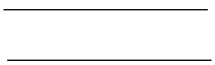
- A data flow diagram (DFD) is a graphical representation of the flow of data through a system. It is a useful tool for modeling and analyzing complex systems, particularly those involving multiple inputs and outputs.

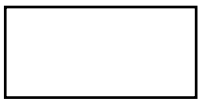
- In a DFD, data is represented as an arrow flowing from one process or component to another. Processes are represented as rectangles, with the data flowing into and out of the process shown as arrows. Data stores are represented as parallel lines, with data flowing in and out of the store through arrows. External entities, such as users or other systems, are represented as squares, with data flowing in and out of the entity through arrows.

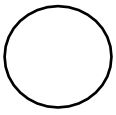
- A DFD can be used to model a wide variety of systems, from business processes to software applications. It is particularly useful for modelling the flow of information within a system, and for identifying areas where data may be getting lost, duplicated, or misused.

- These are the Symbols which are used in Data Flow Diagram:


Flow of Data (Arrow)


Databases (Open-ended rectangle)


External entities (Square)


Process (Circle)

LEVEL 0 – DATA FLOW DIAGRAM

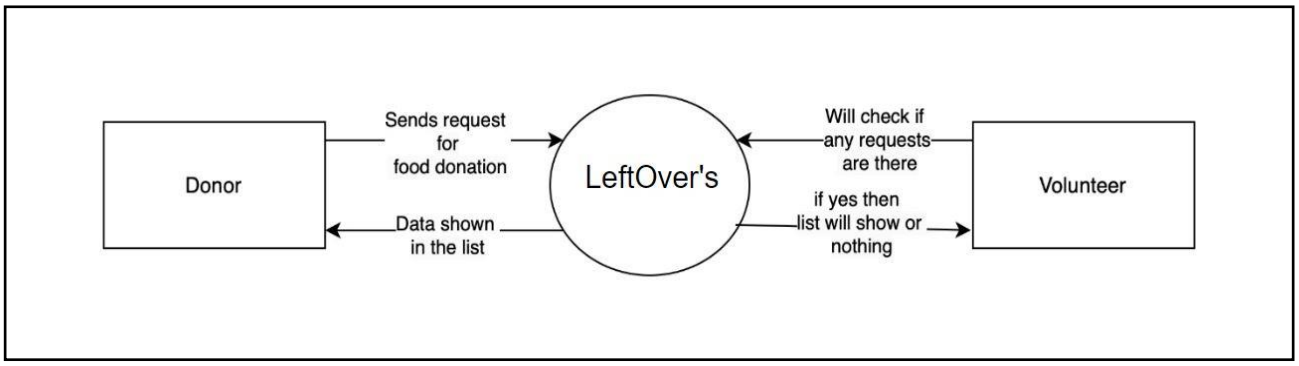


Figure 2 Data Flow Diagram - Level 0

LEVEL 1 – DATA FLOW DIAGRAM

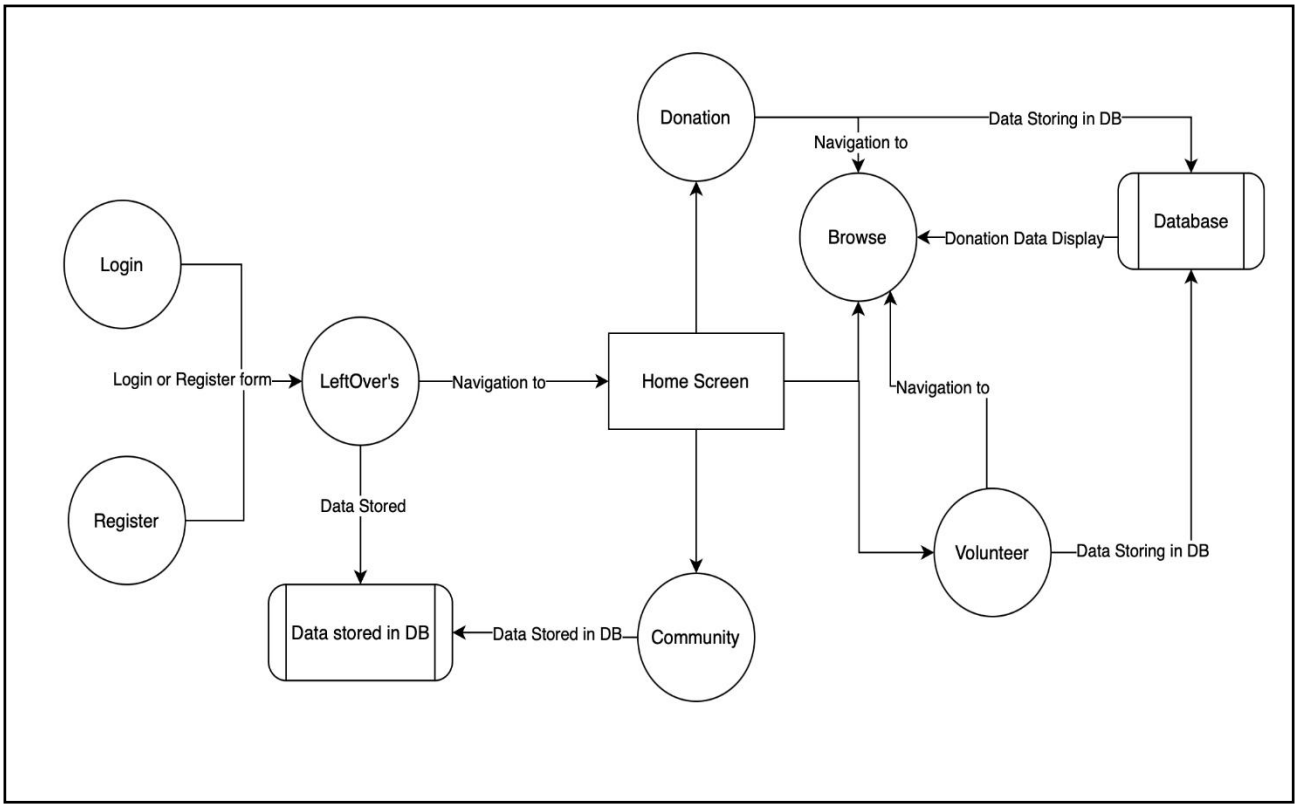


Figure 3 Data Flow Diagram - Level 1

SCREEN SHOTS

Figure 4 Splash Screen

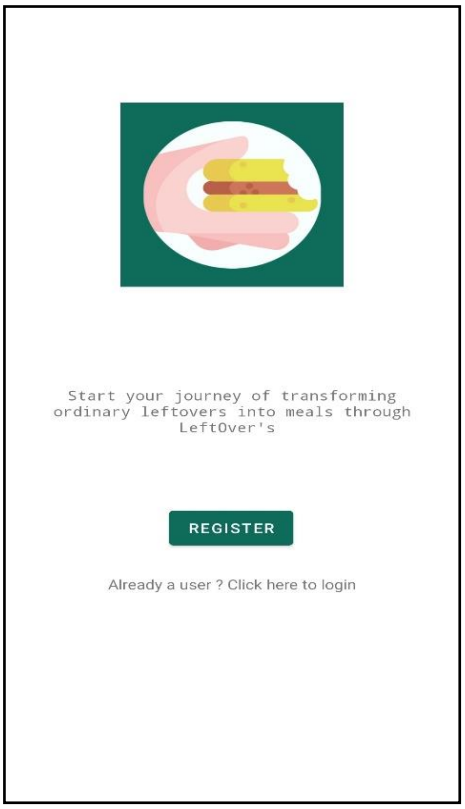


Figure 5 Landing Page.

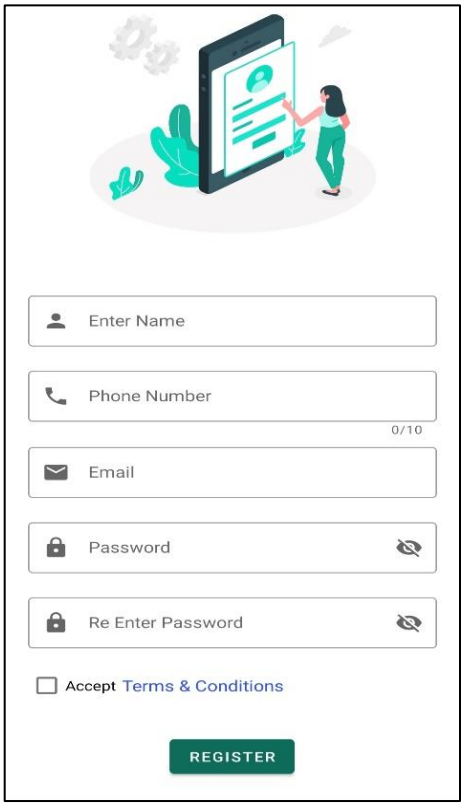


Figure 6 Register Screen

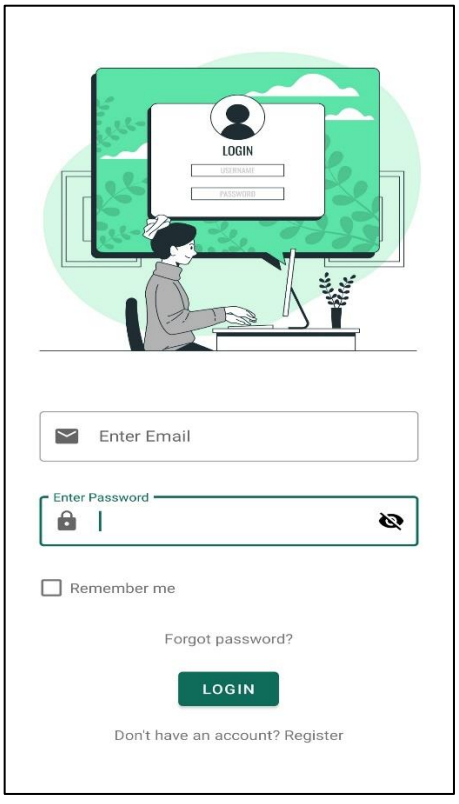


Figure 7 Login Screen

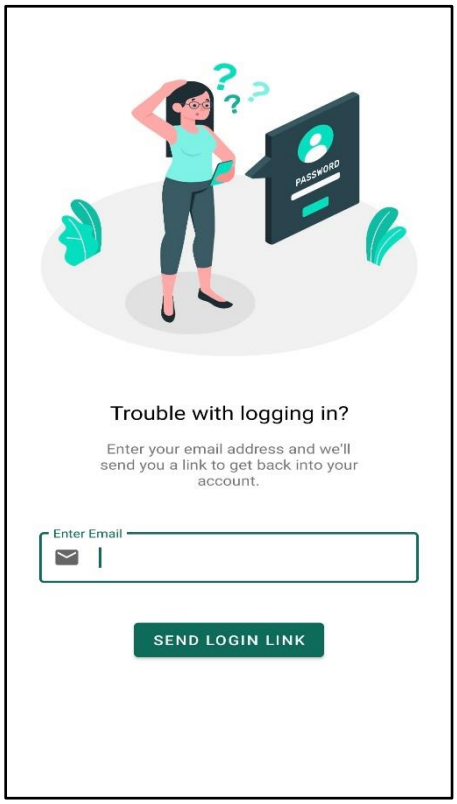


Figure 8 Forgot Password Screen

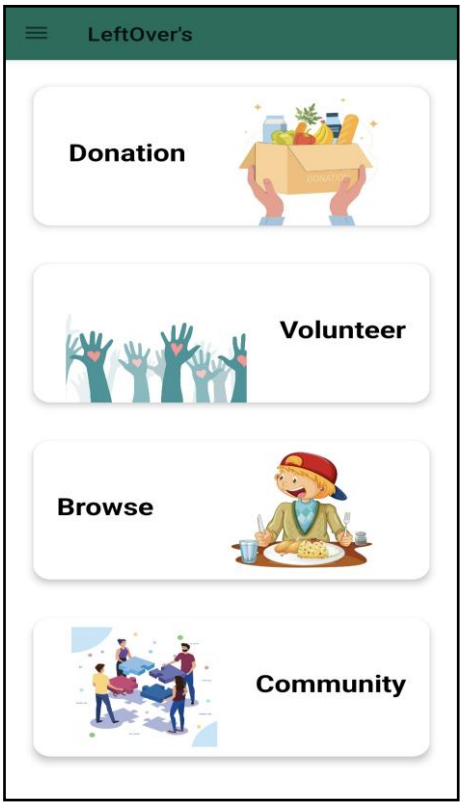


Figure 9 Home Screen

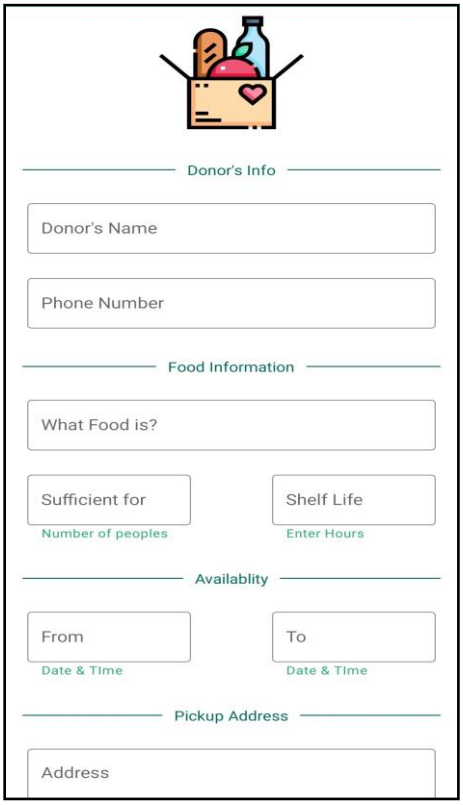


Figure 10 Donation Form

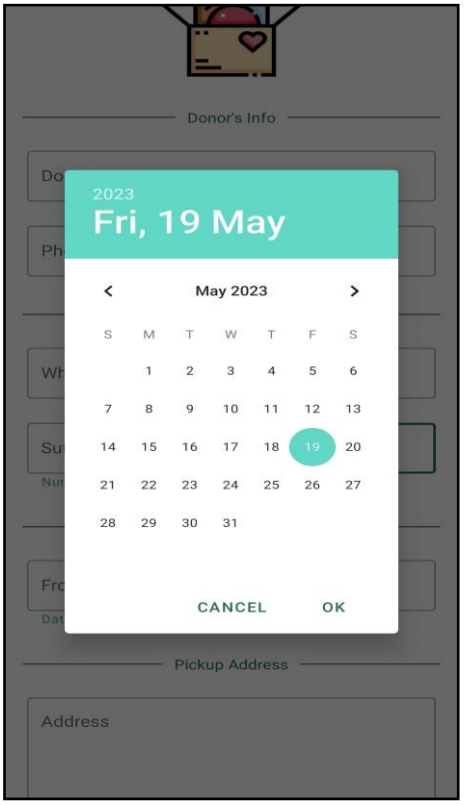


Figure 10.1 Date Picker (Donation Form)

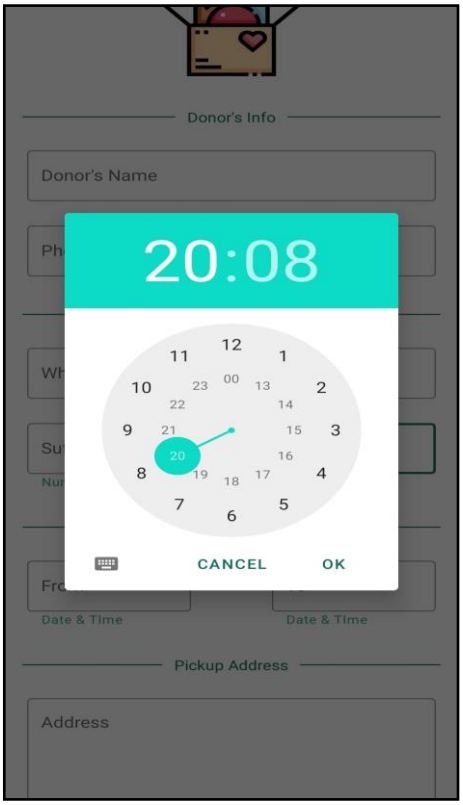


Figure 10.2 Date Picker (Donation Form)

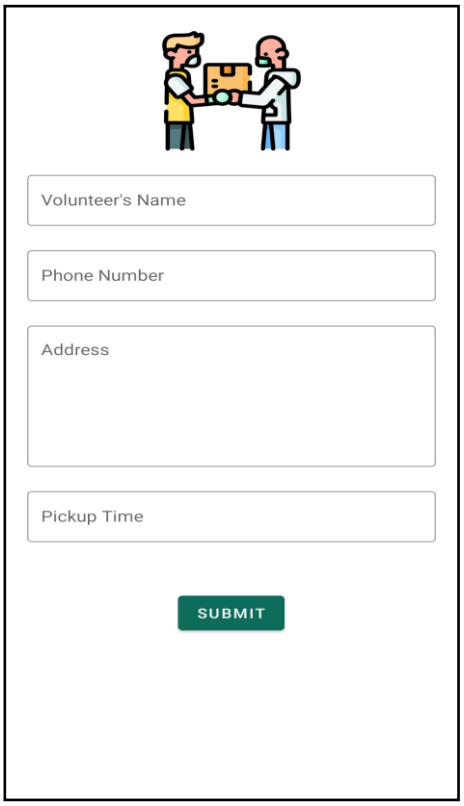


Figure 11 Volunteer Form

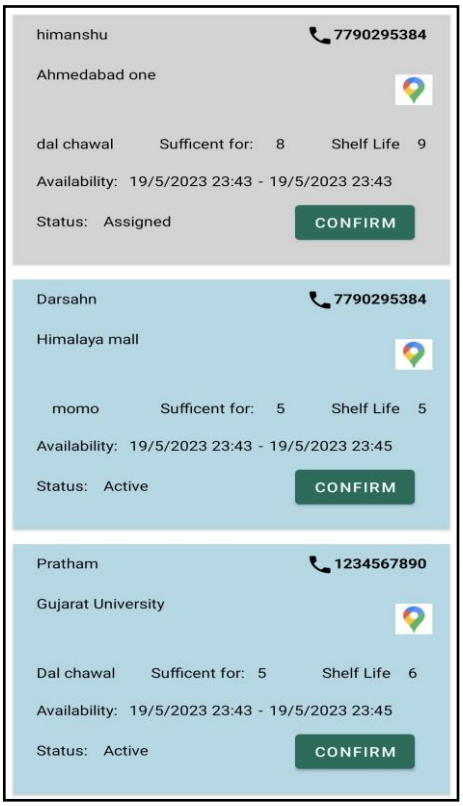


Figure 12 Browse Page

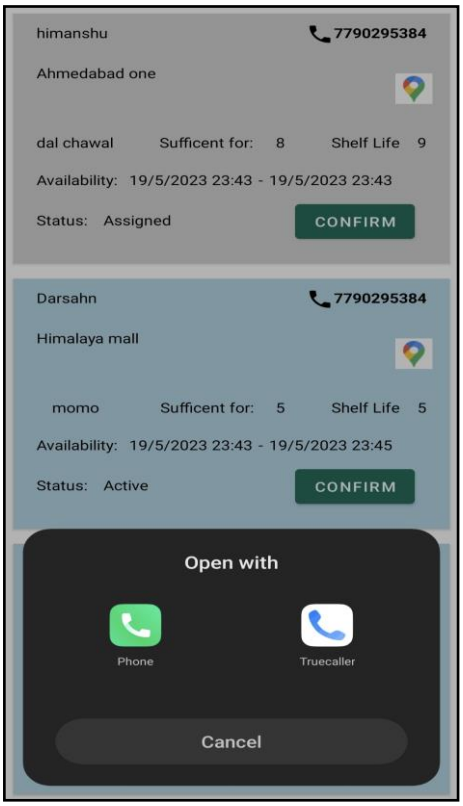


Figure 12.1.1 Logs Navigation on Phone Click

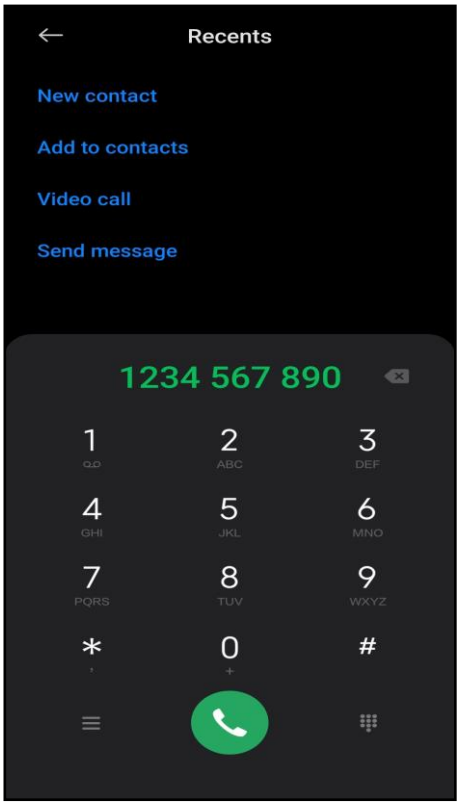


Figure 12.1.2 Auto number copy

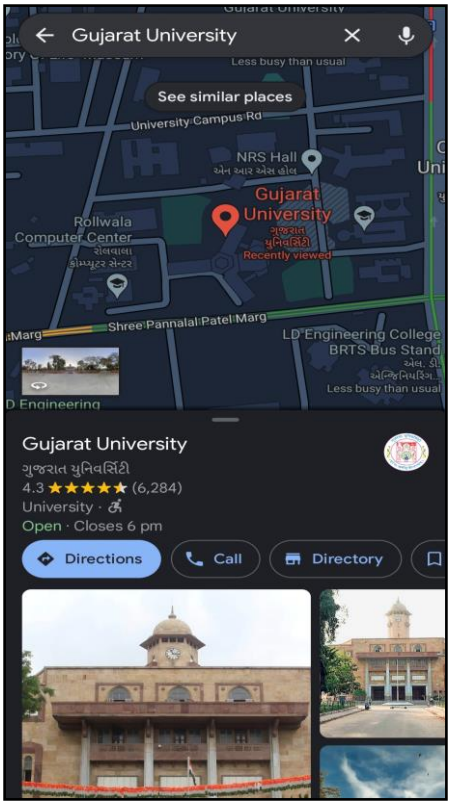


Figure 12.2 Maps Navigation on Map Click

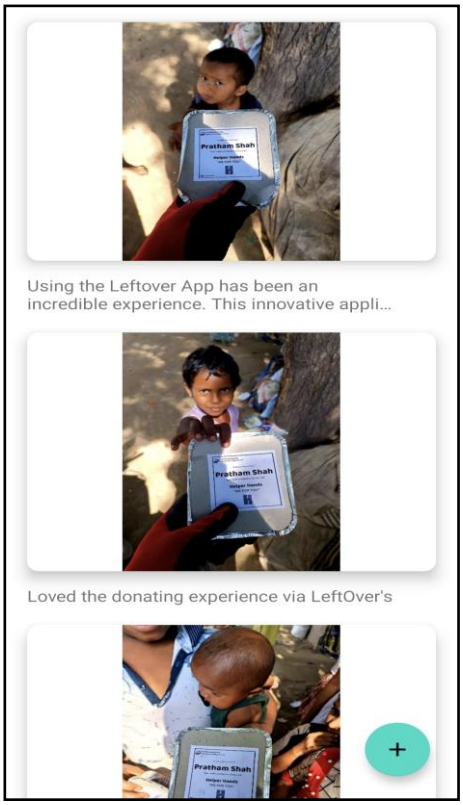


Figure 13 Community Page

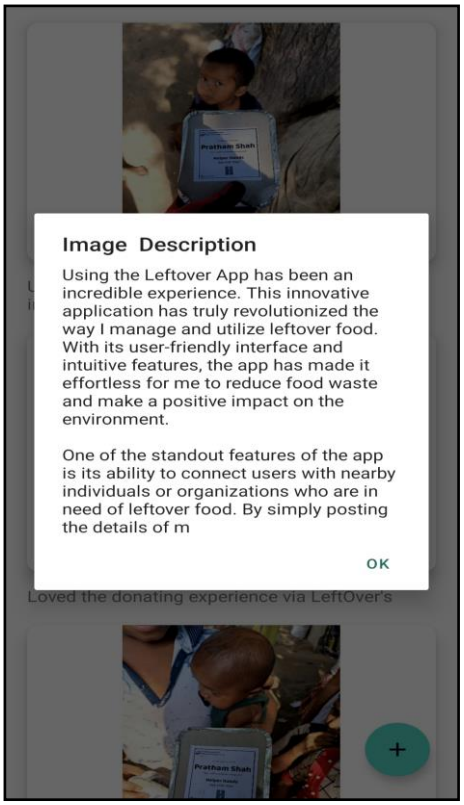


Figure 13.1 Image Description Pop-up

Figure 14 New Image Upload Screen

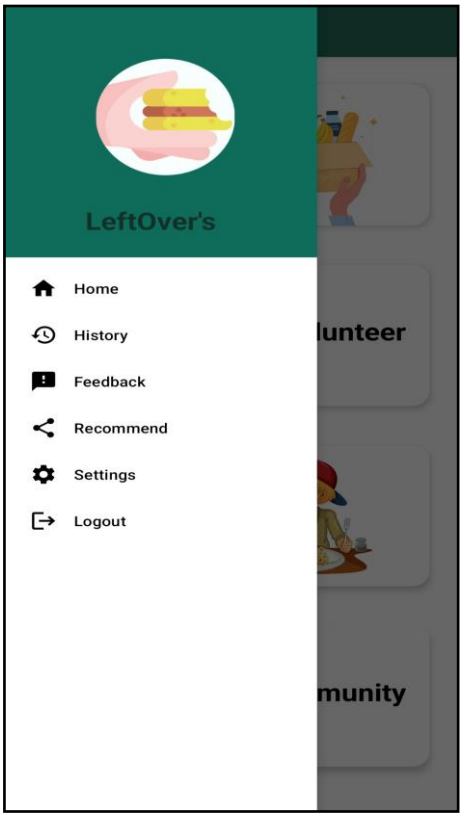


Figure 15 Navigation Drawer

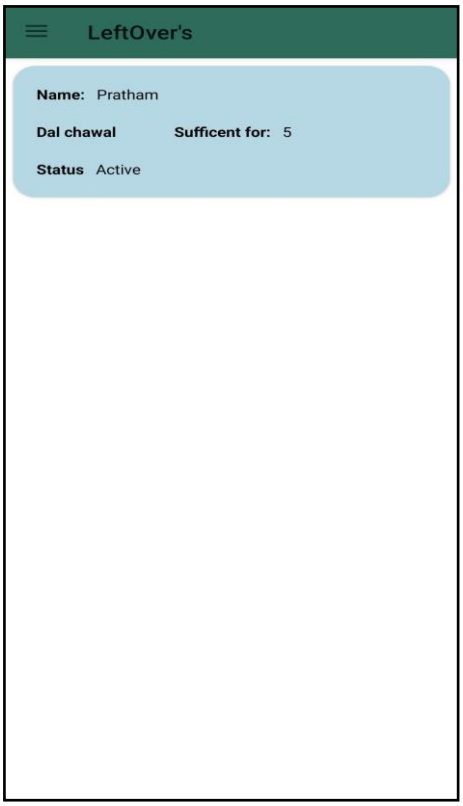


Figure 16 History Screen

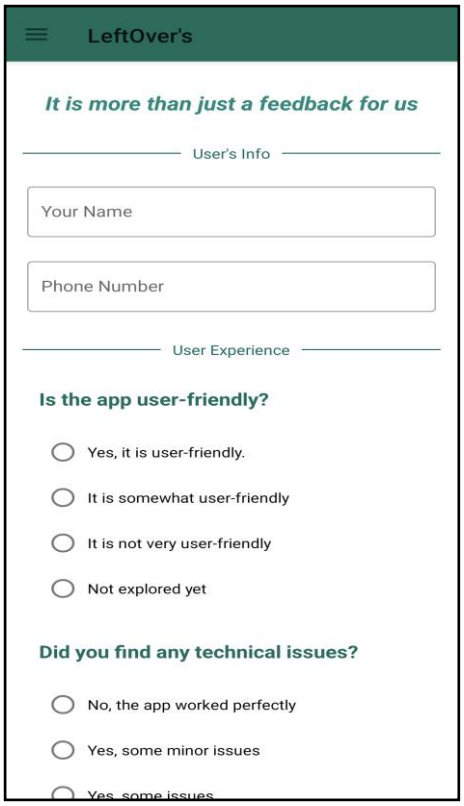


Figure 17 Feedback Form

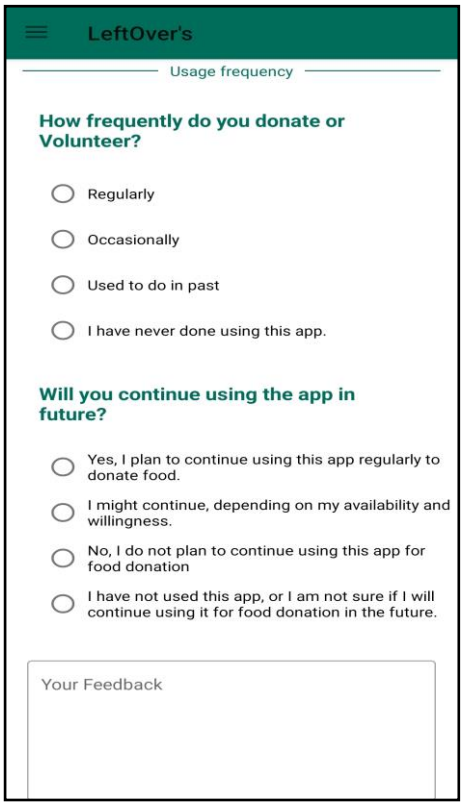


Figure 17.1 Feedback Form

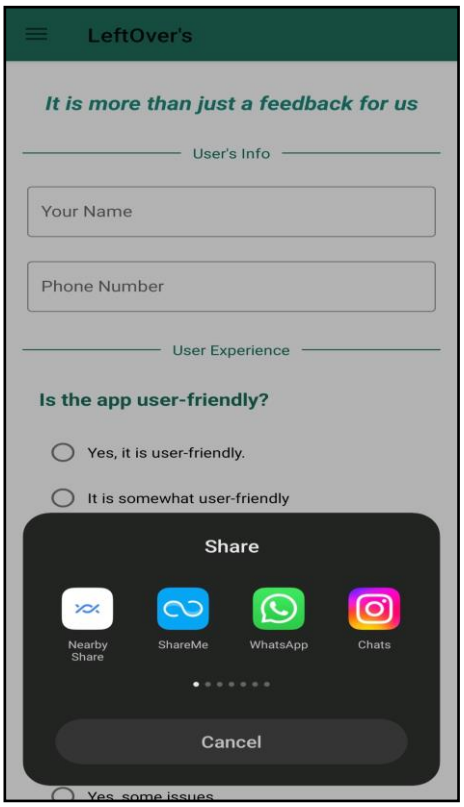


Figure 18 Recommend App

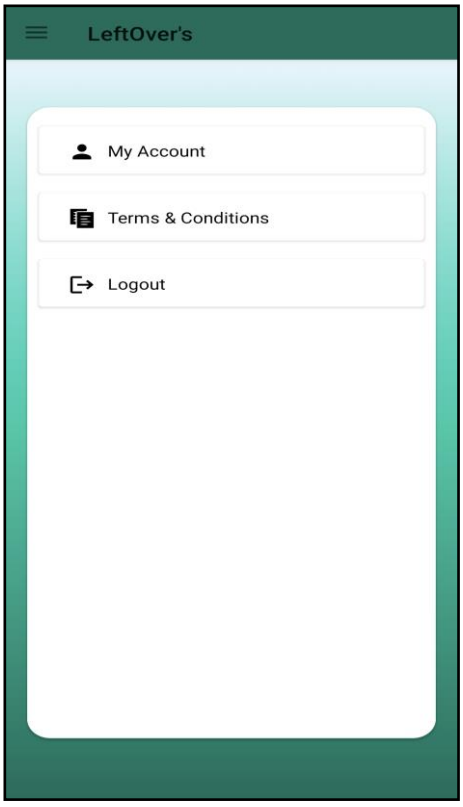


Figure 19 Settings

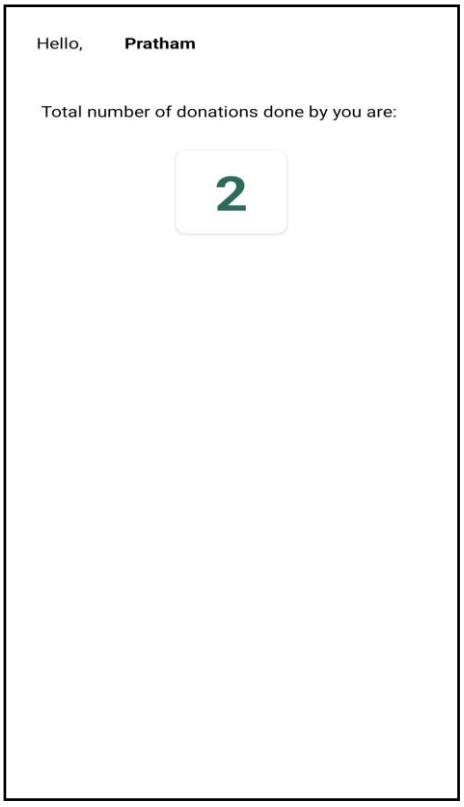


Figure 20 My Account

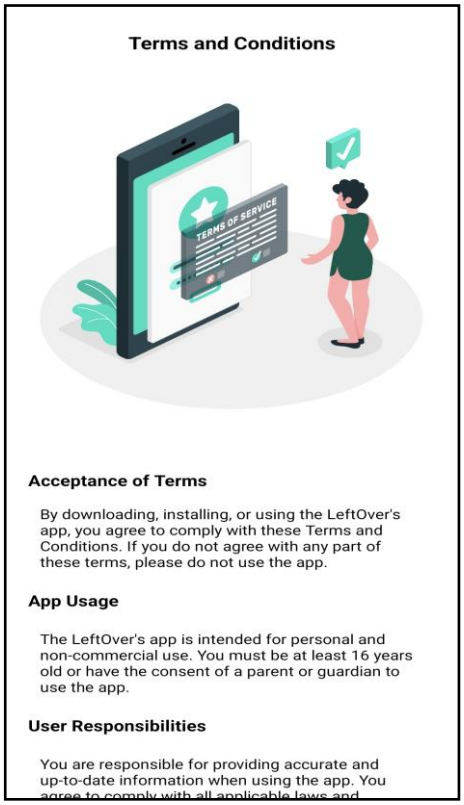


Figure 21 Terms & Conditions

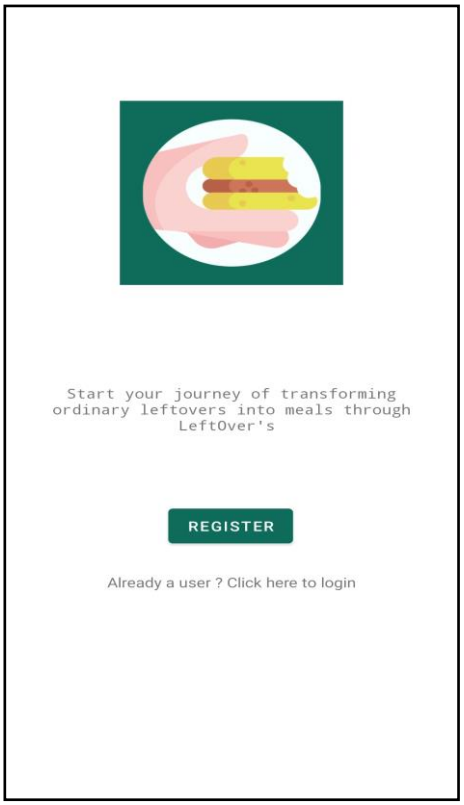


Figure 22 After Logout Screen

DATA DICTIONARY

- A data dictionary is a structured repository of information about data elements, data structures, and the relationships between them. It is a tool used by database designers, data analysts, and other professionals who work with data to help them manage and understand data.

- The data dictionary includes detailed information about each data element, such as its name, definition, data type, format, and constraints. It may also include information about relationships between data elements, such as foreign keys, and information about data structures, such as tables or views.

- The data dictionary is an important component of a database management system, as it provides a central repository of information about the data that is used by the system. It can be used by developers to ensure that data elements are used consistently across the system, and by analysts to understand the structure and meaning of the data.

TABLES

Registration Table				
Column Name	**Data Type (Firebase)**	**Primary Key**	**Allow Null**	**Description**
Id	String	Yes (Auto generated)	No	Unique id for identification of every record
Name	String	No	No	Name of user
Email	String	No	No	Email of user
Phone	String	No	No	Phone of user

Table 1 Registration Table

Donator Table				
Column Name	**Data Type (Firebase)**	**Primary Key**	**Allow Null**	**Description**
Id	String	Yes (Auto generated)	No	Unique id for identification of every record
Name	String	No	No	Name of Donor
Number	String	No	No	Number of Donor
FoodType	String	No	No	Type of Food
SufficientFor	String	No	No	How many Persons can Eat it
ShelfLife	String	No	No	Expiry Time
FromTime	String	No	No	Available From
ToTime	String	No	No	Available To
Address	String	No	No	Pickup Address

Table 2 Donor's Table

Volunteer Table				
Column Name	**Data Type (Firebase)**	**Primary Key**	**Allow Null**	**Description**
Id	String	Yes (Auto generated)	No	Unique id for identification of every record
Name	String	No	No	Name of Volunteer
Number	String	No	No	Number of Volunteer
Address	String	No	No	Volunteer Address
PickupTime	String	No	No	Food Pickup Time

Table 3 Volunteer's Table

Community Table				
Column Name	**Data Type (Firebase)**	**Primary Key**	**Allow Null**	**Description**
Id	String	Yes (Auto generated)	No	Unique id for identification of every record
Image Uri	String	No	No	Image Uri from Firebase Storage of Uploaded Image
Description	String	No	Yes	Description of Image

Table 3 ComunnityTable

Feedback Table				
Column Name	**Data Type (Firebase)**	**Primary Key**	**Allow Null**	**Description**
Id	String	Yes (Auto generated)	No	Unique id for identification of every record
Name	String	No	No	Name of Feedback Giver
Number	String	No	No	Number of Feedback Giver
UiValue	String	No	No	User Friendliness
Issue	String	No	No	Technical Issues
Share	String	No	No	Will User Share the App
UserFrequency	String	No	No	Donation Frequency
FutureValue	String	No	No	App Usage in Future
Suggestions	String	No	Yes	App Suggestions

Table 4 Feedback Table

BIBLIOGRAPHY

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- www.chat.openai.com
- www.geeksforgeeks.org
- www.stackoverflow.com
- www.firebase.google.com/docs
- www.developer.android.com/docs
- www.youtube.com
- www.github.com