Annadaan – Food Donation App

A Project Report Submitted in Fulfillment

Of the Degree of

MASTER'S IN COMPUTER APPLICATION

Year 2022-2023

SUBMITTED BY

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CERTIFICATE

THE EXPERIMENTS DULY SIGNED IN THIS PROJECT REPORT REPRESENT THE BONAFIDE WORK BY MR. **GAURI RAMAKANT SHARMA** APPLICATION ID / SEAT NO. **169514** IN **SEMESTER III** OF **SECOND YEAR OF MASTER OF COMPUTER APPLICATION (SYMCA 2YRS)** OF PCP CENTER **EKNATH MADHAVI SENIOR COLLEGE DOMBIVLI (E)** FOR **MINI PROJECT** DURING THE ACADEMIC YEAR 2022-2023.

Project Guide **External Examiner** **Coordinator– M.C.A**

IDOL STAMP

EKNATH MADHAVI COLLEGE STAMP

Date: _____

Place: Mumbai

Approval of Project

This is to certify that the project work entitled ***"ANNADAAN – A FOOD DONATION APP",*** for **Master in Computer Application** submitted to University of Mumbai by ***Mr. SHARMA GAURI RAMAKANT SARITA (APPLICATION ID : 169514)*** a bonafide student of Institute of Distance and Open Learning, Vidyanagari, Kalina ,Santracruz East has been approved for the award of ***Master in Computer Application***.

Examiner

1.

2.

Date:

Place:

Declaration

I declare that this written submission represents my ideas in my own words and where other's ideas or words have been included, I have adequately cited and referenced the original sources. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in my submission. I understand that any violation of the above will be cause for disciplinary action by the Institute and can evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

(Signature)

Ms. SHARMA GAURI RAMAKANT SARITA

APPLICATION ID: 169514

Date:

Place:

ACKNOWLEDGMENT

After the completion of this work, words are not enough to express my feelings about all those who helped me to reach my goal; feeling above this is my indebtedness to the almighty for providing me this moment in my life.

It's a great pleasure and moment of immense satisfaction for me to express my profound gratitude to my project guide, **Prof. Vijay Kothawade** whose constant encouragement enabled me to work enthusiastically. His perpetual motivation, patience and excellent expertise in discussion during progress of dissertation work have benefited me to an extent, which is beyond expression. His depth and breadth of knowledge of Engineering field made me realize that theoretical knowledge always help to develop efficient operational software, which is a blend of all core subjects of the field. The completion of this project would not have been possible without his encouragement, patient guidance and constant support.

I would like to thank all staff members for their valuable cooperation and permitting me to work in the computer labs.

Special thanks to my colleagues and friends for providing me useful comments, suggestions and continuous encouragement.

Finally, I thanks my family members, for their support and endurance during this work.

Mr. SHARMA GAURI RAMAKANT SARITA

(APPLICATION ID: 169514)

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Title of the Project

Annadaan

(A Food Donation App)

ABSTRACT

In this project, we have tried to provide a solution for food waste through our app. Our android app contains two modules first one is the donor module and another one contains receiver module. In donor module, the person can donate his good quality food he can do this through providing food information to the opp. In Receiver module, the person or any organization who is in need of food can put up his requirements on the app.

1. INTRODUCTION

As per the knowledge, the technology is going advanced and growing day by day. Over main motto is to help needy people. Many people who wish to donate things to needy organizations also can use the idea behind over project. We have tried to reduce food wastage by giving waste food to people or organization who need it.

If someone is in need of food, that person can find a food donor directly through our app, and for that, only that person needs to install our app in his mobile, and open the food map in it and contact the nearby food donors. The biggest feature of our app is the food map in our app. In it, you can see both the users around donors who are going to donate food, and receivers who need food.

You will see donor in green color marker and receiver in blue color marker in the food map. All you have to do is click on the donor's marker, and you will see the name and mobile number of the donor. You can contact them and receive food.

1.1 Problem Definition :

Currently, along with the water problem, the food wastage problem is also increasing in the world. We all should take the food issue seriously too. We throw away leftover food at home, also, in hotels and restaurants where food is prepared in large quantities; this food is wasted a lot. A lot of food is wasted during big events, weddings, and many more.

And the solution to this problem is Annadaan - A Food Donation App.

1.2 Objective Of System :

- You can see the food donors in your area at home on the food map in the app.
- Anyone can donate food anytime by going to the donation section.
- NGOs and orphanages who are in constant need of food can visit the receiver section and show their location to the donors.
- Anyone who needs food can contact them by clicking on the donors in the map.

1.3 Scope Of System :

This project has great future scope. Because in the food donation app made so far, only donors and receivers appear in list form. However, in this app you can see in the map. It's simple UI gives a good user experience. This project also provides security with the use of Login-id and Password, so that any unauthorized users cannot use your account. The only Authorized that will have proper access authority can access the Application.

1.4 PROJECT CATEGORY

Android application.

Language(s) to be used

XML, JAVA

Softwares :

FIREBASE

Softwares :

Android Studio Electric Eel V2022.1.1

2. SYSTEM STUDY

2.1 Disadvantage of Existing System:

In present, a current system for the food waste reduction app is the proposed system which only consists of NGO and Restaurants and User and Donor respectively, But in our app any person who has good quality food can donate food and any needy who can be any person or organization can request for food. The food donation app made so far, only donors and receivers appear in list form. However, in this app you can see in the map.

2.2 Purpose of System:

In this project, we have tried to provide a solution for food waste through our app. Our android app contains two modules first one is the donation module and another one contains volunteer module. In donor module, the person can donate his good quality food he can do this through providing food information to the opp. In Volunteer module, the person or any organization who is in need of food can put up his requirements on the app.

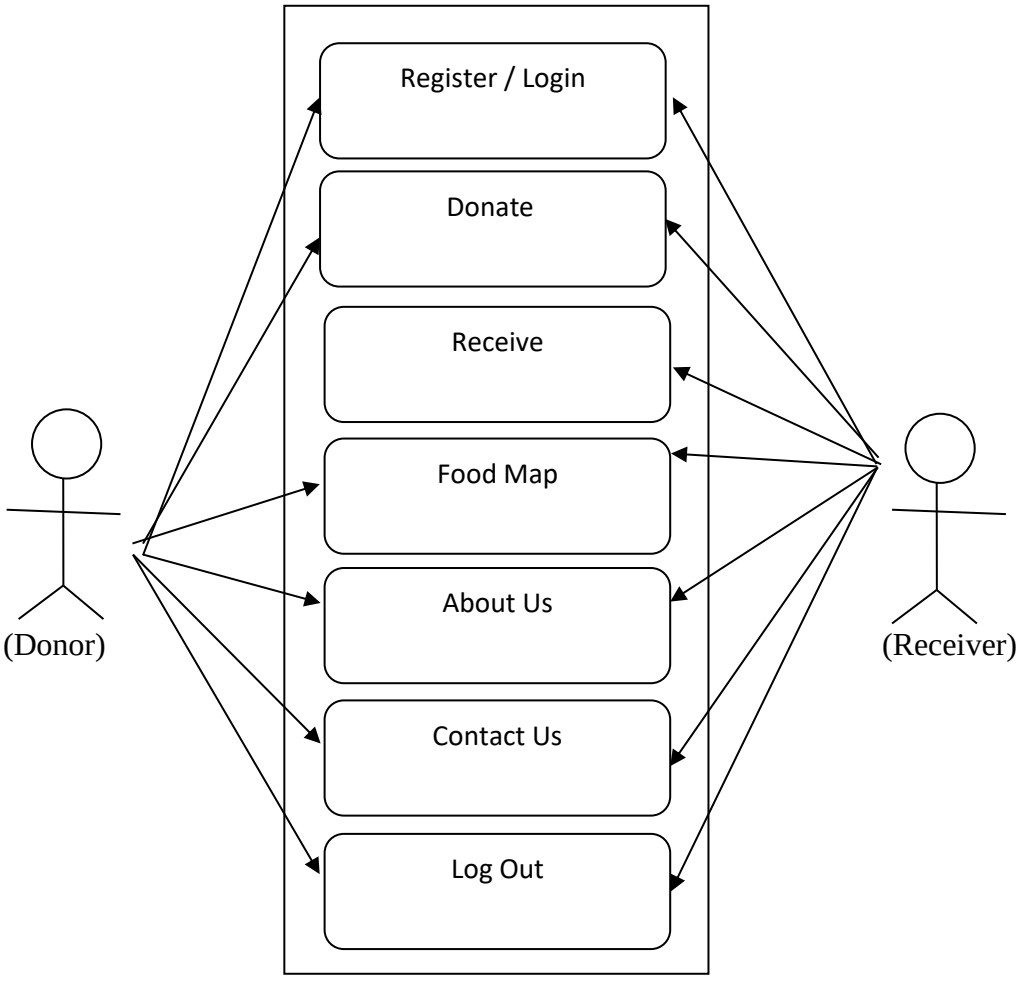
2.3 Use Case:

In the Unified Modeling Language (UML), a use case diagram can summarize the details of your system's users (also known as actors) and their interactions with the system. To build one, you will use a set of specialized symbols and connectors. An effective use case diagram can help your team discuss and represent:

- Scenarios in which your system or application interacts with people, organizations, or external systems
- Goals that your system or application helps those entities (known as actors) achieve
- The scope of your system

Modules

1. **Register / Login:** In this case, you can log in and register in your application.
2. **Donate:** In this case, you can donate the food you want to donate by filling a form.
3. **Receive:** In this case, you can request to receive the food you want by filling a form.
4. **Food Map:** In this case, you can see donate and receive requests in your local area.
5. **About us:** In this case, you will see some information about us.
6. **Contact us:** In this case, you will find a contact form to contact us.
7. **Log out:** In this case, you can log out of your account.



3. Analysis & Design

3.1 Software Hardware Requirement Specifications:

Hardware Requirements

Processor	2.6 GHz or Faster Processor
RAM	8 GB
Disk Space	20 GB of Available Hard Disk
Graphic	DirectX 9-Capable Video Card
Display	1024X 768 or Higher Resolution

Software Requirements

Operating System	Windows 10
Language	Xml, Java
Code Editor	Android Studio Electric Eel V2022.1.1
Database	Firebase

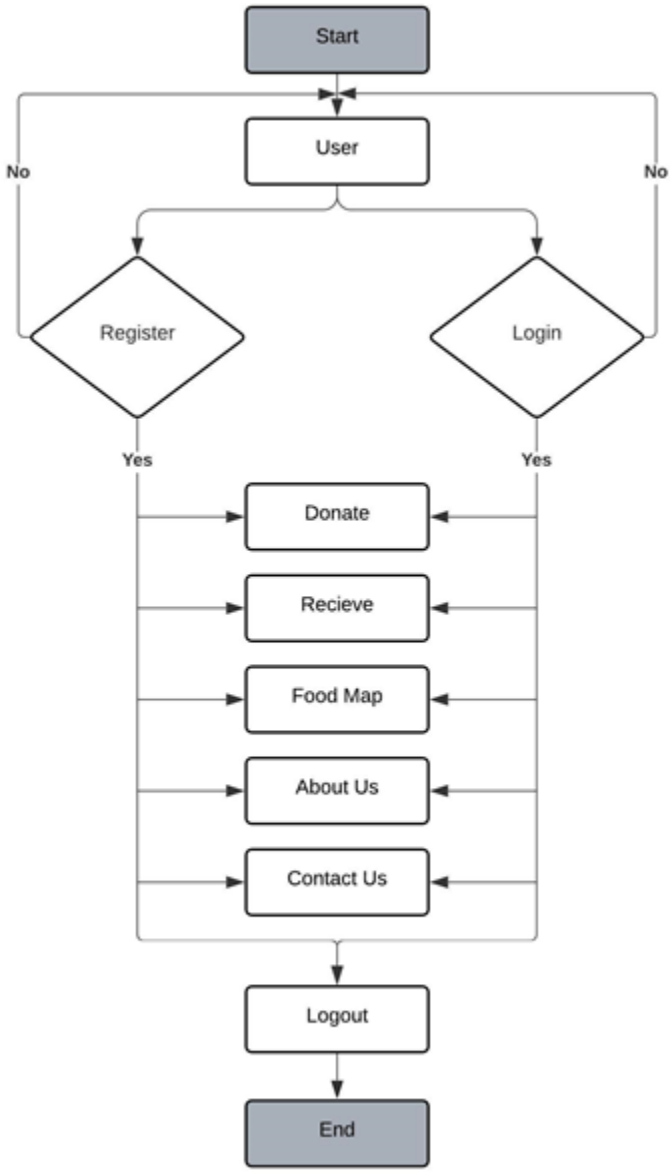
3.2 Gantt Chart

A mechanical engineer named Henry Gantt in 1910 invented Gantt chart. A Gantt chart is simply a type of bar chart that visually represents a project plan over time. It shows start and end dates for tasks, displays milestones, and allows for dependencies between tasks. With all thefeatures of Henry Gantt's project management system, it is no wonder that even now, more than 100 years later, the Gantt chart is still the preferred tool for managing projects of all sizes and types.

weeks Activities	1	2	3	4	5
Research / Define Specification					
Project Planning					
Design / Development					
Test Plan					
Testing and Q A / Delivery					

3.3 Flowchart:

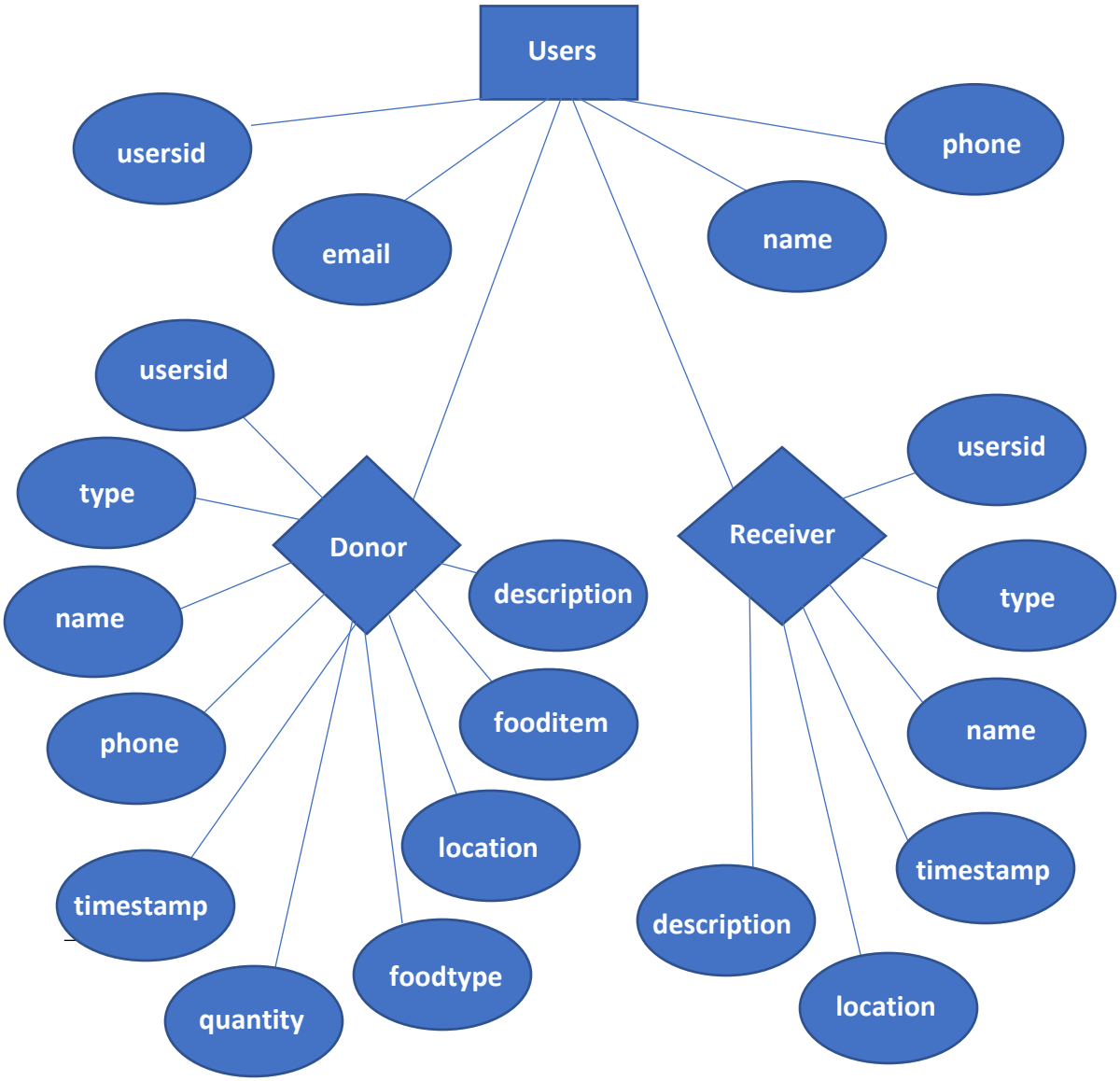
A flowchart is a picture of the separate steps of a process in sequential order. It is a generic tool that can be adapted for a wide variety of purposes, and can be used to describe various processes, such as a manufacturing process, an administrative or service process, or a project plan.



3.4 ER Diagram:

ER Diagram stands for Entity Relationship Diagram, also known as ERD is a diagram that displays the relationship of entity sets stored in a database. In other words, ER diagrams help to explain the logical structure of databases. ER diagrams are created based on three basic concepts: entities, attributes and relationships.

ER Diagrams contain different symbols that use rectangles to represent entities, ovals to define attributes and diamond shapes to represent relationships.

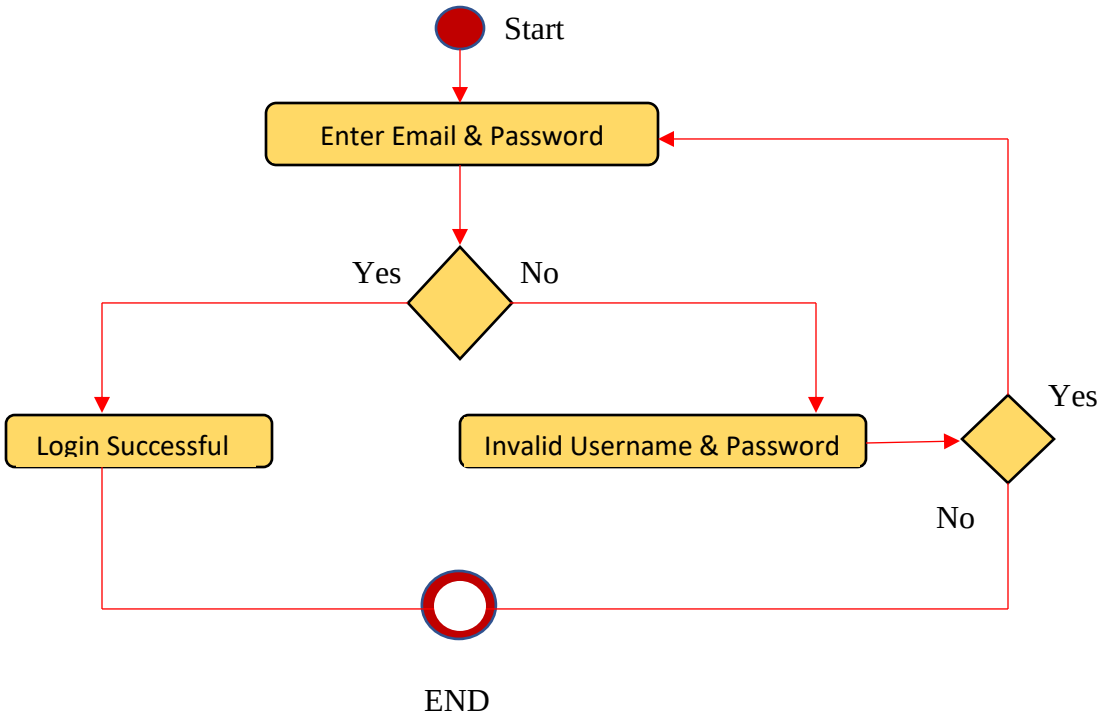


3.5 Activity Diagram:

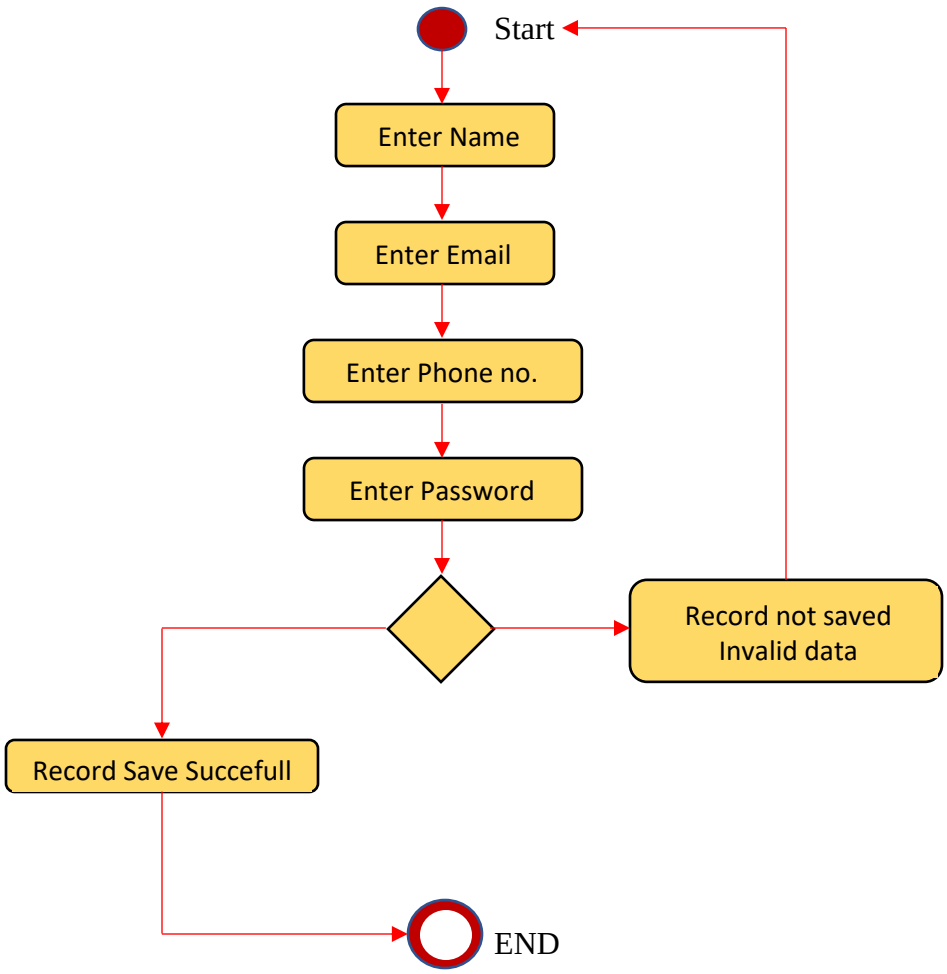
An activity diagram is a behavioral diagram i.e. it depicts the behavior of a system. An activity diagram portrays the control flow from a start point to a finish point showing the various decision paths that exist while the activity is being executed.

Activity Diagrams describe how activities are coordinated to provide a service which can be at different levels of abstraction. Typically, an event needs to be achieved by some operations, particularly where the operation is intended to achieve a number of different things that require coordination, or how the events in a single use case relate to one another, in particular, use cases where activities may overlap and require coordination. It is also suitable for modeling how a collection of use cases coordinate to represent business workflows

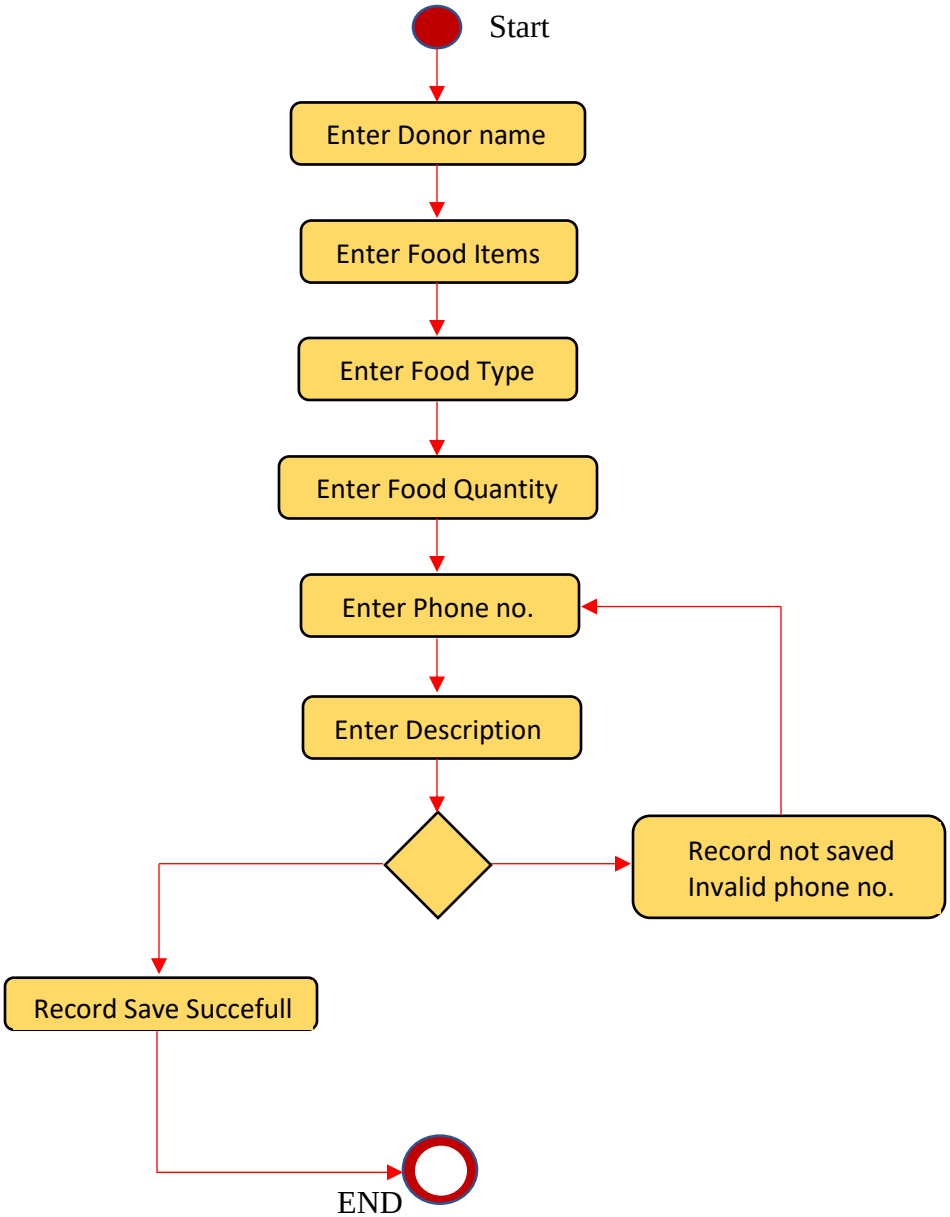
1. **Activity Diagram for login :-**



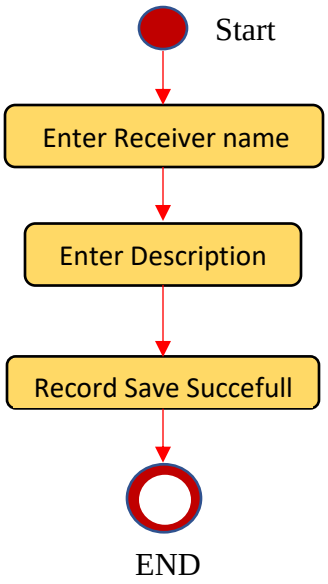
2. Activity diagram for Add new account :-



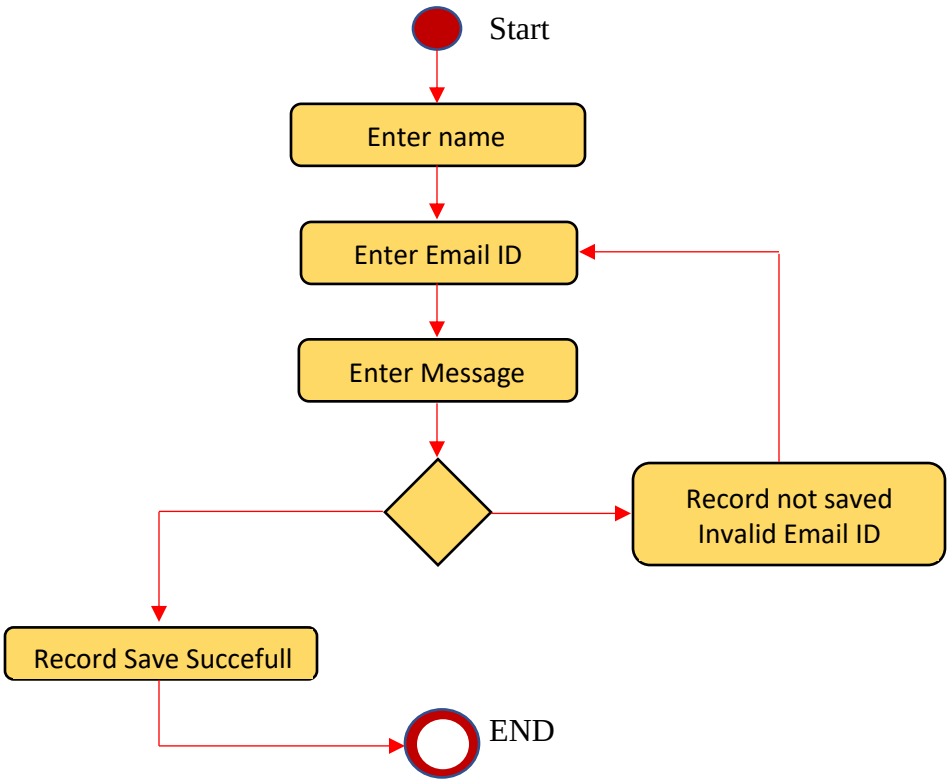
3. Activity diagram for Add Donor Details :-



4. **Activity diagram for Add Receiver Details :-**



5. **Activity diagram for Contact Us Form :-**



4. TESTING & VALIDATION

Testing is an important stage which follows the coding stage in the software development life cycle. The objective of **testing** is to evaluate if we have created the system correctly. During the earlier stages, the focus was to check what is being built but in testing when we have the end product ready, our focus shifts to validate whether the product that has been built has been built correctly or not. Hence, the focus shifts from building the product right to building the right product.

Now, an attempt to define software testing is made. Testing is a systematic activity where records for test execution need to be maintained.

Testing is the process of executing a program with the specific intent of finding an error. The number of errors it has uncovered determines success of the test. Tests can be conducted by the developer or by an independent testing team. What one should remember is that the role of a good tester is to show the presence of the defects or errors of that software.

Testing objectives:

- To ensure that during operation the system will perform as per specification.
- To make sure that system meets the user requirements during operation.
- To make sure that during the operation, incorrect input, processing and output will be detected.
- To see that when correct inputs are fed to the system the outputs are correct.
- To verify that the controls incorporated in the same system as intended.

A good test case is one that has a high probability of finding a yet undiscovered error. The software development has been tested successfully using the following testing strategies and any errors that are encountered are corrected and again the part of the program or the procedure or function is put to testing until all the errors are removed. A successful test is one that uncovers an as yet undiscovered error. Note that the result of the system testing will prove that the system

is working correctly. It will give confidence to system designer, users of the system and prevent frustration during implementation process etc.

Methodologies used for testing:

Software testing is an integral part of the software development life cycle (SDLC). Testing a piece of code effectively and efficiently is equally important, if not more to writing it.

Types of testing:

Software is tested from two different perspectives:

1. Internal program logic is exercised using "white box" test case design techniques.
2. Software requirements are exercised using "black box" test case design techniques.

In both cases, the intent is to find the maximum number of errors with the minimum amount of effort and time.

White Box Testing:

White-box testing, sometimes called glass-box testing is a test case design method that uses the control structure of the procedural design to derive test cases. Using white box testing methods, the software engineer can derive test cases that:

- Guarantee that all independent paths within a module have been exercised at least once.
- Exercise all logical decisions on their true and false sides.
- Exercise all loops at their boundaries and within their operational bounds, and
- Exercise internal data structures to ensure their validity.

Black Box Testing:

The technique of testing without having any knowledge of the interior workings of the application is Black box testing. The tester is obvious to system architecture and does not have access to the source code. Typically, when performing a black box test, a tester will interact with the system's user interface by providing inputs and examining outputs without knowing how and where the inputs are worked upon.

4.1 TEST REPORT

4.1.1 REGISTRATION:

1. Open Registration page.
2. Fill up the details.

TEST CASE ID	TEST ITEM	TEST PROCESS	INPUT	EXPECTED RESULT	ACTUAL RESULT	REMARK
TC1	Name	Enter Name	Empty	Shoulddisplay error	Displayerror	Pass
			Enter Username	Should accept it	Accepted	Pass
TC2	Email ID	Enter your Email ID	Empty	Should display error	Displayerror	Pass
			Enter invalid Email ID	Should display	Display error "Please enter valid. Email ID"	Pass
TC3	Number	Enter your Phone Number	Empty	Should display error	Display error	Pass
			Enter Number	Should accept it	Accepted	Pass

TC4	Password	Enter password	Empty	Should display error	Display error	Pass
			Enter Password	Should accept it	Accepted	Pass
TC5	Register	Click on Register button	Clicked	Should display "You are successfully Registered"	Display Message	Pass

4.1.2 LOGIN :

1. Open Login page.
2. Fill up the details.

TEST CASE ID	TEST ITEM	TEST PROCESS	INPUT	EXPECTED RESULT	ACTUAL RESULT	REMARK
TC1	Email ID	Enter Email ID	Empty	Should display error	Error message "Email Is Required"	Pass
			Enter wrong Email ID	Should display error	Error message "Email is invalid"	Pass
			Enter correct Email ID	Should accept it	Accepted	Pass
TC2	Password	Enter Password	Empty	Should Display error	Error message "Please enter valid Password"	Pass

			Enter wrong Password	Should display error	Error message "Password is invalid"	Pass
			Enter correct Password	Should accept it	Accepted	Pass
TC3	Login	Click on Login. Button	Clicked	Should Login	Logged in	Pass

5. USER MANUAL

5.1 Explanations of key functions:

In our app, any person who has good quality food can donate food and any needy who can be any person or organization can request for food. In this app, you can see the food map.

User can check own created request from my pins. In the Map & Pins Format.

5.2 Method Of Implementation:

5.2.1 Forms : There are total 5 forms in this project or app

1) **Register:** Create an account store in firebase Authentication there's some properties Username(), User EmailID(), Phone Number (int values) & Password (Special characters)

2) **Login:** When the administrator connect the background firebase connection management a log in interface will be displayed dashboard .the administrator need to input Field's correct Username() and password().

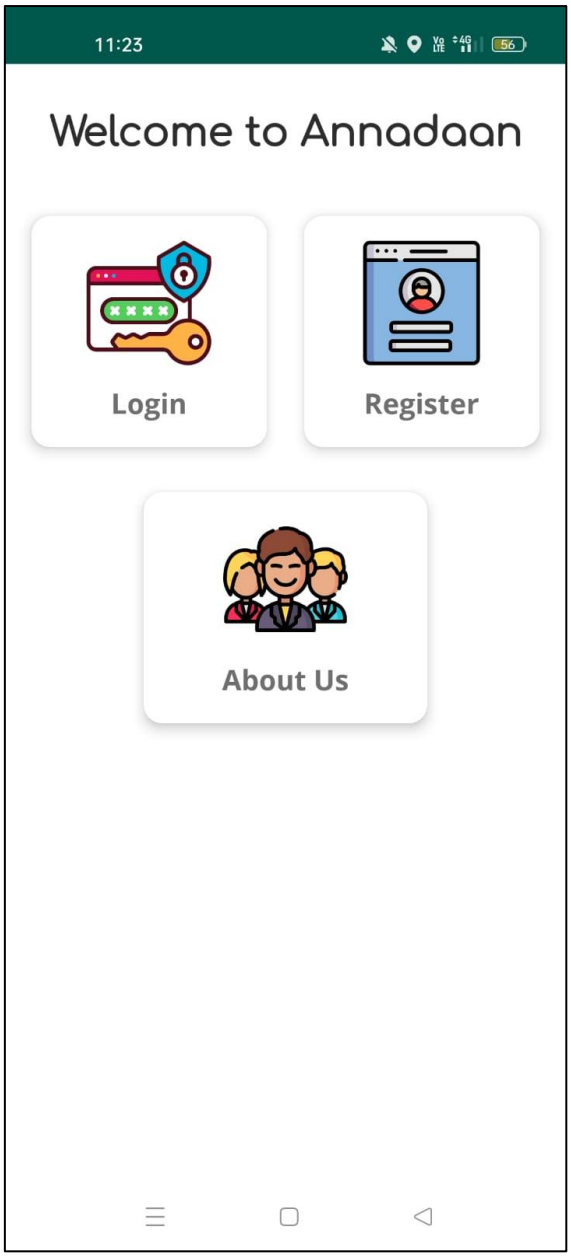
3) **Donate:** Donor data will be store in firebase Database it contains no of properties such like Donor name(), food type(), Food qty() AND description()

4) **Receive:** Receiver data will be store in firebase Database it contains no of fields such like ReceiverName() and description().

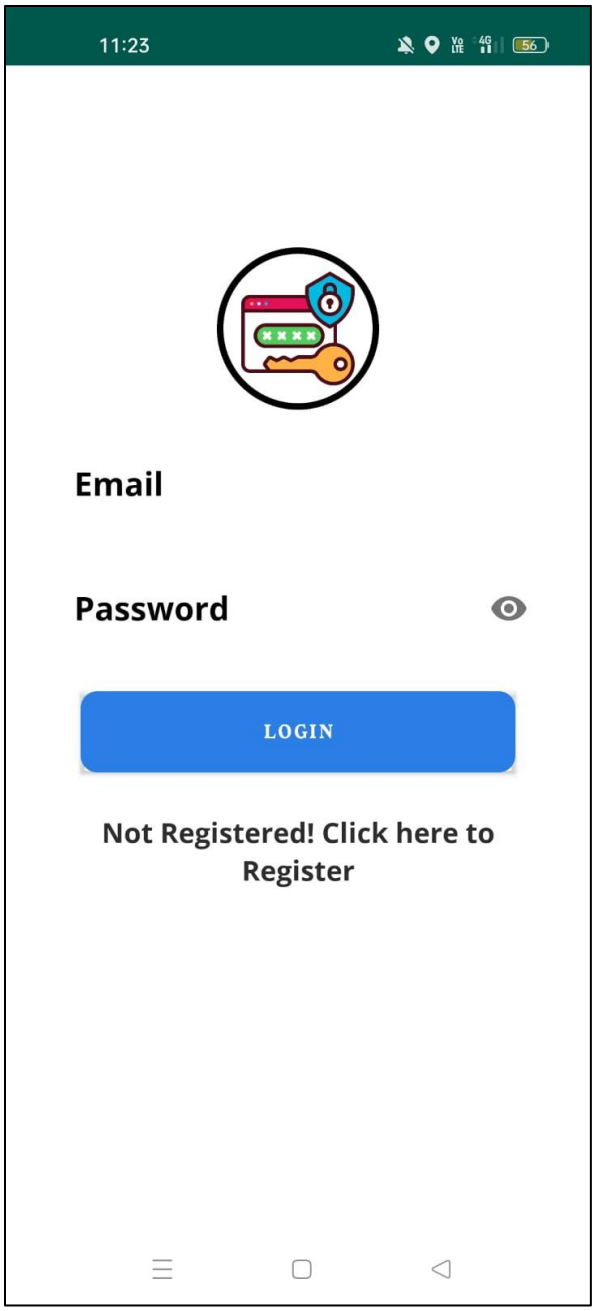
5) **Contact Us:** It will be help to contact to direct Donor and receiver there's some properties Username(), EmailID(), Message() and Input Submit().

5.2.2 Output Screens:

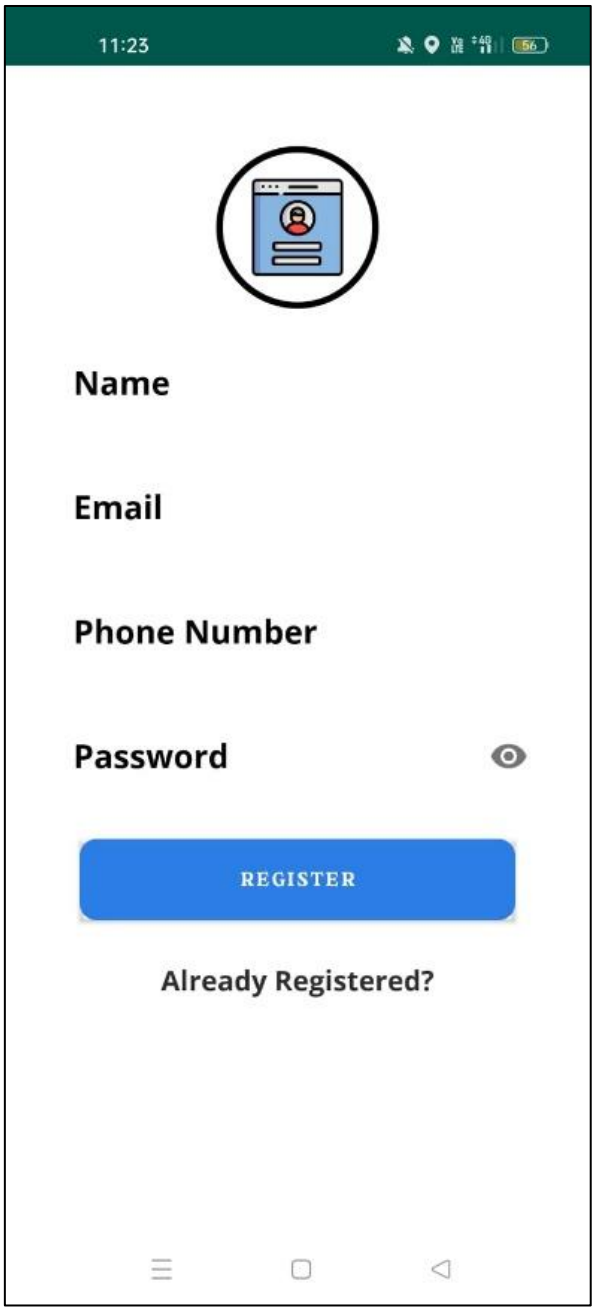
Splash Screen



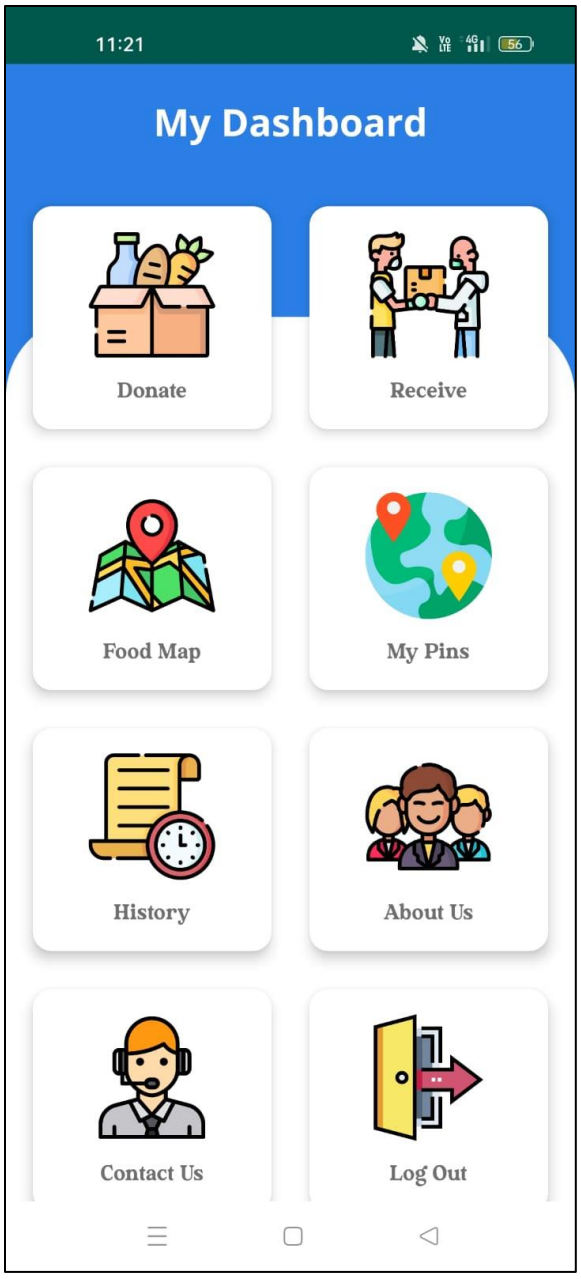
Landing Page



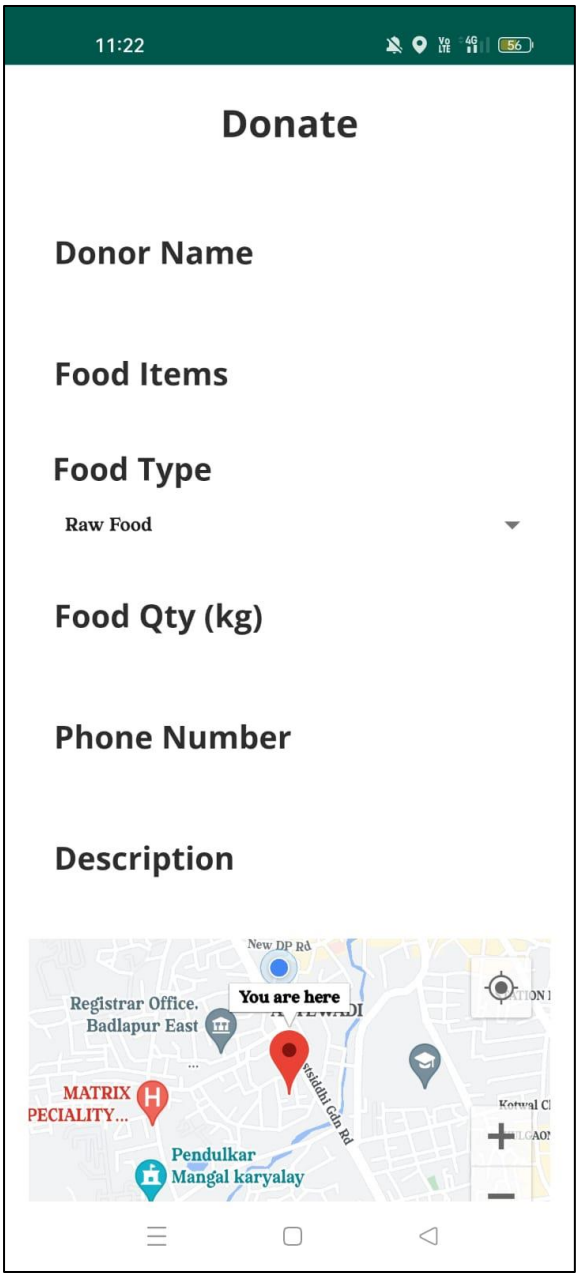
Logup



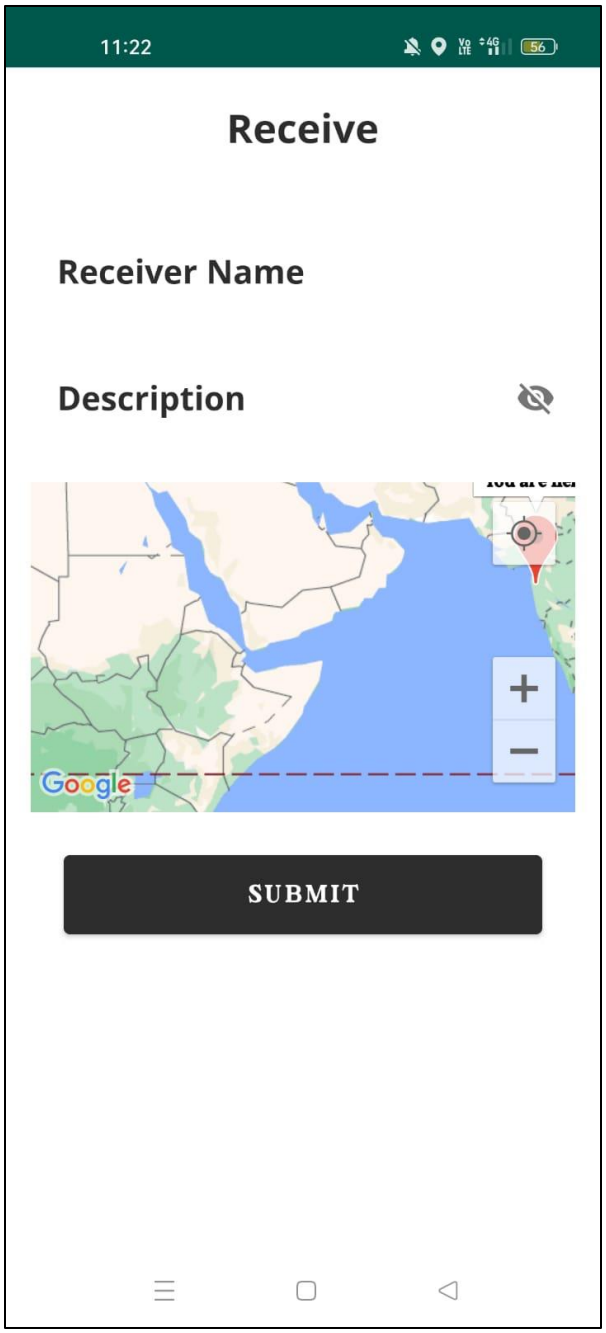
Signup



Main (Dashboard)



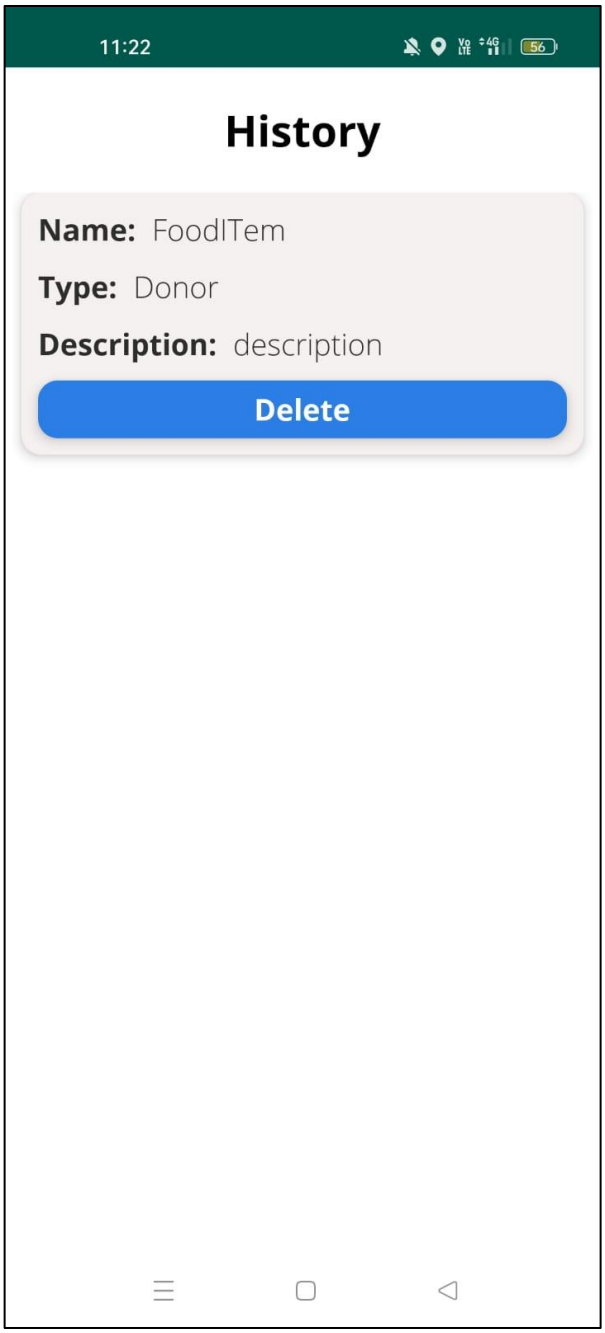
Donate



Receive

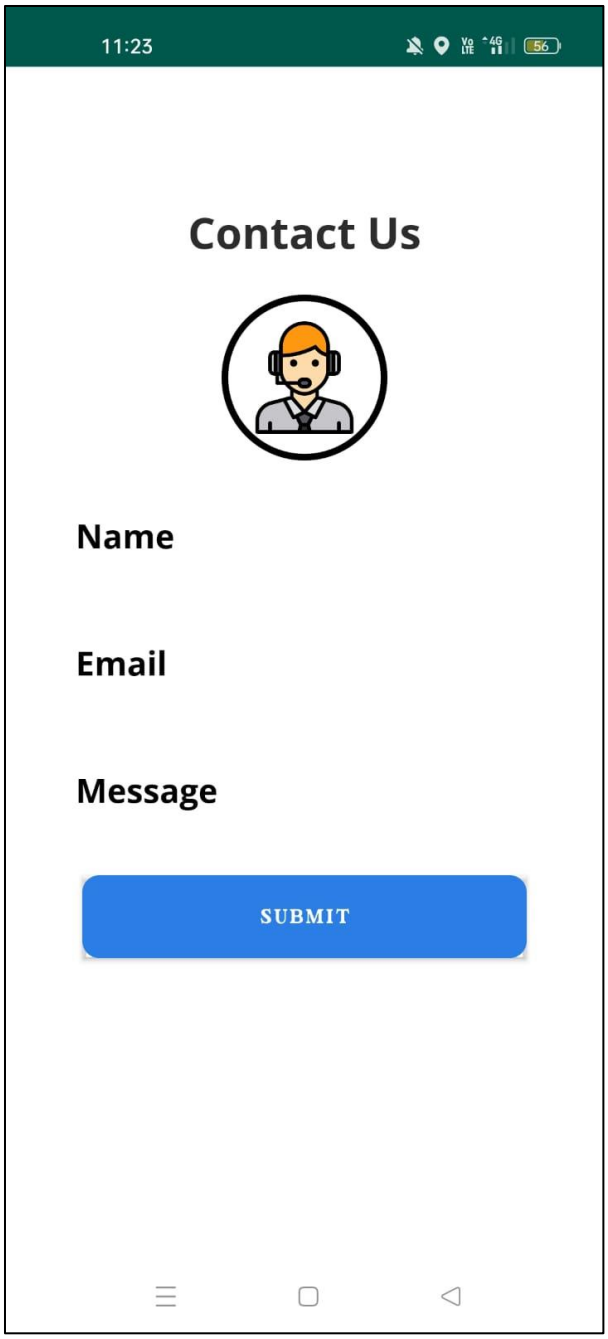
Food Map

My Pins



Single Row (History)

About



Contact

6. FUTURE EXPANSION & PROJECT CONCLUSION

The future scope of the project can be that it is an app, which will reduce food wastage. Therefore, it can be a medium through which we can stop food wastage little by little. This app is also useful in providing good quality food to needy people and organizations.

- We can develop an advanced food map. It can show full details of donner & receiver.
- We can create dedicated login for NGO & Foundations.
- Also can modify donner & receiver form with an extra fields & validations.
- We can create better UI for great user experience.
- We can develop feature that can fetch the exact location where actually the food and grains are available

6.1 Conclusion:

We would like to conclude that our project should aim at helping the needy by connecting them with the donors by using the NGOs as an intermediary who shall their job aided by application that we shall provide them. Our application shall aim to mitigate issues like lack of awareness among donors, lack of transparency in the donation process and thus act as a bridge between the people in need.

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