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Donation App Developed Using Flutter Technology

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Abstract: ***This project is used to manage the wastage of food in a functional way. People are throw away lots of food every day. So we have to lessen that food destruction problem through online. This app is basically a Food Donation App which bridge Food Donors (Caterers, Individuals and Restaurants etc.) and the Receiver (NGOs, Individuals etc.). This app stipulation of details of the leftover food along with pickup address and other relevant details which can be viewed by the Receivers. The Receivers as per their convenience can reach the specified location to collect the food parcel. Efficient management and security of data have been taken care of while developing our product. The user's details are maintained confidential because it maintains a separate account for each user. This project's food redistribution ability can become an enormously extensive successful social innovation that tackles food waste and food poverty.***
Keywords: food donation, food waste, mobile application, flutter, firebase, mobile application.

I. INTRODUCTION

According to the records of of many food organizations there are plenty of peoples who are not able to afford food as per their need or even a single time meal . There are numerous solutions exist which reduces the destruction of food up to some extent, but such solutions are suitable for countries where people feel safe to go to a unknown place or to provide their addresses to a stranger for food distribution or collection. In India, food is mainly donated through random distribution among a group peoples or by directly contacting charitable organizations or NGOs. We introduce the Sahara app, which is based on a donation network that helps in searching for compatible donations and demands, generating orders for donation or receiving. If we compare sahara app to other food donation apps, here the approach used is simpler and specially designed according to Indian reality: In sahara app valid email account is required to proceed which provides more safety for the users as they would required to create an account with valid email to proceed; this app mainly concentrate on that part of people who are in need of food by delivering food as per adequate amount required and with all precautions and safety.

The world is going through a harsh and unpredictable times. The coronavirus (COVID-19) pandemic is causing many problems and uncertainty in life of peoples in India due to which people are struggling in affording required amount of food as per their need. The poor peoples , daily wage workers ,low income groups are facing numerous challenges in fulfilling their daily food requirements. As in the most of the cases, people living in poverty are suffering a lot. There are many old aged people who are living alone at home and having limited resources to fulfill their basic requirements.

By the contribution of this app we will help people to provide food to these helpless needy people who are hit the hardest by the global coronavirus (COVID-19) pandemic. So the purpose of this software is to make the donation of excess food that all we have in our houses, hotels, restaurants etc. easy.

The paper consists of following sections:

"**Methodology**" which explains the method used to make donation app.
"**Modelling**" which explains the structure of the models present in the project.
"**Result**" that shows the experimental analysis of the model.
"**Conclusion**" that shows the results and conclusion.

II. METHODOLOGY

This Software includes maintaining donor details, maintaining receiver end details, maintaining donation details, request for a donation and give feedback. It can be accessed from our houses as well as different hotels, restaurants etc. and will make donations easier. This project will be a mobile application developed by using Flutter and Firebase using Dart language. Steps include database design, form design, coding and testing.

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III. MODELLING

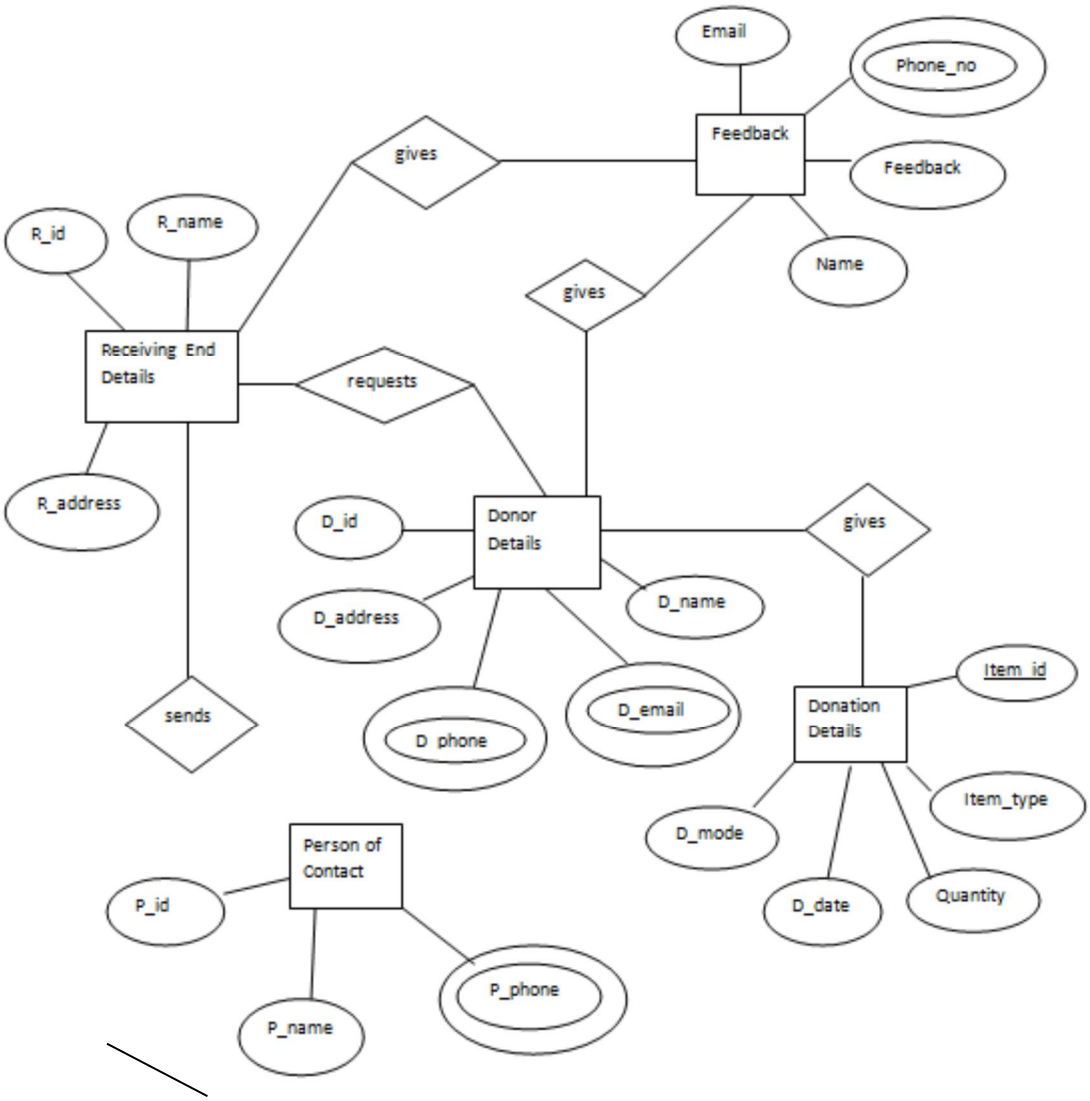
1) *Entity Relationship Diagram (ERD):* An entity-relationship diagram (ERD) is a data modelling technique that graphically illustrates an information system's entities and the relationships between those entities.

Entities along with their attributes in the following ERD are:

a) *Donor Details:* D_id, D_name, D_address, D_phone, D_email.
b) *Donation Details:* Item_id, Item_type, Quantity, D_date, D_mode.
c) *Receiving End Details:* R_id, R_name, R_address.
d) *Feedback:* Name, Email, Phone_no, Feedback.
e) *Person of Contact:* P_id, P_name, P_phone.

A. Relation Between Entities

Donors and Receivers register using name, address, phone and email, then the Donor "**gives**" donation details that contain type of item, quantity, date and mode and the Receiving End "**requests"** donor for donation details. After this the Receiving End "**sends**" the person of contact whose entity contain name and phone number. Lastly both Donor and Receiver "**gives**" feedback containing name, phone number, email and the feedback note itself.



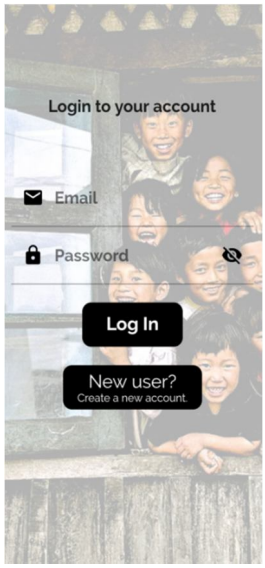
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IV. RESULT AND DISCUSSION

The Sahara app allows persons, restaurants and hotels to register as food donors, and enables charitable organizations to register as food receivers. Instead of individuals sharing food, the volunteer work does not rely only on donation: different entities can be food donors but also can help to transport food from a food donor location to a charitable organization. On the one hand, a volunteer offers food to donate. On the other, a charitable organization reports specific food demands. As an intermediary, a transporter volunteer will perform the process of collecting the food donation and taking it to a charitable organization. The main idea of the app is to facilitate the connection among food donors, transport volunteers and charitable organizations, creating a food donation network. The features included in our mobile application were based on visits to organizations that would fit as food donation receivers. This also allowed us to know the activities developed around them as well as their target audience. The app stores the necessary information about its users and about the food specified in both donation and demand settings. The final mobile application is deployed on the basis of all the models that were made and functionalities that were decided. And the UI (User Interface) can be seen in the below picture.





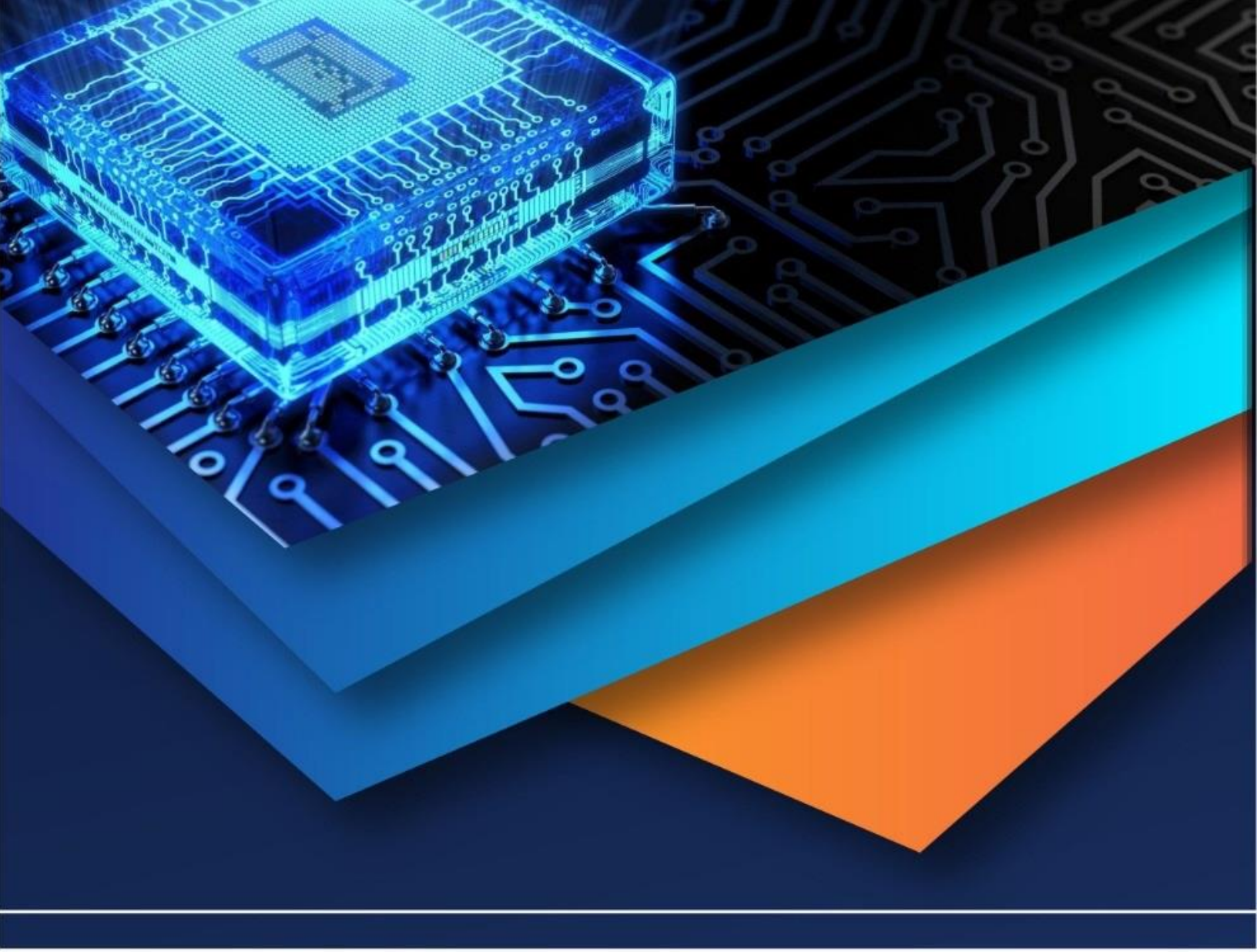
V. CONCLUSION

In the world of today where one is suffering to eat the food of a single time and no one is looking towards that part of world which is undergoing such situations then there are some people who are giving their contribution in such a good deed of serving food to the needy. And we want to serve those soldiers of society by creating an app which will keep them accountable of their good deeds. We are very honoured and proud to bring the idea of accountability into an app which will help donors to come and make them count in the part of serving. So that it will be easy for one to contribute their part into the society.

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