V-Share: Allows Users to Donate & Track Educational Resources to Different Schools and NGOs that Provides Free Education to Children's

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Abstract - *The evolution of wireless portable technology, such as smartphones, has led to radical development in the educational area, our project is about a V-Share application that allows users to donate educational resources to different schools and NGOs that provides free education to children's, This research project aims toward developing an efficient and user-friendly android application that will be able to provide NGOs and Schools, stuffs that are useful for students with all the needed material being used during education. It is an android app that allows users to log in and registers themselves where they can simply donate the materials which they want to provide to needy children. Thereafter the login and registration process, a commander will be allocated to the Specific user and will be reporting to the registered user's locality where the users will be provided a bag/pouch in which they are allowed to donate the materials as they want, At the same time, users will be provided a tracking ID in the application through which they can track the activities that are being processed. Once the donation process is completed, the commander will be reporting to the head of the process for further process. Thus it gives authentication to the users that the donated materials are being donated properly to the needy or the receivers. This system provides one attractive environment where users can track the data or the information about the donated material or stuff easily. Thus, the users or the donor can donate material to the needy effortlessly, as our application will provide secured authentication to the user by the live tracking system of their donated resource.*

*Key Words***: Real-time System, Online donation, Education help, Donated stuff tracking, Donation report, Safety system, GPS.**

1. Introduction

Our app provides an interface between the donor and the receiver. So, the main of our project is that it allows users or the donors to donate the resources to the people effortlessly. They can simply donate the materials in a bag which will be provided by the commanders to them.

Thereafter the donation process [2] [7], the donor will get complete information with a confirmation where his donated material is being donated. It will also provide secured authentication to the donor that resources are being delivered properly.

1.1 Need of this application

The need for our application is that it serves as a medium for the donor to donate resources through the app. One can donate the resources, easily from their home. Whenever a donor donates he will get complete information with a confirmation of where his donated materials are delivered or donated.

There is no fear of misplacement of the donated resources, as the application provides a secured authentication to the donors. The donor can easily donate the materials to the reporting commander without any fear. This application provides the user a tracking ID to the donors to the donated materials.

1.2 Initial Investigation

In the current situation, when a person wants to donate something to the needy [8], he has two options, firstly whether he should directly go to the needy people & provide them the resource, or secondly he should give the resources to any "NGOs or any Fundraising Organization", but due to lack of trust in social organizations, time or knowledge make them defer such decisions, especially first-time donors.

There are a lot of people with money and they want to give more, most often. Because of that, even if people want to give, it is hard to give money away. Many people want to donate but they have a fear in mind that is, "Is the materials or the resources they have donated is being delivered to the needy properly?" or the donor himself needs to donate the materials to the people by themselves because that they have full assurance that the materials is being donated properly.

1.3 Solution

Our solution is the Android application [4] which will be available for the people who are willing to donate resources to the needy. So to our come this fear of people we have created a V-Share application. This app provides full secured authentication to the user or the donor about the donated materials. The donor can track the donated materials through our app. They will be assigned a tracking ID after the donation [1], through which they can easily keep an eye on the donated material. So, one can easily donate with no fear of misplacement of the resource.

2. OBJECTIVE & SCOPE OF APPLICATION

In this world of growing technologies, everything has been computerized. This project simplifies the task of maintaining records because of its user-friendly nature. The objective of this project is to provide a comprehensive approach towards the donors where donor donates resource through the application. The objectives of this system include:

1. Make interface between the donor and the receiver.
2. Allow the users or donor to donate the resources to the people effortlessly.
3. Ensure the donor that the material are safely reach to the receivers due to tracking system.
4. Provide secure authentication to the donors.

2.1 SCOPE

Tracking system: This application ensures the donors track the materials. Due to this tracking system person can donate resources easily from their home. Whenever a donor donates, he will get complete information with confirmation where his donated materials has been delivered or donated [1].

Secured Application: Because of the tracking system donors freely donate the materials, without fear of misplacement, as the application provides secured authentication to the donors. This application provides the user a tracking Id to the donors for donated materials.

3. REVIEW OF LITERATURE

Now in this modern wireless technology era, smartphones have led to radical development in the educational area. There are a lot of people with money and they want to give more, most often, but due to lack of trust in social organizations, time or knowledge make them defer such decisions, especially first-time donors. Because of that, even if people want to give, it is hard to give money away.

Many people want to donate but they have a fear in mind that is, "Is the materials or the resources they have donated is being delivered to the needy properly?" or the donor himself needs to donate the materials to the people by themselves, because as this is the only way through which they can have a full assurance that the resource is being donated properly.

So to overcome this fear of people we have developed a V-Share application. The main objective of this project is to provide a comprehensive approach towards the donors where donor donates resource through the application. It provides fully secured authentication to the user or the donor about the donated materials. As it simplifies the task of maintaining records or keeping a track of the resource

because of its user-friendly nature. Donor can track the donated materials through our app. They will be assigned a tracking ID after the donation, through which they can easily keep an eye on the donated material. So, one can easily donate with no fear of misplacement of the resource.

4. Architecture

4.1 ER-Diagram

Fig 1 depicts the ER- Diagram of the proposed system i.e. V-Share. It gives a short idea about the types of entities and corresponding modules.
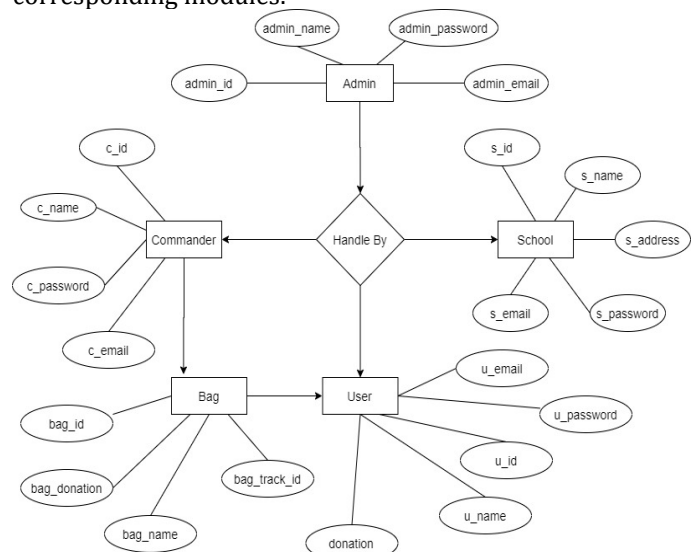

Fig -1: V-Share System ER Diagram

V-Share database includes five datasets. The first part is Bag set which has all data related to user donated stuff, tracking Id, location, and other information of bag which is allocated to the user, user can only view their own allocated bag data, and commander can view set of bags under their Id, and admin is able to manage and view all sets of bag data.

The second part is the School data set which will contain all data of school registered in the application, and it will have its own unique id for each school data set, it will contain a name, address, mail ID, school name information will use to notify the user once donated stuff is scanned by the school.

The third part is the User data set which will contain all basic user information like name, address, phone, mail Id, user data is used for allocating commander to the user.

The fourth part is the Commander data set which will contain commander personal information, commander ID is used to allocated users[s]/bag[s] to the commander.

4.2 Flow Diagram (FD)

Any user who's willing to donate, have to register with an application, and then the user can request for donation then one commander will approach a user with a bag in which the user can donate all stuff he wants, after a donation has been done the user can keep track of its donated stuff location through an application, after NGO/School receive donated stuff then they have to scan bar code[5] and allocated user to that bar code id will get notify by NGO's details and received confirmation mail, this is the flow of V-share System.

Fig -2: Flow Diagram level 0

The above FD(flow diagram) is version 0 where we simply made 4 panel and their activities like at first user will request for the bag to donate, the commander will provide bag and then it will send to school, in another case school can also request their requirements and commander will provide need stuff to school.

Fig -3: Flow Diagram level 1

In version 1 of FD (flow diagram), we simplified the roles of each entity from the system, admin is responsible to maintain the whole flow of the system in a structured way, monitoring all databases and maintain all commander and their activities, the commander is responsible to maintain all allocated user, maintaining donated stuff, updating bag status, School role is to request/confirm donation stuff to the commander, and user role is to donating stuff.

Fig -4: Flow Diagram level 2

In version 2 of FD(flow diagram), we detailed structured the flow of our system from start to end, the first school will register with the application and then it will request required things by the school, that request will be received by the commander and if any user has to donate to schools they must register with application and they have to request commander for the bag to donate some stuff then the commander will approach user and will give the bag to put some donation and after donation done, the user will get allocated to that bag can check location and status of users donated stuff, then the commander will take donation will send to a school who required those stuff and once school received those donation and after scanning bar code from donation box then the user who donated that box will be notified with the confirmation mail.

4.3 Use Case Diagram

Fig -5: Use Case Diagram

In order to provide a clearer picture of the functionality provided by the V- Share App module, we have done a use case analysis. The figure above is a use case diagram to present the functionality in the module.

4.4 Application Panel

A) DASHBOARD

As in Fig. 6, it is the dashboard for a user, commander, and school, on this panel we presented all our previous community work, activities, and achievements.
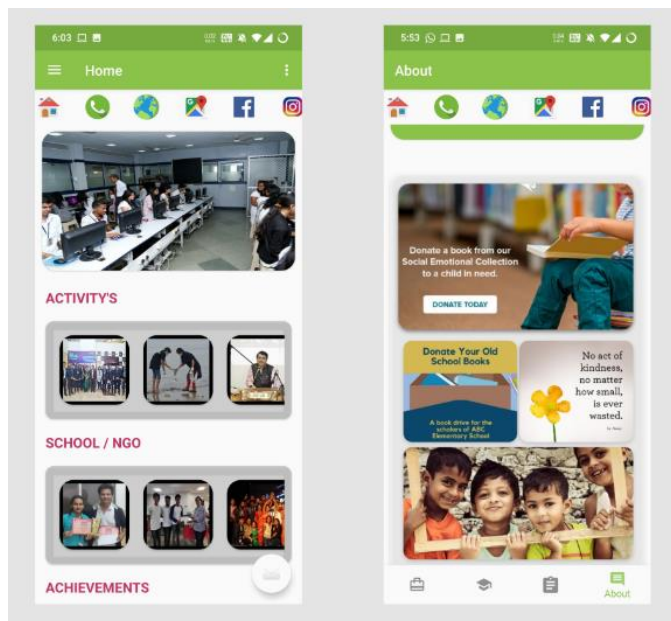

Fig -6: V-Share App Dashboard

B) Tracking BAGS

As in Fig. 7, it is Bag detail page for the user, from this page user can view all details of the bag to which the user donated stuff, the user can get tracking id and other details, and the user can also track the real-time location of user donated stuff and its status, in the status section, it will display whether donated stuff is received by the school or not[6], once previously donated stuff is successfully received by the school then the user can request for a new bag to donate new stuff.
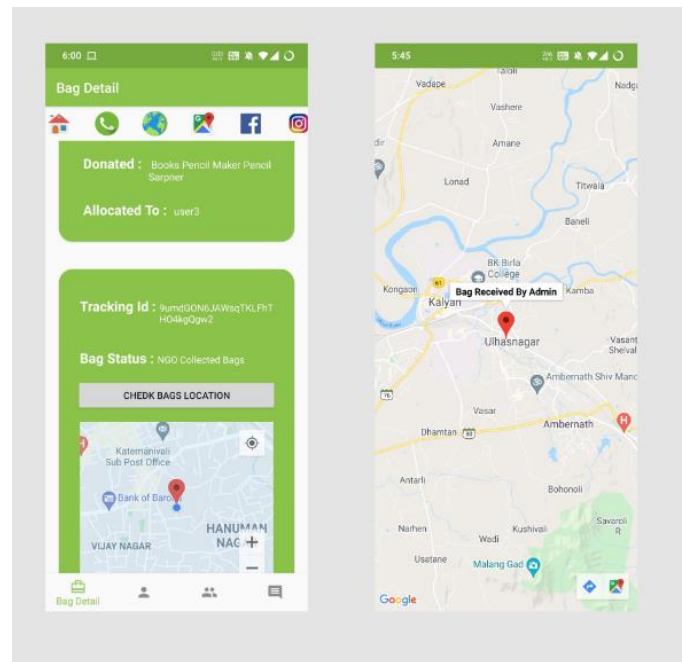
Fig -7: Bag Tracking Panel

C) Tracking Commander and Bags

Commander Detail page is only can view by admin from here admin can track the number of commanders registered in application, how many bag is under which commander and how many user is allocated to that commander Id, admin can also view all bags location by clicking "Check All Bags Locations" button.
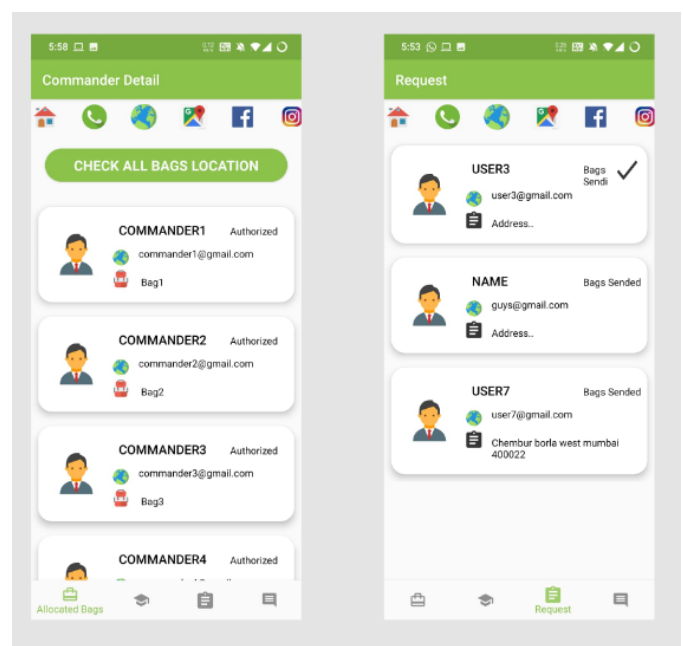
Fig -8: Admin Screens

D) School Panel

As in Fig. 9, it is school dashboard where the school can manage account, can request needed things to commander on clicking request for a donation and after receiving donation, school has to scan bar code on the donation box and then the user who donated that stuff will get notified with help of java mail API [3], and status of the bag will get updated to "donation received by a school".
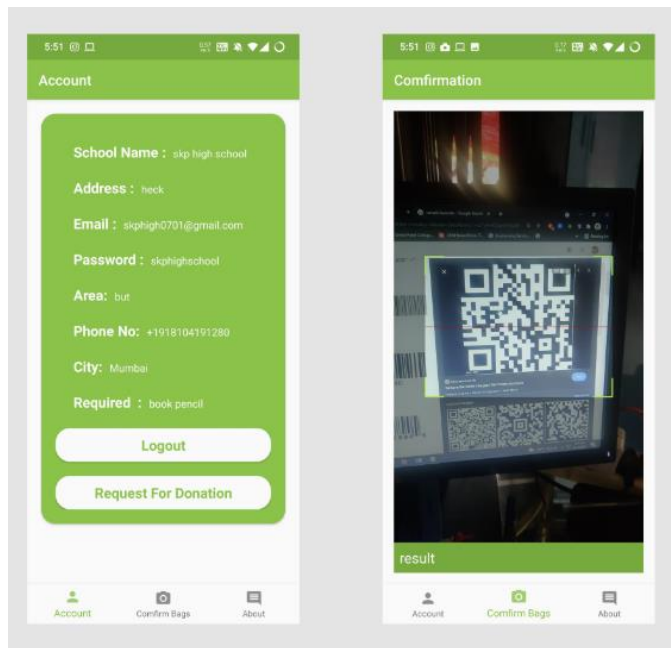
Fig -9: School Panel

E) Commander Screens
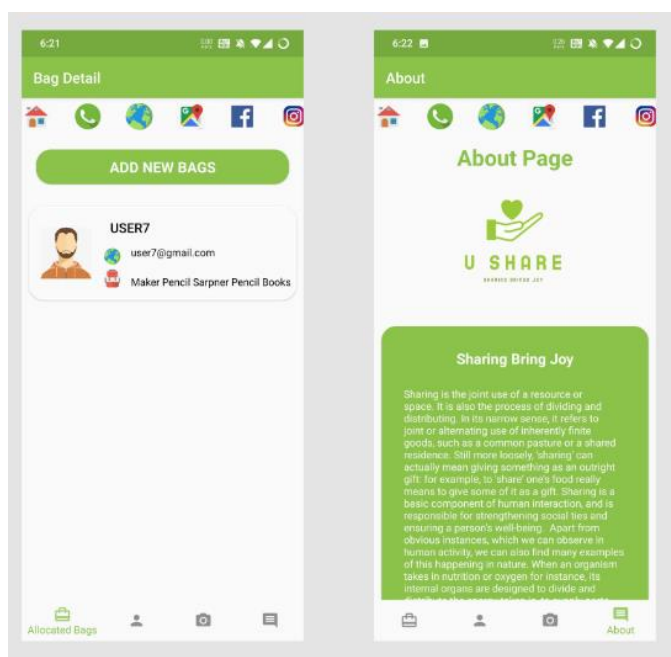
Fig -10: Commander Screens

As in Fig. 10, it is commander dashboard where the commander can see all allocated users to commander bag's, the commander can track user basic information and then provide a bag to the user to donate stuff inside it, the commander can add new bags, for that commander need to scan bag bar code and then that bag id will allocate that commander Id.

F) Bag Status Screens
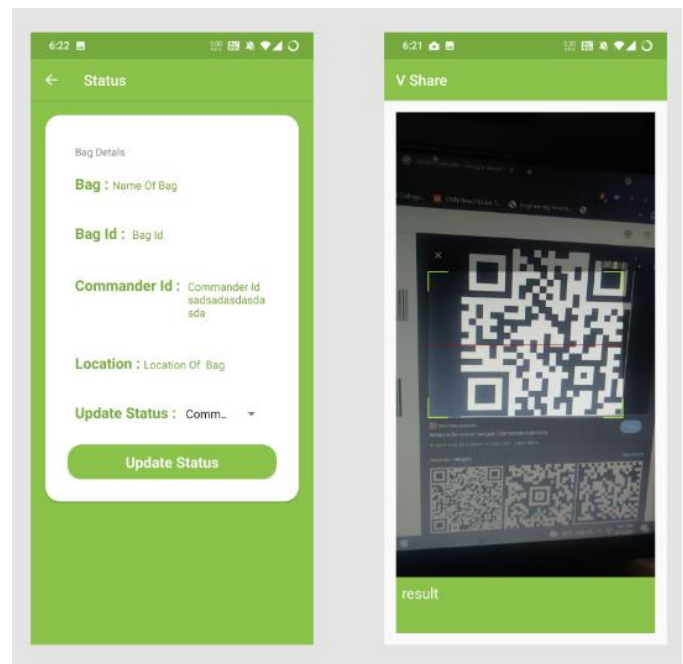
Fig -11: Commander Bag Status Screen

As in Fig. 11, it is commander bag status screens where the commander can see the current status of the bag and all other details, the commander can edit the status of the bag, but before changing any data of bag, the commander must scan bar code which on the bag, this gives security check, once commander makes an update with bag status then user allocated to that bag will get notified with help of Java mail API.

5. Scope and Limitations

The V Share application mainly focuses on developing a user mobile application and organization (school/ngo) dashboard application that provides an easy way to request a donation. This is only implied to help citizens as well as organization to get donation that can be used for people who can't afford it. Also, it provides a robust interface and saves time as well as reduces the efforts which are required in the donation procedure.

Currently, the V Share application only covers educational related goods and can be extended to cover medical and

other fields. This system currently using Java Mail Api for notifying user about donation process but in future this feature can be improved by migrating to firebase function api's, the feature of allocating commander and scanning bar code can be improved.

6. Conclusion

In Conclusion, we build the design of system which is capable to track user donated stuff and will let user notify once that donation is received by any NGO's or School, Our system is used for Support and for Donation that helps to share educational resources like notebooks, textbooks, pencils, etc. to different NGOs & Schools to different rural areas in Mumbai, We built this project for users who want to donates different stuff from their home.

Any user who's willing to donate, have to register with app and then user can request for donation then one commander will approach user with bag in which user can donate all stuff he want, after donation user can keep track of its current location/state of donated things through app, after ngo received donation, user will get notified by ngo details and received confirmation mail, System have four panel (Admin, User, NGO/School, and Commander Panel).

In User Panel, user can request for donation ,user can track current location/state of donated stuff, user can get notified ones donation stuff is reach to NGO, user can also request for further donation in future, In School/NGO panel, Any NGO can register and request required stuff for their students and children's, In Commander Panel, commander is responsible to collect donation stuff from user and send to NGO's and to maintain different states of bags(donation stuff), so that user can track there donated things, in admin panel, admin is responsible to track and maintain whole ecosystem of application and backend ,admin have access of all users ,donation history ,commanders, and ngo's request.

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BIOGRAPHIES

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