

Helping Hand – an Advance Way to Communicate with an Orphanage Organization

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Abstract:- Helping hand is an independent, non-governmental, social development organisation and active application which creates and maintain communication between orphanage organizations and other mobile users. A new study by an international children’s charity has found that 4 percent of India’s child population of 20 million are orphans. Most of these children have been abandoned by their parents. In fact, the charity estimates that only 0.3 percent of these orphans are children whose parents have actually died. Future trends on progress toward reducing the number of orphans are mixed. While the total number of orphans is set to increase from 20 million to 24 million by 2021, the relative number, or proportion, is expected to fall. To help the orphanage we have created a digital solution to it. We have developed an android application “Helping Hand”. Helping Hand allows orphanage to showcase the help which they need and people know their difficulties and help they need, people can donate their belongings to the orphanage.

Keywords:- orphans, better future help, mobile application, geolocation.

I. INTRODUCTION

No human is ever born is a born with a guarantee of a happy, healthy life. However, there are a great many children who are born into loving homes in which they will have the chance that every child deserves. [1] There has never been a single orphan child born, that chose or deserved their status as a child without parental care. Some estimates put this number at 42,000 per day. [6] Through our application user can donate the required things to orphanage and he can establish a contact link between them. Also different organisations can register with us so that require needs will get accomplished. A user can get all the information about the nearby orphanage organization with certain distance parameters. Most of the orphans were staying in orphanages [5]. However, the main problem of the orphanages is that the ratio of staff to children at orphanages or children’s home is not good. The children need a lot of attention. But the staff cannot give them enough individual attention. To learn better things you always need a good teacher.

Orphanages usually require a lot of help either in form of financial or voluntary aid. It has been observed that a lot of people want to help but don’t know where to go and orphanages require help but don’t know from where to get it. The helping hand app thus allows users to help the orphanage, NGO or the organizations. The orphanages and similar institutions help the financially weak and orphans. The app

thus helps the users who want to help and the institutions that need help to connect to each other.

II. BACKGROUND WORK

According to UNICEF statistics, [4] the rate of new orphan children in Asia and some other regions is falling, while in Sub Saharan Africa it is increasing primarily due to AIDS. If the above figure is accurate, 1750 children are orphaned every day, 29 per minute and nearly 1 every 2 seconds Every person ever conceived, was born with specific needs. Those needs include, critical needs such as food and shelter, security, the knowledge that critical needs will continue to be met, bonding, mentoring and nurturing which lead to a sense of belonging as well as self-actualization, or self-worth...the belief that one is of value to themselves and others.

There are many NGO’s and organization present which conducts event to communicate between users and orphanage children but the problem with the above implementation is only few people get noticed and rest of them have no idea what’s going on in surrounding. There are information applications and website present which gives all the required and necessary information about the organization but our application deal with the direct contact with organization as even organizations can also communicate through our app and at the same time users too. From our experience we have seen many people who really want to do something or who are really willing to donate things to orphans contact the owner and then few of them only visit but with us at any time the organization need or user want to give away some similar things then the process becomes simpler and the communication gap becomes smoother and clear.

III. ARCHITECTURE

Architecture is developed into two parts. The first part contains organisation and the second part contains user information system. A user who is willing to donate the items which were specified by the application they can donate them by sending a mail or making a call or some other methodologies in future. For any organization who wants to become part of the application should get first proper registration from our side and then they can independently work or perform respected actions in our application. When an organization comes for a registration the location should be specified along with latitude and longitude or the approximate location will be taken into consideration.

Main aim of this process is to create two separate independent modules. Also creating modularity in the process

so that at a time if few changes are being made then the entire architecture should not get change. Current project aims to two micro services. First is the client application and second for server architecture. In server also all libraries are modular and well managed.

IV. LOCATION BASED SEARCHING METHOD

Location is decided based on latitude and longitude 2.This location can be provided by the orphanage organization or the approximate location is taken into consideration. Hence to decide which are the nearest organization the following logic/algorithm is take place.

- *Distance between two given points:*
The shortest distance (the geodesic) between two given points P1=(lat1, lon1) and P2=(lat2, lon2) on the surface of a sphere with radius R is the great circle distance 3. It can be calculated using the formula:

$$Distance = arccos(sin(lat1) \cdot sin(lat2) + cos(lat1) \cdot cos(lat2) \cdot cos(lon1 - lon2)) \cdot R$$

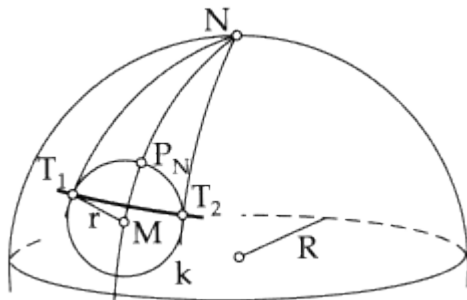


Fig 1:- Tangent meridians to the query circle

Moving along a circle of latitude in order to find the minimum and maximum longitude does not work at all as you can see in figure 1: The points on the query circle having the minimum/maximum longitude, T1 and T2, are not on the same circle of latitude as M but closer to the pole.

$$\begin{aligned} latT &= arcsin(sin(lat)/cos(r)) \\ lonmin &= lonT1 = lon - \Delta lon \\ lonmax &= lonT2 = lon + \Delta lon \\ \Delta lon &= arccos((cos(r) - sin(lat) \cdot sin(latT)) / (cos(latT) \cdot cos(lat))) \end{aligned}$$

Finally nearest orphanage organizations are finalized.

V. IMPLEMENTATION

A mobile application is developed to create contact between users and orphanage organizations. To implement this PHONEGAP software is used. It was the basic building block of this application. For above application, server has to be present. The server implementation is done using PHP. [7] As the PHONEGAP application doesn't support PHP language because it is a server side processing language, JavaScript is used for the front-end development. All the calls that are made from client to server are implemented using JavaScript.

To express more user friendly images were used to denote and express objects. Side bar is provided for the contact and organization purpose. A side bar contains necessary information to contact us and visiting organization panel. Once the user clicks on donate a list get generated and from that list he can select what he want to do or select items to donate. After selecting item a user would be able to see all the nearest orphanage organization near his area. Now if there are no orphanage organizations are present near his area then there is one more option "Show More". After selecting this option, he would be able to see a drop down list of all the states where he can donate those particular items. Also a user can see the location of that particular organization on Google map and then he can find the route nearest to that organization. For contact user can select to call, email and if he wants to visit he can get the directions by opening Google map.

The front-end is developed using JQuery-Mobile framework. When an organization want to change their status they can update it by login into the system. Then there are sections where they can see all previous request/status and also they can update their current status which will help user to know what an organization really needs.

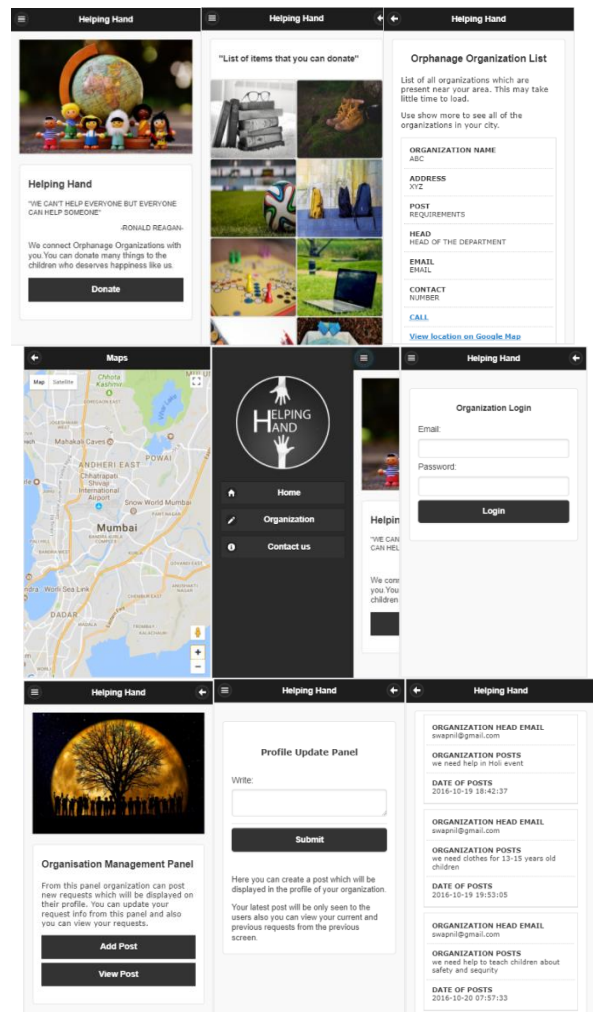


Fig 2:- screenshots of the application

VI. IMPACT

In an ideal world all children would have access to all types of high quality services. In the real world many children, orphaned and not, are malnourished, sick and without shelter. The orphan children have no mother or father to guide them, protect them, or love them. They are hungry, lonely, and afraid have holes in their shoes or no shoes at all, and face the greatest challenges of any children on the face of the earth. Children in many orphanages are frequently deprived of many things such as no proper playground equipment or may be non-existent, lack of basic facilities such as clothing, education, and other necessary things.

Orphans continue to face many challenges in the field of education from the lack of schools to lack of qualified teachers to lack of school equipment. Orphan Impacts exists to help children who are growing up. At this point, “Helping Hand” is targeting providing school equipment to the orphanages that it supports. Helping Hand would like your assistance in donating for school books for the library, technical books for older children to start learning a vocation. Stationary, school uniforms, school book, bags, school shoes, clothes, playground equipment.

VI. FUTURE WORK

This application tries to create two way relationship between the users and orphanage organizations. Often users visits the orphanage organizations. So in future we are planning to host/conduct events so that meet up can take place. Apart from that there will be a message portal where a user can message organization so that doubts will get clear. Also each user will get points which will in dicates his dedication towards society which will create a positive image of him. There will be notification panel which will indicates upcoming events taking place in nearby area.

Also each user will have his own profile where he/she can track their progress and handle the response given by the orphanage organizations. The orphanage organizations will be responsible to send feedback to user along with the token of appreciation. This will create a positive image for that organization. Also the donation Item delivery can either be handled by organization or user itself. The future goal will is making the system more modular and implementing server less architecture to get a better cost efficiency along with the more modular microservices.

VII. CONCLUSION

Any problem doesn't get solved quickly it takes time, hence we are trying to put a step forward to solve the problem faced by orphan kids. The growth in technology and development process in industry is getting faster and we need a generation which has ability to change and adapt to require things. Helping hand will really communicate with the people and orphanage organization which are really seeking for help and with this step we can find few more way to interact with people and solve their problem. In the entire process the only goal is not just satisfying the needs but along with that making a better place where all human being can have a better future.

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