

Food Wastage Reduction through Donation using Modern Technological Approach: Helping Hands

Komal Mandal ,Swati Jadhav, Kruti Lakhani

Abstract— The sharp increase in the amount of wastage in terms of food, clothes, books, etc. makes the need for charity in terms of donation. This paper presents ‘Helping Hands’, a new internet-based application that provides a platform for donating old stuff and leftover food to all needy people/organizations. It provides information about the motivation to come up with such an application, thereby describing the existing donation system and how the proposed product works for the betterment of society. The product is shown to be an effective means of donating things to organizations, etc. over the internet. It shows the potential for avoiding the wastage of food, clothes, books and other stuff.

Index Terms— Smartphone, online donation, password, research, waste management, inventory management, core Java

I. INTRODUCTION

In highly populated countries like India, food wastage is a disturbing issue. The streets, garbage bins and landfills have ample proof to prove it. Marriages, canteens, restaurants, social and family get-togethers and functions expel out so much food. Food wastage is not only an indication of hunger or pollution, but also of many economic problems [1]. The high standard of living has resulted in the wastage of food, clothes, etc. because of quick changes in habits and lifestyle. Instead of wasting these things we can put them in use by donating them to various organizations such as orphanages, old age homes, etc. The product is an internet-based android application that basically aims at charity through donations. Thereby, surveys were conducted at a few organizations like ‘Ankur Nursing Home’, Mira road (E) in order to get knowledge about the organization’s daily requirements that are fulfilled and the ones that remain unfulfilled. Also, their feedback on the idea of creation of this product was taken.

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MOTIVATION

Most people don't realize how much food they throw away every day — from uneaten leftovers to spoiled produce [12]. About 95 percent of the food we throw away ends up in landfills or combustion facilities. In 2013, we disposed more than 35 million tons of food waste [6]. Many people wish to donate things to needy organizations. Also, many organizations wish to ask for various things required by them such as clothes, food grains, books, utensils, etc., but there is no source available through which they can satisfy their requirements. Thereby, an Android application has been developed through which people can donate items as per their capacity and the application also allows organizations to put up their requests, i.e. items required by them, if any. The majority of the population today uses smartphones with active internet connection, which is the basic requirement for this product to function properly [5]

PROBLEM DEFINITION

The product aims at satisfying the requirements of needy organizations through donations over the net. The application shall ask the user/donor to register his/her details into the system and then he/she can login and put up items to donate. Similarly, organizations can register in the system and then put up their item requirements. Also, a donor view the list of items put up by seekers and can donate same, if possible. In the same way, seekers can view the list items put up by donors and if required, can claim the donated item by contacting the donor. The application is developed using Android Studio and the languages used are core Java and XML. The main objectives of the proposed application include reduction in wastage of food, making food, making food, clothes, etc. available to orphanages, old age homes and other such organizations, which will also inculcate values of sharing and sensitivity among people.

EXISTING SYSTEM

Currently, people donate stuff manually by visiting each organization number of times. In order to reduce the problems of food wastage, some websites like www.rescuingleftovercuisine.org [2] and www.annakshetra.org [3] have taken efforts to help people donate their surplus food to shelters through their official website, wherein people can donate food, donate funds and also volunteer for various activities. 'Share my dabba' is another initiative to get left over food in dabbas to hungry street children, using just a tiny sticker and the extensive dabbawala network. The initiative is a joint effort between 'Happy Life Welfare Society' and 'The Dabbawala Foundation' [4]. Every day 200 thousand children on Mumbai's streets are hungry and every day 2 of them die of hunger. The Mumbai dabbawala's deliver 120 tons of food everyday out of which 16 tons is left uneaten [7]. Arham Anna Daan (A project of Arham Yuva Group) - Their volunteers collect in steel containers excess leftover food from weddings, parties and temples. Distribution is to slum dwellers and construction workmen. Nimit Sheth 098218 75656, Ritesh Vaid 098676 22002. Food for All Campaign- This campaign which works in association with Mumbai Dabbawala Association (MDA) focusses on leftovers from weddings. The wedding caterers call the MDA helpline, after which a dabbawala visits the venue, collects the leftovers and distributes the same among homeless and slum-dwellers. Rishikesh Kadam - 075067 44566, 098672 21210 [8].

PROPOSED SYSTEM

The proposed application is android-based, developed on Android Studio version 2.0 using java and xml requires internet connection and will provide a platform for donors and seekers after they successfully register into the system. If a user wishes to donate something, he/she can send a message in application. This message will be shown as notification in donations tab to other users. This message will be stored in backend in the database. Once a notification is sent, the orphanages who wish to claim the donations can reply to the donor and contact him/her. The user interface of this system will be simple and user-friendly, and the targeted system is android. At present, we are aiming to avoid the major wastage that usually happens in India and that is foodstuffs. We are looking and expecting to update and refine the same which will add up to efficiency and utility of the application including books, stationary, clothes, etc. However, the application is limited Android Smartphones with Gingerbread OS and higher versions (Android Jellybean 4.1 is recommended). Also the application will be beneficial if donors and seekers are located near each other. [9], [10], [11]. The use case diagram shown above describes 3 actors – Donor, Receiver and Admin. The Donor performs operations like Registration and Login into the System. He can also put up items for donation and view all donation requests (items required by organizations). The Admin and Donor both can view the Receiver's location. The Admin can also monitor and update the database. The Admin and Receiver both can view the Donor's location. The Receiver

can also perform operations like requesting for items, viewing requested items and claiming donations.

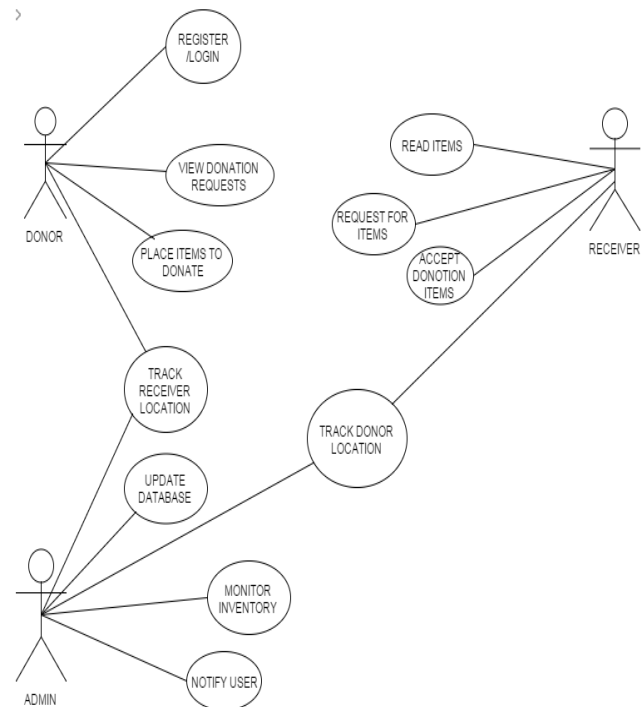


Fig .1 Use Case Diagram.

II. ALGORITHM

This is the way our system will work. Stepwise progress for our system are as follow:

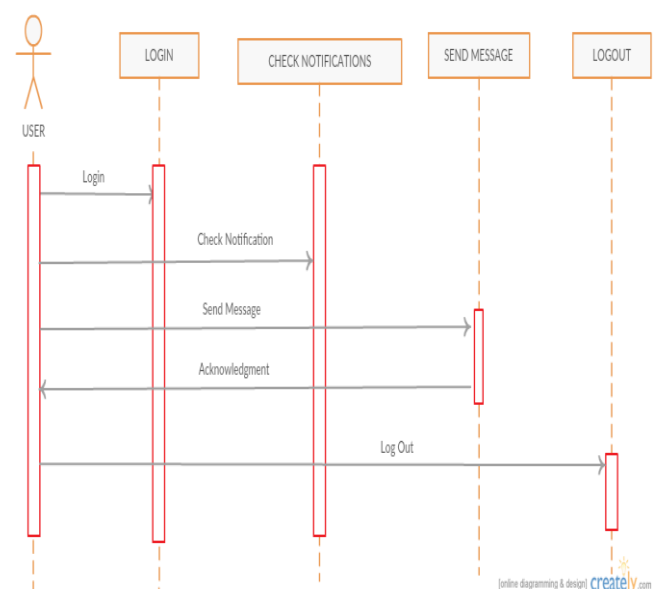
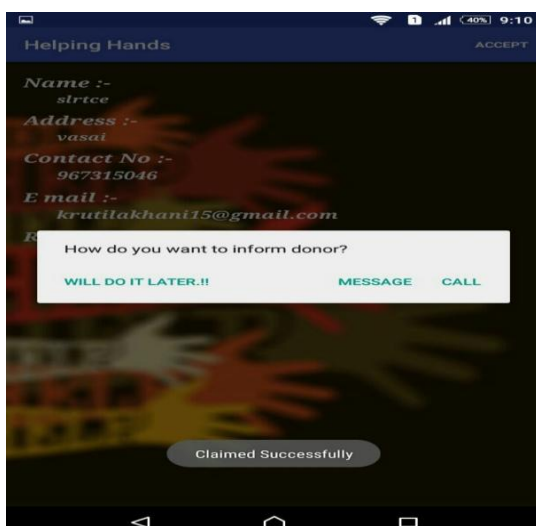
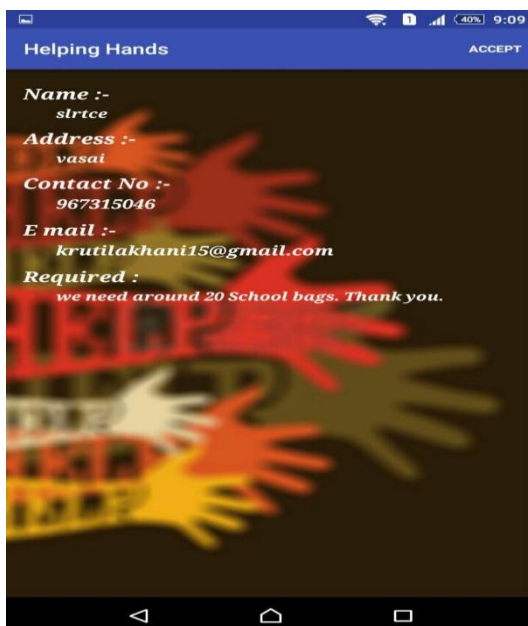
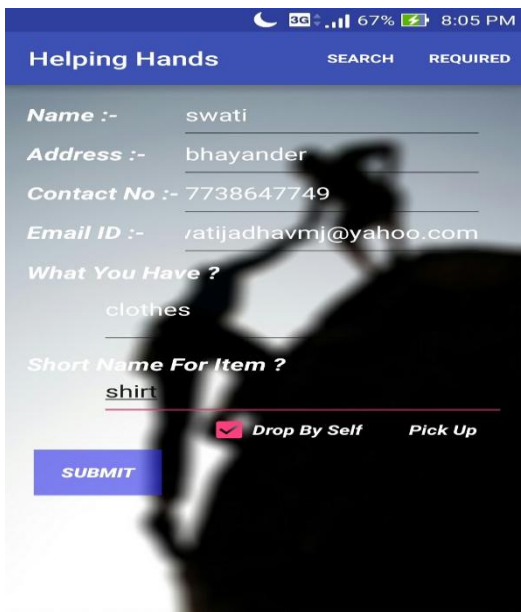


Fig .2 Sequence Diagram

III. IMPLEMENTATION

These are some of the screens of our developed software.



First screen shows user that is donating needs to fill in all the details about item user wish to donate. Second screen is about all the details of organisations displayed after accepting the request for item by the user. Third screen is for donor/receiver to inform the user.

IV. CONCLUSION

The proposed application shall reduce food wastage and also fulfil other requirements like clothes, books, utensils, etc. of needy organizations.

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