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Live Food Donation and Wastage Control Application

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Abstract — India is one of the top most countries that wastes huge quantities of food every day. In fact, one statistical figure based on a survey declares that India wastes as much food as United Kingdom consumes…! And this can easily be proved by our overflowing streets, garbage bins and landfills in and around the city. the wastage is also visible across marriages, canteens, hotels, public functions, social/family events and households.

According to the United Nations Development Program me, nearly 40% of the food produced in India goes waste. For ex: nearly 21 million tons of wheat go waste in India. It is also estimated that more than 50% of all the food produced across the world meets the same fate, and unfortunately, never reaches the needy.

In fact, according to one of the reports by the Dept. of Agriculture, approximately fifty thousand crores worth of food produced in India's wasted every year. Off late we have seen, in India, bigger the wedding, larger the party and greater the waste. But, it's the same case with most of the restaurants and hotels as well. hey contribute equally, if not more, to the food wastage.

While some restaurants in India employ food controllers to check food spoilage/wastage, others donate it to their staff and the needy. Also, smaller restaurants donate it to orphanages and other public utility arenas so as to reach out to those who actually are in need of food.

The ultimate objective of this project is to communicate that investments in food wastage reduction is the most logical step in the pursuit of sustainable production and consumption, including food security, climate change and other adverse environmental effects. Public awareness materials and a strategy will be developed to this effect.

INTRODUCTION

We are developing an android based project which is charity based and purpose driven to this society . As we all know that in todays world inflation is the the biggest problem whiich maximum people face. With the growing inflation rate the edibles available in the market are crossing their limits in pricing standards. In this kind of scenario also there are many house holds or some event places where there is made excess of food and if the food is not finished even though its fresh and hot, its either thrown or given to strays.

This emerging problem of food was should be over-comed as early as possible so for tis we have made an application which basically targets the free fresh food donation in this there are basically 2 characters first one is donor and second one is reciever and this application basically works around them only.

For giving the food in charity the user first have to login inside the applicaion and the users have to choode the character which he wanted to be, means if he wants food then he should go with the reciever and if want to donate food then he will be donor.

Food wastage is one of the biggest problems all countries face. According to a study, up to 40% of the food produced in India to waste every day. The wastage is even more during weddings, festivals and also in hotels. On the other hand, many children die every day due to malnourishment. There are many NGO's which are working hard to make sure such food reaches the poor and needy people. But connecting the NGOs with people is a difficult task. Thus, we propose to implement an android app to connect people who want to share extra food and NGO's who can pick it up and distribute to the NEEDY.

INDIANS waste as much food as the whole of United Kingdom consumes a statistic that may not so much indicative of our love of surfeit, as it is of our population. Still, food wastages an alarming issue in India. Our street and garbage bins, landfills have sufficient proof to prove it. Weddings, canteens, hotels, social and family functions, households spew out so much food. According to the United Nations Development PROGRAM, up to 40% of the food produced in India is wasted. About 21 million TONS of wheat are wasted in India and 50% of all food across the world meets the same fate and never reaches the needy. In fact, according to the agriculture ministry, INR 50,000 crores worth of food produced is wasted every year in the COUNTRY.

In India, the bigger the wedding, the larger the party and the more colossal the waste. No doubt weddings and banquets are a huge source of food wastage, but restaurants and hotels also contribute to food wastage, though the awareness around this has grown in the last five years. While some restaurants in India employ food controllers to check food spoilage, others donate it to their staff and other personnel, and smaller standalone restaurants, donate it to orphanages. However, there is no straight forward way for distributing such food amongst the needy. Ease of Use

MODULES

A. **Login &Registration:** In This module the user either he may be user or donor he / she have to register the the application first and after that login page will be checked and if the security check procedure will be there and appropriate user can only login.

B. **Donator Module**: In donator module, The donor donates his excess food the availability should be mentioned in the discription and donor shouls maintain honesty with the freshness of food

C. **Receiver Module**: In Reciever Module we target the audience which is unable to buy food and have nice food. In this module we'll make reciever to see the avaible food through food map and can order or can get it by them self

MODELING AND ANALYSIS

ANALYSIS OF EXISTING APPLICATIONS

We Analysed that there are many application in the market which provides the food to the customers but this system was only appropriate for people who affrord haigh standard food from hotels.

But in our System we provide free service and we haven't include any distributor who can charge commission in the delivery. In existing applications there were no food donations there where only hotel alliances which used to sell food for much higher rate and delivery commisions.

FINDINGS

To carry out a methodological evaluation of the survey findings we investigate whether the applications provide measure for user adoption, awareness and knowledge, needs, engagement and attitude and behavior change in their approaches to fight food waste.

The food waste is the most headacheing topic in the word and we found that maximum people take this topic very lightly with no due respect.

We analyze if these applications motivate users be more responsible and if they use persuasive techniques to promote their waste behavior. Moreover, whether they focus on preventing waste rather than managing it.

Food management is responsibilty of all the humans living on this planet Finally, if the applications focus on user engagement and create a fun environment for the user while interacting with the application.

USER ADAPTION

Consumer to consumer:

There are several initiatives for sharing leftovers and surplus of food between groups of consumers. These initiatives build communities of people in the same area, willing to share food and reduce waste. We've seen several websites and apps active in England, Germany, Austria, Spain, India and the USA, building communities mostly in bigger cities. Some seem to be successful according to the number of installations.

Retail to consumer:

Some supermarkets in The Netherlands inform customers about food items that almost reach their 'Best before date' and give discounts on these products. Some other apps are used to order takeaway meals from local restaurants, bakeries and collect food that would otherwise go to waste. These apps use the GPS of the mobile device to see if participating restaurants or bakeries are in the neighborhood.

Consumer and retail to charity:

Many local charity initiatives are popping up to donate a surplus of food to a selected charity organization

TECHNOLOGY

Dalvik VM

A modified version of JAVA programming language is used for app development with Dalvik VM used to run the apps on Android devices. Dalvik VM can be viewed as modified version of JVM constrained in terms of memory and processor speed and converts the java bytecode (in form of JVM compatible .class files) to Dalvik compatible .

dex executables before installation. Application Interface & H/W Support Based on Direct Manipulation, the on screen objects have been programmed to respond to real world actions like swiping, touching etc. Boasting of a fast & responsive fluidic touch screen, the OS supports various dedicated hardware like proximity sensors, gyroscopes, magnetometer and accelerometer etc. The Home Screen is analogue to the Desktop in a Windows OS.

Python

Python is an interpreted high-level general-purpose programming language. Python's design philosophy emphasizes code readability with its notable use of significant indentation. Its language constructs as well as its object-oriented approach aim to help programmers write clear, logical code for small and large-scale projects.

Python is dynamically-typed and garbage-collected. It supports multiple programming paradigms, including structured (particularly, procedural), object-oriented and functional

programming. Python is often described as a "batteries included" language due to its comprehensive standard library.
Guido van Rossum began working on Python in the late 1980s, as a successor to the ABC programming language, and first released it in 1991 as Python 0.9.0. Python 2.0 was released in 2000 and introduced new features, such as list comprehensions and a garbage collection system using reference counting and was discontinued with version 2.7.18 in 2020.[Python 3.0 was released in 2008 and was a major revision of the language that is not completely backward-compatible and

Python is meant to be an easily readable language. Its formatting is visually uncluttered, and it often uses English keywords where other languages use punctuation. Unlike many other languages, it does not use curly brackets to delimit blocks, and semicolons after statements are allowed but are rarely, if ever, used. It has fewer syntactic exceptions and special cases than C or Pascal

GPS Based Location Tracker

A **GPS tracking unit**, **geotracking unit**, or simply **tracker** is a navigation device normally on a vehicle, asset, person or animal that uses the Global Positioning System (GPS) to determine its movement and determine its WGS84 UTM geographic position (geotracking) to determine its location.
Various companies buy position and track data for marketing. Also used for military and criminal, to shut down and pick up repossession/thefts and find truck loads. Tracks can be map displayed in real time, with **GPS tracking software**. smartphones with GPS capability.

GPS antenna size limits tracker size, ofter smaller than a half-dollar. In 2020 tracking is a $2 billion business plus military-in the gulf war 10% or more targets used trackers. Virtually every cellphone tracks its movements and per most cell user agreements uploads the track data, creating trillions of sellable locations and tracks, value varies from fractions of a mil to dollars per point and user association.
Locations are stored in the tracking unit or transmitted to an Internet-connected device using the cellular network.

Extensible Markup Language

(**XML**) is a markup language that defines a set of rules for encoding documents in a format that is both human-readable and machine-readable. The World Wide Web Consortium's XML 1.0 Specification[2] of 1998 and several other related specifications[4]—all of them free open standards—define XML.
Android
Android is an open source and Linux-based ***Operating System*** *for mobile devices such as smartphones and tablet computers. Android was developed by the* Open Handset Alliance, *led by Google, and other companies.*

Android offers a unified approach to application development for mobile devices which means developers need only develop for Android, and their applications should be able to run on different devices powered by Android.
The first beta version of the Android Software Development Kit (SDK) was released by Google in 2007 where as the first commercial version, Android 1.0, was released in September 2008

On June 27, 2012, at the Google I/O conference, Google announced the next Android version, 4.1 **Jelly Bean**. Jelly Bean is an incremental update, with the primary aim of improving the user interface, both in terms of functionality and performance.

RESULTS AND DISCUSSION

The majority of applications focus on food donation process, recovering food from donors (food manufacturers, distributors, retailers or individuals) and redistributing to organizations and social services supporting the most deprived. Setting up measurements for both the effectiveness of reducing waste and scaling of user uptake towards food waste should be properly assessed. There is a need for an interactive approach to design processes that avoid relying on a desire to waste less food as a primary motivation, avoid adding the pressure which currently impede food waste reduction, and rather aim to design the food waste management application to have additional motivations, beyond reduction in food waste, so that they are genuinely useful and desirable.
Food waste management applications should consider a goal beyond just food waste reduction to boost user participation. Additionally, application designers have to consider the integration of behavioral change techniques, such as persuasive

technology and focus on user interaction design by making the interaction as simple as possible. Social networks could be considered to engage users in the activity. For example, the use of Facebook or Instagram to create an environment where users could contribute to food waste reduction and donation. Future developments should consider the integration of a gamified layer to a core activity to achieve user motivation and long-term engagement with the application.

CONCLUSION

Food wastage has a significant economic, environmental and social impact. The magnitude and complexity of this problem has been tackled by several studies. This survey analyzed the applications area, techniques, phases and their position in the food waste management hierarchy. Based on our findings, there is a great discrepancy between user focus and the focus of food waste management applications. Moreover, there has been little research on user behavior and experience with food waste management applications, especially on user engagement with the application. This observation indicates the need to incorporate techniques that move user focus beyond food waste management and create a sense of belonging and to harmonies the waste management through a set of activities.

LIMITATIONS

- Authentic Users are hard to find.
- Application may have issues reguarding locations.
- Distributors are not added so the user have to collect food by him self.

I. SYSTEM ARCHITECTURE

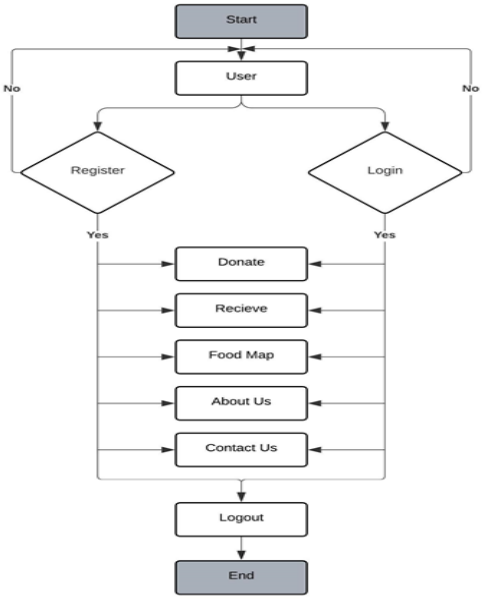

Figure 3: System architecture of Cloud Storage System

II. TECHNICAL SPECIFICATION

The technologies which are used to implement the system are:
1) Android base application.
2) Java Based back end programming.
3) Layout or GUI is XML based.
4) Login and Registration based.
5) Google API used for Location Tracking.
6) Food map based for easy tracking.

Future Scope

This application will serve as a backbone on its further implementation as this implies on the food wastage and controlling natural hazard. This features gives this project a very wide scope as there are many people who have excess food and have to donate and also loke people who want some nice food to have food to kill hunger but because of money problem they were unable to have a stomach ful meal for one time.

And this project makes people to have that in sitting at home , this application mainly targets the poor students who are hungry but cant order expensive food, they can use this app for that problem.

III. CONCLUSION

This cloud storage system will provide to add/upload data on the real-time cloud. This application removes all the bug and satisfies the user requirements too.On domestic level where students are concerned it could be used as software where in it is possible to transfer power point presentation, assignments, programs, video clips could be sent within few of minutes. On industrial level where data privacy/security is a major concern, our software provides efficient security and adding it up with unlimited data transfer.

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