

Food Management System

By:

**Het Jagani
Jainam Patel
Smit Chaudri**

INTRODUCTION:

More than 1 billion (100 crore) of people in this world sleep without having meal even single time a day. Also in India, approximately 230 million people go hungry daily. This is a very big problem to be fought in the present time. The case is not that the food is not there but in fact it doesn't reach poor people.

According to a report in the Times of India only 70 % of food wasted by rich people can fulfil the hunger of poor people. Hence only a management is required to meet the hunger of poor people which we have decided to do by making an application.

Started with Brain Storming, we found out that there were already some bodies who received food through calls and other communication methods and provided it to the poor. Also, the donations they received were not on daily basis because they were getting only the donated food that was from a big party or from the caterers.

Generally, we all know that, there is always some food available in every family that remains after meals and that food becomes a wastage after a day or two which meant that this food also needed to be managed and people would willingly do it too.

But there came in the problem in the thought of managing the food on the house or the family level. The problem was how could any large organization collect all the food that would be requested by the houses. It would take a lot of man-effort doing it and they would need a lot of transportation too.

Hence, we decided to introduce a third body i.e. "Stalls" that would collect the food in small scales that remains in households and such hundreds of small scale collections will now together become a large collection which would make easy for those organizations (Receiving Bodies).

Also, another point which needed to be kept in mind was like, "Suppose there was some function at some donor's house and the food remained was in great amount?" Now what would donor do? As he/she won't be able to take that food and donate to the stalls. Now in such case we later on decided that organization would directly request for that food to the donor and would directly receive it.

DETAILED FEATURES:

There are mainly two bodies:

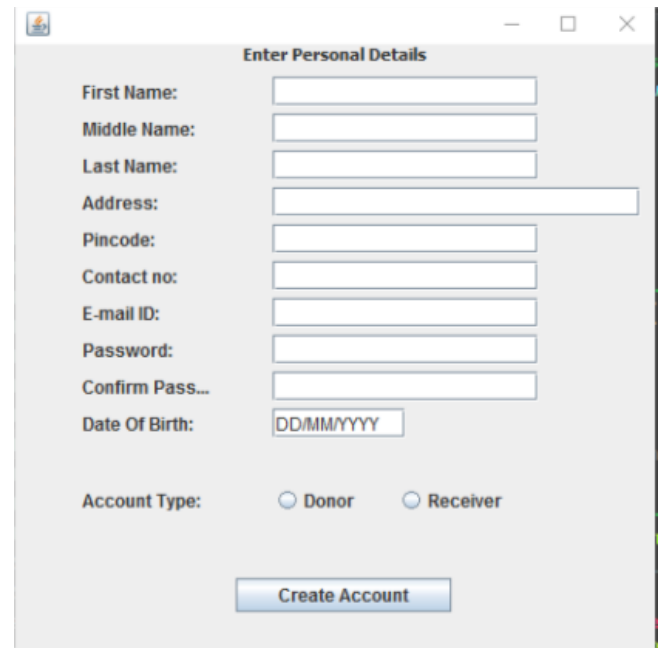
Donor: The person who wants to donate food.

Receiver: The person who collects to food from directly donor or from the stalls.

When the application will start first of all the user have to login / sign up.

A screenshot of a web application window titled "Login Screen". The window has a light gray background. At the top, it says "Login Screen". Below that, it says "Enter your ID and Password". There are two input fields: "ID:" and "Passwo...". Below these fields are two buttons: "Login" and "Sign up".

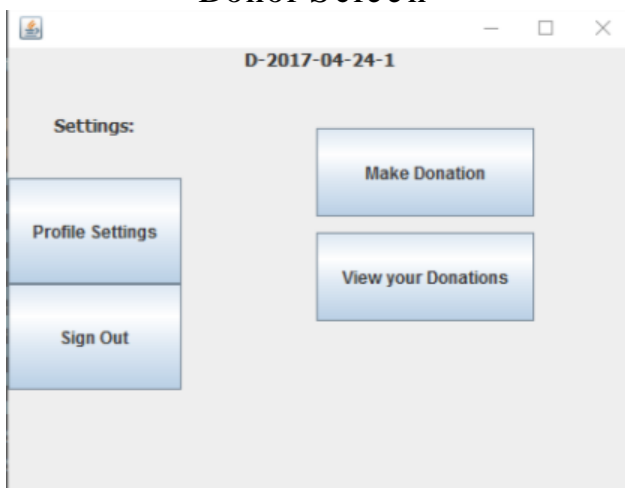
Login Screen

A screenshot of a web application window titled "Enter Personal Details". The window has a light gray background. It contains several input fields: "First Name:", "Middle Name:", "Last Name:", "Address:", "Pincode:", "Contact no:", "E-mail ID:", "Password:", "Confirm Pass...", and "Date Of Birth:" (with a date picker showing "DD/MM/YYYY"). At the bottom, there are two radio buttons for "Account Type": "Donor" and "Receiver". Below these is a "Create Account" button.

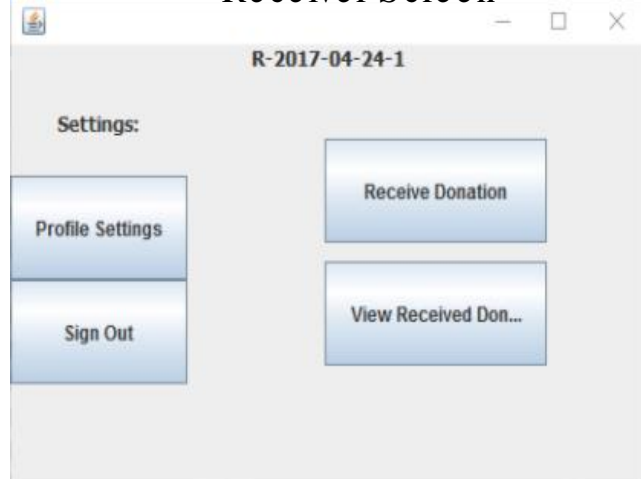
Sign Up Screen

After signing-up, appropriate screen's will appear showing their respective unique-ID's on the top of the screen (i.e. if a person is Donor then Donor Screen and if a person id Receiver the Receiver Screen will appear).

Donor Screen

A screenshot of a web application window titled "D-2017-04-24-1". The window has a light gray background. At the top, it says "D-2017-04-24-1". Below that, it says "Settings:". There are three buttons: "Make Donation", "View your Donations", and "Sign Out".

Receiver Screen

A screenshot of a web application window titled "R-2017-04-24-1". The window has a light gray background. At the top, it says "R-2017-04-24-1". Below that, it says "Settings:". There are three buttons: "Receive Donation", "View Received Don...", and "Sign Out".

Profile Settings:

Here the user can edit his/her personal details and can save them.

Sign Out:

Clicking here Leaves them to the Login Screen

Donor:

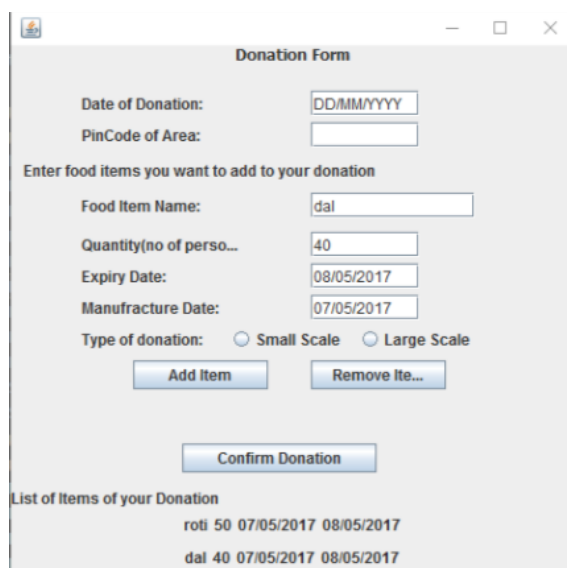
Make Donation

When any donor clicks on MakeDonation button, a Screen will appear which asks about the information like the date of donation, pin code of area where you will give (i.e. for small scale donation it is expected to be donated at the stalls where the wish and here the pin code refers to pin code of the area in which the stall is located) or you are asking the receiver to take it from there(i.e. for large scale donation it is expected that the receiving body will go at that place and will collect. So the pin code of area refers to area from which the receiver will go and collect) on the food that you want to donate.

The other part on the screen is for adding the food items that you want to add in this donation which requires information on food like name, quantity (how many persons can be served with that food), expiry date, manufacturing date etc. There are 3 buttons on the screens Add Item, Remove Item, Confirm Donation.

Add Item:

Clicking here will add one food item as shown in the below figure.



The screenshot shows a 'Donation Form' window. It contains the following fields and controls:

- Date of Donation:** A text box with a placeholder 'DD/MM/YYYY'.
- PinCode of Area:** A text box.
- Enter food items you want to add to your donation** (Section Header)
- Food Item Name:** A text box containing 'dal'.
- Quantity(no of perso...):** A text box containing '40'.
- Expiry Date:** A text box containing '08/05/2017'.
- Manufacture Date:** A text box containing '07/05/2017'.
- Type of donation:** Two radio buttons labeled 'Small Scale' and 'Large Scale'.
- Buttons:** 'Add Item', 'Remove It...', and 'Confirm Donation'.
- List of Items of your Donation:** A list showing 'roti 50 07/05/2017 08/05/2017' and 'dal 40 07/05/2017 08/05/2017'.

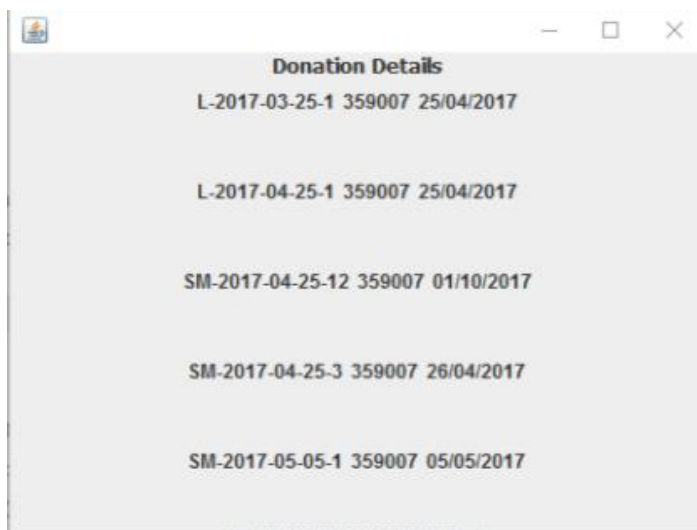
Donation Screen

Remove Item:

Will Remove the currently selected item. (NOTE: To select any food Item, click on the Item that is shown below the confirm donation button.)

Confirm Donation:

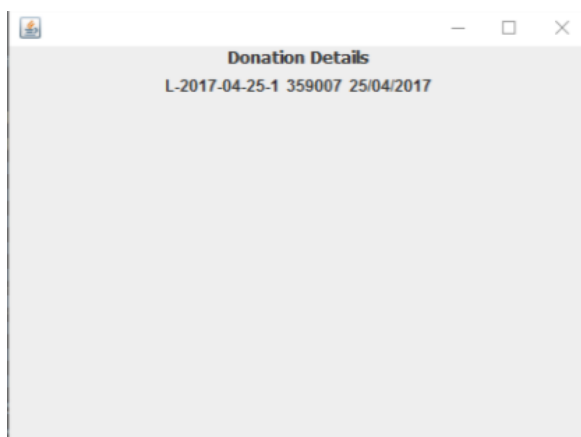
The Donation gets stored (If it was a small-scale donation, then the person was expected to go to the stall and donate there while for the large-scale donation, the receiver was able to see it and request donation).



List of Donations Done

View Received Donations:

Clicking this, a new Screen will appear which gives the list of donations accepted by the receiver whether they were from the stalls or the large-scale donations made by the donors.



List of Donations Received

Clicking on the Donation that are seen in the above screen, then the information regarding that particular donation is displayed, and list of donations in case of a received donation that was accepted from the stall.



Food-ID	Food-Name	Quantity(no of persons)	Mfg-Date	Exp-Date
F-2017-04-25-1	roti	500	25/04/2017	27/04/2017
F-2017-04-25-2	dall	502	25/04/2017	27/04/2017
F-2017-04-25-3	rice	560	25/04/2017	27/04/2017

List of Food Items that are in particular Donation

Receive Donation:

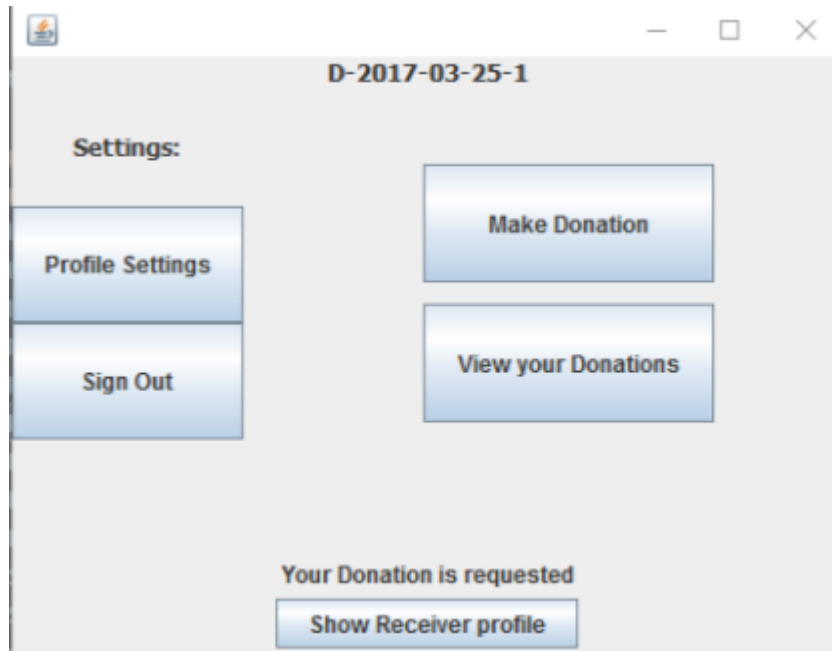
When the Receiver, clicks on the Receive Donation button available on the Receiver Screen, new window appears where you can check the donation available in a particular area by entering the pincode. Now for requesting any donation then the receiver has to enter the StallID or Donation ID to request for the donation and then clicking on Request Donation button below the text box.



Donations in your area			
359007(Pincode)			
Search for donations			
L-2017-03-25-1	359007	2017-04-25	
Enter donation ID to request donation			
Request Donation			

Receiver can check the Donations available in particular Area

When Donation gets requested, the person who made that donation when logs there will be a message saying that Your last Donation is been requested and there will be button when clicked will display the information of the receiver in the other window.



ASSUMPTIONS:

- In our project, we have added few stalls in the beginning at some specific areas that would function by their own.
- So, we have not mentioned any stall handlers in project.
- Also, we have assumed that when the receiver would request donation, he would confirm that he will receive the donation.
- When donor would do small scale donation then it is assumed that donation is done in the stall and all the food items are received by the stall.
- When confirmation takes place, we have assumed that proper information is passed between the donor's/stalls and the receivers and donations are properly been pickup and served to the poor by the receiving body.
- We have assumed that receivers properly collect the food and gives to poor.

ADVANTAGES:

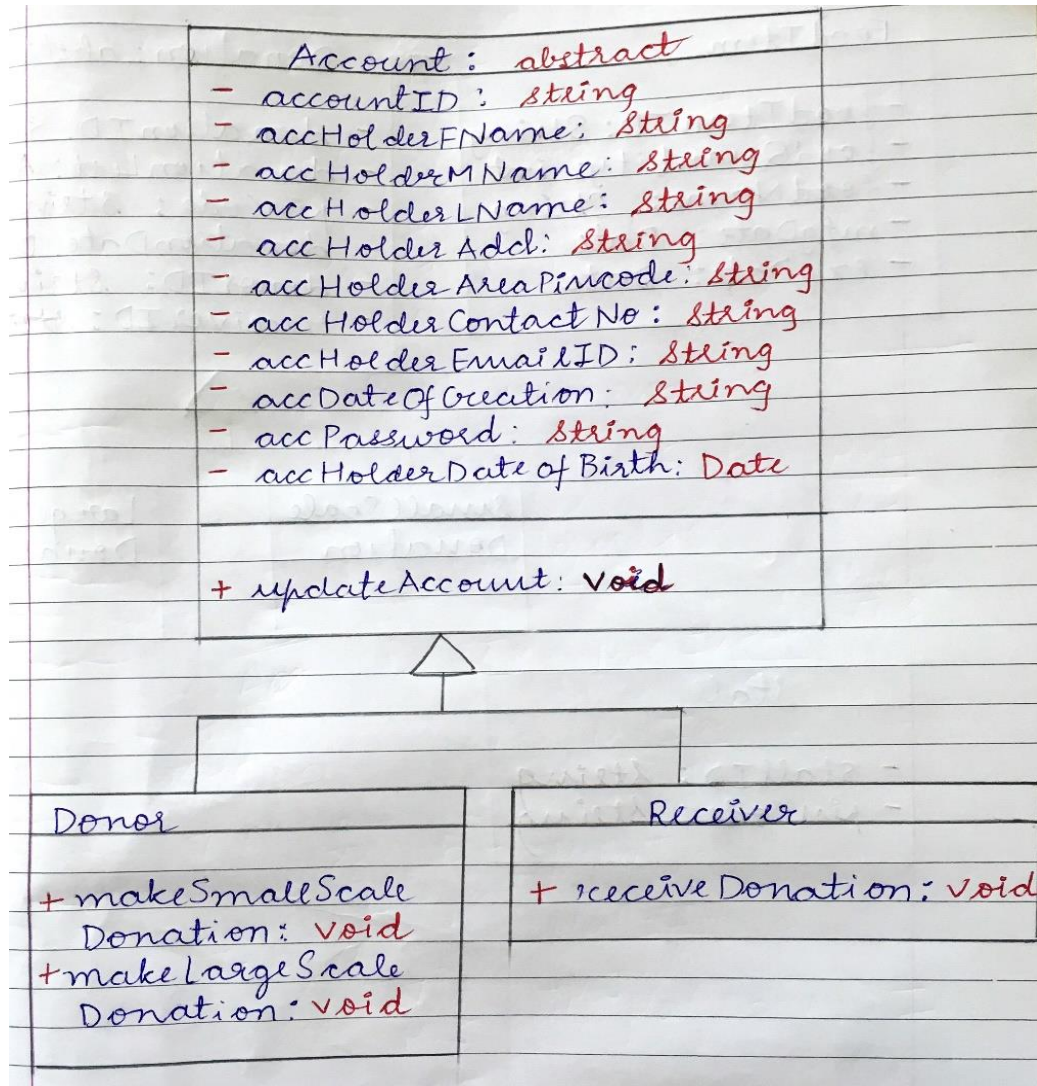
- The food that would be wasted before will now reach to the people who needs that and hence, the food wastage will be controlled.
- By this system, the poor people will get the food.

- System manages both the donations (i.e Small Scale and Large Scale) which was important as and when the wasted food calculated on a large area it would be more than the food that was wasted in the parties, functions, restaurants etc.
- There are already some bodies who used to feed the people who needed it, but weren't able to get/collect enough food or not on daily basis because the contacts were limited and very less people were unaware of such bodies. Now the numbers of donors would be more in our system so these bodies would get a lot of help from our system.
- The Donor and the receiver's job to donate/receive the food have been made easy through our system. (Donor can directly request for donation he does not need to find the poor and then go there and serve food to them. Receivers don't need to find the food through the sources)

LIMITATIONS:

- We wanted to add the security by adding the confirmation of the donation done-received
 - Small (Donor->Stall->Receiver) Confirmation b/w : Donor & Stalls and Stall Handler & Receiver
 - Large (Donor->Receiver) Confirmation b/w : Donor & Receiver
 Which is essential.
- No checking of the food whether the food was still good or not.

CLASS DIAGRAM:



FoodItem

- foodItemID: String
- foodQuantity: int
- foodName: String
- mfgDate: Date
- expDate: Date

Donation: abstract

- donationID: String
- donationList: ArrayList<FoodItem>
- pinCode: String
- donationDate: Date
- donorID: String
- receiverID: String



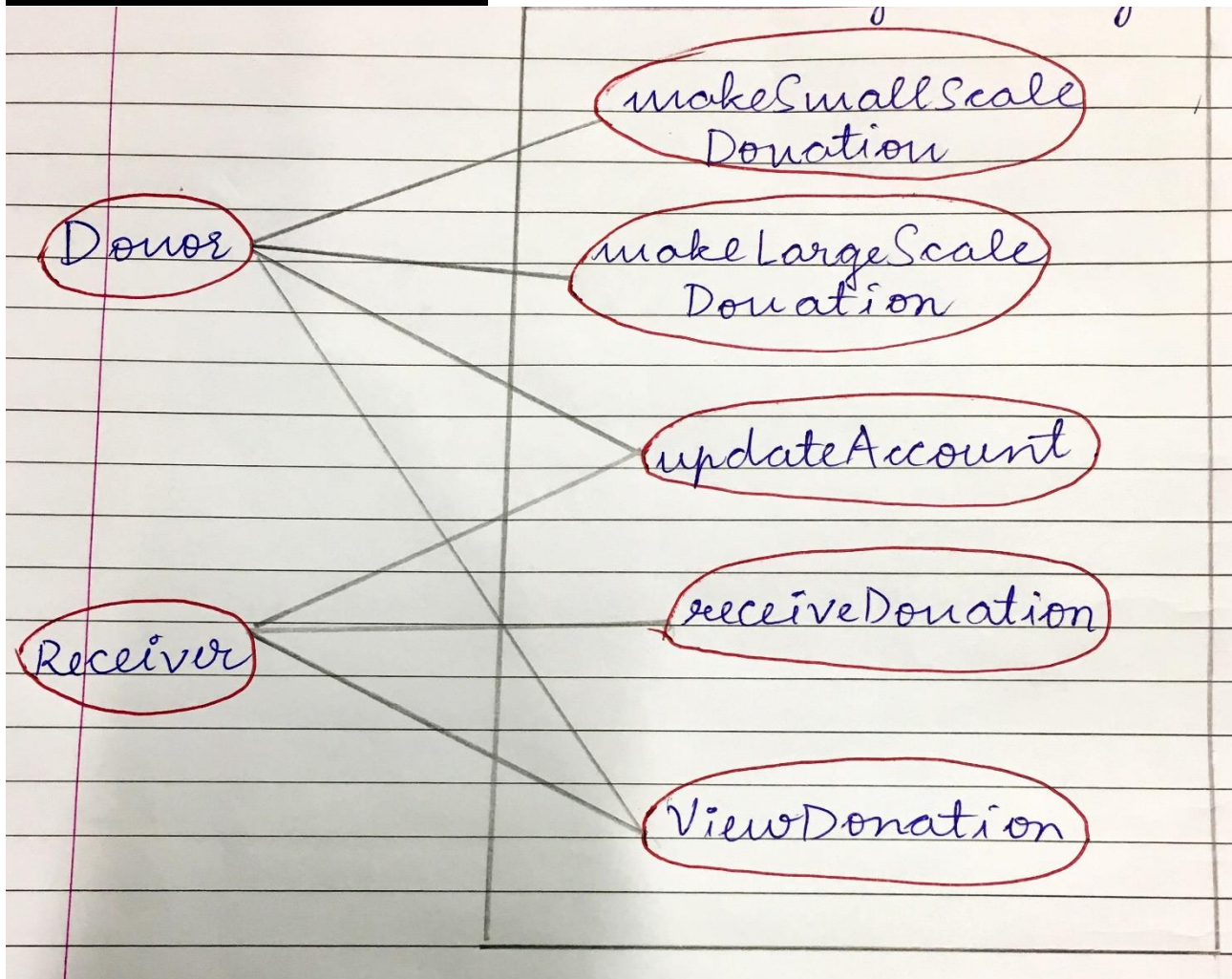
SmallScale
Donation

LargeScale
Donation

Stall

- stallID: String
- pinCode: String

USE CASE DIAGRAM:



DATA STORAGE:

accounts	stall
P.K accID accHolderFName accHolderMName accHolderLName accHolderAdd accHolderPincode accHolderContactNo accHolderEmailID accDateOfCreation accPassword accHolderDateOfBirth	stallID donationID receiverID pincode.

donation	fooditem
P.K donationID donorID receiverID pincode donationDate	F.K donationID foodName mfgDate expDate quantity P.K foodItemID

DIVISION OF TASKS AMONG TEAM MEMBERS:

NAME	WORK
Het Jagani	Controller
Jainam Patel	Model, Database
Smit Chaudhari	View

NAMING CONVENTION:

1. Class Name: starts with upper case in camel notations. (i.e Account, FoodItems).
2. Variable Name : starts with lower case in camel notations. (i.e accountID, accHolderFName).
3. Method Name: starts with lower case in camel notations. (i.e makeDonation(),receiveDonation()).
4. Package Name: starts with lower cases (i.e model, view, controller).

OBJECT ORIENTED APPROACH IN DESIGN AND CODE:

Implemented in MVC (Model, View, Controller)

Our system comprises of mainly two bodies: Donor and Receiver. So we used inheritance to implement this. We inherited Donor and Receiver classes from Account class.

Donor has function to make donation and receiver has function to receive donation hence they both are different types of account.

In our design Donation class has sub classes: SmallScaleDonation and LargeScaleDonation.

Actually, there is no different functionalities of both types of donations, only difference is quantity of food and the receiver of that donation.

We separated this types for better designing of the classes, through this we can get whole different objects of different type of donations.

We can also do it in another way by making an attribute of type inside Donation class, that tells us which type of donation it is.

But we chose this way because it is more appropriate for our design of project.

Every donation would contain the food items so we used containership in it. Every donation object would contain list of food items associated with it.

We took stall as totally different entity and assumed that there are stalls present in every area, which are added previously.

CONCLUSIONS:

Many people will now onwards sleep having some meal. Also the food that was wasted will now be consumed by the who are really in the need of that.

REFERECES:

- <http://timesofindia.indiatimes.com/india/Superpower-230-million-Indians-go-hungry-daily/articleshow/11494502.cms>
- foreignpolicy.com/2011/04/25/more-than-1-billion-people-are-hungry-in-the-world/
- <http://www.thebetterindia.com/46855/where-to-donate-excess-food-to-after-party/>
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- <http://www.annakshetra.org/>
- <http://ijarcet.org/wp-content/uploads/IJARCET-VOL-5-ISSUE-4-906-908.pdf>
- https://publications.the seus.fi/bitstream/handle/10024/60090/Olanigan_Ibrahim.pdf?sequence=1