



FEED THE HUNGRY MOBILE APPLICATION USING SAP HANA AND CLOUDSHARE

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Abstract: The objective of this article is to ensure that surplus food is not thrown in a garbage can but is distributed among the poor and the hungry by spreading an awareness among people that for some food is a scarce commodity. So, every citizen should realize its importance and ensure that not even a morsel is wasted. Therefore, by doing this exercise we can achieve a dual goal. Nowadays we all see that a lot of food is wasted at big gatherings which could have been effectively utilized by serving the poor and the needy. So we decided to take this as our topic for paper presentation and devise a mobile application using SAP HANA. Since SAP HANA is concerned with real time data, a text message can be sent to the nearest NGO so that they can come quickly to collect the food from the Donor before it gets stale. These NGOs can then distribute the food to the poor and the needy.

The user interface has been developed using HTML 5 and the connectivity of this is with the SAP HANA Studio on the CloudShare ProPlus.

Keywords: NGO , Donor, HTML5, CloudShare ProPlus , SAP HANA

I. INTRODUCTION

Indians are known by nature to spend lavishly on weddings and parties on a large scale. People spend huge amount of money on wedding halls, party halls and going to the expensive restaurants but pay little attention to the food which ultimately gets wasted. Most of us have seen that food gets thrown away in garbage not because it is stale but it is in excess of what has already been consumed and this regularly happens at the end of marriage or any functions. Piles of dishes of excess food are thrown into the garbage bin even knowing that ghee, meat, sugar and vegetable are touching new records day by day. Fig. 1 and Fig. 2 show the Block Diagrams of Donor and NGO respectively

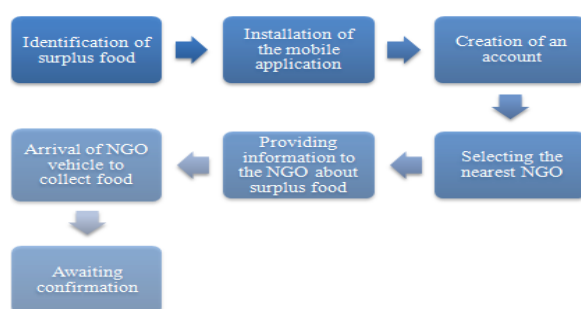


Fig. 1. Block Diagram of Donor

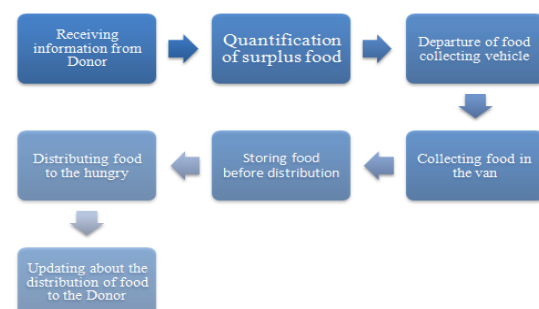


Fig. 2. Block Diagram of NGO

II. THEORETICAL FRAMEWORK

A. About SAP HANA

SAP HANA Enterprise 1.0 is an in-memory computing appliance that combines SAP database software with pre-tuned server, storage, and networking hardware from one of several SAP hardware partners. It is designed to support real-time analytic and transactional processing. Fig 3 shows the architectural design of SAP HANA. The heart of SAP HANA Enterprise 1.0 is the SAP In-Memory Database 1.0, a massively parallel processing data store that melds row-based, column-based, and object-based storage techniques.^[2]

B. About HTML5

HTML5 is cooperation between the World Wide Web Consortium (W3C) and the Web Hypertext Application Technology Working Group (WHATWG). Some of the most interesting new features in HTML5^[3]:

- The <canvas> element for 2D drawing
- The <video> and <audio> elements for media playback
- Support for local storage

- New content-specific elements, like <article>, <footer>, <header>, <nav>, <section>
- New form controls, like calendar, date, time, email, url, search.

C. About CloudShare

CloudShare is a cloud computing provider which enables users to create, replicate and share fully functional IT environments in the Cloud. CloudShare combines aspects of virtualization, cloud computing and web conferencing to offer a software as a service (SaaS) solution for delivering IT to colleagues, clients, customers and partners. Customers can create multi-machine IT environments in the cloud or upload existing virtual machines. CloudShare supports leading hypervisors (VMware, Xen) and operating systems (Windows 7, Ubuntu), and provides 18 templates for new machines with operating systems and even software (such as Microsoft SharePoint 2010, Microsoft Office 2010 or Ruby on Rails) preinstalled.^{[4][6]}

Features of Cloud Share

- With CloudShare ProLabs you get complete environments pre-set, so you don't have to worry about setting-up infrastructure, storage, and networking. Focus on your job.
- CloudShare ProLabs enables you to share your environments and collaborate with your colleagues and clients.
- Snapshot your complete development environments to create a backup or to share with others.
- Take advantage of dozens of pre-configured, ready-to-go environment templates which include Windows and Linux machines.
- With secure FTP protocol and mounted disks, it is easy to move files to and from the cloud.^[5]

III. ANALYSIS AND INTERPRETATION

A. When Food Wastage is More?

Due to growing affluence in the society social functions particularly, weddings have come to reflect social status of the person. Big fat weddings are becoming a norm now. One can now see a large number of dishes in social functions. In Delhi itself 36,000 marriages took place on the same day. Duplication of guests is common practice hence there is always a mismatch between the guests invited and the number of actual guests attending the wedding. The RSVP system does not work in our country. According to Table II. 56.6 percent of the respondents blamed the excess number of dishes on the menu list for food wastage while 20.6 percent said it was because of the number of guests.

Areas	Reasons		
	Number of Dishes is More	Number of Guest is More	Both
Delhi	56.5	20.2	23.3
Gurgaon	58.9	17.9	23.2
Ghaziabad	61.5	21.5	16.9
Faridabad	49.2	23.7	27.1
Total	56.6	20.6	22.8

TABLE I: When Food Wastage is More

B. Stage where Food Wastage takes place

During social gatherings it has been observed that people generally want to eat as many items as they can. Every individual has his own taste and preferences. A number of items are taken in the plate. As a result food left over in plates is wasted. It is equally true that unserved food is also wasted. According to Fig. 5 50.4 percent of the respondents both served as well as unserved food is wasted. 39.0 percent of them said that food which is left over in plates is mainly wasted while 10.7 percent agreed that unserved food is also wasted.

Areas	Wastage Pattern		
	Leftover in Plates	Unserved Food	Both
Delhi	35.0	9.0	56.1
Gurgaon	41.1	16.1	42.9
Ghaziabad	46.2	9.2	44.6
Faridabad	44.1	13.6	42.4
Total	39.0	10.7	50.4

Fig. 3 Stage Where More Food Wastage Takes Place

C. Loss Due to Food Wastage

According to Table III food wastage leads to loss of individual's money (57.1 percent) while 73.2 percent of them felt that food wastage can be avoided and it can be used to feed the hungry. It resulted in wastage of valuable natural resources while majority of them 64.3 percent felt that it results in loss of individuals money, loss of valuable natural resources and the same could be used to feed the hungry.^[1]

Area	Very Much	Some Extent	Not at All
Loss of Individuals' Money	57.1	34.7	8.2
Can be used to feed hungry people	73.2	22.1	4.7
Loss of valuable natural resources	58.6	36.7	4.7
All of them	64.3	30.0	5.7

TABLE II: Loss Due to Food Wastage

IV. CONCLUSIONS, RECOMMENDATIONS AND LIMITATIONS

A. CONCLUSIONS

Fig. 4 shows the icon for this particular mobile application. Fig.5 is the Landing Page.



Fig. 4. Icon for the Mobile Application



Fig. 5. Landing Page

The Landing page has two buttons one for the donor and the other for the NGO. When the donor clicks the DONOR button then he will be directed to the location page. Here, the user has to press the CLICK HERE button for his location to be detected. Also, the user has to grant permission for his location to be tracked. Google Maps will open up showing the donor's current location.

The Donor then has to click on the NEXT button. As soon as the Donor's position is tracked the NGOs which are nearest to the Donors location are fetched and the Donor selects one of the NGO and clicks on the Lets share button.

This selected NGO will call the Donor to ask about his/her details like name, type of event (to help the NGO make an estimate on the number of vehicles which depends on the approximate amount of food left) and the venue details.

After the NGO collects and distributes the food among the poor it notifies the concerned Donor through a message about the date and place of food distribution.

When the NGO clicks on the NGO button a screen asking for the NGO's username and password is displayed. If the NGO is already registered then it can login and details of the persons who have donated the food are displayed. If the NGO is not registered then the New User button is clicked and the Registration Page will be displayed. The confirmation page will then be displayed on successful completion. Fig.6 shows the tables of the registered NGOs in the database.

Fig 6: NGO Details Table

B. RECOMMENDATIONS

- To identify the fake registration of an NGO in the database with the help of Unique ID which gives the authenticity of an NGO.
- To help in the establishment of NGOs which are solely dedicated to the collection of Surplus Food and distributing it amongst the poor and the needy.
- To create awareness among the masses about the importance of our mobile application so as to prevent the Surplus Food from being thrown into garbage.
- To convert this online mobile application into an offline application so as to make it available to all those people who cannot use a smartphone.

C. LIMITATIONS

- Insertion of a fake NGO in the database with a nonexistent Unique ID
- Since SAP HANA is a new technology therefore its availability is difficult.

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