

A Software Engineering Case Study Report

on

“Excess Food and Old Stuff Donation App”

Prepared by

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NEW DELHI
Reg. No. - L-112480/2022
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Maitri Vibhute, Vineeth Naitam, Dakshata Wasnik and Pratik Yeole

Under the guidance of

Ms. Swati. V. Jadhav



Bansilal Ramnath Agarwal Charitable Trust's

Vishwakarma Institute of Technology

666, Upper Indiranagar, Bibwewadi,
Pune, Maharashtra, INDIA - 411 037.



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Software Requirements Specification

for

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Excess Food and Old stuff Donation App



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1. Introduction

1.1 Purpose

The food at restaurants is often not fully consumed due to which the amount of food which is leftover is high. This food is of no use to the restaurants and that's why it is thrown away. This causes a lot of wastage of food which has become a major issue as there are people who starve due to shortage of food. We aim at supplying the excess food at restaurants to the poor people through NGOs.

Many people think of donating their old stuff like clothes, toys, etc., to poor people, but they do not have the contact of such people and also don't have the time to go and donate in person. To overcome these things, we aim at making an app which will have the contact of NGO's who will come and collect the things to be donated.

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1.2 Scope of Project

India is a developing nation and problems such as hunger and other issues are still prevalent to a large degree. Many people do not get even one meal a day and thus is a major problem.

Many NGOs try to provide food to such people but sometimes they might also not be able to help all the people. We all know that in many restaurants, there is a large amount of food leftover each day and this food is then thrown away. We can minimize this food wastage by donating the food to the needy ones. This app will connect the restaurants with NGOs so that the restaurants can donate the food to the NGOs and the NGOs provide this food to the people in need. We as users of the app can also donate our old stuff such as clothes, toys etc., to the NGOs.

In future we shall try to expand our reach and the amount of help we provide.

1.3 Objectives and Goals

The main objective of our application is to make an interaction between NGOs, donors and the needy people. This android-based Food Waste Management system can assist in collecting the leftover food from hotels & restaurants to distribute among those in need. NGOs that are helping poor communities to battle against starvation & malnutrition can raise a request for food supply from restaurants through this application. This project helps to reduce lack of awareness, enable easy interaction between donors and NGOs.

An important goal of this application is that reduces food wastage in restaurants. Our main aim is that we can utilize that waste food for needy person. With the help of this app, we can use old stuff early with needy people.



1.4 Software context

The software will be developed as an Excess Food and Old stuff Donation App for NGOs, restaurants and food donors. This application will help in the reduction of waste food and old stuff.

1.4.1 User interface

The user interface includes sign up screen. Sign up screen for registration of users. Name, address, pincode, contact no. details of users can be taken. The NGOs can have an accept request option after which they can collect the food from the restaurants.

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1.4.2 Database:

In this app, the restaurants, NGOs data can be stored in the database. The database used is Firebase Database. The storage permitted is up to 1GiB, 20,000 writes and 50,000 reads per day.

1.4.3 Payment System

As this application is free of cost, there won't be any payment system.

1.5 Major Constraints

1.5.1 Business Constraints

There is a need of a fast DSL internet connection for the app to work efficiently. Moreover, the app uses location services of the user for providing directions if needed. Good network is a must for the working of this app.

1.5.2 Product Constraints

To ensure the competitiveness and the efficiency of the software, it needs to be outlined in a user-friendly and an adaptable manner.



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2. Overall Description

2.1 System Environment

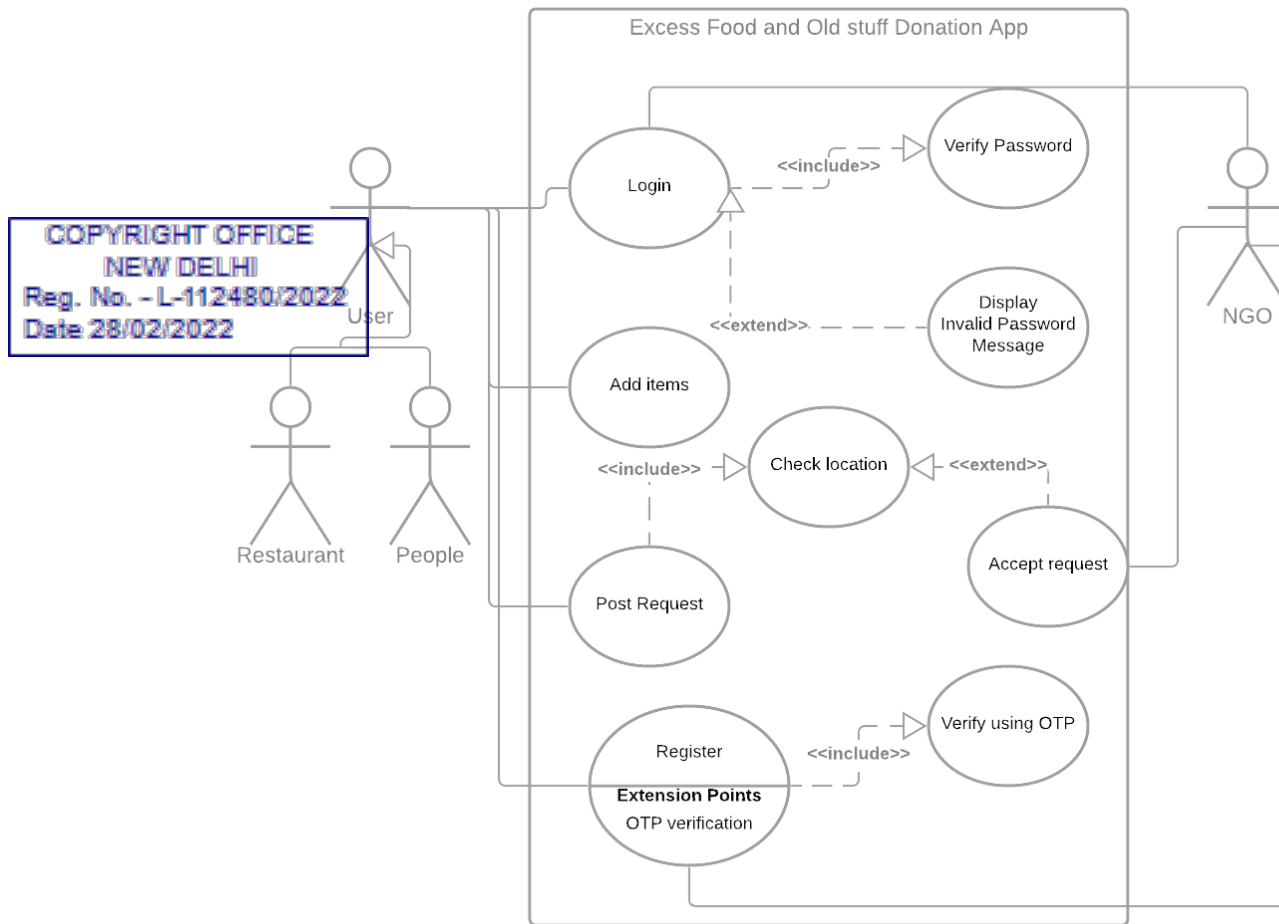


Fig. Use-case diagram



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2.2 Usage Scenario

The usage of the software can be described as below:

There will be two types of users for the system:

1. Restaurants
2. NGOs

Use cases are as follows:

1. Login
2. Enable location services
3. Add items
4. See the requests
5. Accept a request
6. Chat options



2.3 User-Profiles

There will be two types of users for this application:

1. Donors like Restaurants, etc.
2. NGO

For the Restaurants and other users, the following will be the sequence :

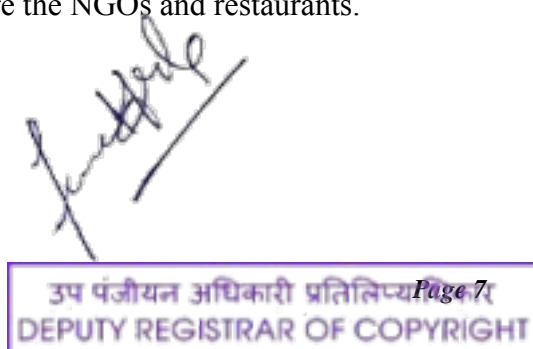
1. Login/Register
2. Add the items to be donated
3. Post a request

For the NGOs, the sequence will be as follows:

1. Login/Register
2. See the requests and the details of donation
3. Accept a request

2.4 Functional Requirements Specification

In this section, a separate description of each user will be provided. The main actors of the application are the NGOs and restaurants.



2.4.1 Restaurant Use-Case

A. The restaurant will register and login initially.

The step-wise description is as follows:

- Open the application
- Select type of user(restaurant in this case)
- Register by adding details like name,address,contact number,etc.
- Create password
- Account is created
- Enable location services
- Add login details to login in.

B. Adding items and posting request.

The step-wise description is as follows:

- The user will add items to be donated
- The items will be added to the items list
- The user will be able to post a request for donation and the list will be visible to the NGOs.
- Chat option is available for the users to keep connected with the NGO.

2.4.2 NGO Use-Case:

A. The register and login steps are similar to that of the restaurant use-case.

B. Accepting request:

The step-wise description is as follows:

- The location of the donor is visible and the NGO can select the nearest one.
- See the items list of the donation.
- Accept request.
- Chat option is available for keeping connected with the donor.

2.5 Non-Functional Requirements

The application will require internet connection and will access the users' location so that the request can be sorted according to location.

There will be a chat option for the users for keeping connected with each other in the process.



3. Restrictions and Limitations

- This application will require a good internet connection throughout its usage.
 - Security and privacy is also a constraint in the app.
 - The app uses location services of the users.
-

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Product Backlog

for

Excess Food and Old stuff Donation App

Product Backlog :

A product backlog shows the list of the to-do work arranged according to the priorities. It contains items which are to be implemented by the developing team. The most important items are placed at the top of the product backlog so that the team is clear about the items to be delivered first.



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Food and Old stuff Donation App								
Description		Sprint #	1	2	3	4	5	6
	Effort needed for Release 1 as in the beginning of the sprint	10						
Basic structure of the application.		5	3	3	3	3	3	0
Design a signup page for the registration of the users.		8	0	0	0	0	0	0
The name, address, contact no. and pincode of the users is		3	0	0	0	0	0	0
Create signup page for restaurants.		8	0	0	0	0	0	0
Set up the restaurants data in the database.		8	0	0	0	0	0	0
Set up the NGOs' data in the database.		8	0	0	0	0	0	0
User signup and database creation.								
Restaurants list the food to be donated.		8	0	0	0	0	0	0
The users add the information of the things to be donated.		8	3	3	0	0	0	0
The quantity of food leftover is displayed.		5	0	0	0	0	0	0
The restaurants post the information about the leftover food.		2	0	0	0	0	0	0
The NGOs can see the post and the location of the restaurant.		3	0	0	0	0	0	0
Information of donation								
On the particular date, the list of users who want to donate things is listed.		3	3	3	0	0	0	0
The users list the things to be donated.		2	2	2	0	0	0	0
The NGOs can accept the requests.		3	3	3	0	0	0	0
User donation of old stuff.								
The NGOs can give review to the restaurants.		13	13	13	5	0	0	0
The photos of the people who are benefited are available on the app.		5	5	5	0	0	0	0
A chat window for the users and NGOs.		13	13	13	5	0	0	0
Additional Features.								
version								
ulated ads from the test server		20	20	20	20	20	20	20

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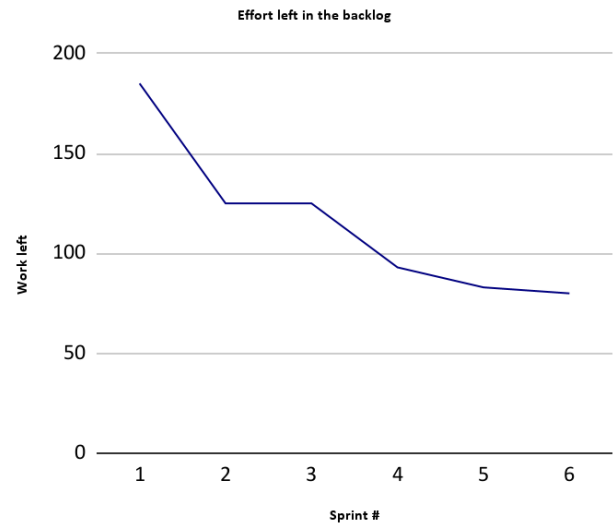
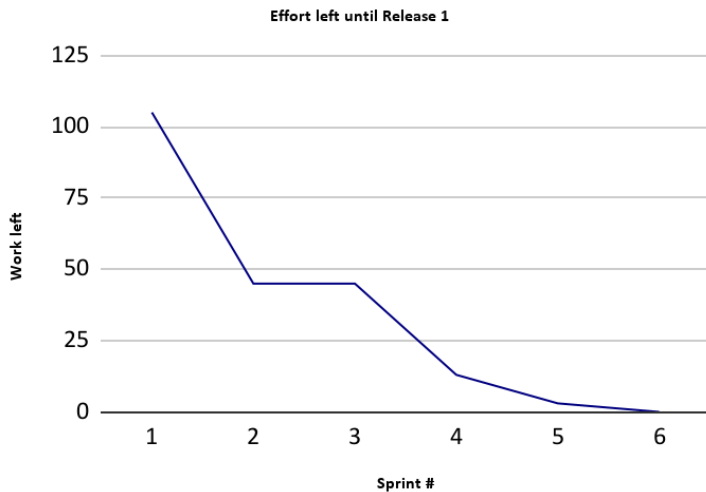


Plug real ads in		20	20	20	20	20	20
Change current city automatically according to the cell info		40	40	40	40	40	40
Advertisements support							
Ad-supported version							
		18	12	12			
Effort in the whole backlog		5	5	5	93	83	80
Backlog state taken after the end of sprint 4 = after release 1							

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Sprint Burndown Chart :

A burndown chart makes the work of a team visible by presenting it in a graphical format. It shows the rate at which the work is completed and the amount of work that is pending.



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User Stories

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Sprint 1 :

1. As an NGO, I want to see the details of the restaurants so that I can be sure.
2. As a restaurant, I want to see the details of the NGO so that I can be sure about the donation.

Sprint 2 :

1. As a restaurant I want to list the leftover food items so that NGOs can see it.
2. As an NGO, I want to see listed food so that I can receive it.
3. As an NGO, I want to see the quantity of leftover food so that it is easy for me to collect the food.



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Sprint 3 :

1. As a user I want to post the list of things to be donated so that NGOs can see them.
2. As an NGO, I want to filter restaurants by location so that I can find the nearest restaurant.

Sprint 4 :

1. As an NGO, I want to filter restaurants by location so that I can find the nearest restaurant.
2. As a user I want a chatting option so that I can be in touch with other organizations.

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