Software Requirements Specification

for

E-Annapurna

Version 1.0 approved

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18 July 2020

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1.   Introduction

1.1   Purpose

In India, many people don't get daily food for a living. Whereas more amount of food is wasted through functions, weddings, schools and all. Today, in the global hunger index India ranks 102nd out of 117 qualifying countries. In India, many people don't get daily food for a living.

We have developed a system to help such needy people to provide them food from these functions. People who wish to donate their leftover food contact us via our website.

We store their details with us. When someone requests for food, we check available food and the same areas as sponsors and allocate that much amount of food to them. Common people get involved in our system by becoming volunteers. They register themselves as per their available days. Our system checks the availability of them and allocates tasks to collect and deliver food according to their suitable time.

1.2   Document Conventions

Heading	Font Size: 18 Font Style: Bold Font : Times
Subheading	Font Size: 14 Font Style: Bold Font: Times
Content	Font Size: 12 Font: Times

1.3   Product Scope

Our Scope allow the NGO to,

● Allocate specific volunteers to specific requests based on areas.
● Check the monthly performance of volunteers, donors, sponsors and consumers.
● Download the overall current report of the NGO.

1.4   References

● https://robinhoodarmy.com/
● https://www.feedingindia.org/
● Global hunger index of india
● Food wasted in functions such as wedding
● https://github.com/AyanGadpal/E-Annapurna

2. Overall Description

2.1 Product Perspective

The E-Annapurna is a volunteer based organization that works to get surplus food from restaurants to the less fortunate sections of society in cities across India. The organization functions on and propagates the basic ideology of self-sustained communities across the city i.e. each locality/community within the city will contribute towards providing food to the needy through its local volunteers and restaurants. The traditional food distributed to the needy is sourced from restaurants, which regularly provide surplus or freshly cooked food on a goodwill basis.

Our System provides both Website and Admin Panel for the E Annapurna.

The Websites showcase the work of the organization to attract volunteers, Sponsors and donors. Also we get the information of those who are in need of food through the website.

The second part of the system is the Admin Panel. It is used to Manage and analyze the NGO. It provides in-depth reports with graphs of donations, volunteers, sponsors and requests of food. It enables the NGO Admin to allocate volunteers to the specific consumer and analyze their report.

2.2 Product Functions

- Volunteer will register himself and will perform given tasks
- Consumer will provide required food and quantity
- Donator will donate according to his will
- NGO will monitor all work and will get report of its performance

2.3 User Classes and Characteristics

- Volunteer   : Can register himself and will perform given tasks
- Consumer   : Requests for food
- Donor   : Who wants to Donate Food / Fund to NGO
- NGO   : Admin

2.4 Operating Environment

1. Operating system: Windows, Linux
2. Platform : Any Web-Browser with strong Bandwidth.

2.5   Design and Implementation Constraints

1.   User End
    1.1.   HTML5 supported Browser
2.   Deployment (server)
    2.1.   Memory requirement : 2GB
    2.2.   Database : Firebase
    2.3.   Language requirement : English
    2.4.   Communication protocols : HTTPS
    2.5.   Technologies : HTML5, CSS3, Php

2.6   User Documentation

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2.7   Assumptions

Our Assumptions Are:
1.   The NGO is Operating in Single City
2.   NGO/ Volunteer have means of transport to transfer the food
3.   There is a point of contact available with Consumers
4.   All non-Admin Users have Email

3. External Interface Requirements

3.1 User Interfaces

The application is very user friendly and uses a GUI interface implemented in PHP and HTML to Communicate with the user. Various features are self – explanatory. Forms are easy to fill in and components can be added, removed and updated very easily through a Single dialog box. The application includes tool-tip hints to give a brief description of the particular input Field.
List boxes are used to display all the components at once so that users can see all the components of a Particular type at once. One can just select the component and modify and remove the component (based on the access control of the person).

3.2 Hardware Interfaces

1. Storage
    ○ 2GB (Server)
2. Network
    ○ 10 Mb/s (Server)
    ○ 2 Mb/s (Client)
3. Ram
    ○ 4 GB (Server)
    ○ 2 GB (Client)

3.3 Software Interfaces

1. Any Network Operating System
2. Any web browser on user side for accessing the internet

3.4 Communications Interfaces

We will use **Hypertext Transfer Protocol (HTTP) with** default port 80

4.   System Features

4.1   Registration of Volunteer, Consumer, Donor

4.1.1   Description and Priority

In this feature, all users i.e. volunteer, consumer, and donor will register themselves through our website. This feature is of very high priority as it's the first step which will get information of all users for the NGO to start its operation.

- Volunteer
  - Volunteer will need the following the inputs:
  - Location: Area of the Volunteer
  - Time : Day of week when volunteer is available
- Consumer
  - Consumers are the one who request for food:
  - Location : Area of the Consumer
  - Quantity : Amount of food they want
  - Type : Type of the food i.e. raw or cooked
- Donor
  - Donors are the ones who will donate fund or food:
  - Location : Area of the Donor
  - Donation : Fund or Food
  - Food type : Type of food i.e. raw or cooked
  - PAN card number (if donating funds)

4.1.2   Stimulus/Response Sequences

- Volunteers will register themselves by providing personal information. They will provide the days on which they are available to do the activity.
- Consumers will register themselves with their location then they will request for the food they want and for the quantity of food.
- Donors will register themselves with their location and will provide the amount of funds they want to donate. They can also donate in the form of food either raw or cooked.

4.2   NGO Interface :

4.2.1   Description and Priority :

This is one of the important features in E-Annapurna. With the help of NGO interface, Admin can easily see the analytics as well as other data of volunteers, Consumer and donor. Here, NGO is an entity which interacts with all other modules in the system. Along with this, the admin can see all the donations to NGO.

In order to see all the analytics and data of registered volunteers, a separate web module is created. The NGO interface is only accessible to key peoples in order to maintain safety and security.

4.2.2   Functional Requirements :

Req. 1. Admin's credentials :
       In order to maintain security at the NGO Interface, a login portal is provided. The requirement is that the password must be strong enough. In case when Admin forgets the password, then there will be a forget password feature present.

Req. 2. Strong network connection :
       To see all the analytics and register volunteers, proper network bandwidth should be available.

Req. 3. Availability :
       NGO interfaces should be available all time in order to provide excellent service to peoples.

4.3   Automation of Mapping

4.3.1   Description and Priority

       Mapping is the function which allocates volunteers to the consumer. The Allocation of the volunteer will be selected based on some policy. In our case, the Policy comprises two conditions, The volunteer should be able for the day, and they should be in the same area as the donor and consumer.
An appropriate number of Volunteers are filtered and selected for particular consumers, and then allocated. Once allocated the notification will go to the volunteers either on their interface or via SMS

This whole process does not require any human assistance. However, NGO admin can see, and modify the mapping if required so.
The Priority of this function is High.

4.4   Volunteer Interface

4.4.1 Description and Priority

In a volunteer interface, a volunteer will get to know from where he/she needs to pick up the food and where to deliver it. Volunteers will also get to know his/her record of his performance as a Volunteer. This function is having medium priority.

4.4.2 Stimulus/Response Sequences

Once the Mapping is done and the volunteer gets allocated to some consumer and donor, They will get notified with detailed information of their task on their Volunteer interface.

5.   Other Nonfunctional Requirements

5.1   Performance Requirements

The Performance of the system depends on the network bandwidth as well as minimum requirement of the system as mentioned.

5.2   Safety and Security Requirements

- There should be a proper rollback policy maintained such that if the donor donates food or money and at that instance of time, the server goes down then rollback policy must be maintained.
- Every request of the consumer maintained properly such that if user requests for food, then proper acknowledgement should be provided.
- Users should enter strong passwords in order to maintain security.
- If a user forgets his/her password then he/she should be able to reset password in order to maintain security.

5.3   Software Quality Attributes

5.3.1   AVAILABILITY : System should be available without any delay or latency.

5.3.2   CORRECTNESS : Proper acknowledgements should be provided to Volunteers, Consumers as well as Donors.

5.3.3   MAINTAINABILITY : The NGO (Admin) should properly maintain all the modules of system also volunteers of system.

5.3.4   USABILITY : System should satisfy maximum number of consumer requests at any instance of time.

5.4   Business Rules

This Project is to help NGO, and is a nonprofit organization thus, When someone is Donating funds, they are expected to enter their PAN card number. This is necessary to account for all the funds getting in the system.

6.   Other Requirements

Appendix A: Glossary

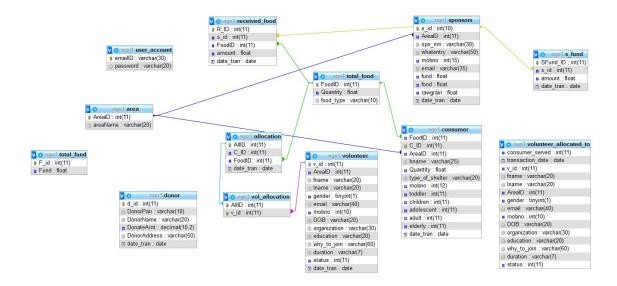| Term	Meaning
Consumer	Who requests the food
Volunteer	Who wants to Deliver the food to the people
Donor	Who wants to Donate Food / Fund to NGO
NGO	Non-profit Organization (Admin)

Appendix B: Analysis Models

Fig. 1. SCHEMA DIAGRAM