

Helping Hands

Final Year Project

Session 2015-2019

A project submitted in partial fulfillment of the degree of

BS in Software Engineering



Department of Software Engineering

Faculty of Computer Science & Information Technology

The Superior College, Lahore

Fall 2019

Type (Nature of project)	[☒] Development [☐] Research [☐] R&D			
Area of specialization	Android Application Development			
FYP ID	FYP-BSSE-S19-011			
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*The candidates confirm that the work submitted is their own and appropriate credit has been given where reference has been made to work of others

Plagiarism Free Certificate

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Sheraz Ejaz	1.0		<Original Draft>	
Sheraz Ejaz	2.0		<Changes Based on Feedback from Supervisor>	
Sheraz Ejaz	3.0		<Changes Based on Feedback From Faculty>	
Sheraz Ejaz	4.0		<Added Project Plan>	
Sheraz Ejaz	5.0		<Changes Based on Feedback from Supervisor>	

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Dedication

This work is dedicated to my Parents.

Acknowledgements

Alhamdulillah, all praises to Allah Almighty, the most Merciful and the most Gracious, for the strengths and His blessings in completing this Project. Working on this project was indeed a challenging task that demanded immense efforts. But, I feel proud to express my deepest sense of gratitude and appreciation to my supervisor Sir. Muhammad Ahmed for his kind help, advice, inspired guidance, unlimited support, sympathetic attitude and sincere personal involvement throughout the development of project. I would never have been able to reach this stage but for the prayers and great support of my family. Thanks and best wishes for all those who have made this learning experience so wonderful for me.

Executive Summary

This app will be helpful for those people who love to help the society in any matter. But the matter here is Food. If you want to Feed poor and Needy people you just have to download this app and have to be registered over there. By your just one click our crew member will come to your place and will get the food which you use to throw out as a waste product, but we will give that to those who have to sleep without feeding their bellies. This app will have two interfaces, one for those who want to donate the remaining food and other interface will be for our crew members. When you will click the buttons which reads "DONATE FOOD" your location will be tracked over the account of our crew member, he will come to your place by tracking the location of yours; he will pick the food up. And according to schedule planned by us poor will come to our office and will collect the food from us.

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Chapter 1

Introduction

Chapter 1:

Introduction

This app will be helpful for those people who love to help the society in any matter. But the matter here is Food. If you want to Feed poor and Needy people you just have to download this app have to be registered over there. By your just one click our crew member will come to your place and will get the food which you use to throw out as a waste product, but we will give that to those who have to sleep without feeding their bellies.

1.1. Background

The poverty in Pakistan is gripping its roots strongly all over, which ultimately results in the Poor to sleep with empty stomachs. On the other hand those who use to eat almost every single day outside are wasting much more food which feeds the empty dustbins, which is quite useless. According to a survey, estimate 36 million tons of Food is being wasted in Pakistan every year. This is equivalent to the population of Karachi, Lahore and Hyderabad tossing out entire lunches and dinners everyday

1.2. Motivations and Challenges

As I am a Muslim and being a Muslim, my biggest motivation under the heading of FEEDING POOR is:

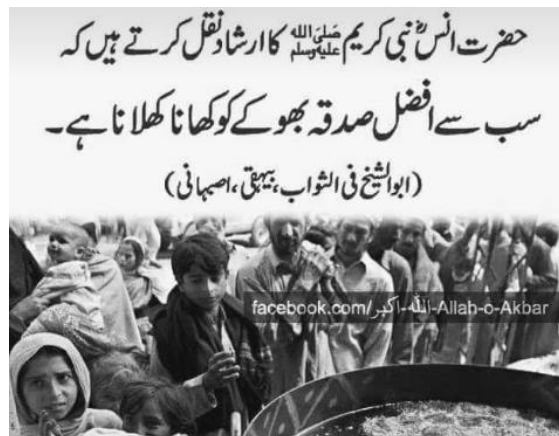


Figure 1.2 Motivation

BUT as it is being said that man had to face many of challenges while doing well, and man is that WHO faces all the challenges with great dignity and patience. The challenges I am facing doing this good deed are:

- Fund raising.
- Raising a campaign.
- Convincing people.
- Hiring of volunteers.
- Expenses of collecting and serving food.

1.3. Goals and Objectives

“NO ONE IN THIS WORLD HAVE REACH TO ONE’S DESTINATION WITHOUT DETERMINUG A TRACK”

- My **Goal** is mainly to produce an environment where everybody should think about the poor in sense of helping them, feeding them and by all these I will be able to generate a feel of CARE OF OTHERS upon which ISLAM emphasizes a lot.

As Abdul Sattar Eidhi is my mentor, I want to serve the humanity as he did. I wish to leave my impression in every heart that needs a helping hand.

- My **Objective** is to feed poor, to feed those who use to sleep with empty stomachs almost every night. We all in our lives once think about such people but the problem is we just think, but I am going to such a track whose destination is exactly the same as I have set an objective for it.

1.4. Literature Review/Existing Solutions

Yes we have some competitors in Pakistan who donate food. But they don’t collect and donate food .They just donate on the behalf of their Bank Balance. The Some Examples are:

- Behria Dastarkhwan
- Rizq (By Monal)
- Roti Bank

1.5. Gap Analysis

There are few centers for this purpose of feeding poor, majority of poor are unable to access these centers. Moreover, there are very few apps for such good deed; we are struggling to introduce these things to those who are almost wasting their times on social media doing nothing and to those who are wasting many of food items. So we want to introduce such an excellent app from which people will be able to be a part of good deed by using their favorite gadget.

1.6. Proposed Solution

This app will have two interfaces, one for those who want to donate the remaining food and other interface will be for our crew members. When you will click the buttons which reads "DONATE FOOD" your location will be tracked over the account of our crew member, he will come to your place by tracking the location of yours; he will pick up the food. And according to schedule planned by us poor will come to our office and will collect the food from us.

1.7. Project Plan

The Project Plan is simple to break down the documentation phase and full fill are documentation with respect to Gantt chart dates.

To introduce this application with people, waste of food will be minimal, and the as much people will be feed.

1.7.1. Work Breakdown Structure

1. Initialization

1.1. Existing System

1.2. Problem Statement

1.3. Proposed Solution

1.4. Project Plan

1.5. Review Project Plan

2. Design Document (SRS)

2.1 Gather Requirements

2.1.1. Functional Requirement

2.1.2. Admin Side Requirements

- 2.1.3. Customer Side Requirements
 - 2.1.4. Non Functional Requirement
 - 2.1.5. Performance
 - 2.1.6. Scale-ability
 - 2.1.7. Capacity
 - 2.1.8. Availability
 - 2.1.9. Reliability
 - 2.1.10. Usability
 - 2.1.11. Security
- 2.2. SRS Diagrams
- 2.3. Use Cases
- 2.4. Domain Model
- 2.5. Sequence Diagram
- 2.6. System Sequence Diagram
- 2.7. Operational Contract
- 2.8. Activity Diagram
- 2.9. State Machine Diagram
- 2.10. Class Diagram
- 2.11. Deployment Diagram
- 3. Development/Coding
 - 3.1. Admin Side
 - 3.2. Client Side
- 4. Testing
 - 4.1. Functional Testing
 - 4.2. Non Functional Testing
- 5. Deployment

1.7.2. Roles & Responsibility Matrix

Mostly we done every phase of our project in team, but the sample of roles and responsibility of project are given below:

WBS #	WBS Deliverable	Activity #	Duration (# of Days)	Responsible Team Member(s) & Role(s)
1.0	Initialization	1	25	
1.1	Existing System	2	5	Sheraz Ejaz
1.2	Problem Statement	3	5	Sheraz Ejaz
1.3	Proposed Solution	4	5	Sheraz Ejaz
1.4	Project Plan	5	5	Sheraz Ejaz
1.5	Review Project Plan	6	5	Sheraz Ejaz
2.0	Design Documentation	7	70	
2.1	Requirement Gather	8	24	Sheraz Ejaz
2.1.1	Functional Requirement	9	10	Sheraz Ejaz
2.1.1.1	Admin Requirement	10	5	Sheraz Ejaz
2.1.1.2	Customer requirement	11	5	Sheraz Ejaz
2.1.2	Nonfunctional requirements	12	14	Sheraz Ejaz
2.2	Srs diagram	13	46	
2.2.1	Use cases	14	5	Sheraz Ejaz
2.2.2	Domain model	15	5	Sheraz Ejaz
2.2.3	Sequence diagram	16	5	Sheraz Ejaz
2.2.4	System sequence diagram	17	5	Sheraz Ejaz
2.2.5	Operational contract	18	5	Sheraz Ejaz
2.2.6	Activity diagram	19	5	Sheraz Ejaz
2.2.7	State machine diagram	20	5	Sheraz Ejaz
2.2.8	Class diagram	21	6	Sheraz Ejaz
2.2.9	Deployment diagram	22	5	Sheraz Ejaz
3.0	Development/Implementation	23	70	
3.1	Admin Side	24	35	Sheraz Ejaz

Table 2.7.2 WBS

1.7.3. Gantt chart



Figure 1.7.3

1.8. Report Outline

1. BACKGROUND

2. MOTIVATION AND CHALLENGES

- Religious and spiritual confidence
- Will power, self-confidence of doing goods.
- Fund raising, raising a campaign
- Developing a sense of helping others.

2. GOALS AND OBJECTIVES

- Creating an environment of “CARE OF OTHERS”
- Serving humanity
- Feed poor

3. EXISTING SOLUTIONS

- Behria Dastarkhwan
- Rizq (BY MONAL)
- Roti bank

4. GAP ANALYSIS

- Few apps for such purposes
- Few centers
- Poor unable to reach such centers.

5. PROPOSED SOLUTIONS

- An app with two interferences
- One for DONORS of food
- Other for CREW MEMBERS for picking up the food.

6. PROJECT PLAN

- After the completion of documentation phase
- Introduction of application to people
- Publicizing of campaign

Chapter 2

Software Requirement Specifications

Chapter 2: Software Requirement Specifications

2.0 Introduction

This chapter specifies the detailed note of the project; it will describe the purpose of concerned application, all kind of documentation e.g. Document convention & document scope. Moreover product's functional and non-functional requirements have also been discussed in it.

2.1 Purpose

The main purpose of this application is to enhance the spiritual moral of people, with the aim of doing good deeds and for the developing a sense of raising a best society where everybody will care for each other.

All other requirements and plans for achieving this PURPOSE are mentioned in this document.

2.2 Document Conventions

The whole document is written in MLA format. Topics introduced in section and subsection headings in a bold text. All the paragraphs are aligned as well as justify also. Highlighting is to point out words in the glossary and italicized text and includes various diagrams like UML, ERD, DFD, CDSD etc.

2.3 Intended Audience and Reading Suggestions

This project's documentation is purposeful, readable & applicable for almost everybody of different mature age groups, as this application is for donating food so anybody from a home is intended. After reading this, project developer and project managers will be able to understand the SRS of project hopefully.

2.4 Product Scope

The project scope will increase with the passage of time as the application will secure he fame, as this project is mainly for the reason of feeding poor, and THANKS to LORD who have put some amount of sympathy in every heart & in every soul, so whenever this application will be launched not only homes will get this point of feeding poor, many restaurants will also able to get stick on donating food by adding their part in this deed. So, it will catch its scope on its own.

2.1.1. References

- IEEE Software Engineering Standards Committee, “IEEE Standard 830-2016, IEEE Recommended Practice for Software Requirements Specifications”, October 20, 2016.

2.5 Overall Description

Following overall description will give some more details of the project e.g. features and systems being used in it.

2.5.1 Product Perspective

The development of a software from nothing to it is released position is an important physical act from any software development company. It has need of much money put into business in terms of hard work and price and also makes more fixed the belief person for whom one does work market(example: Google play). We have got facts together some interesting articles from the web. The development of any software or game in software industry is an important goal of any software solution company.

2.5.2 Product Functions

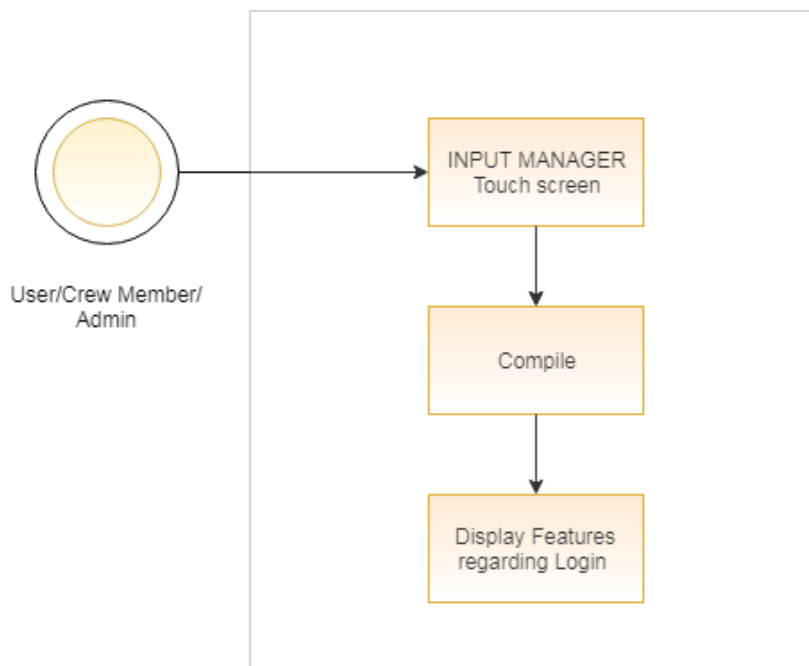


Figure 2.5.2 Product Functions.

2.5.3 User Classes and Characteristics

For all of them registration and login will necessary. This application will be use by following classes:

- **ADMIN:**

Admin will have all the rights to control the application, and will have the ability to change or add or remove anything.

- **ANDROID PHONE/ TAB USERS :**

They will all those who will have Google play store and will those who will 'donate food'.

- **CREW MEMBERS:**

They will collect the food from donors and will bring that to our office / center by using our application.

2.5.4 Operating Environment

The following are operating systems and software's for usage of this application:

- Android 4.4 &above
- IOS in future
- Windows in future
- Web app in future

2.5.5 Design and Implementation Constraints

There are 3 stages for the development of this application:

1. CODING AND SCRIPTING

- Admin interface
- Users
- Crew members

2. IMPLEMENTATION

- Will launched in market and start working by relevant users of different interfaces.

3. TEST AND DEBUGGING

- Interface testing
- Database testing
- Graphic testing

2.5.6 User Documentation

Complete use documents will provided in application support options in mobile and web app.

2.5.7 Assumptions and Dependencies

We are assuming that after the development of our application it will work in an acceptable manner as I am mainly depending on Android Studio and also it will responsible for testing and construction implementations.

2.6 External Interface Requirements

2.6.1 User Interfaces

User when open the application, will find following

- Will find a registration form and will fill it
- Will find an option 'as a crew member' or 'as a user'.
- After selecting 'users'
- Will find two things :
 1. Button of donate food
 2. Slide to check your points

2.6.2 Hardware Interfaces

This application has been developed by using following hardware tools:

- Mobile (for android users & IOS users)
- Laptops or computers (desktop users)

2.6.3 Software Interfaces

Our software interface for this application is:

- Android Software development kit for applications on the Android Platform

2.6.4 Communications Interfaces

Users can very easily download this app from their google play store. Inn android systems it will smoothly run in android jellybean version or above and also in mobile applications.

2.7 System Features

This system has three layers every layer has different features.

- 1) Admin Layer
 - Check Donations.
 - Check serving.
- 2) Crew Member Layer
 - Track location & collect food
- 3) User Layer
 - Donate food
 - Check points against donations

2.7.1 Admin Layer (Check Donations/ Serving)

2.7.1.1 Description and Priority

This admin interface is just for keeping an eye and having a complete control over the system. Admin can check donation collections and the serving of those donations.

2.7.1.2 Stimulus/Response Sequences

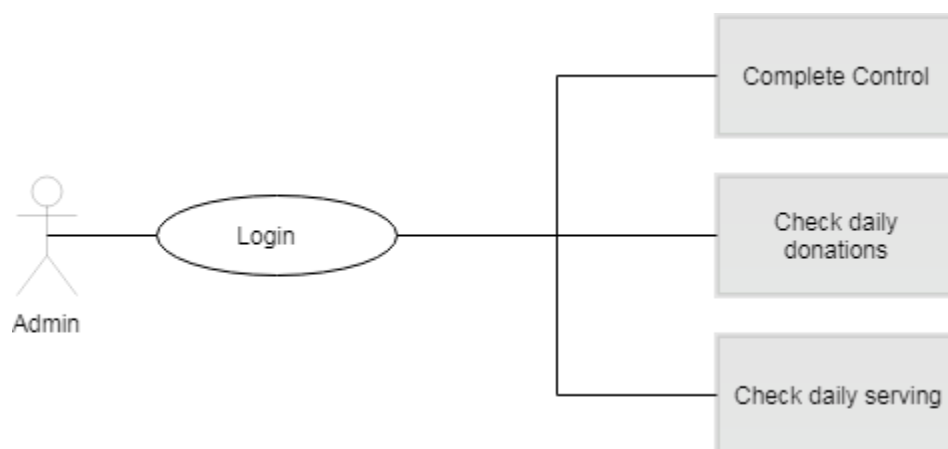


Figure 2.7.0-1.2 Stimulus/ Response Sequence

2.8 Functional Requirements

This sections contains all the functional requirements of Admin interface

REQ-SF1-1: Login/ Signup

REQ-SF1-2: Control all functionality of the system

REQ-SF1-3: Check daily donations

REQ-SF1-4: Check daily serving

2.9 Crew Member Layer

2.9.1.1 Description and Priority

The crew interface track the location of donors over this application, crew will reach there and will collect the food because a tracking map is available in crew's interface.

2.9.1.2 Stimulus/Response Sequences

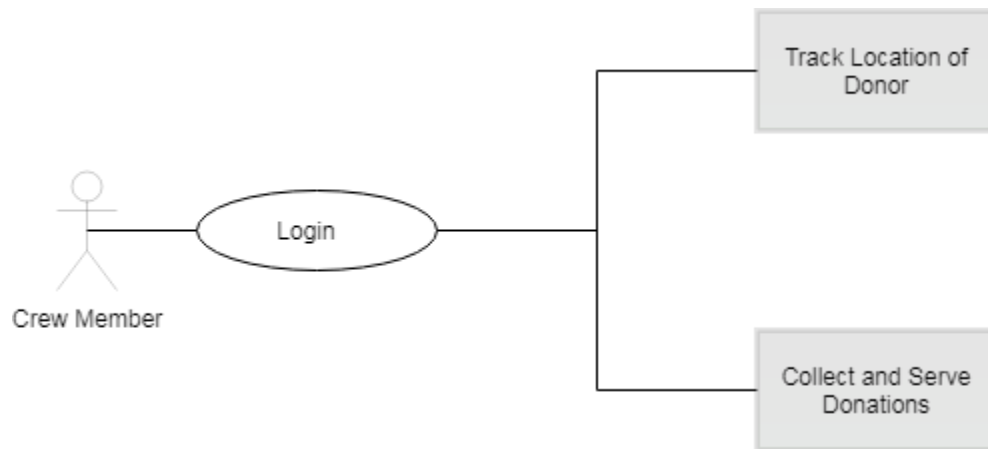


Figure 0-2.9.1.2 Stimulus/ Response Sequence

2.9.1.3 Functional Requirements

This sections contains all the functional requirements of Crew's interface

REQ-SF2-1: Login/ Signup

REQ-SF2-2: Track the location of donor through map and collect food

2.9.2 User layer

2.9.2.1 Description and Priority

User interface will consist of two things:

One donation button will for the donation, by clicking them they can handover the food to our crew member.

Second button is slide bar that will be of checking out the points that will be generated after donations. Upon which we will be collaborate with some of them and will give them vouchers or use their points on donations depend on their wish.

2.9.2.2 Stimulus/Response Sequences

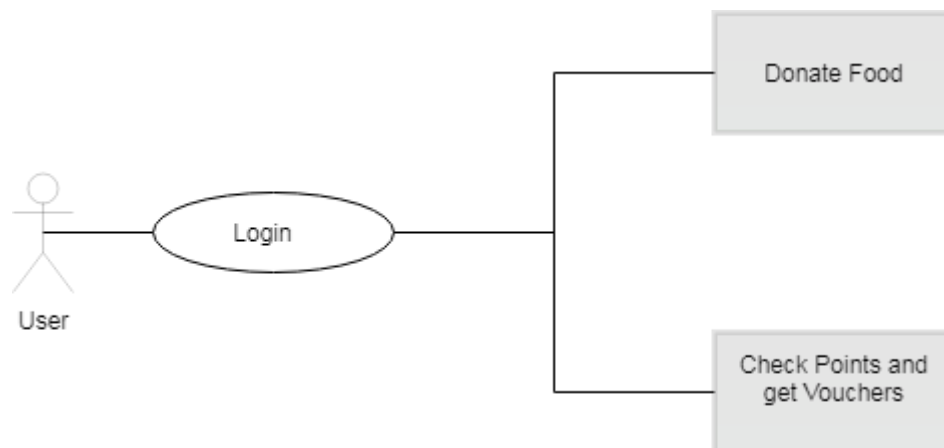


Figure 2.9.2.2 Stimulus/ Response Sequence

2.9.2.3 Functional requirements

This sections contains all the functional requirements of Crew's interface

REQ-SF2-1: Login/ Signup

REQ-SF2-2: Donate food and get points

2.10 Other Nonfunctional Requirements

2.10.1 Performance Requirements

Performance requirements of mobile applications are:

- 1 Mobile Application Testing Strategy.
- 3 Device Performance.
- 4 Server Performance.
- 5 Network Performance.
- 6 Troubleshooting Mobile Applications Performance.

2.11 Safety Requirements

This application is user friendly. It will not show its influence on the other applications and also will not harm them. User didn't have to stay on this application for so long as user just have to click the button after opening it, it will not give user any kind of health issue regarding over use of gadget like eyes or headache issue. All the process by the user will do in seconds so it's safe for them anyway.

2.11.1 Security Requirements

Everybody in this world is much more concern about their personalities and personal information. This application will not ask to user for their personal information, so everybody can feel free and ease while using this application. Only the point is that there is user's authentication, because the points being earned by user itself can be used by others, so it's necessary for the user to use this application only themselves so that unauthorized person will not able to reach user's points and seek the advantage of it.

2.11.2 Software Quality Attributes

The software quality attributes for this project is

Performance

Firstly we enlist the resources that are used for our project

- Smart phone/ Tablet
- Laptop

Availability

User just have to login at a very first time on this application, after that whenever our user will open this application user is already signed in and after compile loading the application is ready to use that's why our availability time is very less.

Correctness

How the application functions are implemented successfully. When deploying this application the amount of bugs and errors produce in this application.

Usability

The mechanism of usability we describe above for this application.

Testability

The number of tests in testing phases and also time required for testing. There are many test mechanisms that we are used for this application testing.

Security

Making the application safe and controlling the point's loss.

2.11.3 Business Rules

The topic **1.7.2 Roles and Responsibilities Matrix** in this document explain the Business rules of this Final Year project Helping Hands.

2.12 Other Requirements

All the requirements are discussed there is no other requirements in this document that is not discussed.

Chapter 3

Use Case Analysis

Chapter 3: System Analysis

This chapter describes the system analysis and models of this application system. This chapter includes all the main and sub functions/activities. These models tell us how the user interacts with the system and what the sequence of activities that occur as the software is used. Use case model explained the system of this application and fully dressed use case diagram describes overall system and subcategories.

3.1. Use Case Model

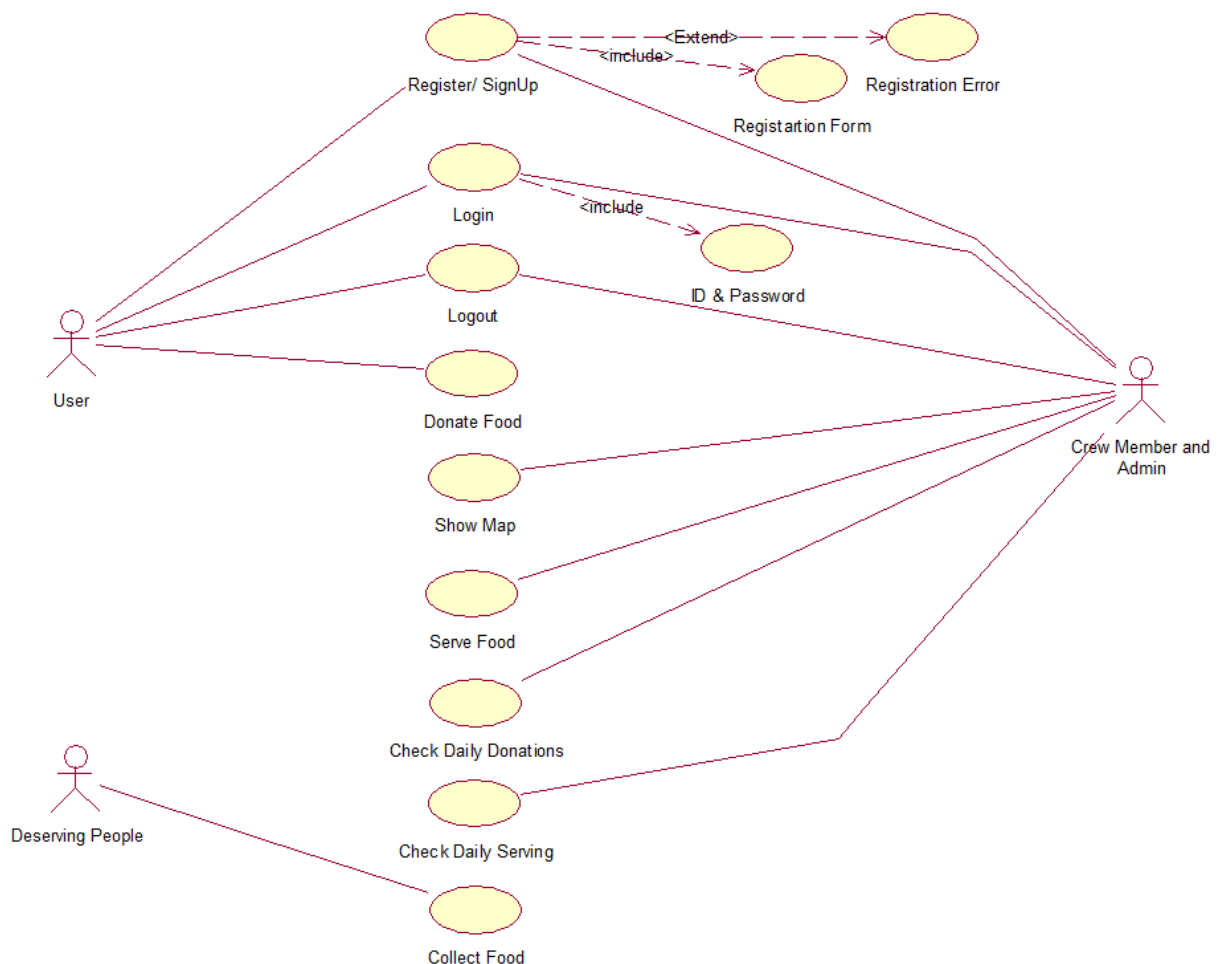


Figure 3.1 Use Case

3.2. Fully Dressed Use Cases

The following are the Fully Dressed Use Cases of the application Helping Hands. That means, this completes all the sections of the use case specifications i.e. the basic flow, the alternative flow, special requirements, Pre/Post specifications are also described.

Use Case Description

Use case description is following

i. **Use Case:** Sign up

Primary Actors: User

Secondary Actor: Admin, Crew member, Poor People

Status: Under development

Goals in Context: To Register Primary and secondary actors

Pre-Condition:

- System supports the application configuration
- Android device should have specified version of software

Post-Condition: Id will be generated

Scenario: Go to main menu of the Application and Click Sign up button

Exception: Signup Error

ii. **Use Case:** Login

Primary Actors: User

Secondary Actor: Admin, Crew member, Poor People

Status: Under development

Goals in Context: To Login a User

Pre-Condition:

- Password and Login id is correct

Post-Condition: Login the interface

Scenario: Go to main menu of the Application and Click login button

Exception: Login Error

iii. **Use Case:** Logout

Primary Actors: User

Secondary Actor: Admin, Crew member, Poor People

Status: Under development

Goals in Context: To Logout a User

Pre-Condition:

- User must be login for logout

Post-Condition: Logout the Interface

Scenario: Go to main menu of the Application and Click login button

Exception: Logout Error

iv. **Use Case:** Database

Primary Actors: User

Secondary Actor: Admin, Crew member, Poor People

Status: Under development

Goals in Context: To connect the actors with database

Pre-Condition:

- User must be register for database connection

Post-Condition: User data will generated

Scenario: Go to main menu of the Application and fill the form that will be saved in database

Exception: Connection Error

v. **Use Case:** Show map

Primary Actors: User

Secondary Actor: Admin, Crew member, Poor People

Status: Under development

Goals in Context: To track the location of user

Pre-Condition:

- User must be click on donate food button

Post-Condition: Location will be generated in map

Scenario: Go to user login of the Application and click on donate food

Exception: Location Error

vi. **Use Case:** Donate Food

Primary Actors: User

Secondary Actor: Admin, Crew member, Poor People

Status: Under development

Goals in Context: To Donate food

Pre-Condition:

- User must be click on donate food button for donation

Post-Condition: Food will be collected after tracking

Scenario: Go to user login of the Application and click on donate food

Exception: Location Error

vii. **Use Case:** Daily Donation

Primary Actors: User

Secondary Actor: Admin, Crew member, Poor People

Status: Under development

Goals in Context: To Check Daily Donations

Pre-Condition:

- Donation must be generated on daily basis

Post-Condition: Donations will be checked

Scenario: Track the Donor and collect the Donations on daily basis

Exception: Database Error

viii. **Use Case:** Daily Serving

Primary Actors: User

Secondary Actor: Admin, Crew member, Poor People

Status: Under development

Goals in Context: To Check Daily Servings

Pre-Condition:

- Crew member must be serve daily donations

Post-Condition: Serving will be checked

Scenario: Collect food from user and serve with poor and needy people on daily basis

Exception: Database Error

ix. **Use Case:** Serving

Primary Actors: User

Secondary Actor: Admin, Crew member, Poor People

Status: Under development

Goals in Context: To Serve food

Pre-Condition:

- Crew member must be serve daily donations

Post-Condition: Serving

Scenario: Collect food from user and serve with poor and needy people on daily basis

Exception: Less Donation

x. **Use Case:** Collect food

Primary Actors: User

Secondary Actor: Admin, Crew member, Poor People

Status: Under development

Goals in Context: To Serve food

Pre-Condition:

- Schedule of serving food generated

Post-Condition: Serving

Scenario: Poor people come on time and collect food

Exception: Schedule Serving

Chapter 4

System Design

4.3. Class Diagram

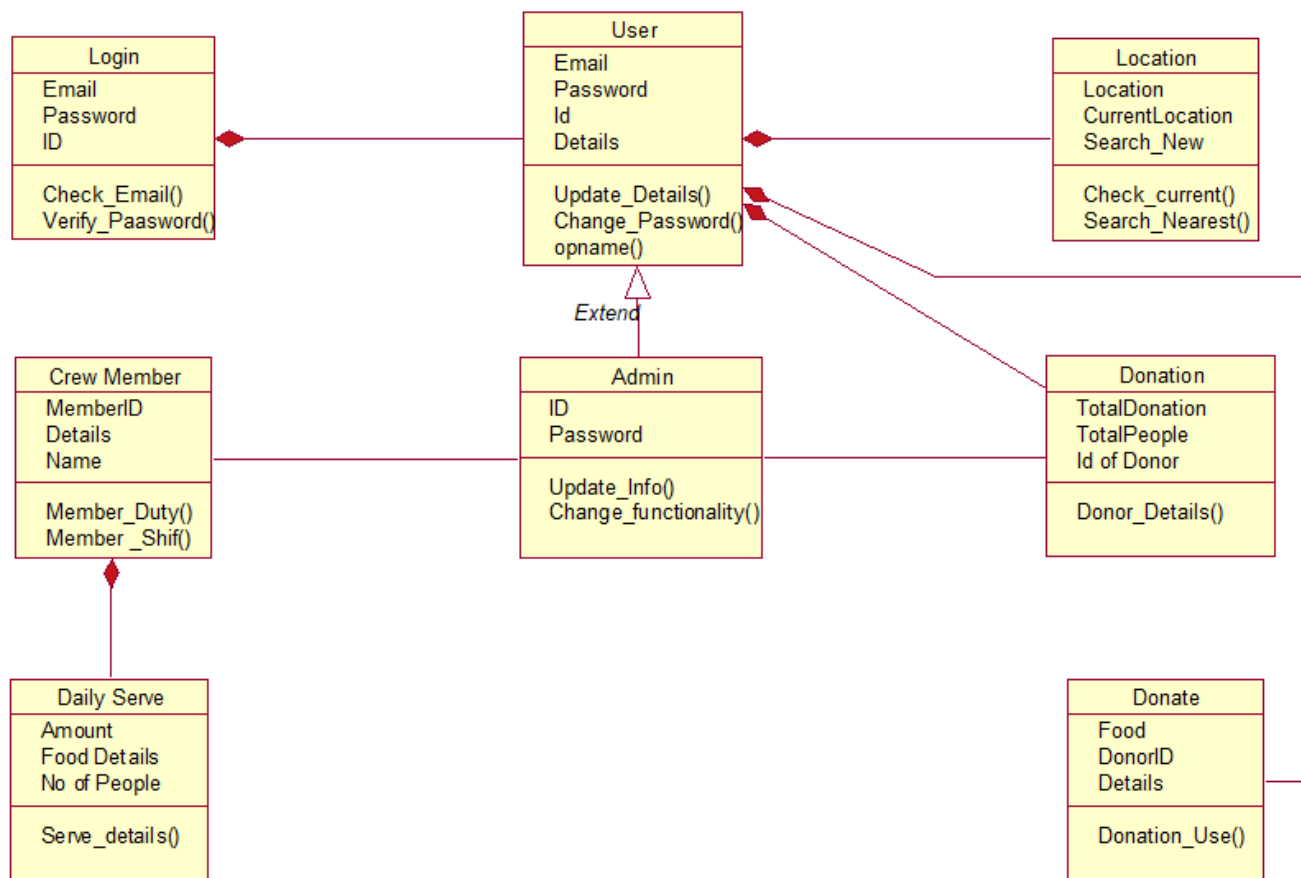


Figure 4.3 Class Diagram

4.4. Sequence

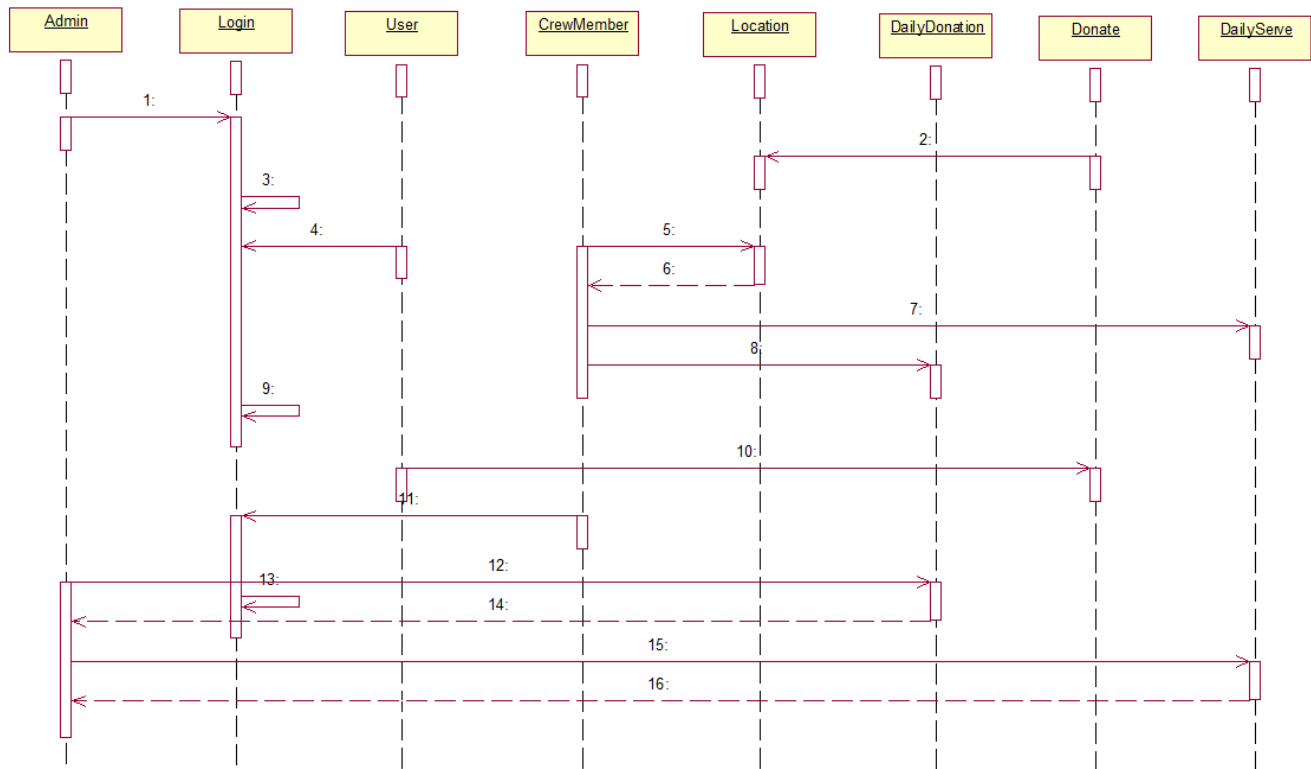


Figure 4.4 Sequence Diagram

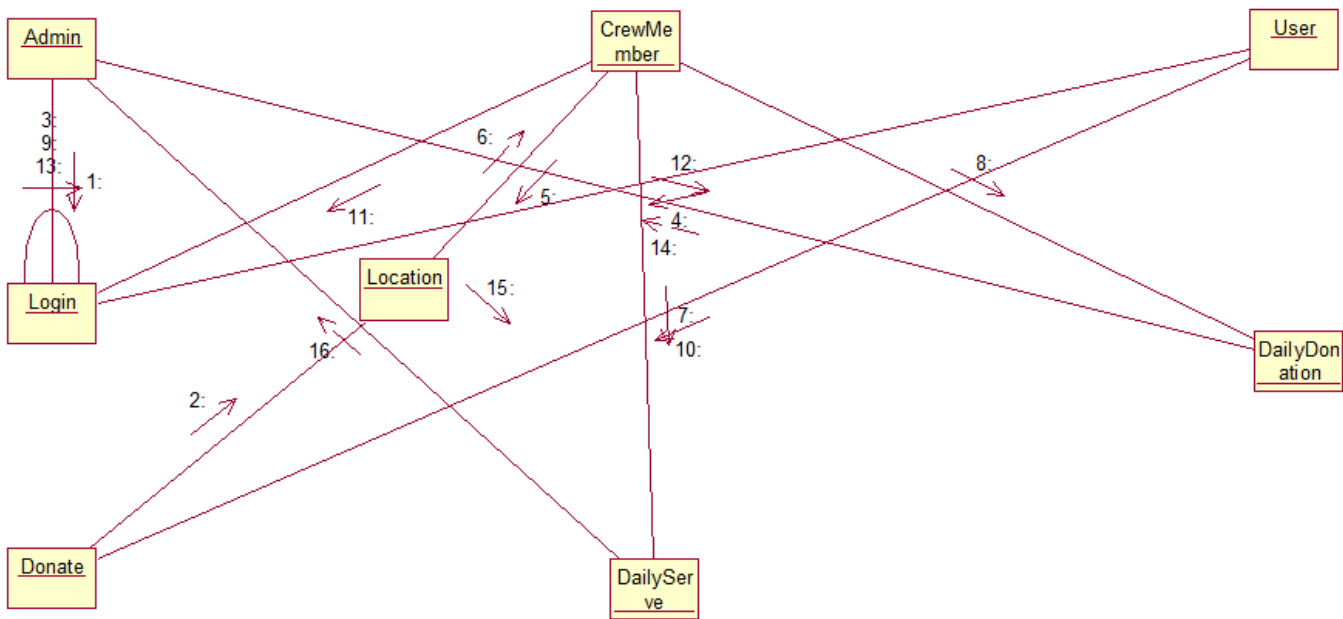


Figure 4.5 Collaboration Diagram

4.6. Operation contracts

1 **Operation:** Signup/Login

- **Pre-condition:** Mobile version should enable to run Application
- **Post-condition:** User ID is created and opened

2 **Operation:** Click Donate Food

- **Pre-condition:** Location will be Tracked on Crew Member's End
- **Post-condition:** He will track location and collect food

3 **Operation:** Admin View

- **Pre-condition:** Login as an admin
- **Post-condition:** Check Daily Donations & Servings

4 **Operation:** Login as crew

- **Pre-condition:** Collect Food

5 **Post-condition:** Serve Food

6 **Operation:** Poor Needy People

- **Pre-condition:** Select Area of such kind of people
- **Post-condition:** Serve Food

4.7. Activity Diagram

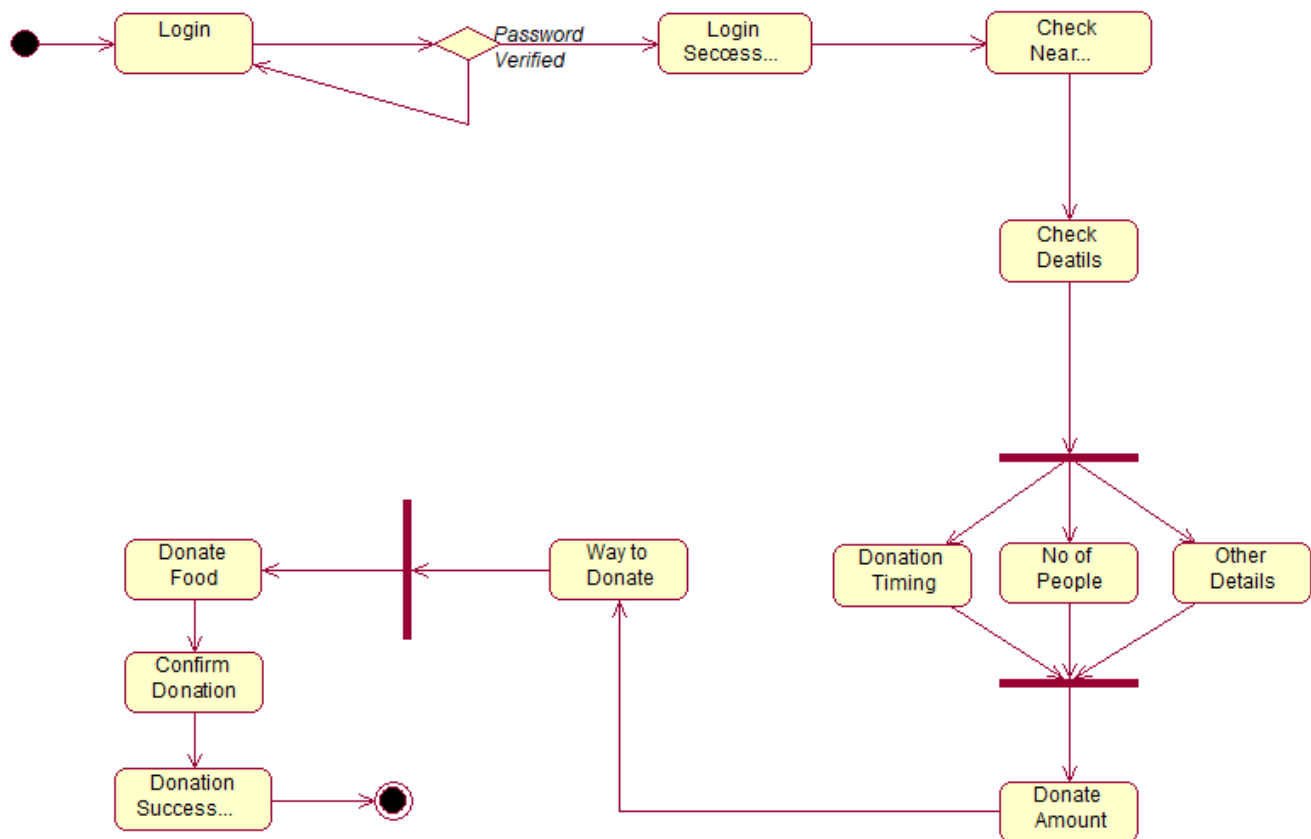


Figure 4.7 Activity Diagram

4.8. State Transition Diagram

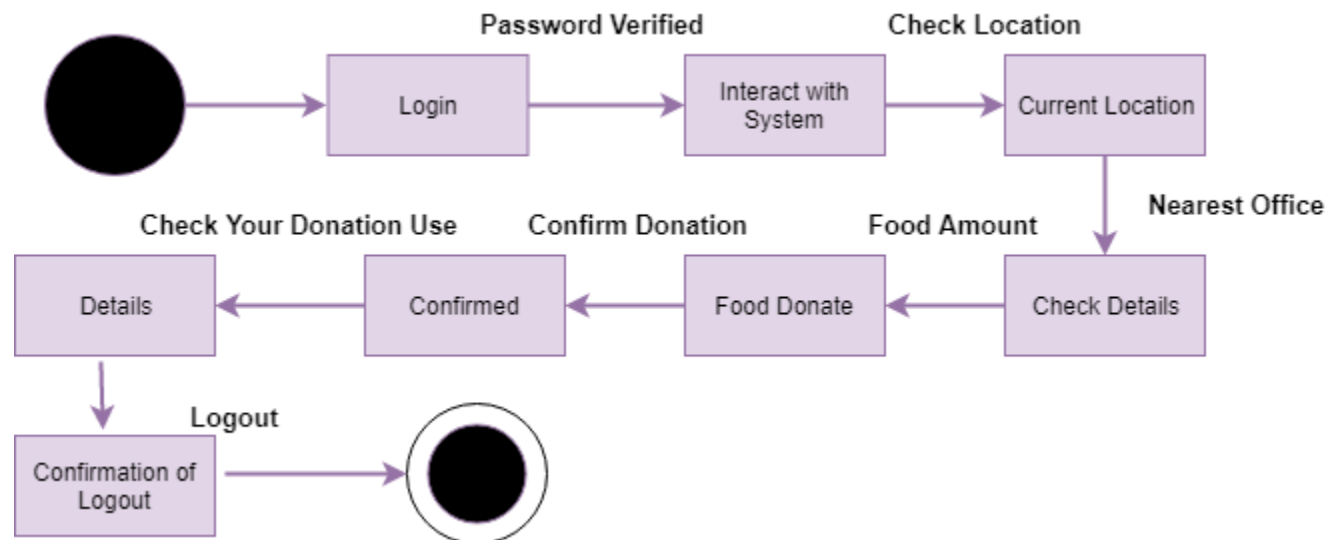


Figure 4.8 State Transition Diagram

4.9. Component Diagram

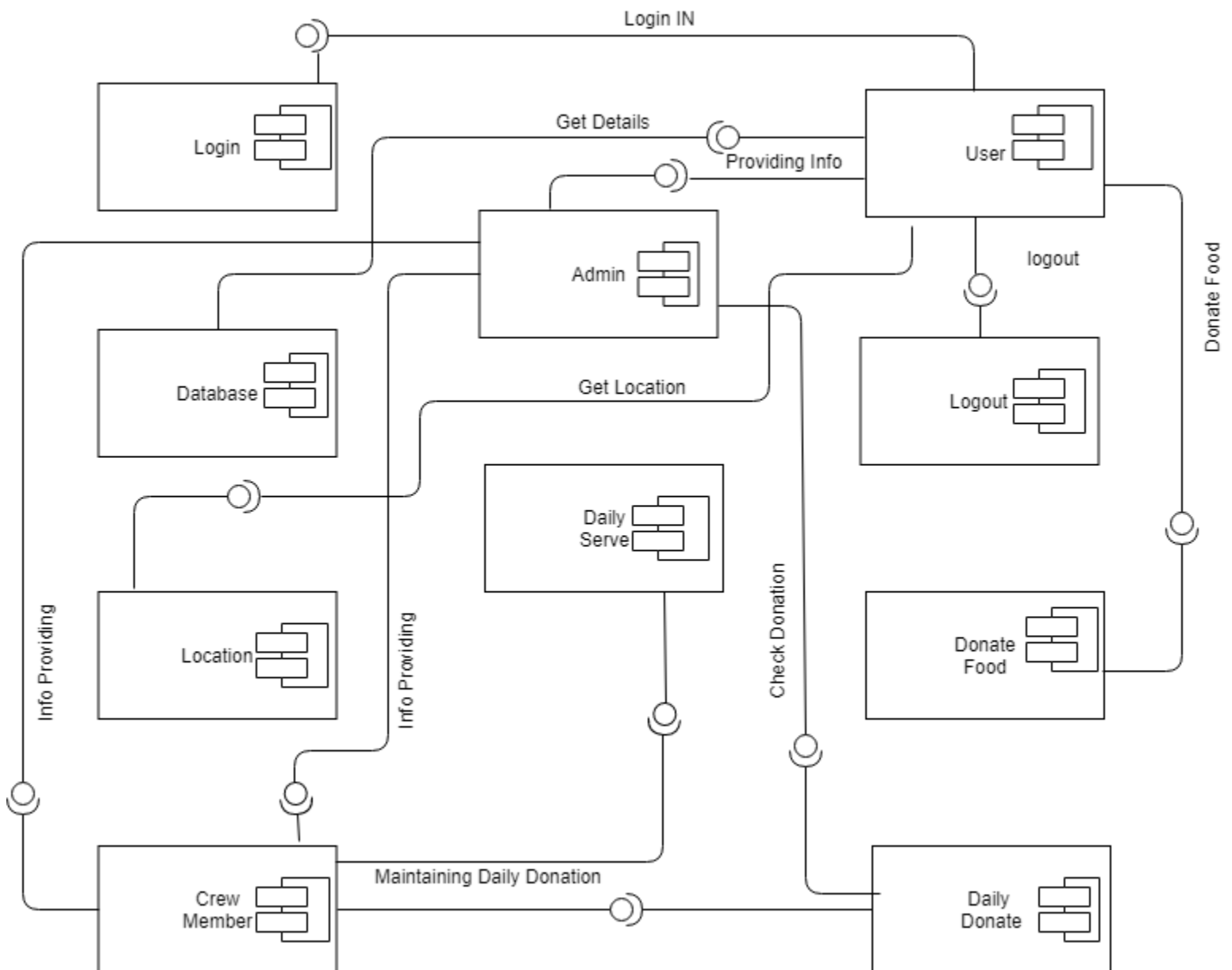


Figure 4.9 Component Diagram

4.10. Deployment Diagram

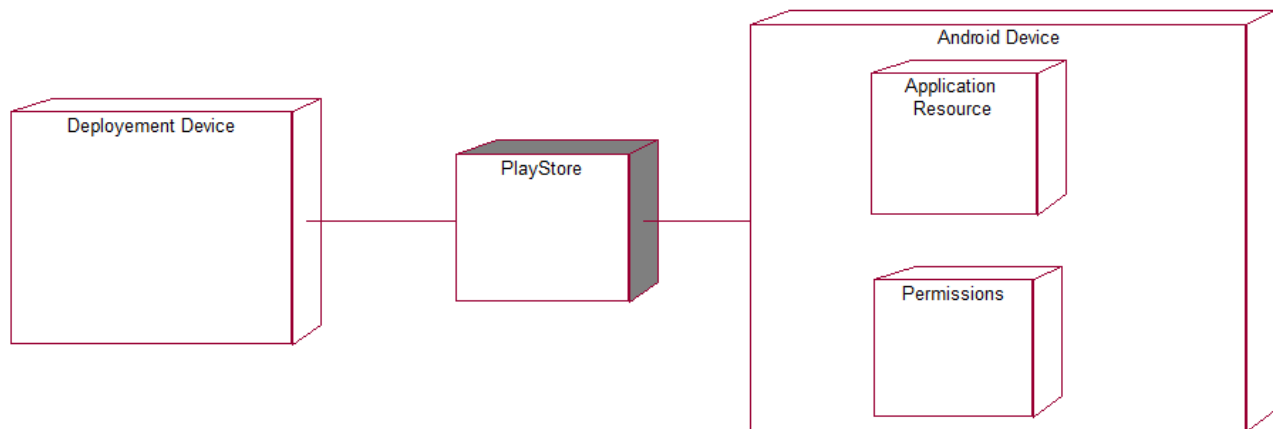


Figure 4.10 Deployment Diagram

Chapter 5

Implementation

Chapter 5: Implementation

This Chapter describe the implementation of features of our application, moreover this chapter is basically based on the explanation of flow controls, libraries and services. On the other hand it will also explain the developmental criteria use in this application like tools and techniques and coding standards

5.1. Important Flow Control/Pseudo codes

Following is the Pseudo code of the application that helps to understand how it works and what will be the flow of code:

Start

1. Login or Signup after opening an application
2. This app contains two interfaces.
3. One for User and other for office bearers
4. User can donate food
5. Office bearers can perform tasks like track location, get food and check daily serving and donations.

End

5.2. Components, Libraries, Web Services and stubs

Components define and control the behavior of Application Objects they are attached to. Following are different Android Studio Components that will use to implement our application.

- Activities
- Services
- Content Provider
- Broadcast Receiver

Libraries:

- Location Provider
- Location Tracker

Web Services:

- GPRS Services

5.3. Deployment Environment

We can deploy our Application in any environment but firstly we deploy it on android operating systems. After that we can potentially deploy our application to a greater variety of devices from tablets, Windows 10 and mobile phone operating systems.

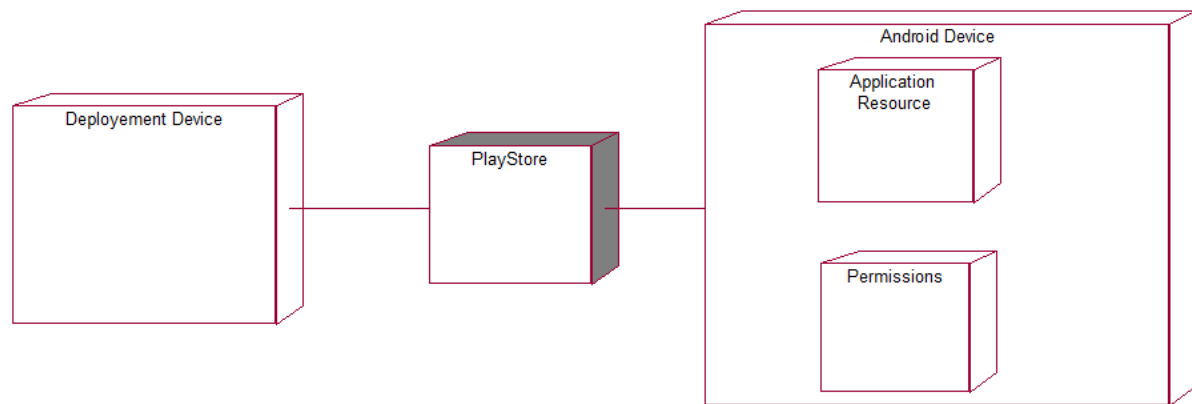


Figure 5.3 Deployment Environment

5.4. Tools and Techniques

The tools we use in our project are as follows.

- IBM Rational Rose XDE (For Making Diagrams)



- Android Studio (For Making Mobile App)



- Microsoft Office (For Documentation)



- Microsoft Project (For Some Documents)



- Firebase (For Database)



5.5. Best Practices / Coding Standards

Naming Conventions: The naming conventions in android we used

Variables: begins with the lowercase letters. The variables are used to store the applications information about any aspects of any state of app.

Classes: Classes are declared with the uppercase letter. The classes are the collection of functions.

Functions: Functions are starts with uppercase letters. Functions are collection of code and they are written once and they can be used as they need in program.

We also fulfill these constraints.

- Coding for efficiency
- Coding for readability
- Meaningful error messages
- Reasonably sized functions and method

5.6. Version Control

Android Studio provides us services to build our Application as a team in a different ways but rather than using this we individually complete our tasks in our separate machines and the finally joined all this and build Application in a one single machine in which our complete project is up and running. For further any update we fix this issue in the same way we did before.

Chapter 6

Testing and Evaluation

Chapter 6: Testing and Evaluation

Testing is the way a product, system or capability under the development is evaluated for correctness and proved to meet the stated requirement. Testing is done at each stage of development and has characteristic unique to the level of test being performed.

6.1. Use Case Testing

TEST CASE(S)	Steps	Expected Results
Test Case:	Signup1 – Normal Workflow	-
1)	Fill all the fields and submit data	System will display message of successful signup and divert the user towards the login page.
Test Case:	Signup2 – All fields not filled	-
1)	User skip some fields and submit data	System will display message to fill all the fields.
Test Case:	Signup3 – Username not available	-
1)	User choose the username which already has been taken and not available for the current user.	System will display the message to change the username.
Test Case:	Signup4 – Short length username or password	-
1)	User put the username or password containing characters less than 3.	System will display message to increase the length of username or password respectively.

Table 6.1 Use Case Testing (SignUp)

TEST CASE(S)	Steps	Expected Results
Test Case:	Login1 – Normal Workflow	-
1)	User fill both the fields	System will divert the user towards the home page.
Test Case:	Login2 – Both fields are not filled	-
1)	User doesn't fill both fields and try to login	System will display message to fill the both fields.
Test Case:	Login3 – Username or password not matching	-
1)	User enter the incorrect username or password to login	System will display the message to notify the user about the wrong username or password

Table 6.1 Use Case Testing (Login)

TEST CASE(S)	Steps	Expected Results
Test Case:	Logout1 – Normal Workflow	-
1)	After successful login	Check whether clicking on Logout option, redirects you to login page or not.
Test Case:	Logout2 – After Logout	-
1)	Check after logout	You should not be able to access any of your emails, account details
Test Case:	Logout3 – After Login	-
1)	After successful login	Unplug the network cable, and then click on logout link, it should not log the session off

Table 6.1 Use Case Testing (Logout)

TEST CASE(S)	Steps	Expected Results
Test Case:	Donation – Normal Workflow	-
1)	Click on Donate button	Location of donor will show on map
Test Case:	Donation – Unusual flow	-
1)	Click on donate button	Location will not fetching on map

Table 6.1 Use Case Testing (Donations)

TEST CASE(S)	Steps	Expected Results
Test Case:	Show Map – Normal Workflow	-
1)	Show fetched location	If Donor click on donate Button their location will be displayed on map
Test Case:	Show Map – Unusual flow	-
1)	Not Showing location	If Donor click on donate Button their location will not be displayed on map

Table 6.1 Use Case Testing

TEST CASE(S)	Steps	Expected Results
Test Case:	View Daily Donations – Normal Workflow	-
1)	Tap on Donation Record	System will display all the Donation days wise

Table 6.1 Use Case Testing (View Daily Donations)

TEST CASE(S)	Steps	Expected Results
Test Case:	View Daily Serving – Normal Workflow	-
1)	Tap on Serving Record	System will display all the Serving days wise

Table 6.1 Use Case Testing (View Daily Serving)

6.2. Equivalence partitioning

1) Sign up page:

a) Username input:

Here is the test condition for username input box:

Valid Input: If entered username is not existing already.

Valid Input: If entered username length is greater than 2.

Invalid Input: If entered username is existing already, and taken by another user.

Invalid Input: If entered username length is less than 3.

b) Password input:

Here is the test condition for Password input box:

Valid Input: If entered Password length is greater than 2.

Invalid Input: If entered Password length is less than 3.

c) Phone Number input:

Here is the test condition for Phone Number input box:

Valid Input: If entered Phone Number length is exactly equal to 11.

Invalid Input: If entered Phone Number length is greater than 11.

Invalid Input: If entered Phone Number length is less than 11.

2) Update Account page:

a) Password input:

Here is the test condition for Password input box:

Valid Input: If entered Password length is greater than 2.

Invalid Input: If entered Password length is less than 3.

b) Phone Number input:

Here is the test condition for Phone Number input box:

Valid Input: If entered Phone Number length is exactly equal to 11.

Invalid Input: If entered Phone Number length is greater than 11.

Invalid Input: If entered Phone Number length is less than 11.

6.3. Boundary value analysis

Test Scenario Description	Expected Outcome
Username length = 1	System should not accept
Username length = 2	System should not accept
Username length = 3	System should accept
Username length = 10	System should accept

Test Scenario Description	Expected Outcome
Password length = 1	System should not accept
Password length = 2	System should not accept
Password length = 3	System should accept
Password length = 10	System should accept

Test Scenario Description	Expected Outcome
Phone Number length = 5	System should not accept
Phone Number length = 10	System should not accept
Phone Number length = 11	System should accept
Phone Number length = 12	System should not accept
Phone Number length = 20	System should not accept

Table 6.3 Boundary Analysis

6.4. Unit testing

This is a developer test that is successively more complex. It being by integrating component

Test type	Unit testing
Test case number	1
Test case name	Registration
Test case description	The user should be enter valid email , name , password, phone, address, security question and answer (to get password if forget).
Item to be tested	All the fields must be filled, otherwise system should not let the user get registered.
Specification 1. If user fill all fields: System should display message to notify about successfully registration 2. If user not fill all fields System will display message to fill all the fields.	

Table 6.4 Unit Testing (Registration)

Test type	Unit testing
Test case number	2
Test case name	Login
Test case description	User will open the application. Login page will be visible to the user. User will enter his username and password. Then user will be diverted towards the homepage.
Item to be tested	All the fields must be filled and data should match with the database
Specification 1. User will enter his username and password. On successful login, user will be diverted towards home page. 2. If user not fill both fields, The system will display the message to fill the both fields. 3. If username or password doesn't match, The system will display the message that username or password is not matching, and will ask to check again the username and password	

Table 6.4 Unit Testing (Login)

Test type	Unit testing
Test case number	3
Test case name	Logout
Test case description	User will open the application. After Login to his account, at home page, user will tap on Sign Out option from the navigation drawer. System will divert the user towards the login page.
Item to be tested	After login, user must click on logout button and after that user must be divert towards login page

Table 6.4 Unit Testing (Logout)

Test type	Unit testing
Test case number	4
Test case name	Donate Food
Test case description	User Click on Donate Button then his location will be displayed on crew member's screen
Item to be tested	All the Location falling inside a particular category must display on screen

Table 6.4 Unit Testing (Donate Food)

Test type	Unit testing
Test case number	5
Test case name	Show Map
Test case description	User Click on Donate Button then his location will be displayed on crew member's screen
Item to be tested	All the Location falling inside a particular category must display on screen

Table 6.4 Unit Testing (Show Map)

Test type	Unit testing
Test case number	6
Test case name	View Daily Donations
Test case description	User will open the application. After Login to his account, at home page side menu user can view some of the details of his donations.
Item to be tested	All the donations falling inside a particular category must display on screen

Table 6.4 Unit Testing (Daily Donations)

Test type	Unit testing
Test case number	7
Test case name	View Daily Serving
Test case description	Crew Member will open the application. After Login to his account, at home page side menu crew member can view some of the details of his serving.
Item to be tested	All the Serving falling inside a particular category must display on screen

Table 6.4 Unit Testing (Serving)

6.5. Integration testing

Integration testing is done to test the functionality and interfacing between the module. The system is built up for various module which work together to automate the activities. This module is work together in a same less way to achieve the desired result. Integration testing will test for this property of module. These modules display a cause and effect relationships, if data in one module changed then it effects the data to change in some other module also.

6.6. Performance testing

Performance testing is performed to evaluate the performance of component of a particular system under a particular workload during this testing system component are monitored to verify both stability of system under the test. It strives to build performance standard into the implementation and design. These will include speed, stability, reliability and scalability.

6.7. Stress Testing

We normally used stress testing to understand the system limit and at which point these are executed. Stress testing is especially helpful in determining whenever the system will perform in a satisfactory manner if the current load goes well above the expected manner.

Chapter 7

Summary, Conclusion and Future Enhancements

Chapter 7: Summary, Conclusion & Future Enhancements

7.1. Project Summary

As a Muslim It's our duty to help humanity, as our religion and our beloved prophet (PBUH) emphasize on feeding those who are needy and helpless and spend their days and nights by being hungry. This app will helpful for those people who love to help the society in any matter. But the matter here is Food.

This era we are living in is indeed an era of technology and we are spending our most of time by engaging with mobile, so how it will be to do the good deeds with engaging with our favorite device?

If you want to Feed poor and Needy people you just have to download this app have to be registered over there. By your just one click our crew member will come to your place and will get the food which you use to throw out as a waste product, but we will give that to those who have to sleep without feeding their bellies. This app will have two interfaces, one for those who want to donate the remaining food and other interface will be for our crew members. When you will click the buttons which reads "DONATE FOOD" your location will be tracked over the account of our crew member, he will come to your place by tracking the location of yours; he will pick the food up. And according to schedule planned by us poor will come to our office and will collect the food from us.

7.2. Achievements and Improvement

First of all, after doing this work, as a Muslim I think that I have achieved my spiritual and moral values. Moreover I have learned the professional way of documentation, how to make to a product professionally and at last but not the least I have learned that how to test the product, the best way to implement a product and how to give value to your product in market.

The improvements will:

- Its graphical view will be much better then now.
- It will be compatible for different devices like e.g.
Laptops (web view) and Tablets (tab view)

7.3. Critical Review

Thinking about the present situation of our country and not only for our country POVERTY is a Worldwide and emotional issue and as a human we have feels for the needy and poor ones. We have dedicated our most of the lives to the mobile phones and technologies, meanwhile. Those people who waits for us to help them. This is the only way to awake the all technology lovers for helping the needy and poor ones. Now the matter of requirement is how this app works.

You just have to download this app, have to be registered over there. By your just one click our crew member will come to your place and will get the food which you use to throw out as a waste product, but we will give that to those who have to sleep without feeding their bellies. This app will have two interfaces, one for those who want to donate the remaining food and other interface will be for our crew members. When you will click the buttons which reads "DONATE FOOD" your location will be tracked over the account of our crew member, he will come to your place by tracking the location of yours; he will pick the food up. And according to schedule planned by us poor will come to our office and will collect the food from us.

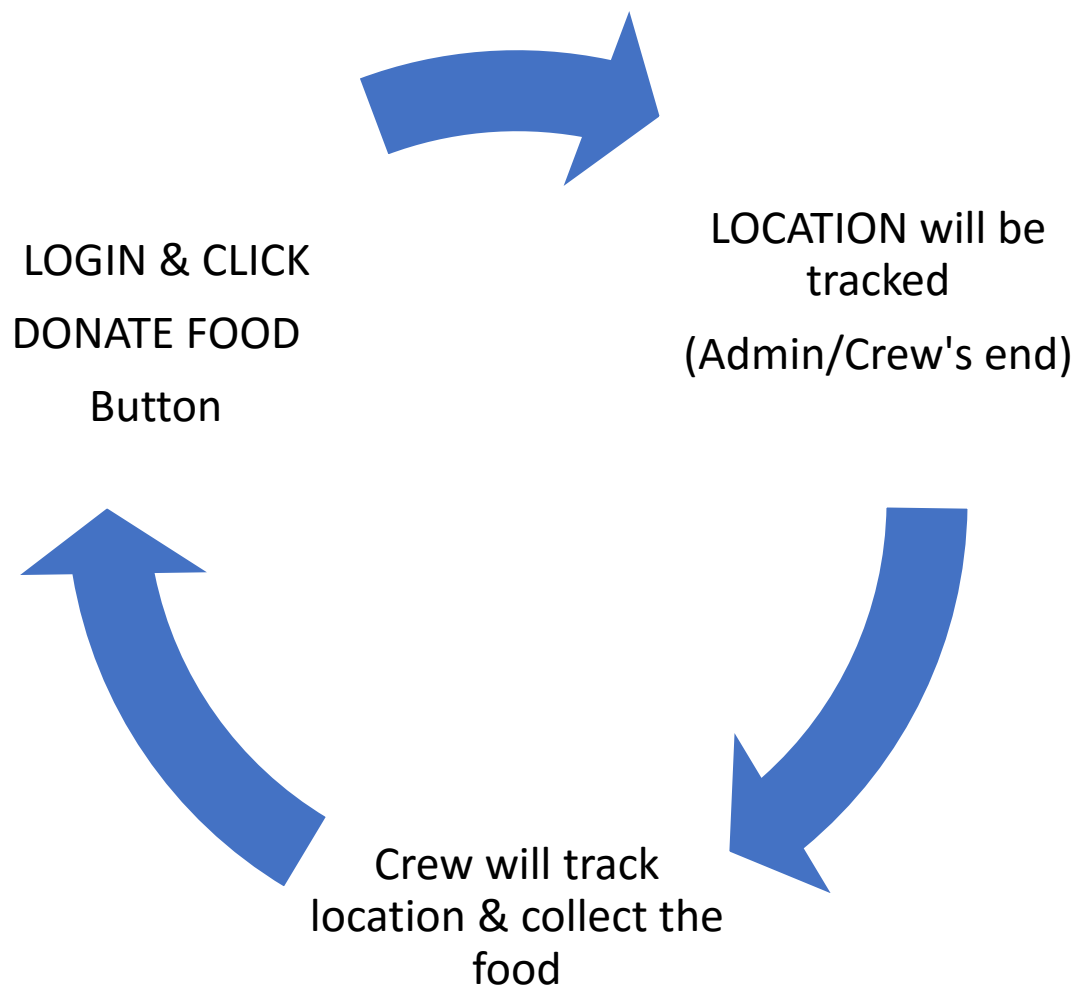


Figure 7.3 Critical Review

7.4. Lessons Learnt

After making this application with my spiritual as well as academic view, I have learned many things. And while making this application I have experienced a lot of new things, whatever we have learned in our curriculum, the application of that knowledge is applied while making this app.

Lessons I have learned:

- Application of the learned knowledge in a practical form.
- How to implement the things from paper to reality of substances.
- How to make the things happened in real life from the thoughts.
- How to do the documentation in professional way.
- How to test the product.
- How to make your product an eye-catching product or app.

7.5. Future Enhancements/Recommendations

Whatever knowledge I have learned in my academic life, I have learned that a good product is only that, which will go with the flow, whatever the changes and technology the world will make my product will be accommodate the modernity.

The recommendations will:

- The graphical view will be much better then now.
- It will be compatible in other different devices e.g.

Laptops (web view)

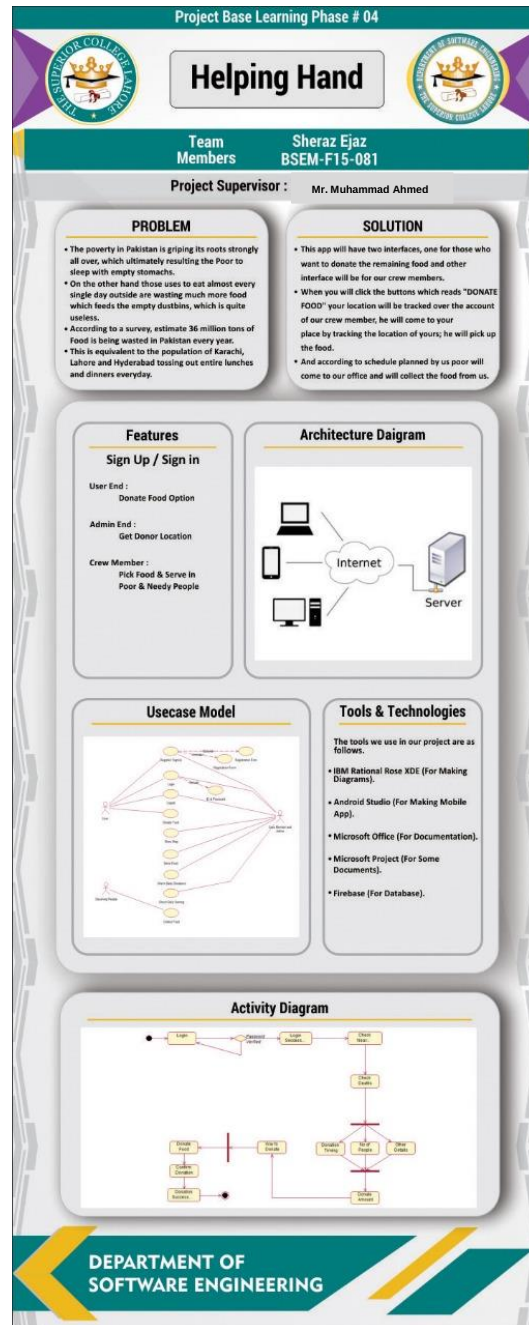
Tablet (tab view)

Appendices

Appendix A: Information / Promotional Material

This project is an online application for food donation. There are two types of user we considered in this project. One is Donor who will come & donate food and the other one is Crew Member who track the donor location and control all the main activities of this application.

A.1. Standee



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Reference and Bibliography

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