

# **Hover Food - A Smartphone Application**

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This Report Presented in Partial Fulfillment of the Requirements for the  
Degree of Bachelor of Science in Computer Science and Engineering

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**DAFFODIL INTERNATIONAL UNIVERSITY**

**DHAKA, BANGLADESH**

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## **APPROVAL**

This Project titled “**Hover Food - A Smartphone App : Find foods per your budget and choice**”, submitted by **Nusrat jahan Nisha, 152-15-6023, Susmita Sen, 152-15-6027, Umme Sabiha Alma, 152-15-6031 and Fatema Zannat, 152-15-6048**, to the Department of Computer Science and Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 3rd May 2019.

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## DECLARATION

We hereby declare that, this project has been done by us under the supervision of Dr Syed Akhter Hossain, Professor and Head, Department of Computer Science and Engineering (CSE), Daffodil International University.

We also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

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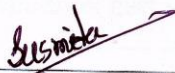


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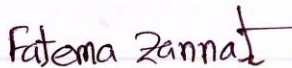
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## **ABSTRACT**

Food is our daily living part and right choice of food with the budget is always a challenging task. In general people find hard time deciding on a good place to eat within the budget. This project is conceived from this perspective as an android application for finding food within one's budget and in the nearby area. The main purpose of the application is to establish a link between restaurants or individual users who are finding food within their budget. This application will also help to reserve table or order food from restaurant. We have developed this application because sometimes due to lack of enough budget to buy food. It happens that after entering to a restaurant it's quite embarrassing to come out due to budget problem. This application will help to search food at nearby restaurants within our budget and according to our choice of food. The application can be further extended in the future using AI.

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# CHAPTER 1

## INTRODUCTION

In this chapter we are going to provide an Introduction of our project, followed by Motivation, Problem statement, Expected output and Report layout.

### 1.1 Introduction

Food is any substance expended to give dietary help to a living being. It is for the most part of plant or creature inception, and contains fundamental supplements, for example, sugars, fats, proteins, nutrients, or minerals. We need Food to live.

Across the world, there are so many restaurants. Where millions of people get rid of their hunger. Dhaka is one of the most densely and highly populated cities in the world. A huge number of working people .

We have developed an android app to establish a link between restaurants and the customers. People can easily find food as per their budget. Suppose one have 100 taka and he wants to eat burger within this money. In this situation if he/she enter into a restaurant and find that there is no burger coming out without having anything is a bit embarrassing. Or because of money problem he/she couldn't come out. In this kind of situation he/she can use our application to search food in nearby restaurant within their budget and choice.

To make this project, we have studied related work of android application. We also have analysis about restaurants and online food providing applications in Bangladesh, especially in Dhanmondi and around it. Technically, we have learned JAVA, XML, JSON, Data Mining, Firebase Authentication, Real-time Database, OOP by doing this project.

### 1.2 Motivation

Sometimes we don't get food according to our budget. It is so embarrassing if we enter to a restaurant and find that there is nothing in our budget. We can find food within our budget and order food as well. Without entering into a restaurant we don't

even know if our required food is available there or not. If Pathao/Uber can be one of the world's best transportation application without having their own vehicle, we thought 'Hover Food' can be one of the best food finding app without having a single restaurant of our own.

### **1.3 Objectives**

- Avoid tension about food at a new place
- Easily know the menu
- Easily book/reserve table on a restaurant
- Small shopkeepers/businessman get a floor to explore his business
- Find food according to one's budget and choice

### **1.4 Expected Output**

- User will find nearby restaurants
- Filter can be used (such as: budget, type of food, availability, user review)
- Advance Table reservation
- Food order for any event

### **1.5 Report Layout**

This report is divided into six chapters. The chapters are summarized below:

- (i) Chapter one covers a presentation of our undertaking Food Share alongside the inspiration driving this work. Targets, expected yield are likewise included here.
- (ii) Chapter two covers the writing survey and some past comparable works with near investigations and difficulties of our task.
- (iii) Chapter three is for the most part featured on the depicted business process model and use case structure with plan necessity of the undertaking.
- (iv) Chapter four is plan particular of front-end and back-end structure with our execution prerequisites.
- (v) Chapter five depends on the execution with the subtleties of the testing of our task.
- (vi) Chapter six which is the last one comprises of end and future potential outcomes of our undertaking work.

## CHAPTER 2

### LITERATURE REVIEW

In this chapter we are going to summarize the statistics we have studied about online food finding applications followed by some examples of related work performed in this field. We also discuss the challenges and how we overcome them.

#### 2.1 Introduction

We have proposed 'Hover Food' application. It is a remote eatery locator framework which depends on android gadgets. Android advanced cells draw in both the general and business clients. Android is a Linux based working framework for cell phones, for example, cell phones and tablets. Area Based administrations utilizing Android OS Motivated by the utilization of Android portable OS in Health and different applications, we present the utilization of Android Devices in Business applications, to be specific the locator and booking framework in eateries. Considering the promising future of Android market, it is beneficial and worth to write applications for android that target mob of people.

After going to a new city in every visitors need a restaurant located near by the major problem faced by the visitors to find a budget restaurant. Person need a path finder application or the smart mobile applications so that easy to track the location of the hotel and checkout the status. Normally survey tells that it is a complex situation to find the suitable restaurant.

"e-Restaurant: Online Restaurant Management System for Android....IJACSA Special Issue Selected Papers from International Conference & Workshop On Advance Computing 2013. Dr. Vinayak Ashok Bharadi, Associate Professor, IT Department, Thakur College of Engineering & Technology Kandivali(E) , Mumbai, India“ [1] .

As per the above paper e-restaurant system needs a high speed internet interface to provide the services.

"Digital Dining System using Android Parag Bhingre, Taruni Boddu, Aboli Chandak, Dhiraj Devkar, Prof. Shiv Prasad Patil Department of Information Technology, NBNSOE." use of application based system reduces the complexity [1] .

We can say that one single application for the multiple services continece of use for the user.

## 2.2 Similar Works

There are a couple of number of use and site accessible with respect to this idea. We have considered on these application and site. Here, we talk about the most helpful application and site and like our application.

### 2.2.1 Foodpanda

'Foodpanda' is a German mobile food delivery marketplace headquartered in Berlin, Germany, operating in 40 countries and territories [3]. The service allows users to select from local restaurants and place orders via its mobile applications as well as its websites. This is a food delivery project by which one can order food from his/her preferred restaurants. Here one can choose restaurant. Then the app will show the food items available at the chosen restaurant. The customer can choose a restaurant. The customer can choose any food item to order. After that customer have to select the method to get food. They have to choose where the food should deliver. Finally they can track their ordered food till delivery. The company has partnered with over 27,095 restaurants in 193 cities and works with over 15,733 delivery riders [3] . Foodpanda Bangladesh has a wide range of 2000+ restaurants available from Dhaka, to Chittagong through to Sylhet. [4]. Foodpanda Bangladesh continues to grow strongly with more than 300,000 app downloads and 100 percent revenue growth year on year [5] .

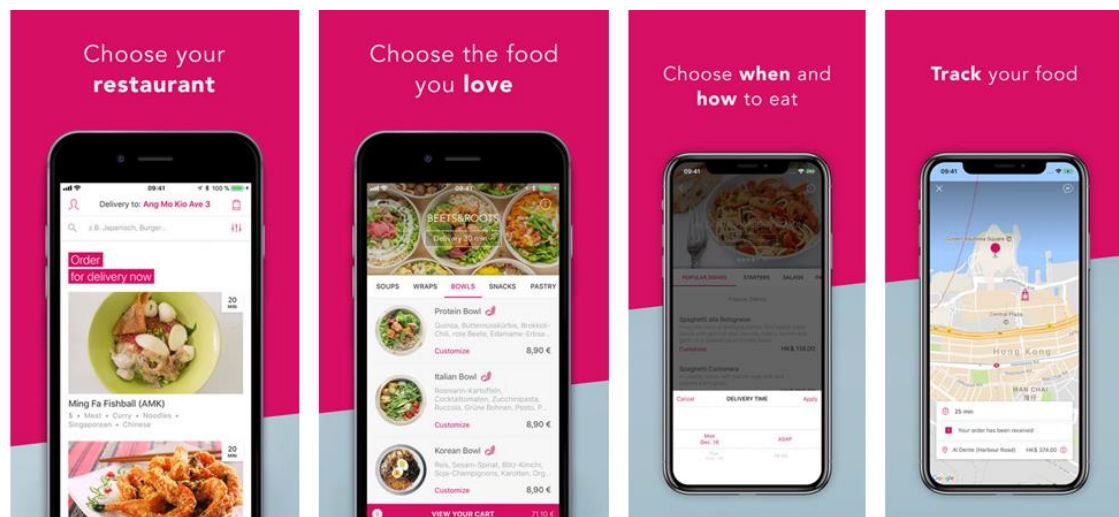


Figure 2.1: User Interface of Foodpanda Application

## 2.2.2 Pathao Food

Pathao food is a Bangladeshi food delivery application based on android. Founded in 2015, Pathao is among the fastest growing tech startups in Asia which has dedicated itself to create solutions to minimize infrastructural problems. A fast paced organization, the company gives it employees an immense amount of space to grow professionally as well as take ownership of the initiatives undertaken in the organization. People have to select their location and pick a restaurant among thousands available. Then they have to pick any item and checkout. Pay the delivery agent with cash or through digital payment system and can rate with their experience. Pathao continues to grow strongly with more than 1,000,000 app downloads [6].

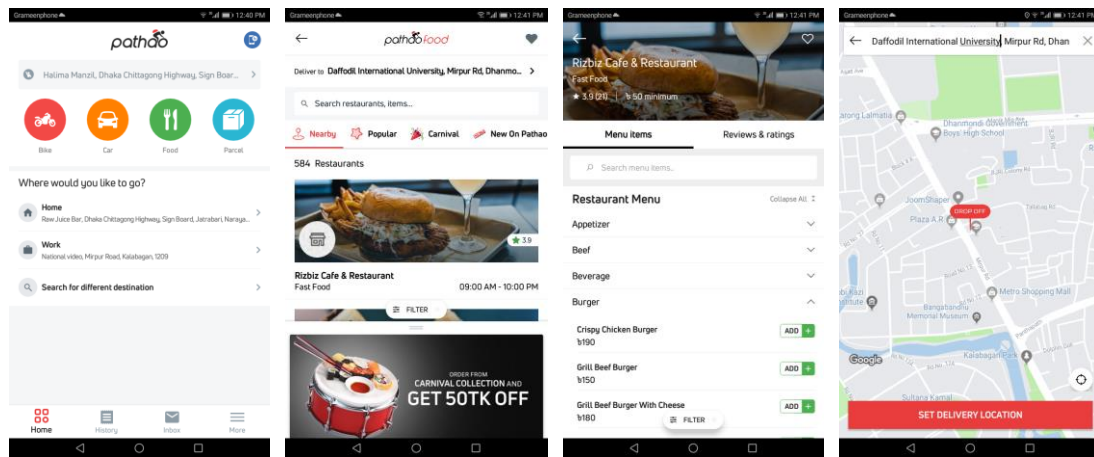


Figure 2.2: User Interface of Pathao Food Application

## 2.2.3 Zomato [7]

Zomato is an Indian restaurant search and discovery service founded in 2008 by Deepinder Goyal and Pankaj Chaddah. It currently operates in 24 countries [8]. It provides information and reviews of restaurants, including images of menus where the restaurant does not have its own website and also online delivery services in some countries. The authority of the application gathers information from every restaurant on a regular basis to ensure our data is fresh. The vast community of food lovers share their reviews and photos, so they have all that they need to make an informed choice.



**Figure 2.3: User Interface of Zomato Application**

### 2.3 Comparative Study

We have studied some application and website regarding the concept of finding food according to one's choice and budget. Most of them are developed for finding or ordering food. None of them uses budget filter. It will take time to find out food of our budget. Now-a-days 39% people use website or smartphone applications to find or order food. So we have tried to focus on Bangladesh perspectives. 'Pathao' or 'Food Panda' are helping to find food from registered restaurants. If any restaurant authorities don't sign up to their sites those restaurants cannot be found through those applications. But our main target is to help budget restaurants to conduct customers easily. Our team will go door to door of the restaurants to receive and update their menu. So, there will be no chances for missing any restaurant's updated menu. 'Zomato' used to go restaurants and collect data to upload at their application. But they do not use any budget filter. So people need time to find out food according to their budget. Beside that only city people are getting benefit from this applications. But when we went to a rural area those applications don't work. We will spread the application among the whole country. If someone wants to find or order food, he or she has to take the food from their selected places. But through our project, anyone can share their restaurant's food details from anywhere among the country.

### 2.4 Scope of the Problem

Our application has some uncommon element which improve our application than other existing undertaking and take care of the issues. Some special features of our application are:

- Verified organization.
- Filter according to our budget
- Phone number verification.
- Easy to get register as restaurant, admin or individual user.
- Established a link between budget restaurants and customers.
- Easy to make a food availability post.
- Easy to confirm food pick-up request.
- Navigate pick-up location from current location.
- User friendly UI design.
- Fast loading and high performance.

## 2.5 Challenges

Amid various phases of this venture we needed to confront a couple of difficulties. We had the capacity to effectively conquer those difficulties. The challenges we confronted were:

- We have faced challenge when we want to create a real time database. We have overcome this challenge by using Google firebase.
- Structuring and executing an easy to use and intelligent UI utilizing XML was likewise trying for us.

We likewise confronted test to make the task recipient for the eatery. On the off chance that the application isn't recipient for them, they won't be intrigued to utilize it.

We have include 'altruism' direct framework toward tackle this issue.

- Some other common challenges was deadline, Requirements analysis, Quality of Code, Performance and efficiency of system.



## CHAPTER 3

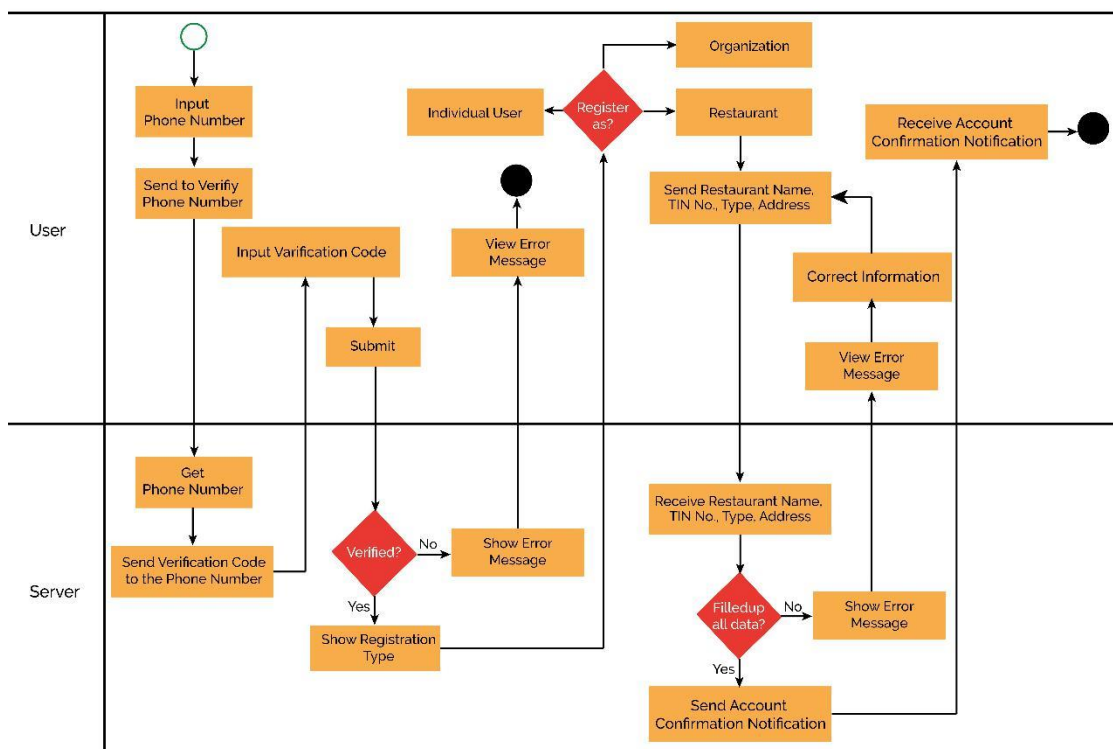
### REQUIREMENTS SPECIFICATION

In this chapter we are going to discuss about all the requirements that will be needed to complete the proposed system. Use case diagram and description; other requirements are described in this chapter.

#### 3.1 Business Process Model

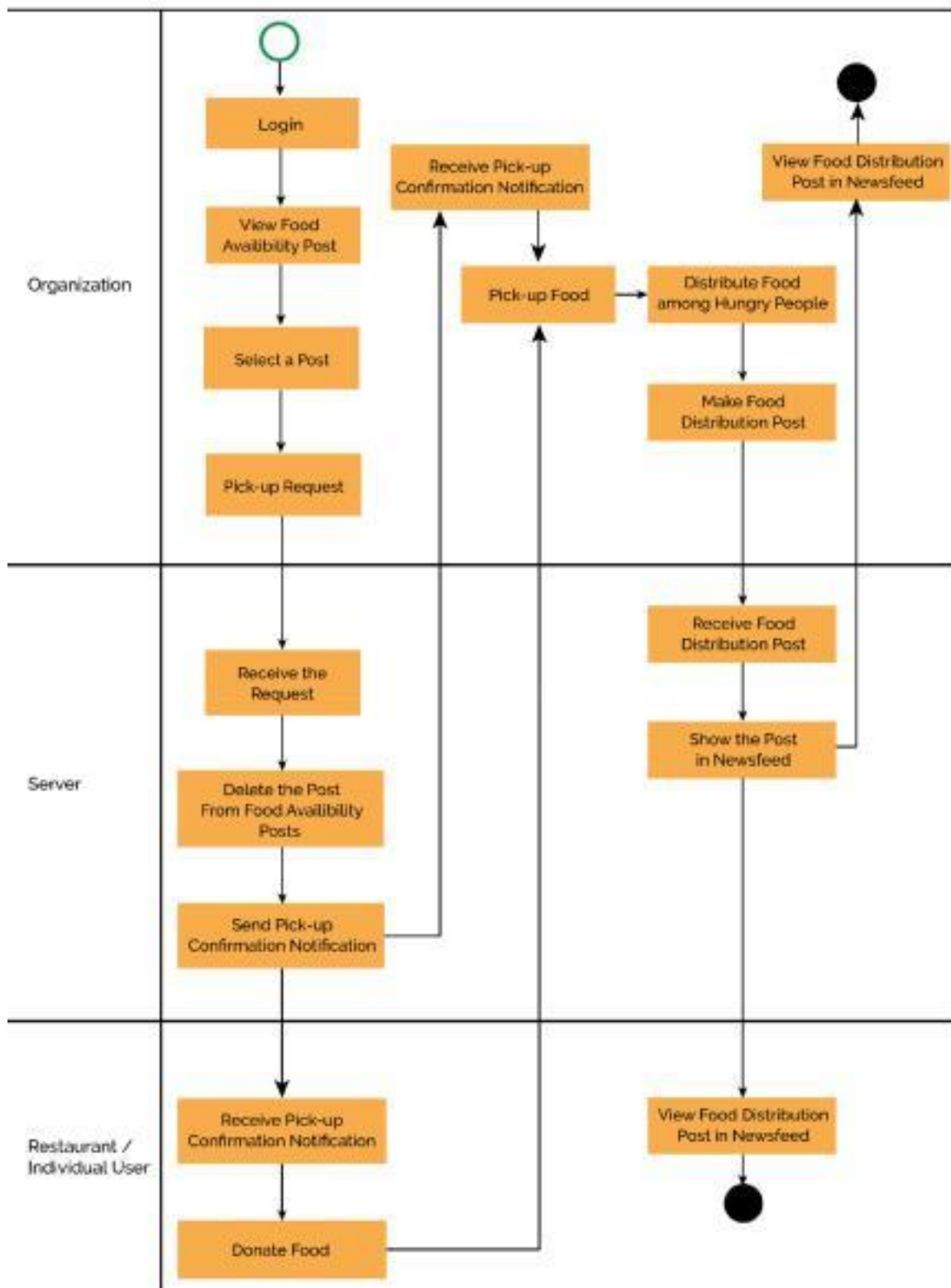
Business process modeling (BPM) is an absorption of business process the board and framework building of an association or venture. It depicts the explanatory portrayal of any association or endeavor. It expands business quality and furthermore diminish business cost. Business process modeling can be changed or improved to get new business openings.

#### Business Process Model for Restaurant Admin's Signup:



**Figure 3.1:** Business Process Model for Restaurant Admin’s Signup

Business Process Model for Food Pick-up Request & Confirmation:



**Figure 3.2:** Business Process Model for Food Pick-up and Distribution

### 3.2 Business Process Model Description:

Restaurant admins have to register by providing necessary information. Every user can easily login through mobile number verification, if they are registered.

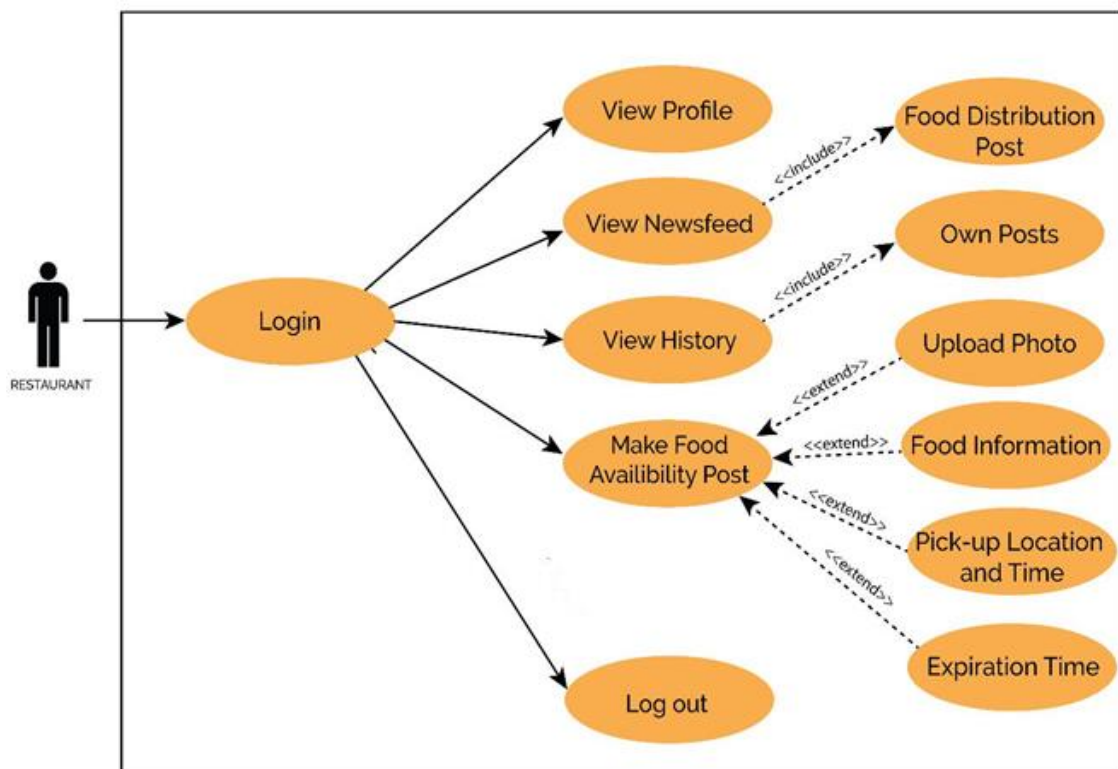
When restaurants and individual users login, they can view the recent food availability posts. User can filter by their budget and preferred food. If they want to collect the food, they have to click 'Pick-up' button. Server will automatically send pick-up confirmation notification to both admins and individual users. After getting pick-up confirmation notification, organization can collect the food in given pick up time and location by the restaurant.

### 3.3 Use case Diagram

A use case diagram shows all the action flows of a system along with the primary and secondary users. Where generally primary users are the human users and secondary users are technology based creations.

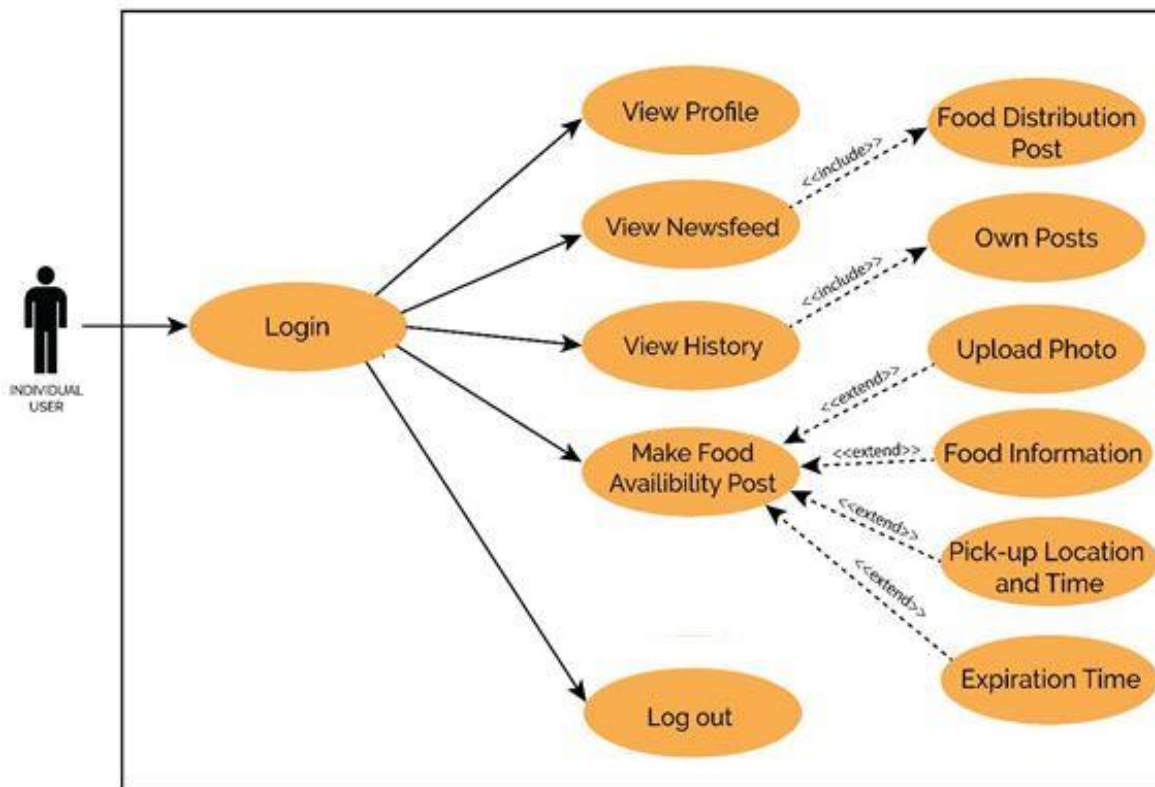
We attached the use case model for Restaurant and Individual user separately.

#### Use case Diagram for Restaurant:



**Figure 3.3:** Use case Diagram for Restaurant

## Use case Diagram for Individual User



**Figure 3.4:** Use case Diagram for Individual User

### 3.4 Use Case Description

Use case descriptions are made to clarify the actions of the use case diagram. Pre-conditions and post conditions of an action performed are explained in use case description. Use case description of our proposed system.

Table 3.1: Description of Use Case for Login

Use case	Login
Primary Actor	Restaurant Admin, Individual user
Secondary Actor	Server
Actor's Goal	To login to the application
Pre-condition	Provide registered phone number for verification.
Post condition	View newsfeed

Table 3.2: Description of Use Case for View Newsfeed

Use case	View Newsfeed
Primary Actor	Restaurant Admin, Individual user
Secondary Actor	None
Actor's Goal	To view the newsfeed
Pre-condition	Login to the application
Post condition	Restaurant and individual user can make food availability post

Table 3.3: Description of Use Case for Make Food Availability Post

Use case	Make food availability post
Primary Actor	Restaurant, Individual user
Secondary Actor	Server
Actor's Goal	To make a food availability post
Pre-condition	Login to the application and upload image, detail information about the food, pick-up location and time, food expiration time
Post condition	View own the post in history

Table 3.4: Description of Use Case for View Food Availability Post

Use case	View food availability post
Primary Actor	Individual User
Secondary Actor	Server
Actor's Goal	To view the food availability posts
Pre-condition	Login as an registered organization
Post condition	Can make a pick-up request

### 3.5 Design Requirements

#### Design requirement for Restaurant or Individual User

- Able to sign up.
- Login.
- View newsfeed.
- Find food using food type and Budget filter.
- Able to order food for home delivery
- Able to set a pickup location and time.
- View own profile.

#### Design requirement for Restaurant Admin

- Able to sign up.
- Login.
- View newsfeed.
- View the food availability posts.
- Make pickup confirmation request.
- View map direction from current location to the pickup location.
- Upload photos after food distribution.
- View own profile.

# CHAPTER 4

## DESIGN SPECIFICATION

### 4.1 Front-end Design

The front-end design is the user interface. When user run the application or website, they only can view the front-end design. So to attract the user, front-end design should be user friendly and simple. Therefore we tried to keep our front-end design as simple as possible and also user friendly.

Our project front-end has mainly designed by XML, which stands for Extensible Markup Language. We have used SVG files and Adobe Photoshop too.

#### XML : Extensible Markup Language

Extensible Markup Language (XML) is a markup language that defines a set of rules for encoding documents in a format that is both human readable and machine readable. The W3C's XML 1.0 Specification and several other related specification define XML. It is a textual data format with strong support via Unicode for different human languages. XML has come into common use of data over the internet. [7]

We have use XML in our application. It is very easy to use and flexible text format. Our Buttons, layouts, text views, image views are designed by using XML.

#### SVG: Scalable Vector Graphics

SVG is an XML-based vector image format for two-dimensional graphics with support for interactivity and animation. The SVG specification is an open standard developed by the World Wide Web Consortium (W3C) since 1999. SVG images and their behaviors are defined in XML text files. This means that they can be searched, indexed, scripted, and compressed. As XML files, SVG images can be created and edited with any text editor, as well as with drawing software. [8]

#### **Adobe Photoshop:**

Adobe Photoshop is a raster graphics editor developed and published by Adobe Systems for macOS and Windows. Photoshop was created in 1988 by Thomas and John Knoll. Since then, it has become the de factory industry standard in raster graphics editing,

such that the word "photoshop" has become a verb as in "to Photoshop an image," "photoshopping" and "photoshop contest", though Adobe discourages such use. It can edit and compose raster images in multiple layers and supports masks, alpha compositing and several color models including RGB, CMYK, CIELAB, spot color and duotone. Photoshop has vast support for graphic file formats but also uses its own PSD and PSB file formats which support all the aforementioned features. In addition to raster graphics, it has limited abilities to edit or render text, vector graphics (especially through clipping path), 3D graphics and video. Photoshop's feature set can be expanded by Photoshop plug-ins, programs developed and distributed independently of Photoshop that can run inside it and offer new or enhanced features. [11]

## **4.2 Back-end Design**

The back-end design is basically how the server, application and database works, update and maintain. It is not visible to the end users. But it works to support the front-end of the application. So back-end design is most important part of a project.

We have used Java in our back-end design of our project. We also used firebase for real time data parsing.

### Java:

Java is a general-purpose computer-programming language that is concurrent, class-based, object-oriented, and specifically designed to have as few implementation dependencies as possible. It is intended to let application developers "write once, run anywhere" (WORA), meaning that compiled Java code can run on all platforms that support Java without the need for recompilation. Java applications are typically compiled to bytecode that can run on any Java virtual machine (JVM) regardless of computer architecture. As of 2016, Java is one of the most popular programming languages in use, particularly for client-server web applications, with a reported 9 million developers. Java was originally developed by James Gosling at Sun Microsystems (which has since been acquired by Oracle Corporation) and released in 1995 as a core component of Sun Microsystems' Java platform. The language derives much of its syntax from C and C++, but it has fewer low-level facilities than either of them. The latest version is Java 10, released on March 20, 2018 [10].



### Firestore:

We have used Firestore as our database. Firestore is a realtime database by Google. In firestore, data is stored and synced with NoSQL cloud database. Data is synced across all clients in realtime, and remains available when your app goes offline. The Firestore Realtime Database is a cloud-hosted database. Data is stored as JSON and synchronized in realtime to every connected client. When you build cross-platform apps with our iOS, Android, and JavaScript SDKs, all of your clients share one Realtime Database instance and automatically receive updates with the newest data. [14]

### **4.3 Interaction Design and UX**

Interaction Design is an important component within the giant umbrella of User Experience (UX) design. Interaction design is specifically a discipline which examines the interaction between a system and its user via an interface and User experience (UX) design is the process of creating products that provide meaningful and personally relevant experiences. It may also incorporate design focused on how information should be presented within such a system to enable the user to best understand that information though this is often considered to be the separate discipline of “information design” too. Our application is very user interactive. We have tried to make this application’s user interface very easy to understand and use.

### **4.4 Implementation Requirements**

To implement our android application project, we used different types of tools, attributes and components which are helped us to develop our android application project successfully. In Implementation requirements area, we discuss all those tools, attributes and components that we have used to develop our android application project and making attractive to the user.

#### **4.4.1 Android Studio**

Android Studio is the authority incorporated improvement condition (IDE) for Google's Android working framework, based on JetBrains IntelliJ IDEA programming and structured explicitly for Android advancement. There are a great deal of highlights of android studio as like that Gradle based form support, Android-explicit refactoring and handy solutions, Lint instruments to get execution, ease of use, variant similarity and different issues, App-marking abilities, Template-based

wizards to make regular Android structures and parts, Android Virtual Device (Emulator) to run and troubleshoot applications in the Android studio. The best element of android is supporting various programming dialects. All these reason we use the Android Studio as our application coordinated improvement condition (IDE) [15].

#### **4.4.1 Basic Android Overview**

Android is a far reaching stage, which implies it is a finished programming stack for a cell phone. It gives every one of the instruments structures to creating versatile application essentially, rapidly and effectively. We structure our application with Extensible Markup Language (XML), association with database server with Java Language in Android Studio. Android is likewise open source stage where designer can make any sorts of UI which the engineer needs to plan his/her application. The engineer can compose any programming language for his/her application in android studio. So designer can undoubtedly create distinctive kinds of portable application by use it for client collaboration.

#### **4.4.2 The Emulator**

An emulator is an Android Virtual Device (AVD) that speaks to a particular android gadget for imitating any sorts of android application or venture. The designer can utilize an Android emulator as an objective stage to run and test his/her Android applications on his/her Personal Computer (PC). By Using Android emulators is discretionary. We run our application in both our own gadget and Android emulator as well. The emulator runs a similar code base as real gadget. The emulator is so lovely for imitating android ventures.

#### **4.4.3 Android SDK**

Android advancement begins with Android SDK (Software Development Kit). Android SDK is a lot of gathering of improvement instruments used to create and work of any sort of android application for android stage. That implies Android SDK is basic instruments for both creating and building any android application. We use Android SDK for both building up our android application and furthermore testing our android application when need to keep running for seeing yield. Least SDK variant 16 (Android 4.1, Jelly bean) is required to run this application.

#### **4.4.4 Firebase**

Firestore is a versatile and web application advancement stage created by Firebase Inc. in 2011, at that point procured by Google in 2014. Firestore gives a realtime database and backend as an administration. The administration gives application engineers an API that enables application information to be synchronized crosswise over customers and put away on Firestore's cloud. The organization furnishes customer libraries that empower combination with Android, iOS, JavaScript, Java, Objective-C, quick and Node.js applications. The database is additionally open through a REST API and ties for a few JavaScript structures, for example, AngularJS, React, Ember.js and Backbone.js. The REST API utilizes the Server-Sent Events convention, which is an API for making HTTP associations for accepting pop-up messages from a server. Engineers utilizing the real-time database can verify their information by utilizing the organization's server-side-authorized security rules. [16]

#### **4.4.5 Permissions Needed**

- Read and write access of external storage.
- Internet permission.
- Camera permission.
- Location access permission.

## CHAPTER 5

### IMPLEMENTATION AND TESTING

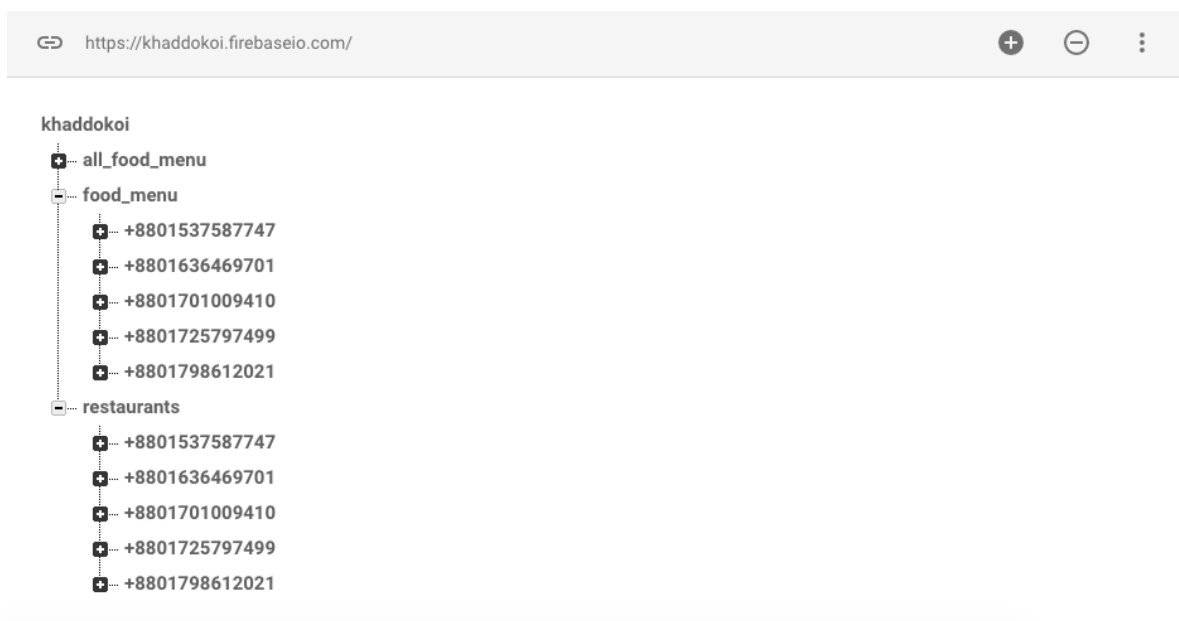
In this chapter we will show demo implementation of our project and test the whole project for its effectiveness and workings.

#### 5.1 Implementation of Database

The implementation phase is where developer installs the Database Management System (DBMS) on the required hardware, optimize the database to run best on that hardware and software platform, and create the database and load the data. The initial data could be either new data captured directly or existing data imported from a DBMS. The developer can establish database security and give the various users that the developer has identified access applicable to their requirements.

##### 5.1.1 Database Design

We have used Firebase as data manager to store data in our android application. When a user make a food availability post, it immediately appears to the registered organization newsfeed. There is no need to refresh the newsfeed. If we used MySQL server instead of firebase, we can not get the benefit of real time database, which means we have to refresh the newsfeed again and again to get updated newsfeed. For getting benefit of real time database, we have used firebase in our project. We have attached some screenshot of back-end database of our project.



**Figure 5.1** Database Implementation

Name	Size	Type	Last modified
food_menu/	–	Folder	–
restaurants/	–	Folder	–

**Figure 5.2 Database Storage**

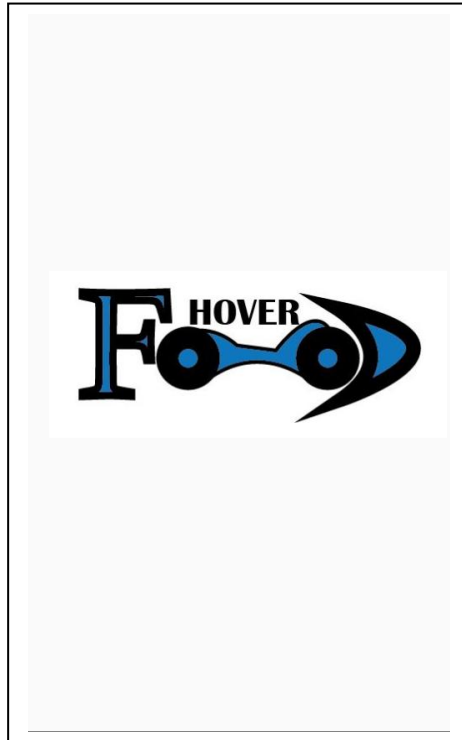
Identifier	Providers	Created	Signed In	User UID ↑
+8801644400252	📞	22 Feb 2019	22 Feb 2019	25nT2GAC0QSV7z42fJphYVY6Nz1
+8801701009410	📞	8 Mar 2019	8 Mar 2019	AriSYtTw7Sdy0KpNFg0SWRpZLi1
+8801751801593	📞	21 Feb 2019	22 Feb 2019	DVSv1aCdCXaZyjd50IWtpxlZBlq2
+8801725797499	📞	3 Apr 2019	3 Apr 2019	MGlyvRfa0SYO3x30vQrrJi5JTSj2
+8801798612021	📞	4 Mar 2019	2 Apr 2019	V4aINcviHdbGudz6bolo0rgvMT2
+8801636469701	📞	21 Feb 2019	2 Mar 2019	dW8tEDAlhpNLTv18q1WwFVfWsk...
+8801622722356	📞	23 Feb 2019	23 Feb 2019	itFvJ5kBMqQ0k5LHPwmsxWv3uxy1
+8801537587747	📞	27 Feb 2019	27 Feb 2019	mttlLEcHDgdorfaqQLnJDE2sbf1
+8801990348300	📞	31 Mar 2019	31 Mar 2019	nnpnDKTuFEid63gLY2h3rRW5zZ0z1

**Figure 5.3 Phone Number Verification**

## 5.2 Implementation of front-end design

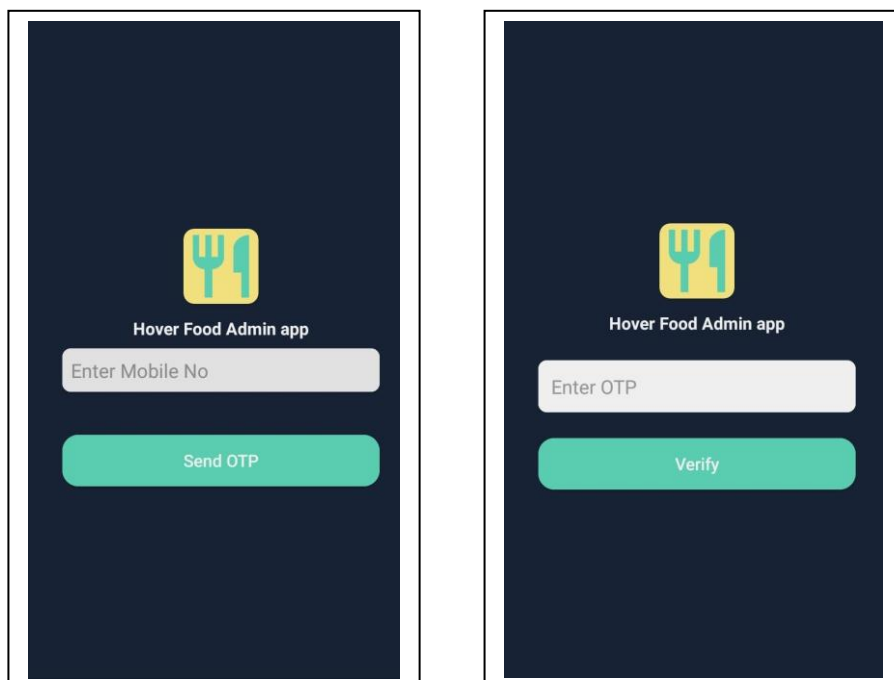
It was extremely a major test to build up a ravishing front-end plan which will be pulled in by the clients. For interactive design, we have constantly attempted to make a straightforward and simpler UI structure of our android application. Any client can without much of a stretch comprehend the introduction of the data. We have utilized basically XML to plan our front-end. UI of certain pages are appended beneath.

In figure 5.4, we have appended the screen capture of the beginning page of our application with the logo, application name.



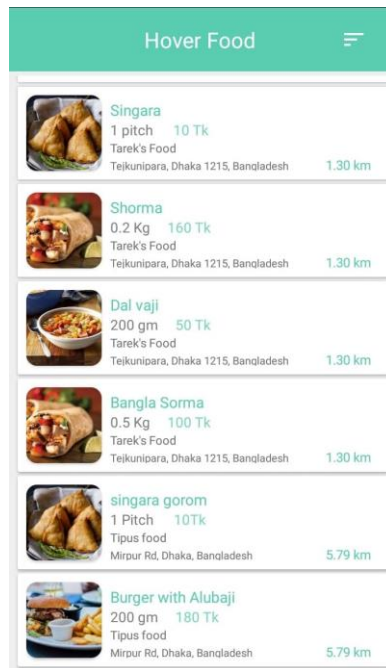
**Figure 5.4** A Screenshot of Intro Activity

Phone number verification activity has attached in figure 5.5. After fill-up the phone number, when user click on 'VERIFY PHONE NUMBER', user will receive a message with a verification code. User need not to fill-up the verification code. It will be filled up automatically. After submitting the code, user can verify his/her phone number. Phone number verification is needed while sign up and login to the application.



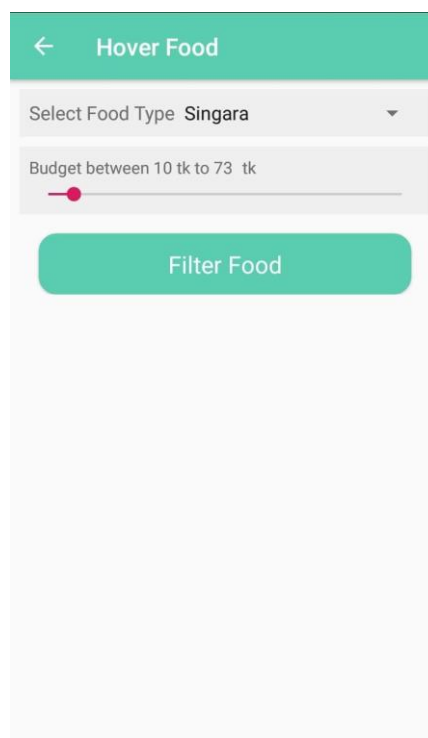
**Figure 5.5** A Screenshot of Phone Number Verification Activity

In figure 5.6, we have attached the newsfeed activity. All user can view how many meal have donated by which restaurant and served by which organization.



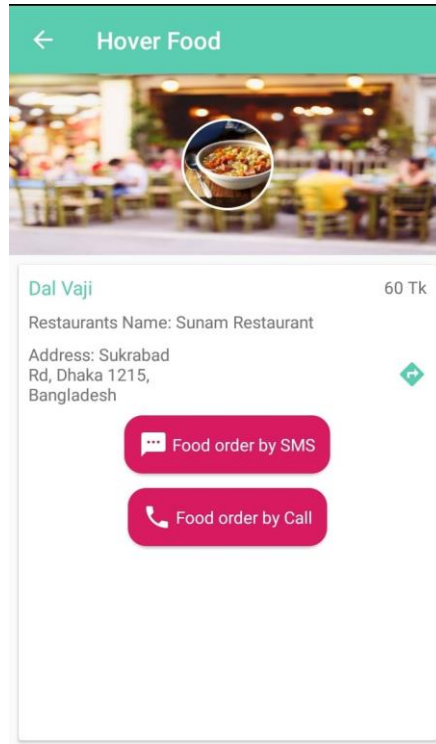
**Figure 5.6:** A Screenshot of View Newsfeed Activity

In figure 5.7, we can see the filtering system by budget and food type. By using these filters one can find their required food within their budget.



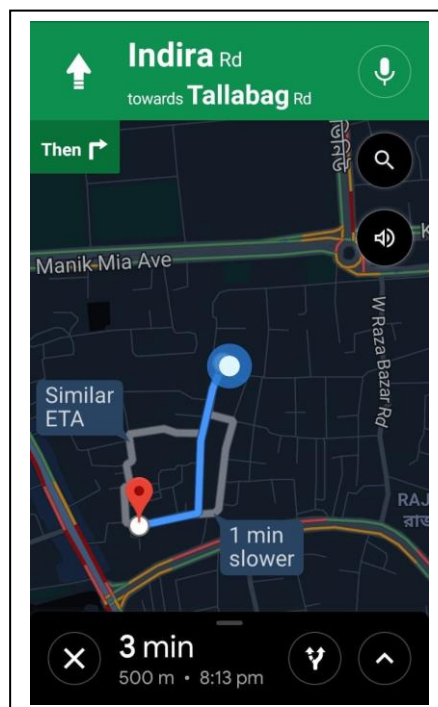
**Figure 5.7** A Screenshot of filtering Food by type and budget

In figure 5.8, we attached the activity of ordering food for home delivery. Whenever we click on our desired food it will show address of the restaurant and also provide option to order via sms or call.



**Figure 5.8** A Screenshot of Make Food Distribution Post Activity

In figure 5.9, we can see how the app show us the way to the restaurant.



**Figure 5.9** A Screenshot of navigation activity



### **5.3 Implementation of interaction design**

Our application is extremely client interactive. The introduction of data is straightforward and simple to give the required data. We have talked about a portion of our key highlights how we make our application interactive plan.

We have used phone number verification to sign up and login, which is secured and easy. When a verification number send to the phone number, user have to fill-up the verification code. Each user have to do this first time. The information that we wanted from user while signup, is presented in such a way that user can easily understand and fill-up. User can take a photo or select a photo from gallery when he or she needs to upload a photo. User can view map direction from its current location to restaurant's location.

### **5.4 Testing Implementation**

Testing of our project has been actualized. While building up every capacity are working fine. For this case we can say unit testing is finished. While some piece of venture created we have tried the collaborations between pages to pages. Intent to intent. As we don't have proficient analyzer and every one of the prerequisites are orchestrated by us. So we realize great about the client prerequisites and we have record the visual cues of client desire and tried the desire for clients. So we can say each kind of testing like unit testing, coordination testing and acknowledgment testing done close by.

### **5.5 Test Results and Reports**

Each venture needs a yield accordingly. According to our testing background we have discovered every single anticipated outcome. Every user can sign up and login by using phone number verification and providing required information. Restaurant and individual user can successfully make a food availability post and the posts are shown to organization successfully. Organization can request for pick-up food and after getting confirmation notification, the food availability post has been deleted. Organization also can post about the food distribution and this post appears in every user's newsfeed. So every client's prerequisite has been full filled.

## **CHAPTER 6**

### **CONCLUSION AND FUTURE SCOPES**

#### **6.1 Conclusion**

This paper contains the inspiration, structure designs, detailed execution and testing forms for our Hover Food application. We experienced numerous issues at the season of taking a shot at the task. By settling every one of them, we have extended our insight into refreshed innovation, for example, Android phone programming, Java programming. The application runs smoothly within the internet environment.

#### **6.2 Future Scope**

Our future target is to implement this project in our city and mainly inspire small restaurants. In the near future we will add some more feature to attract user to use our application. We can add user review system so that others can find nearest famous food easily. We also can add a notification system that notifies users if there is any food availability post created nearby. We will connect community centers where different kinds of social or commercial events are organized. We will also arrange campaign to increase awareness against food wastage and inspire people to use our application to save food from being wasted.

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