

**MOMS KITCHEN: A FOOD DELIVERY SYSTEM**

**BY**

**ABDULLAH AL IMRAN  
ID: 142-15-3690**

**MEHEDI HASAN EMON  
ID: 143-15-4628**

**AND**

**MEHERUN NESSA JUTHY  
ID: 151-15-5231**

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

**Supervised By**

**MD. JUEAL MIA**  
Lecturer  
Department of CSE  
Daffodil International University

**Co-Supervised By**

**NAFIS NEEHAL**  
Lecturer  
Department of CSE  
Daffodil International University



**DAFFODIL INTERNATIONAL UNIVERSITY DHAKA, BANGLADESH**

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## **APPROVAL**

This Project titled “**Moms Kitchen: A Food Delivery System**”, submitted by Abdullah Al Imran, ID No: 142-15-3690, Mehedi Hasan Emon, ID No: 143-15-4628 and Meherun Nessa Juthy, ID No:151-15-5231 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 (CSE) and approved as to its style and contents. The presentation has been held on 10<sup>th</sup> December, 2018.

### **BOARD OF EXAMINERS**

---

**Dr. Syed Akhter Hossain**  
**Professor and Head**

Department of Computer Science and Engineering  
Faculty of Science & Information Technology  
Daffodil International University

**Chairman**

---

**Narayan Ranjan Chakraborty**  
**Assistant Professor**

Department of Computer Science and Engineering  
Faculty of Science & Information Technology  
Daffodil International University

**Internal Examiner**

---

**Md. Tarek Habib**  
**Assistant Professor**

Department of Computer Science and Engineering  
Faculty of Science & Information Technology  
Daffodil International University

**Internal Examiner**

---

**Dr. Mohammad Shorif Uddin**  
**Professor**

Department of Computer Science and Engineering  
Jahangirnagar University

**External Examiner**

## DECLARATION

We hereby declare that, this project has been done by us under the supervision of **Md. Jueal Mia, Lecturer, Department of 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.

### Supervised by:

---

**Md. Jueal Mia**

Lecturer

Department of CSE

Daffodil International University

### Co-Supervised by:

---

**Nafis Neehal**

Lecturer

Department of CSE

Daffodil International University

### Submitted by:

---

**Abdullah Al Imran**

ID: 142-15-3690

Department of CSE

Daffodil International University

---

**Mehedi Hasan Emon**

ID: 143-15-4628

Department of CSE

Daffodil International University

---

**Mherun Nessa Juthy**

ID: 151-15-5321

Department of CSE

Daffodil International University

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## **ABSTRACT**

This project is based on a food delivery app and its own website. The purpose of this project is to focus on women empowerment and eradicating unemployment of the women folk of our society through their cooking skill. The customers of this app will avail the tremendous facility to enjoy tasty and healthy daily foods from anywhere of the country. Moreover, they will just feel like having heavenly food cooked by moms. This project will make it easier to generate employment and income for women and at the same time the potential users/ customers will get their preferred food at their convenience. The other benefits of this project is that any woman who is expert in cooking various types of foods can easily make her own employment and thus they can increase our demographic women empowerment. The website will also be very helpful to get every update about our services through the posting by the cooks and the ratings from the customers. Any organization can also order food on their special occasions. Above all, this app can easily eradicate women unemployment and ensure their empowerment and thus our country will have a better GDP, GDN and someday it may take us to another level of excellence.

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# CHAPTER 01

## Introduction

### 1.1 Introduction

Moms Kitchen is the process of food delivery and reception through an android application and website. It looks like ordering consumer goods online, many of these services allow customers to keep accounts with them in order to make frequent ordering convenient and at the same time the women cooks who can offer foods through posting. A customer will search for a favorite food item, usually filtered via type of cuisine and chosen from available items, and choose delivery. Payment can be made through cash on delivery and later we want to make other payment methods available if we find any promising sponsor.

This project is an attempt to give an opportunity to the housewives to earn money by staying at their own place.

### 1.2 Motivation

Food delivery Systems are getting very popular day by day. With food delivery system ordering food becoming easier. There are many food delivery systems now but all of them deals with restaurants only. This project is an attempt to give an opportunity to the housewives of our society who are willing to do something at their own and also provide healthy, hygienic foods to customers. The motive is to create an online food ordering system to deliver foods to the customers according to his or her own food menu. Though this wants to remove the dependence of the housewives of our country who are very good cooks and want to make their own identity and earn money at their own. As we know that most of the peoples of our country do not allow their wives to work outside, but they want to do something, then this system will be very helpful to them. On the other hand, most of the bachelors of our country who do not live with their family for study purposes, face many problems to have their meal to lead their daily life. They always want to prefer homemade food for their daily meal, but it is not possible for them. Our system can be the best choice for them. They can order food and get those easily by staying at home.

### **1.3 Objective**

Nowadays people are familiar with online food delivery system based apps which serves only the readymade fast foods whereas in terms of demanding the daily basis traditional foods are tough to find through these apps. On the other hand, it redirects to something different where the people demanding their desired habitual foods or their own type of preferable foods feels deprived of enough facility to get them because fast food is on the trend, not their own choice! In our app, we can encompass a large variety of foods. We designed our app in a way that the people who need food can search for their own categorical choices and can filter their searching options. On the other hand, the women folk as well as self-propelled entrepreneurs who want to do something at their own for earning can enjoy a nicely arranged venture through our app because they can post about their productions and they can also fix the perfect price of their products by seeing other substitute product lines. In a way, our app can help both the cook and the consumer.

### **1.4 Expected Outcome**

The main motto of this project is to give the easiest opportunity to the housewives of our country, whose life is bound behind the walls of their home but they want to be independent financially and for the people who are suffering a lot to find their appropriate daily meals and want to eat homemade foods. It is an android and web based project where anyone of the nearest area can have meal by staying at home through ordering foods according to the food menu which has been posted by the housewives.

The users can obtain the following things:

- Can access according to their own id
- Can order any food from the menu
- Can have the meal by staying at their home
- Can search the nearest
- Can login
- Can see the food menu
- Can comment the food

- Can rate the food
- Can post pictures of foods
- Can select price at their own
- Can assure the quantity
- Can do the registration
- Can see the location
- Can pay by credit cards or cash on delivery

## **1.5 Report Layout**

### Chapter 1: Introduction

In this chapter we have discussed about the motivation, objectives and the expected outcome of the project. Later Followed by the report layout.

### Chapter 2: Background

We discuss about the background circumstances of our project. We also talk about the related work, comparison to other candidate system, the scope of the problem and challenges of the project.

### Chapter 3: Requirement Specification

This chapter is all about the requirements like business process modeling, the requirement collection and analysis, the use case model of the project and their description, the logical relational database model and the design requirements.

### Chapter 4: Design Specification

In this chapter all the design of the project. Front-end design, back-end design, interaction design and UX and the implementation requirements.

### Chapter 5: Implementation and Testing

This chapter contains the implementation of database, front-end design, interactions and the test results of project.

Chapter 6: Conclusion and Future Scope We discussed about the conclusion and the scope for further developments which petty much derive about the project.

## **CHAPTER 02**

### **Background**

#### **2.1 Introduction**

Nowadays we can see that people are using various intermediary or third party apps or websites to get their desired foods which consists with basically fast foods, junk foods, heavy foods etc. From this types of circumstances we found that basically people are ordering foods and restaurants are serving foods but those intermediaries are working as the main connector between the service or product provider and the ultimate customer or consumer. Here the customers can evaluate mostly the delivery system but not the food quality or the service provider every time whereas we are providing the easiest rating method ever and creating a better market place for home-made foods which has barely been optimized in any other app or website such effectively so far.

#### **2.2 Related Works**

In Our country a lot of food delivery app and website is going on. But most of the apps and websites provide as usual restaurant foods which is run through the contracts between restaurants and service providing apps. During working with our own project, we also analyzed some related both old and new apps such as food panda<sup>[1]</sup>, hungry naki<sup>[3]</sup> and cookups<sup>[2]</sup>.

##### **2.2.1: Food Panda**

Food panda<sup>[1]</sup> provides all kind of restaurant foods given by their app and websites. It has FB page, Google+, Twitter, Pinterest account.

Popular restaurants



**Nando's** ★ 4.1 (509)  
 \$\$\$, chicken, chicken, fast food, mediterr...



**Amanat Biryani House**  
 \$\$\$, beef, bengali, chicken, indian, biryani



**Pizza Zone** ★ 3.3 (4)  
 \$\$\$, american, burgers, chicken, fast foo...



**Ghoraa Food & Kebab Min...** ★ 2.2 (5)  
 \$\$\$, asian, bengali, biryani, chicken, chine...



**Indian Snicy Chicken**



**Cream & Fudge** ★ 4.3 (63)



**Just Juice** ★ 4.4 (328)



**Dhansiri Restora-(Gulshan)** ★ 4 (502)

Figure- 2.1 Food Panda<sup>[1]</sup>

2.2.2: CookUps

Cookups<sup>[2]</sup> provides all kind of home-made foods given by their app and websites. It has FB page, Google+, Twitter, Pinterest account.

Discover Best Home-cooked Food in Dhaka



**Growups**  
 Gulshan 2



**Angelic Gausia**  
 Tejgaon



**Marjan Aktar**  
 Uttara



**Tomato Ketchup : Sufola - Growups Grocers**  
 Today and 6 more days

growl **৳120**



**Chicken Cream Cheese Wonton**  
 Today and Sun, Nov 4

**৳360**



**Biye Barir Alu Bukharar Achar**  
 Today and Sat, Nov 3

**৳400**

Figure 2.2: Cookups<sup>[2]</sup>

## **2.3 Comparative Studies**

Currently used websites and apps are helpful for people. They are delivering foods around the country. But there are some limitations. Firstly, most of the apps are just contracting with the restaurants and providing food delivery service where there is less possibility of finding simple home-made foods. Secondly, deliveries are delayed sometimes due to the operational problems or the pressure of customer flow in the restaurants. Thirdly, there are very few apps like ours which is based on the cook and the consumer relationship and most of them cannot take an instant order and perform accordingly. Fourthly, the users who join as cooks cannot independently post about their own food products because of the poor app structures. Fifthly, time management is not satisfactory since they use third party parcel delivery apps. As a result, most of the times food is delivered to late then the expected time. Last but not the least, these kind of apps which are based on cook vs consumer relationship, have not opened the scope for the cooks to post about their own products instantly to create a dynamic and competitive market which always pushes the consequences towards late delivery or only taking orders for future occasions which is not effective and inefficient from the aspect of business in terms of contemporary market competitions. We have made a developed and user friendly app which may mark some effective solutions to the problems with the previous apps or websites.

## **2.4 Scope of Problem**

We developed an application by which consumer type users can get home-made food and at the same time the women cooks as the service provider type user can deliver as per the order under the same platform. We already have added few smart features so that both the users will be benefitted. Hereby at the very beginning, we have thought for the women who want to be an entrepreneur in the sense of selling homemade foods. Secondly, we also considered the life of the people who stay away from their home and have to manage their daily foods from the outside which is not at all according to their own choice and taste because everybody wants to eat something he or she is habituated with more likely as having foods as if it was cooked by his or her mother.



## 2.5 Challenges

In this world or reality, no work is done in an easy way without facing any challenge or obstacle. Our project is not an exception from that. During accomplishing our project, we faced following challenges:

- There was problem while developing as we are new in this kind of platform. We implemented the best possible error free method and still we are trying to do some finer tuning.
- Ensuring database connection with front end was a sophisticated task.
- Making a user friendly interface took quite long time to design.
- Designing the materials was not easy. The app crushed for multiple times while editing the design to follow the commonly practiced customs and then we decided to design it at our own style.
- It was tough to set up the cookies in relation to carts while setting up their connection. Order management was very challenging to serve one person with multiple orders at a time.
- While researching the background in terms of collecting data about various food delivery services, we faced problem. Data scarcity, availability of pure data always kept us in tension.

# CHAPTER 03

## Requirement analysis and design

### 3.1 Business Process Modeling

Business process modeling is a technique to represent the workflow of a system. The main characteristic of the methodology are diagram base as “Flow Diagram”. Here, figure 3.1 shows the business process modeling of our project.

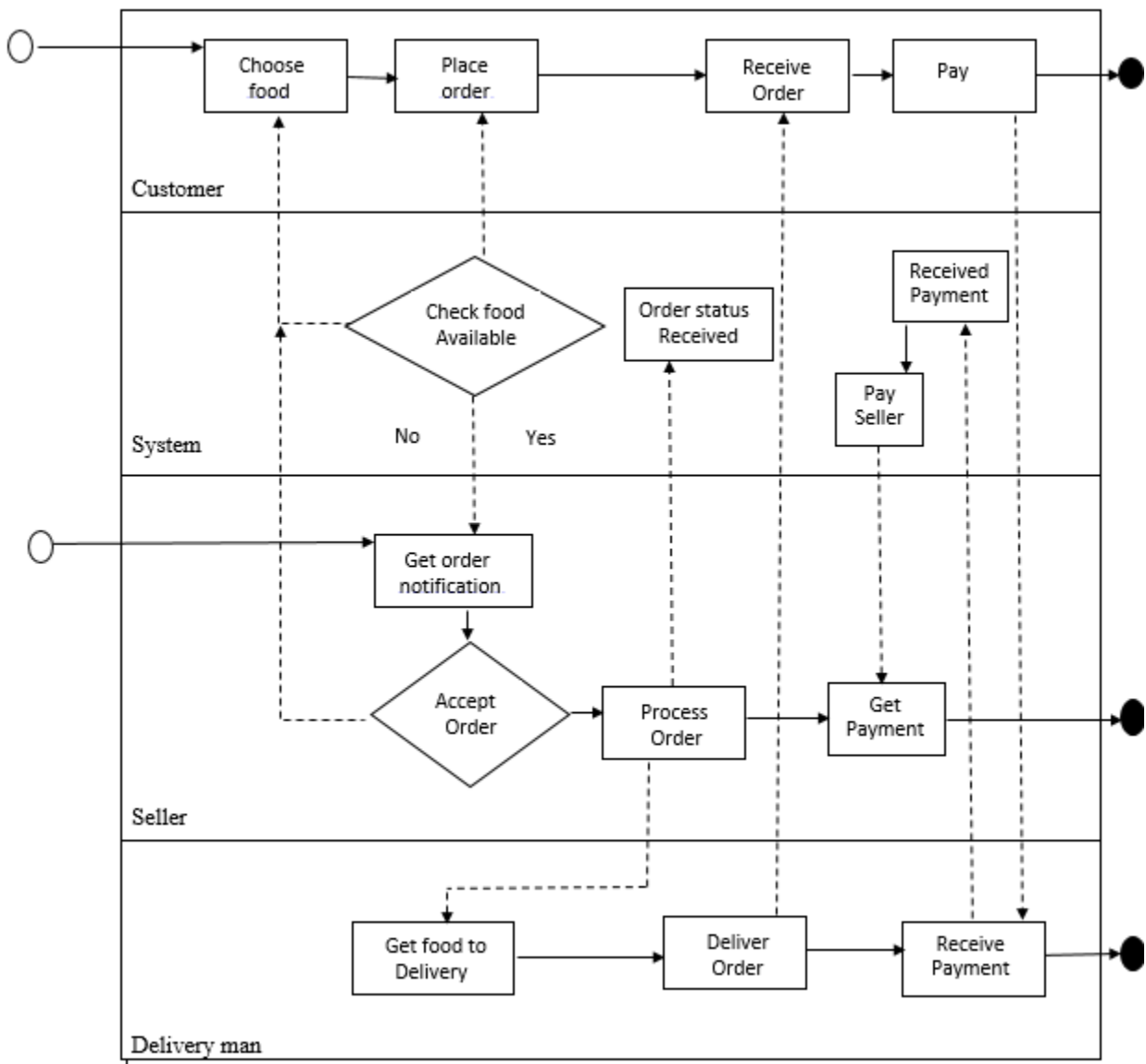


Figure 3.1: Business Process Module

## **3.2 Requirement Collection and Analysis**

One of the primary conditions of application development is requirement collection and analysis. For deployment, there are two types of requirements: one is the functional requirement and the other is nonfunctional requirement. Functional requirements are those activities that the application software can perform. On the other hand, Nonfunctional requirements define the personality of an application such as like the application is how much efficient, performance issue of the application and many more.

### **3.2.1 Functional Requirement**

From the point of view of our system, it should have many functional requirements like, a registration section, a login section where only authenticated subscriber can access, a dashboard for maintaining user profile and their activities. And another one for the published news.

### **3.2.2 Non-functional Requirement**

Non-functional requirements are help to being more efficient; optimize performance, memory consuming, smoother operation and load on quickly as possible to our application. Application UI should be user friendly and gorgeous for excellent user experience.

### 3.3 Use case Diagram and Description

A use case has these characteristics:

- Use to organize functional requirements.
- Modelling the goals of the system/actor interactions.
- Record path from trigger event to goals.

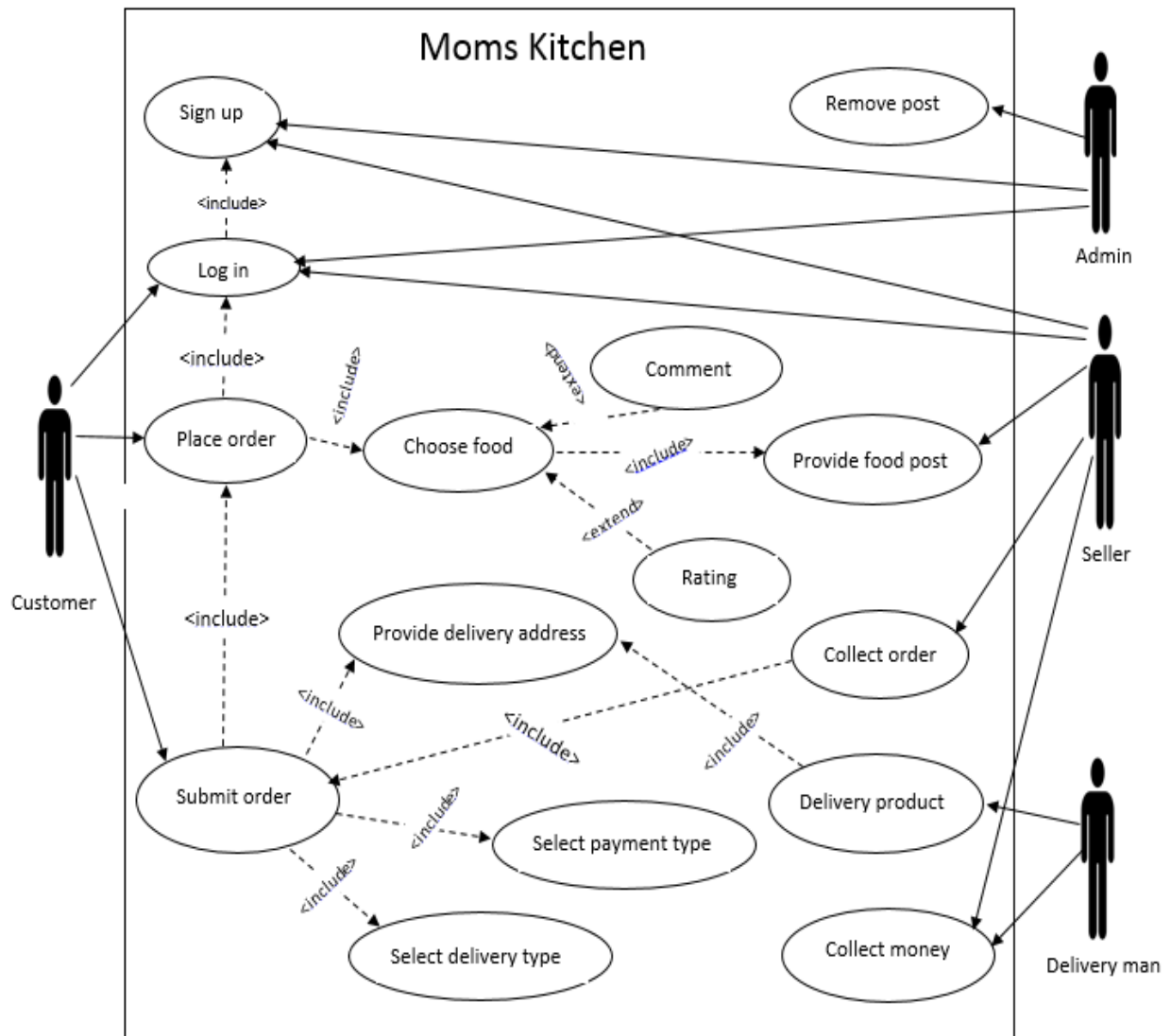


Figure- 3.2 Use Case Diagram

Table 3.1: Use case description of Sign up

Use Case	Sign up
Primary Actor	Customer, Seller
Secondary Actor	Null
Pre-condition	Null
Scenario	<ul style="list-style-type: none"> <li>• Phone number</li> <li>• User name</li> <li>• Address</li> <li>• Password</li> </ul>
Post-condition	<ul style="list-style-type: none"> <li>• Sign up successful or failed</li> <li>• Log in</li> <li>• Edit profile</li> </ul>

Table 3.2: Use case description of Log in

Use Case	Log in
Primary Actor	Customer, Seller
Secondary Actor	Null
Pre-condition	Sign up as seller or customer
Scenario	<ul style="list-style-type: none"> <li>• Phone number</li> <li>• Password</li> </ul>
Post-condition	<ul style="list-style-type: none"> <li>• Log in successful or failed</li> <li>• Browse app and choose food</li> </ul>

Table 3.3: Use case description of Post food

Use Case	Post food
Primary Actor	Seller
Secondary Actor	Null
Pre-condition	Login as seller
Scenario	<ul style="list-style-type: none"> <li>• Food name</li> <li>• Food image</li> <li>• Food description</li> <li>• Food price</li> </ul>
Post-condition	<ul style="list-style-type: none"> <li>• Edit post</li> <li>• Delete post</li> </ul>

Table 3.4: Use case description of Choose food

Use Case	Choose food
Primary Actor	Customer
Secondary Actor	Null
Pre-condition	Log in as customer
Scenario	See food details
Post-condition	Place order

Table 3.5: Use case description of place order

Use Case	Place order
Primary Actor	Customer
Secondary Actor	Null
Pre-condition	<ul style="list-style-type: none"> <li>• Log in</li> <li>• Choose food</li> </ul>
Scenario	<ul style="list-style-type: none"> <li>• Add quantity</li> <li>• Delivery address</li> <li>• Add payment type</li> <li>• Add payment method</li> </ul>
Post-condition	See order status

Table 3.6: Use case description of Profile setting

Use Case	Profile setting
Primary Actor	Customer, Seller
Secondary Actor	Null
Pre-condition	Login as seller or customer
Scenario	<ul style="list-style-type: none"> <li>• Change name</li> <li>• Change image</li> <li>• Change address</li> <li>• Change Password</li> </ul>
Post-condition	<ul style="list-style-type: none"> <li>• Update profile successful or failed</li> <li>• View profile</li> </ul>

### 3.4 Logical data model

Logical data model of our project has been shown through the figure- 3.3 given below:

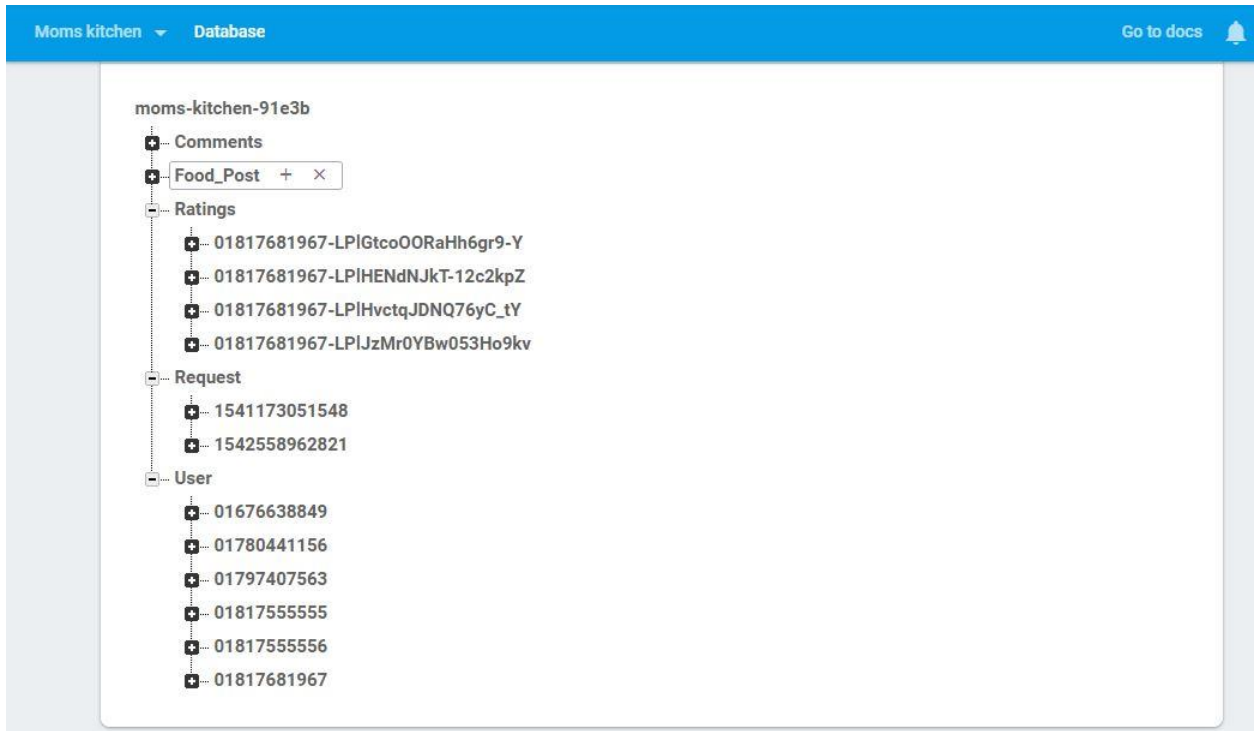


Figure- 3.3 Logical Data Model



### 3.5 Design Requirements

The design requirement is the one of the most important part of an application which makes an application unique from any other existing application. In our application we mainly focused on better user experience and user friendly. We working on our own specific problem statement, system or user experience which we are designing. We also provide some new features by which the user can easily operate our system.

- In our application and website we design a registration section so that any customer and cooker can be registered to our application with their information's.
- We design for checking available home-made food for order by customer and post food by cooker.
- We also design customer profile and cooker profile where both are want to get editing options.
- We design a cart for the customer but now it accept single item order with as customer's quantity.
- We design comment and rating system for all foods which are post by the cookers. Any registered customer can access this part.

# CHAPTER 04

## Design specification

### 4.1 Front-End Design

#### 4.1.1 Front-End For Android Application:

In any application the front end design is the visual part of an application. By which the user interacts with. In the perspective of designing, Front-end design is one of the most essential segments for the application. It represents the introduction layer and user can directly communicate with this.

It is very important to build up a straightforward and understandable front-end design or GUI for the user of an application. Therefore, while developing the app we tried to keep our design as simple as possible so that the user can easily access the app. We attach our application front-end design as follows:

In figure 4.1, 4.2 it shows log in and registration of our application.

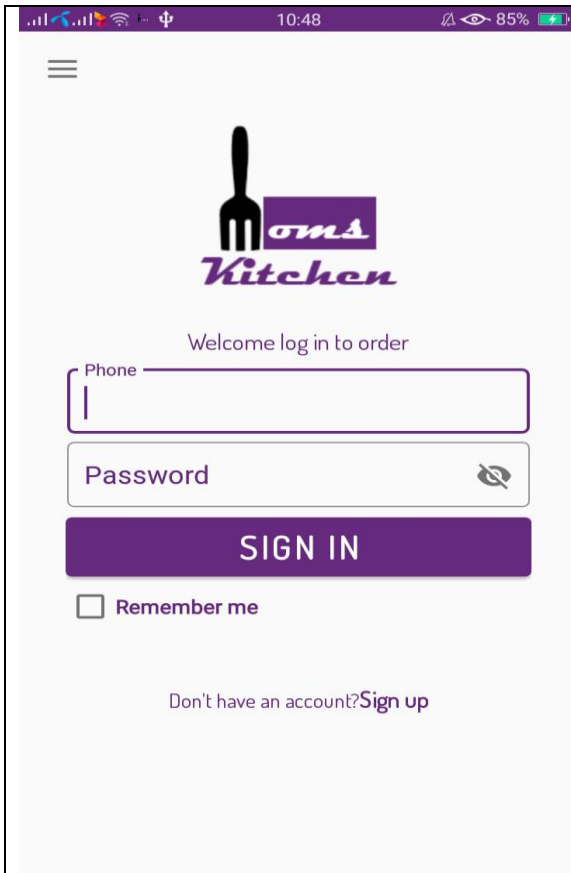


Figure: 4.1

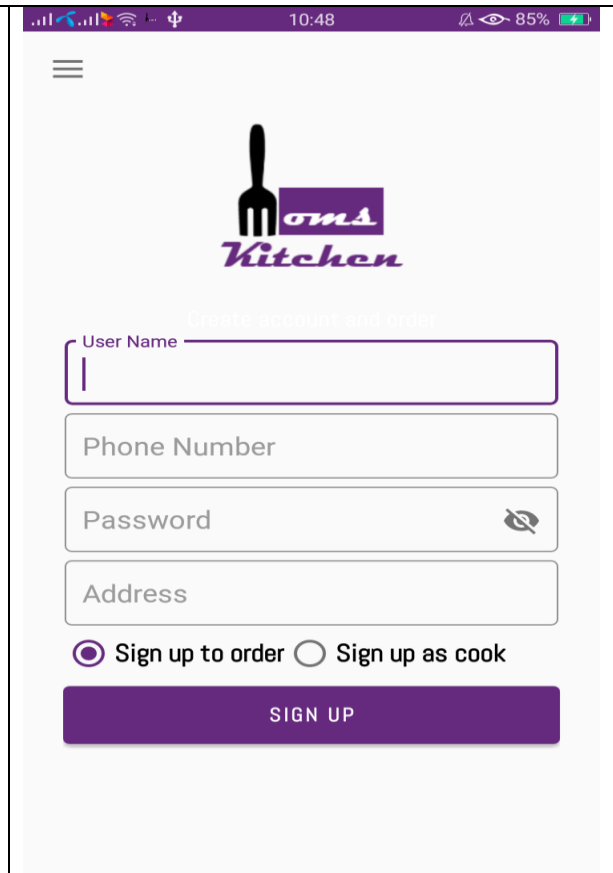


Figure: 4.2

In figure 4.3, 4.4, 4.5 shows Customer Navigation, Menu and Food Description of our application.

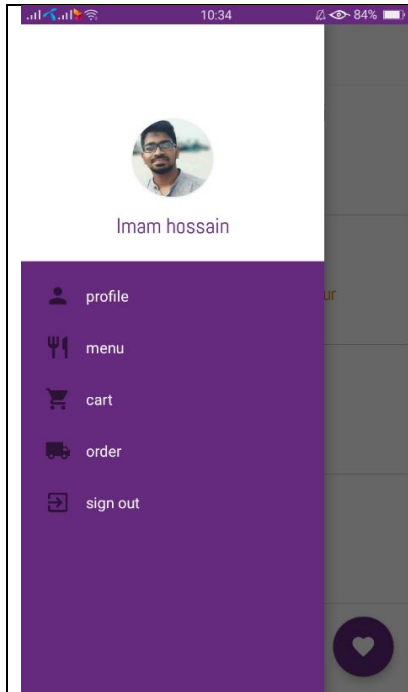


Figure: 4.3

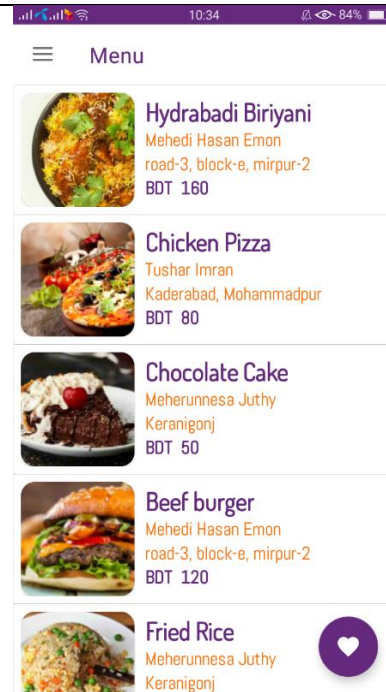


Figure: 4.4

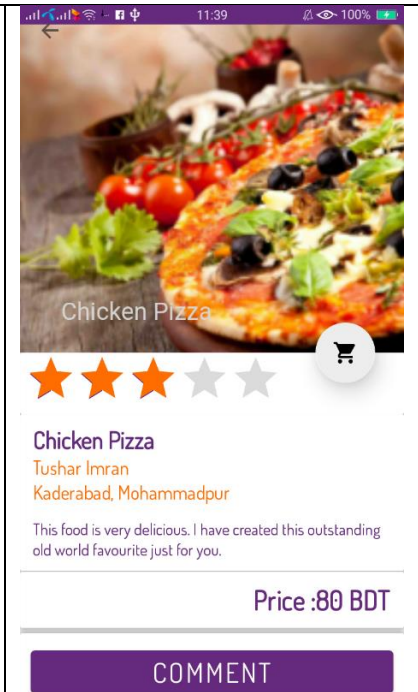


Figure: 4.5

In figure 4.6, 4.7, 4.8 shows Rate and Comment, Place order and Own order of our application.

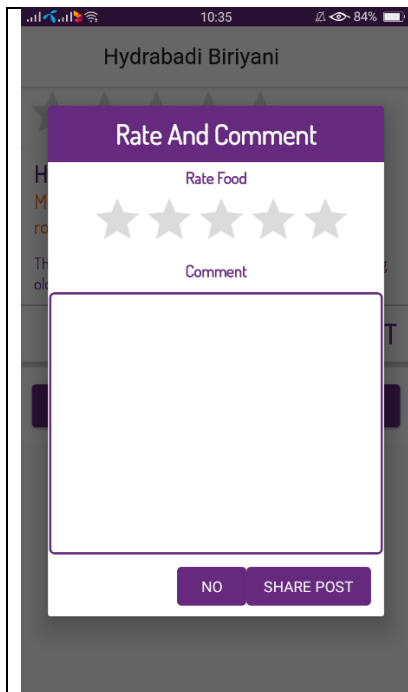


Figure: 4.6

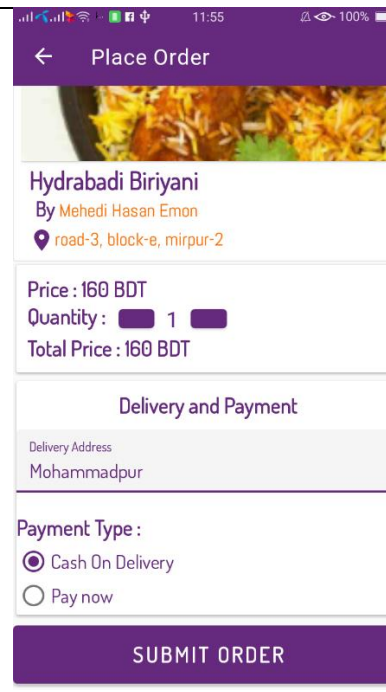


Figure: 4.7

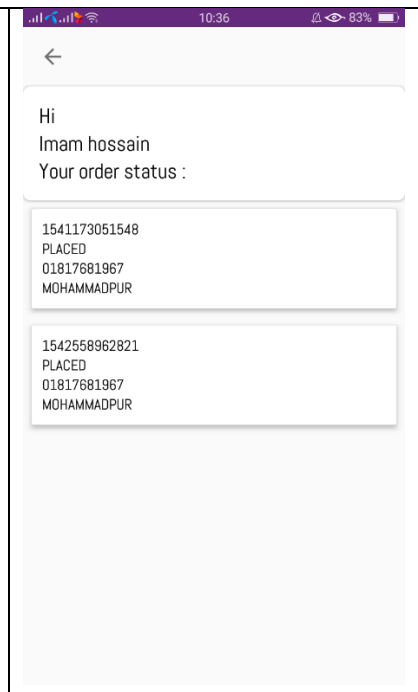


Figure: 4.8

In figure 4.9, 4.10, 4.11 shows Profile, update profile Seller navigation of our application.

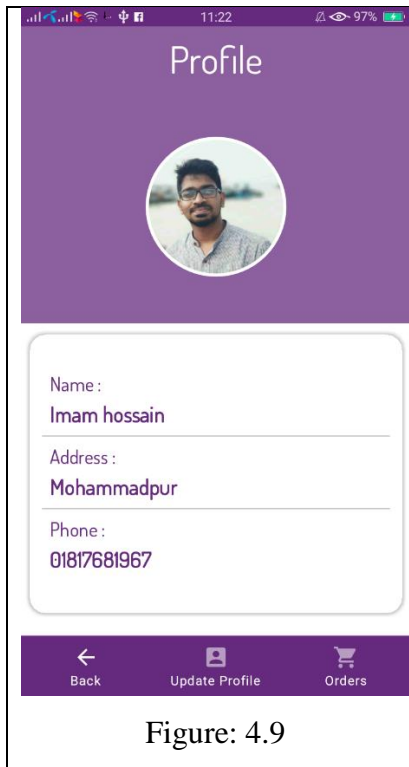


Figure: 4.9

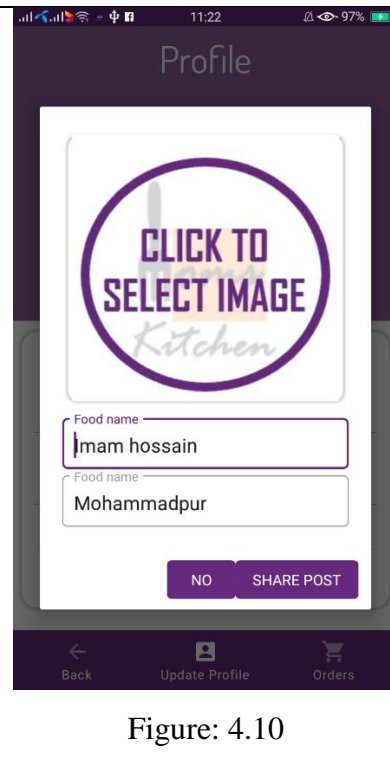


Figure: 4.10

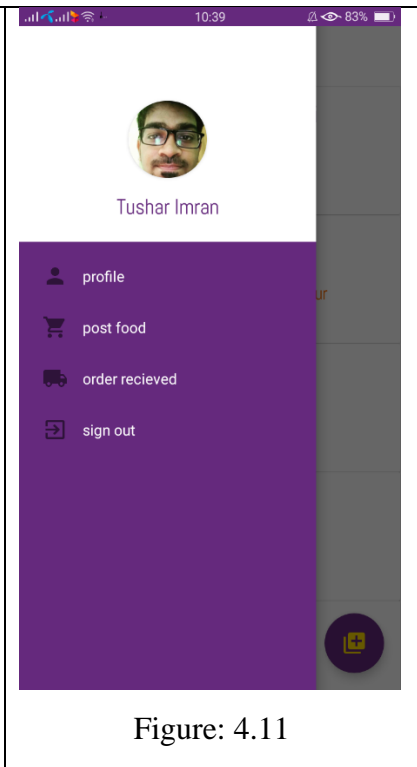


Figure: 4.11

In figure 4.12, 4.13, 4.14 shows Seller post, Update post and Order notification of our application.

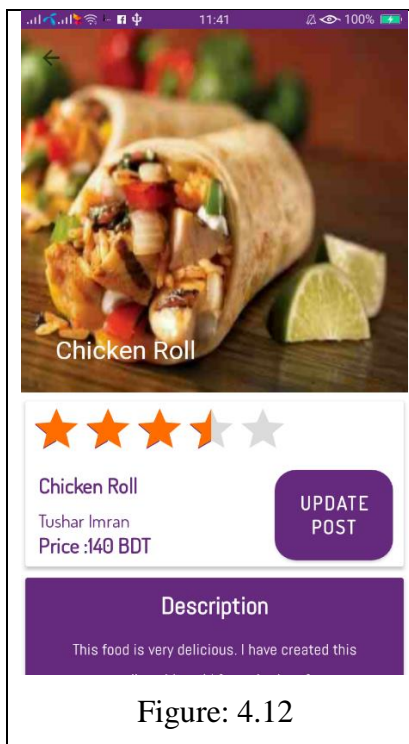


Figure: 4.12

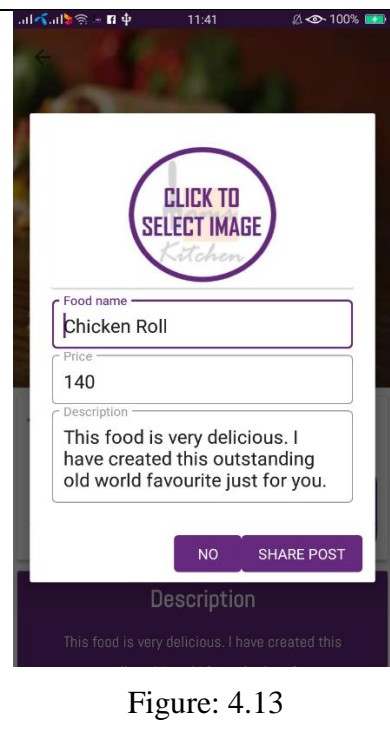


Figure: 4.13

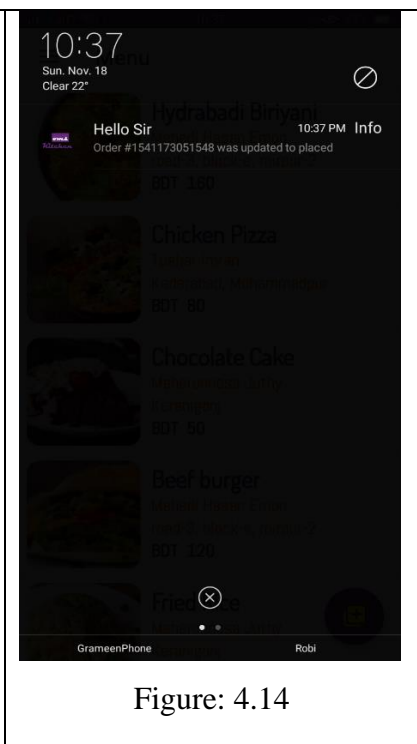


Figure: 4.14

In figure 4.15, 4.16, 4.17 shows Received order and Seller profile and Update profile of our application.

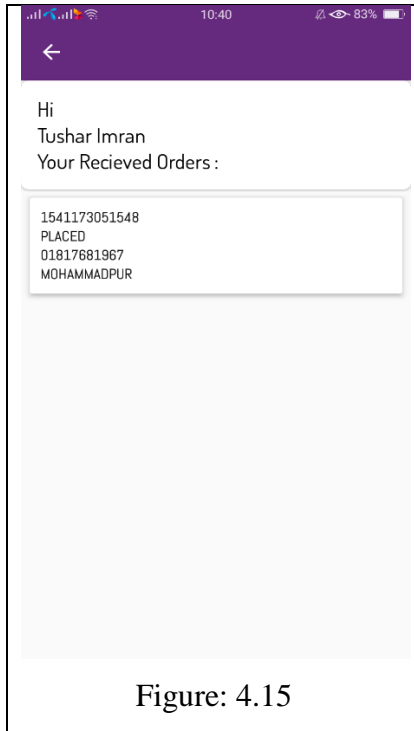


Figure: 4.15

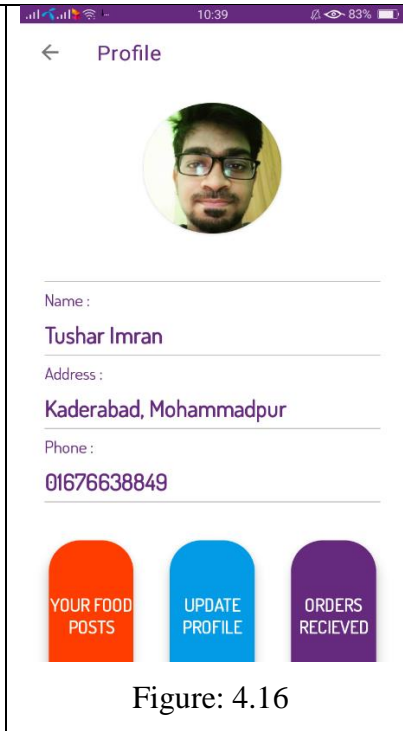


Figure: 4.16

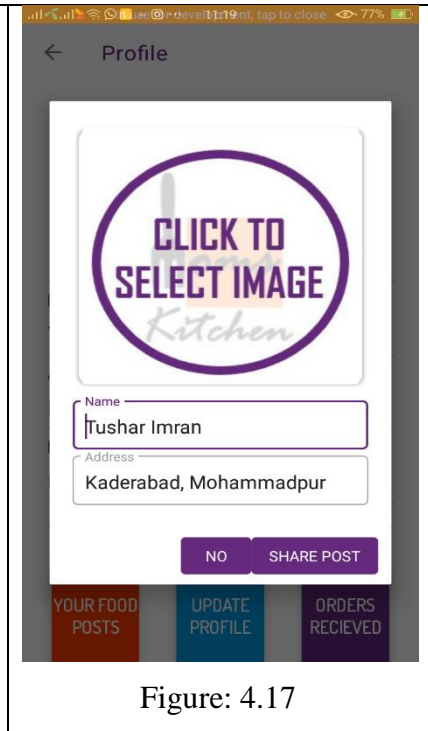


Figure: 4.17

#### 4.1.2 Front-End For Web:

The front of the website is designed keeping in mind that user should be satisfied with the interface and its specification. We have used standard color combination that conducive to users with all eye sight. We used simple and light colors for fonts and backgrounds so that readers feel comfortable reading news.

In figure 4.18 shows Log in page of our website.

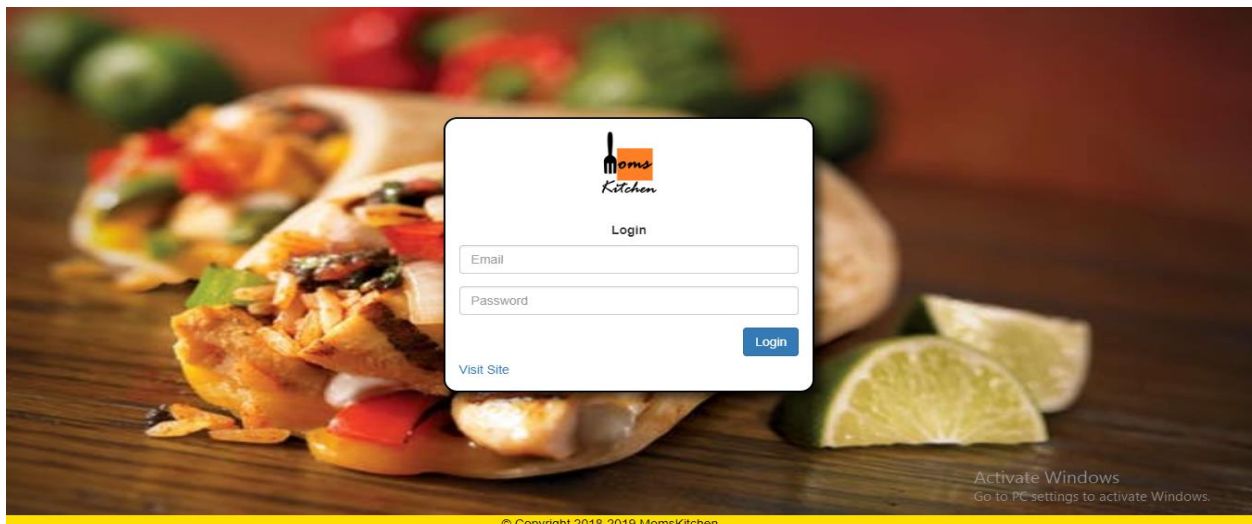


Figure 4.18



In figure 4.19, 4.20, 4.21 Shows Registration, Home page and Featured item of our website.

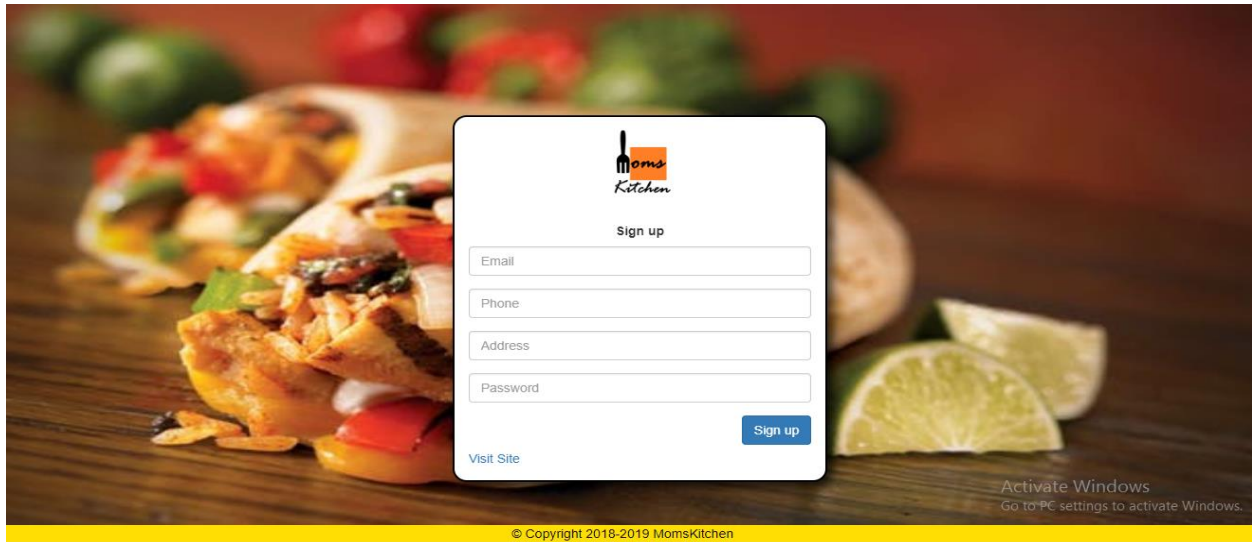


Figure: 4.19

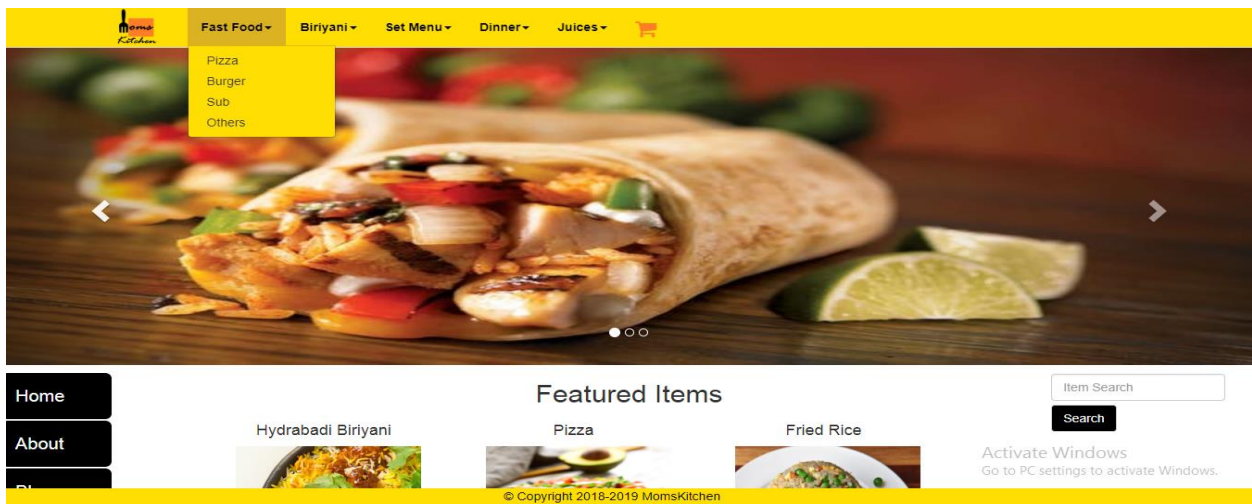


Figure: 4.20

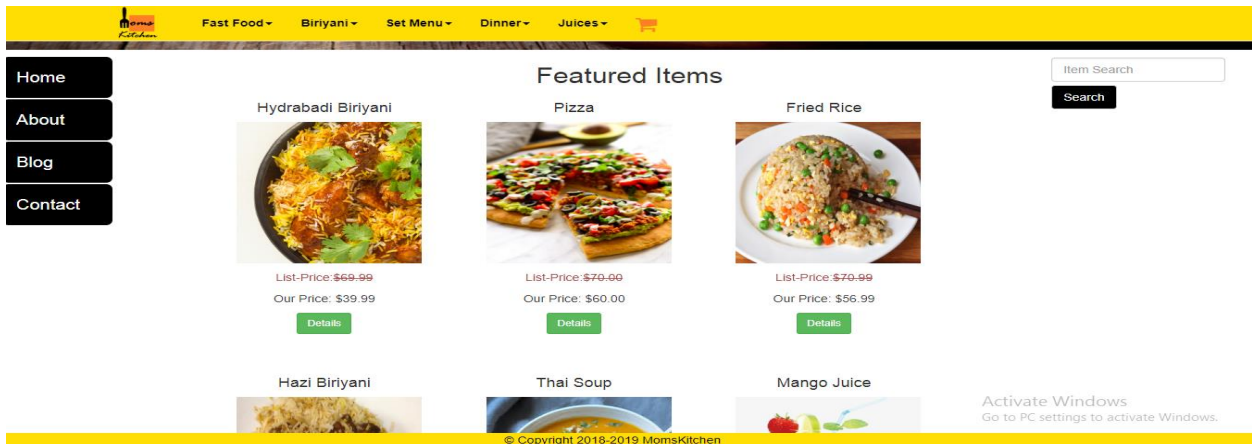


Figure: 4.21

In figure 4.22, 4.23, 4.24 Shows Item details Add cart and Shipping address of our website.

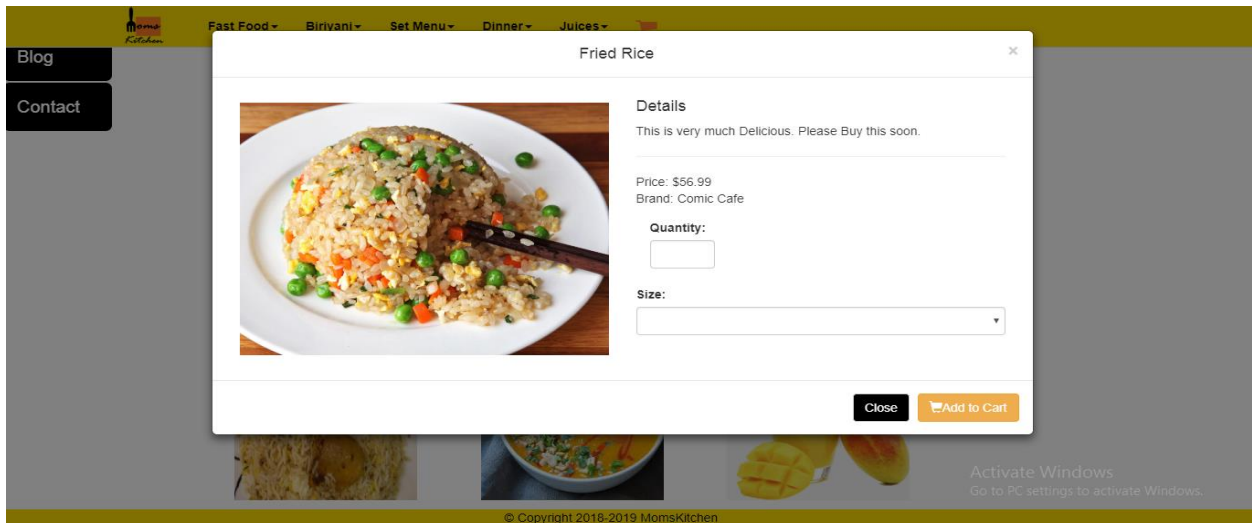


Figure: 4.22

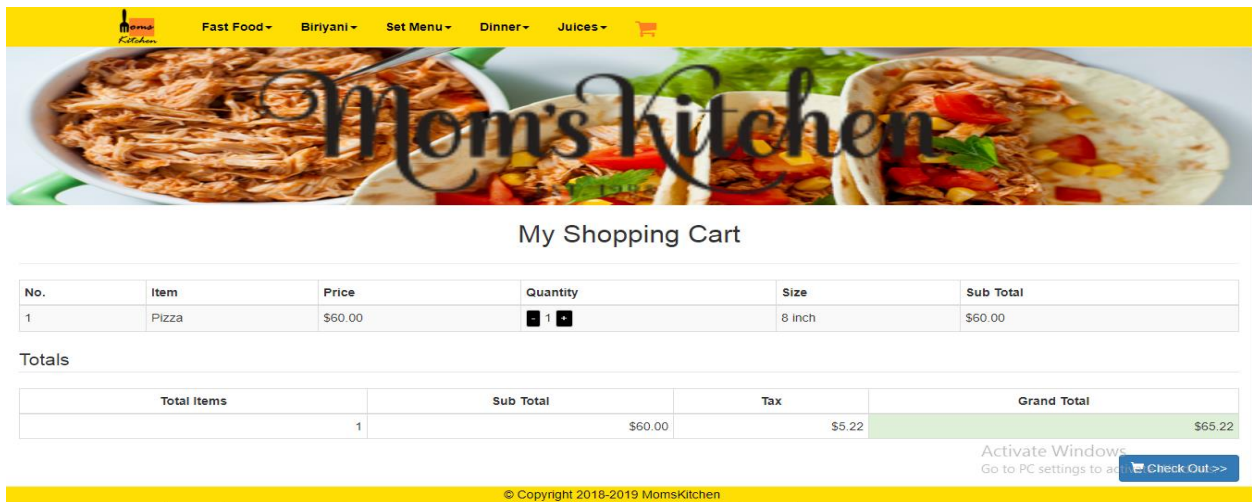


Figure: 4.23

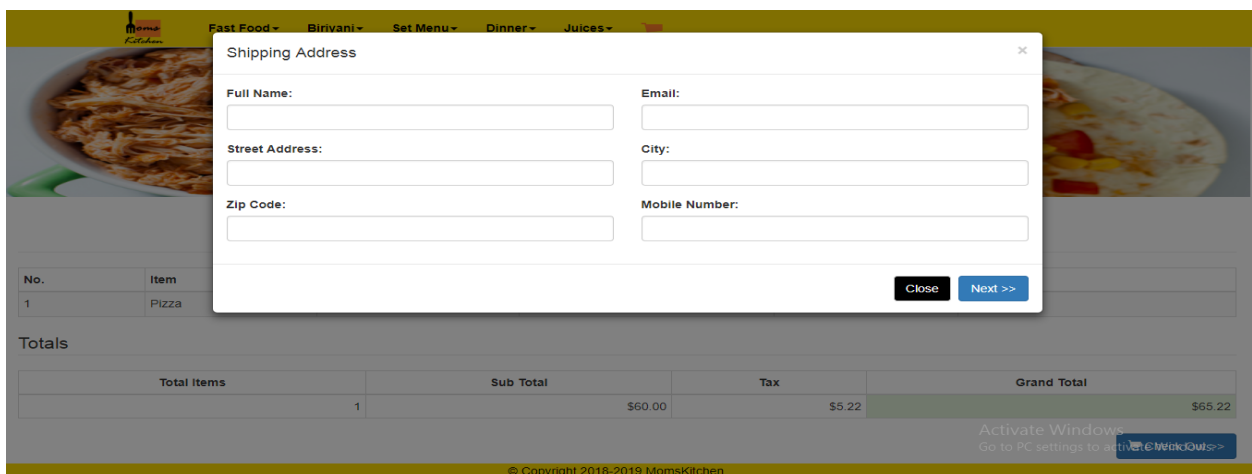


Figure: 4.24

In figure 4.25, 4.26, 4.27 Shows Payment method, Thanks page and Category page of our website.

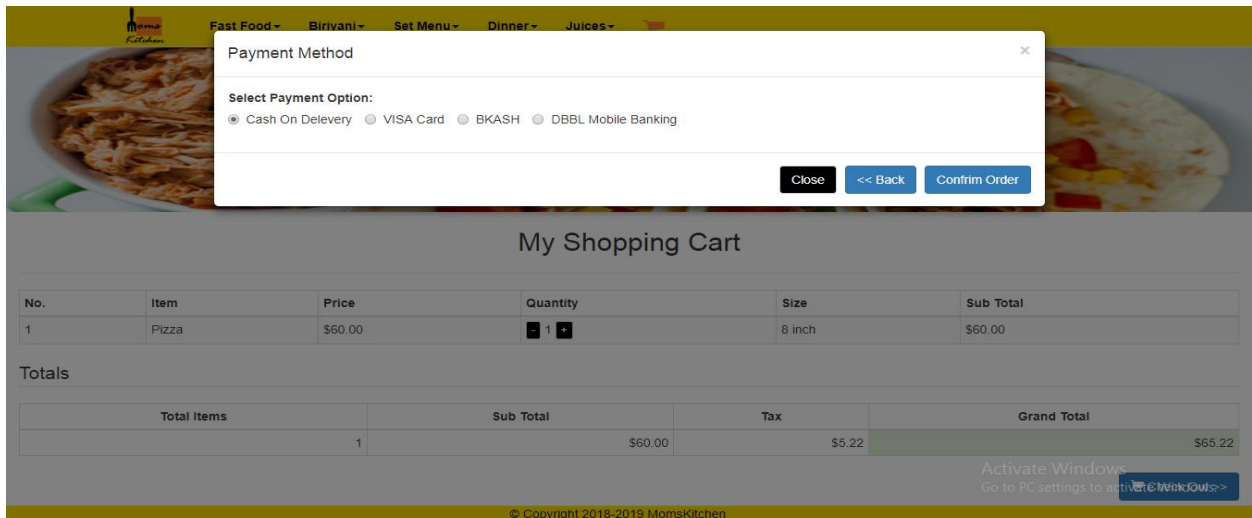


Figure: 4.25

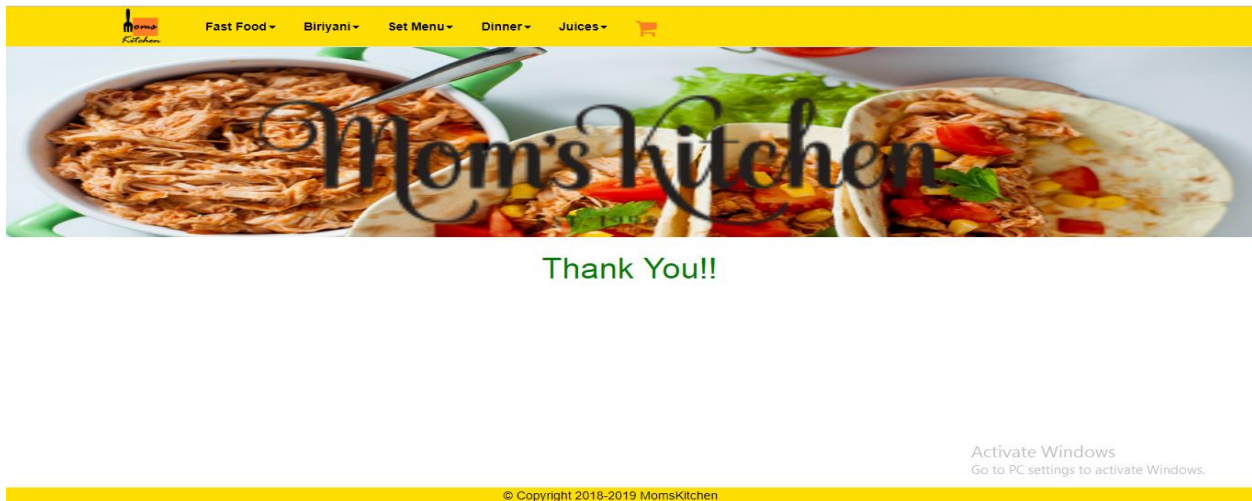


Figure: 4.26

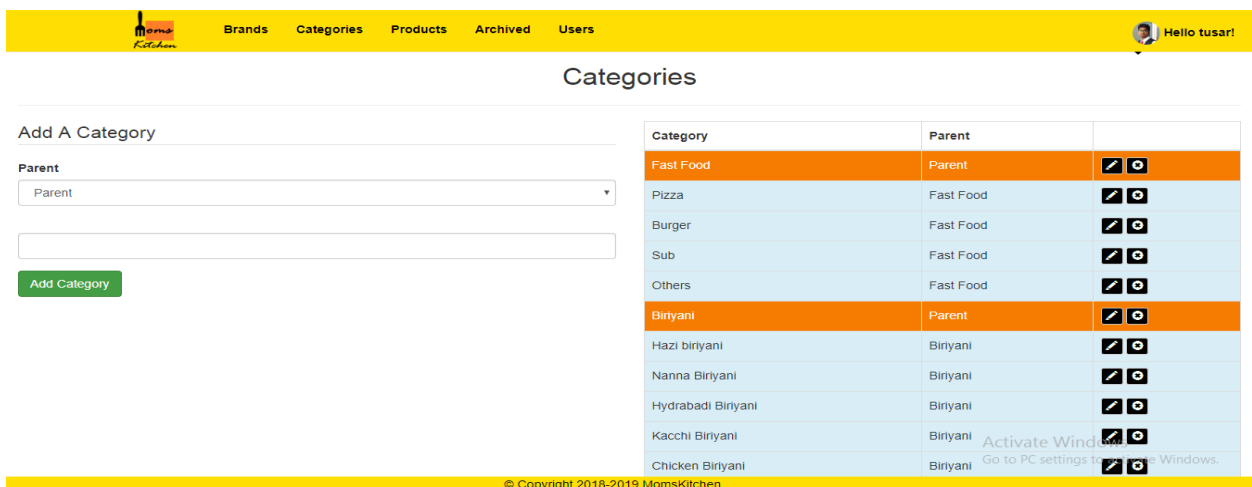


Figure: 4.27



In figure 4.28, 4.29, 4.30 Shows Product page, Add product page and Add user page of our website.

	Product	Price	Category	Featured	Sold
	Hydrabadi Biryani	\$39.99	Biryani-Hydrabadi Biryani	Featured Product	0
	Pizza	\$60.00	Fast Food-Pizza	Featured Product	0
	Fried Rice	\$56.99	Dinner-Fried Rice	Featured Product	0
	Hazi Biryani	\$80.00	Biryani-Hazi biriyani	Featured Product	0
	Thai Soup	\$50.00	Dinner-Thai Soup	Featured Product	0
	Mango Juice	\$10.00	Juices-Mango Juice	Featured Product	0
	Set Menu 1	\$110.99	Set Menu-Package 1	Featured Product	0
	Naga Burger	\$50.00	Fast Food-Burger	Featured Product	0
	Set Menu 3	\$150.00	Set Menu-Package 3	Featured Product	0

Figure: 4.28

Figure: 4.29

Figure: 4.30

## 4.2 Back-End Design

### 4.2.1 Back-End Design for App:

The Back-end design is the part that working behind of the project. The user can't see or notifying or the back-end part. There is only one-way user can interact with the app by front-in design. And the user cannot see the back-end design and how this part is working. In every application back-end does almost everything that happens on the server of the application. In android application, to handle back-end part is more complex than a web application, because components of android device are limited. For this reason, we tried to keep our back-end as simple as possible.

To developing and maintaining the back-end section we use Firebase Database on our application. Our application's back-end design as follows:

Figure 4.32 shows database of the app which contains all works and user login and registration information.

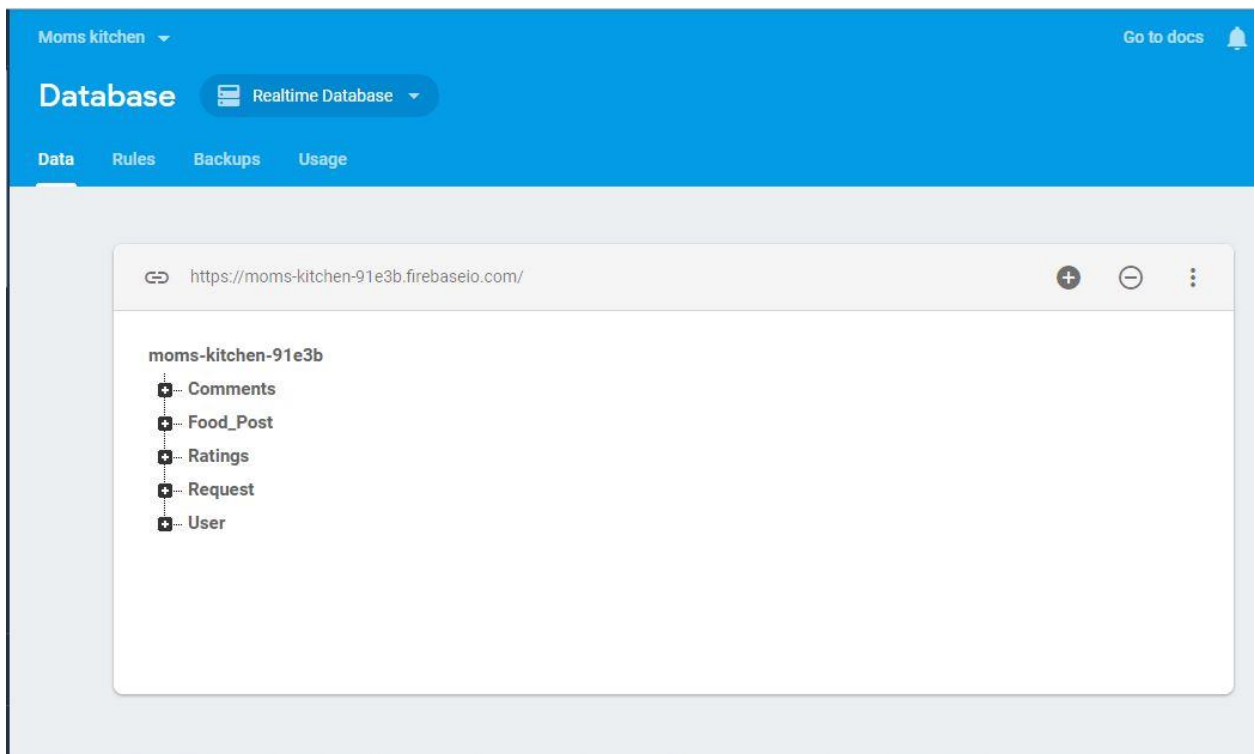


Figure: 4.31

Figure 4.29, 4.30 shows request and rating by the user. And authentication rule.

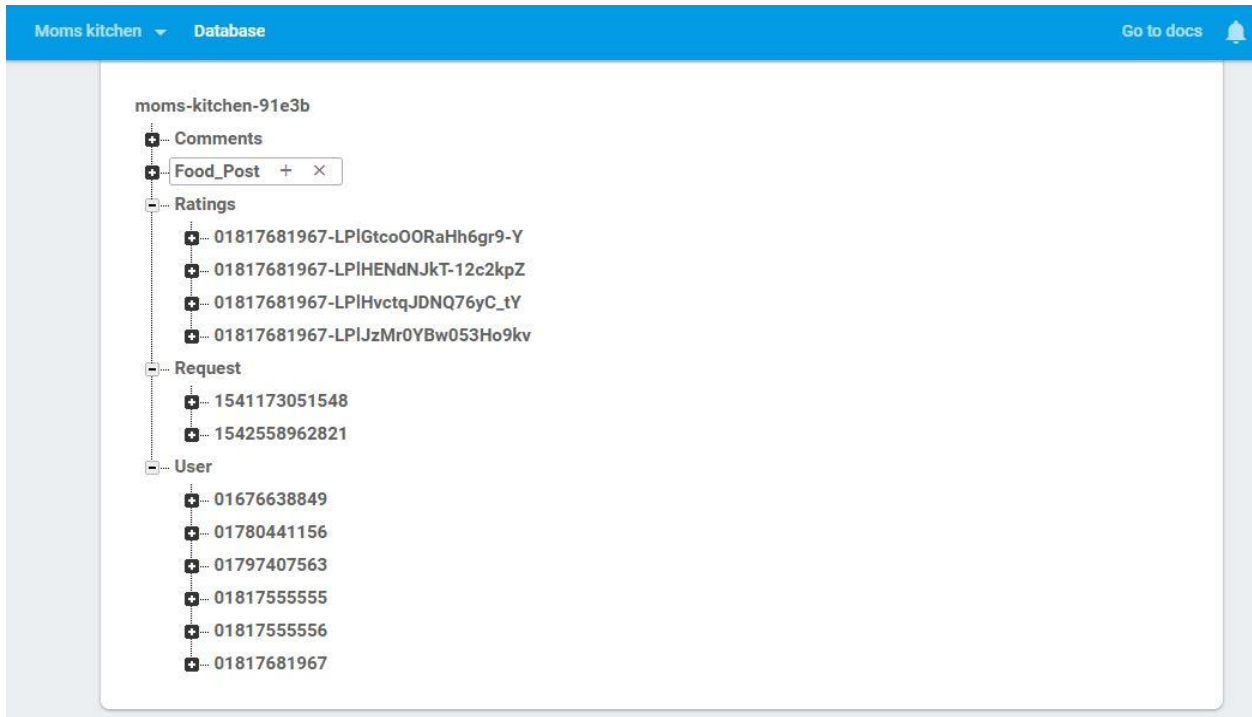


Figure 4.32

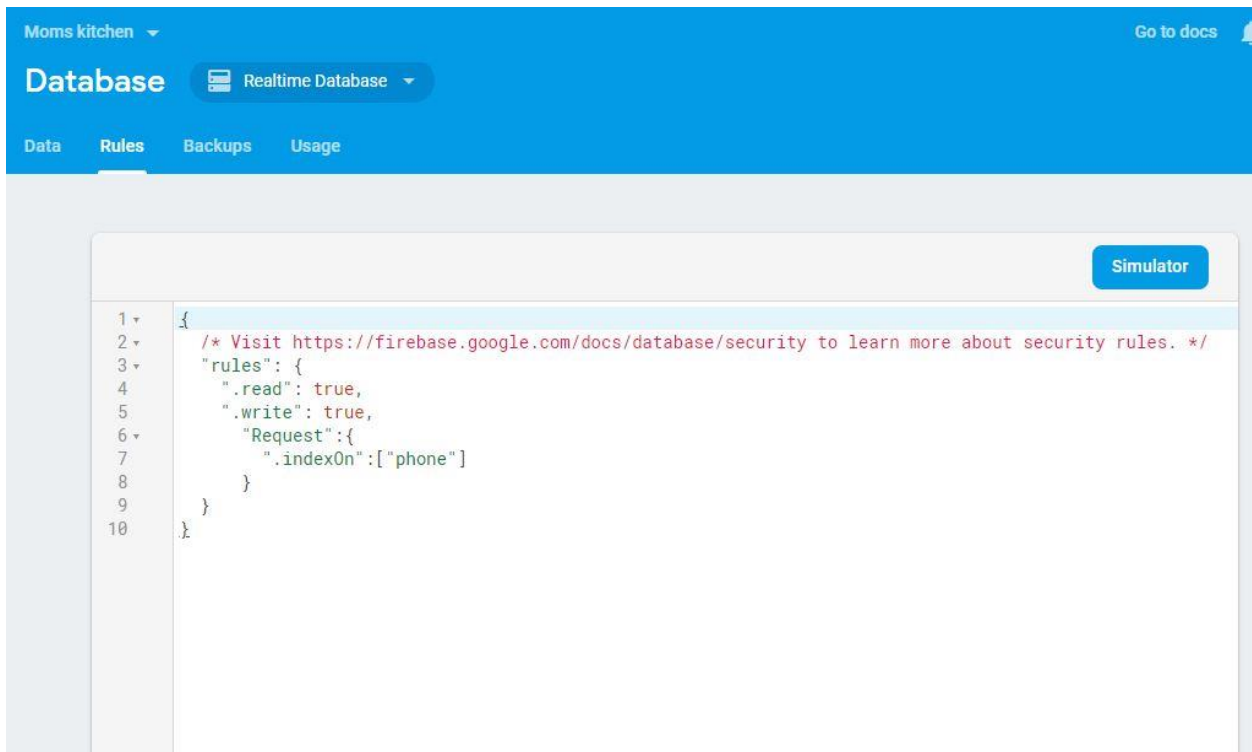


Figure 4.33

## 4.2.2 Back-End Design for Web:

Our back-end designs have been shown through figure 4.31 to figure 4.35

Table	Action	Rows	Type	Collation	Size	Overhead
brand		7	InnoDB	utf8_unicode_ci	16 KiB	-
cart		2	InnoDB	latin1_swedish_ci	16 KiB	-
categories		27	InnoDB	utf8_unicode_ci	16 KiB	-
products		9	InnoDB	utf8_unicode_ci	16 KiB	-
users		2	InnoDB	latin1_swedish_ci	16 KiB	-
5 tables	Sum	47	InnoDB	latin1_swedish_ci	80 KiB	0 B

Figure: 4.34

+ Options		id	brand
<input type="checkbox"/>		1	Hazi Biryani
<input type="checkbox"/>		2	Singapore juice corner
<input type="checkbox"/>		5	Pizza Inn
<input type="checkbox"/>		6	Comic Cafe
<input type="checkbox"/>		7	Burger King
<input type="checkbox"/>		8	Sultans Dine
<input type="checkbox"/>		9	Other

Check all    With selected:

Figure: 4.35

+ Options		id	full_name	email	password	join_date	last_login	pe
<input type="checkbox"/>		1	tusar imran	tusar@gmail.com	\$2y\$10\$Rlw09kVXXRldcvPewb4itHd9uvmwXugBfEYdpm.3s...	2018-10-19 17:31:32	2018-11-01 22:55:37	adi
<input type="checkbox"/>		3	test editor	test@gmail.com	\$2y\$10\$xDkRCsJBM.s746tyb3WgvOxL0Q8e18v.6cP1W.B8UPe...	2018-10-22 01:31:39	2018-11-01 23:03:34	edi

Check all    With selected:

Figure: 4.36

+ Options				id	category	parent			
<input type="checkbox"/>		Edit		Copy		Delete	1	Fast Food	0
<input type="checkbox"/>		Edit		Copy		Delete	2	Biriyani	0
<input type="checkbox"/>		Edit		Copy		Delete	3	Set Menu	0
<input type="checkbox"/>		Edit		Copy		Delete	4	Dinner	0
<input type="checkbox"/>		Edit		Copy		Delete	5	Pizza	1
<input type="checkbox"/>		Edit		Copy		Delete	6	Burger	1
<input type="checkbox"/>		Edit		Copy		Delete	7	Sub	1
<input type="checkbox"/>		Edit		Copy		Delete	8	Others	1
<input type="checkbox"/>		Edit		Copy		Delete	9	Hazi biriyani	2
<input type="checkbox"/>		Edit		Copy		Delete	10	Nanna Biriyani	2
<input type="checkbox"/>		Edit		Copy		Delete	11	Hydrabadi Biriyani	2
<input type="checkbox"/>		Edit		Copy		Delete	12	Kacchi Biriyani	2
<input type="checkbox"/>		Edit		Copy		Delete	13	Package 1	3
<input type="checkbox"/>		Edit		Copy		Delete	14	Package 2	3
<input type="checkbox"/>		Edit		Copy		Delete	15	Fried Rice	4
<input type="checkbox"/>		Edit		Copy		Delete	16	Thai Soup	4
<input type="checkbox"/>		Edit		Copy		Delete	17	Chicken Biriyani	2
<input type="checkbox"/>		Edit		Copy		Delete	21	Home Decor	18

Figure: 4.37

		id	title	price	list_price	brand	categories	image	description	featured
<input type="checkbox"/>		1	Hydrabadi Biriyani	39.99	69.99	8	11	/momskitchen/images/ced0ed0674bd7c18bc0d2b5795f289...	These Biriyani are Delicious. You must try them an...	1
<input type="checkbox"/>		6	Pizza	60.00	70.00	5	5	/momskitchen/images/32dd06cbebdac68277801964b38c51...	This shoes is very Delicious	1
<input type="checkbox"/>		7	Fried Rice	56.99	70.99	6	15	/momskitchen/images/ad825d326abfd10deea2fd11bd9b9e...	Buy it soon ... This is very much Delicious. Please Buy this soon.	1
<input type="checkbox"/>		8	Hazi Biriyani	80.00	90.00	1	9	/momskitchen/images/e548d9aa44225559a5755409604b3b...	This Biriyani is very delicious. Buy these soon..	1
<input type="checkbox"/>		9	Thai Soup	50.00	70.00	6	16	/momskitchen/images/2d778aff4bd1a8a3ebcd0f01bcbc40...	This Thai Soup is very testy . Please buy this soo...	1
<input type="checkbox"/>		10	Mango Juice	10.00	20.00	2	23	/momskitchen/images/1617f49f04951e34e84588f6faf4ba...	This Juice is very testy. Please buy this soon.	1
<input type="checkbox"/>		11	Set Menu 1	110.99	122.99	8	13	/momskitchen/images/c8c608eec227935198eff59602abff...	It is very testy . please buy this soon.	1
<input type="checkbox"/>		12	Naga Burger	50.00	60.00	7	6	/momskitchen/images/f573a9d8baff2c1bc2e55cf4a88d69...	It is very testy . Please buy this.	1

Figure: 4.38

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

Interaction design is specifically a discipline which examines the interaction (via an interface) between a system and its user. 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.

User experience design focuses on the overall experience between a user and a product. It is not just concerned with the interactive element but also the way that certain elements look, feels or contrive to deliver certain output.

### **4.4 Implementation Requirements**

To implement a project, we need to use different type of tools, components those help us to developed a project successfully. So in our application development we also used some tools and components. In the Implementation Requirement section, we mainly discussed about all the tools and components that we have used to develop our project.

#### **4.4.1 Android Studio**

Because of our project is about making an android application. Android studio<sup>[4]</sup> is very important tool. Android studio is the speediest apparatuses to building android applications on each kind of Android gadget. The main features are excellent code altering, troubleshooting, execution tooling, an adaptable form framework, and a moment fabricate/send framework to create superb applications. We use the Android Studio as our application IDE. Since here we discussing the Android Studio, so at first we have to know some essential data about Android.

##### **4.4.1.1 Basic Android Overview**

Android is a total arrangement of programming for android application. It has championed by Google and owned by Open Handset Alliance. Android is a complete software stack for a mobile device. Android provides almost all the tools frameworks for developing mobile apps quickly and easily. Android is also an open source platform, so developer can easily develop different kinds of mobile application by using android.

#### **4.4.2 Mobile Device**

We need mobile for running our application on a physical device versus an emulated device. It is pretty much the same thing as the actual device.

#### **4.4.3 Android SDK**

During developing Android application, Android SDK is one of the very essential tool. This SDK is very important tool that contains the libraries for development and the simulator to test the application. We use Android studio together to run and develop all the Android application.

#### **4.4.4 Firebase**

To develop our application, we need to save our data in a database. So we have used firebase<sup>[5]</sup> as our data manager. Because the Firebase Real-time Database is a cloud-hosted database. In Firebase data is stored as JSON and synchronized in real time to every connected client in the application. When we need to build cross-platform apps with iOS, Android, and JavaScript SDKs, all of the clients share one real-time Database instance and the clients automatically receive updates with the newest data by Firebase.

#### **4.4.5 Website**

To develop and design a website, we should follow requirement specification. Because it plays vital role in web developing. We used computer, mobiles and tabs to check the output results. Atom text software for coding. HTML, CSS, Bootstrap framework, JavaScript, jQuery, MySQL, php languages are used.

## **CHAPTER 05**

### **Implementation and design**

#### **5.1 Implementation of Database**

This chapter is focused on how we implement our database. As we mention earlier for our project we use Firebase database. Firebase is a real time database. It has also some other features like Crash reporting, Cloud storage Authentication, Hosting and so on. Since Firebase is a real time database, so there is no need of direct SQL query to perform the actions.

We implemented and executed our website by MySQL. All of database table and insertion are done by SQL language. For query and connecting with front end we used php language. Our main programming language is php to develop our website.

#### **5.2 Implementation of Front-End Design**

How many user will use a system, is completely depend on the easy design and usability of the system. When a user opens our application, they will firstly see the front end design. Android device size is varying from one device to another device. Some device is equipped with heavy hardware, some has large screen, and some are too small. Also android regularly release updated version of their OS. For this we have to make our design device independent and it is very challenging. So, we try our best to keep our design gorgeous also user friendly. We use very simple UI design, for this if any user open any feature of our app, by simply looking on the icon, they will understand what this feature do.

We have used HTML (hypertext markup language) to create the main frame of our website. Bootstrap framework is used for making our website 100% responsive. CSS (cascade style sheet) is used for styling and coloring texts, menus, background etc.



### **5.3 Implementation of Interaction**

The successfulness of a system is completely depend on the interaction with the user. Now a days, interaction is found everywhere. Interaction is which makes a system popular and attractive to a user. So, it is very important to make a system interactive. We develop some unique feature to interact our system with user (like - monitoring system).

We implement our system with responsive UI for better user experience. For this, we use easy icon, text link and button. The system is totally user friendly and user can easily interact with our system. Our application is successfully implemented and has impressive interaction with the users.

And to create our website more interactive we used JavaScript language. Because it is a world class interaction platform. For dropdown menu, auto hover, hide and appeared action we user JSON, jQuery, angular JS etc. library function of JavaScript.

### **5.4 Testing Implementation**

Testing implementation is process of testing the implementation of a system, where tester or system architect will see various cases and specification, is it implementable or it has limitations. We tested the case with which the user interfaces can be used. We checked the application or the product built is user-friendly or not. Our application is comfortable with different parameters the flow, navigation and layout, speed and content especially in comparison prior or.

Each part of the application is tested to ensure that the detailed design is correctly implemented. It has been carried out to ensure that each part of the system works as per requirements. Usability test were carried out by users. These verify that the system provides the required functionality.

Table 5.1: Testing Implementation

<b>Test Case</b>	<b>Test Input</b>	<b>Expected Output</b>	<b>Actual Output</b>	<b>Result</b>	<b>Tested On</b>
1. Install Application	Tested on various android version – 6.0, 6.0.1, 7.0.	Successfully installed all those version.	Install Successfully	Passed	03/11/18
2. Registration	Without registration	Restrict access to the features.	Imposed the restriction.	Passed	03/11/18
3. Mobile Number	Blank or incorrect	Showing warning the valid number.	Showed the warning	Passed	03/11/18
4. Password	Blank or incorrect password.	Showing a warning that correct password must be entered.	Showed the warning	Passed	03/11/18
5. Customer Home page	Click on the login and provide mobile/password	To show the home page.	Showed the homepage.	Passed	03/11/18
6. Food Description	Click on the food item.	Show the details of food.	Showed the food description.	Passed	03/11/18
7. Place order	Click the button.	Show the order page.	Showed the order page.	Passed	03/11/18

8. Confirm Order	Click the button place order and confirm order.	Check info and invoice.	Showed the info and invoice.	Passed	03/11/18
9. Favorite Button	Click the button.	Show favorite list.	Showed favorite list.	Passed	03/11/18
10. Customer Profile	Click navigation item profile.	Show user information.	Showed user information.	Passed	03/11/18
11. Seller Homepage	Click on the login and provide mobile/password	To show the home page.	Showed the homepage.	Passed	03/11/18
12. Post Food	Click Post button or navigation item post food.	Can post food for sell.	Post completed.	Passed	03/11/18
13. Food Details	Click on food item.	To show food details.	Showed food details.	Passed	03/11/18
14. Update Profile	Go to details of food and click update post.	Can update information and changing.	Updated information and changed.	Passed	03/11/18
15. Seller Profile	Click navigation item profile.	Check info and invoice.	Showed the info and invoice.	Passed	03/11/18
16. Received Order	Click received order button.	Show the order details.	Showed the order details.	Passed	03/11/18
17. Sign Out	Click the sign out button.	To logout from the account.	Logged out successfully.	Passed	03/11/18

## **5.5 Test Results and Reports**

Test Report represent the result of the test in a formal way. Report contains the data which we evaluated in a professional and organized manner. Report describe the operating condition and shows the test result with test objective.

## **CHAPTER 06**

### **Conclusion and future scope**

#### **6.1 Discussion and conclusion**

This project focuses on providing foods to the consumers and self-employment to the women folk who want economic independence. We created an app and its website where the admin(s) have full control and others have limitations according to their level. Cooks do not have and access to change the contents of the man website. They can only post about their foods and receive orders. We are focusing on the advantages of a unique food delivery system followed by consumer convenience in terms of quality homemade foods. All the women with cooking skill will be our customer. Using our project, they will be able to ensure most updated food chain service to their customers. Not only this project can feed the consumers but also it will reduce their dependence on other substitute complicated apps. Lastly, creating and deleting users is very easy to proceed. Consequently, changes in user types or their information will not create any problem to the admins.

#### **6.2 Limitations**

It goes without saying that we had a number of challenges and limitations as followings:

- Timeframe was very limited.
- Taking several orders from several entities at a time is tough.
- Having internet for 24/7 was tough.
- Having access to GPS is still pending.
- There was scarcity of reliable data and respondents.

#### **6.3 Scope for Further Development**

We have few scopes to develop in future as followings:

- Adding more online payment systems
- Using GPS in our app
- Adding real time tracking
- Creating discount opportunities for users
- Using this app for commercial in-app advertisements

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