

**FRESHNIN: A RELIABLE MOBILE APPLICATION FOR AUTHENTIC AND  
TRADITIONAL FOOD SUPPLY**

**BY**

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

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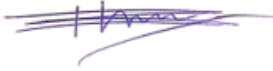


**DAFFODIL INTERNATIONAL UNIVERSITY  
DHAKA, BANGLADESH  
DECEMBER 2021**

## APPROVAL

This Project/internship titled “**FreshNin: A Reliable Mobile Application for Authentic and Traditional Food Supply**”, submitted by Ragib Abid Fuad, ID No: 161-15-6908, 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 5<sup>th</sup> January 2022.

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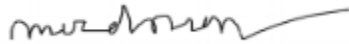
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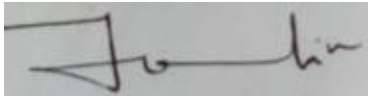
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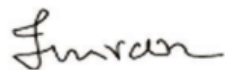
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## DECLARATION

We hereby declare that this project has been done by us under the supervision of Mr. Md. Sazzadur Ahamed, Senior Lecturer, Department of CSE in 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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Finally, I must acknowledge with due respect the continuous support and patience of my parents.

## **ABSTRACT**

Currently, this project is being worked upon an Android based development project titled **“FreshNin: A Reliable Mobile Application for Authentic and Traditional Food Supply”**. This application will allow users to order and receive traditional food on demand. It will also allow the users to manage all the authentic food items and get deliveries to their doors. This application will make ordering Bangladeshi traditional food easier for customers. It saves a lot of time as it eliminates the need for a mediator to finalize the order. It will also allow the customer to track the order's delivery. It beats the weaknesses of the regular conventional lining framework. Along these lines, this application improves the speed and standardization of taking the request from the customer. Right now merchants from different business can't build their sells just from the shop since current culture love to shop from home generally. The actual idea of this application is to gather every famous local food and serve it to the consumers where it is needed. Through this application customer get various option of payment and I can create job for general people. Also the seller, from where I collect my products get familiar in the long run. The application should be responsive as the application can be gotten to through any devices. The application has straightforward and simple features.

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# CHAPTER 1

## INTRODUCTION

### 1.1 Introduction

Basically, my android application is developed to provide traditional and authentic foods that are famous throughout the country to reach to every corner of the country. The internet requesting framework is normally benefitted to diminish the issue of conveyance and installments strategy. Nowadays every businessman is putting their steps on online business. From 2013, about 25% of people aged between 18 to 50, are ordering online products by using the website or android application. Also, users are getting used to getting their purchased products via home delivery. For using the application set no knowledge is need. Almost every organization are trying to overcome category, order, food item list, delivery, payment, etc. But every online delivery system maintains different types of methods.

At the point when an online conveyance framework is beginning individuals are befuddled about their item quality. Many individuals or clients stressed over the conveyance on schedule or about insecurity. Be that as it may, when the internet based item requesting framework is well known step by step the clients become pressure free and profited from the strategy. For the most part, individuals request items by reference of a companion or closest family member. We have such contemplations subsequent to pondering everything.

### 1.2 Motivation

For the most part, we were propelled for this from a startup business. We began our journey at the prime time of the pandemic. As the Covid-19 pandemic forced us to stay at home, we saw people getting frustrated and bored because of staying at home for quite a long period. People were desperate to have something new in their life. We saw an opportunity and started giving them their long-awaited taste of traditional foods that were out of reach for them at that time. First, we started our business procedure with only a Facebook page and saw tremendous support

and encouragement of the people. Then gradually we started adding more and more items on the list. We also ran several surveys to find out which items were most desired by the people. In this way, we feel the requirement for an android application and perceive that in case we can give the offices which we are missing so it will be extraordinary for our business and client will get an appropriate identification about FreshNin.

### **1.3 Objectives**

Our main purpose or objective is to provide the customers the unique taste that they can only have at the unique place, delivered to their doorstep. We need to take the full responsibilities regarding conveying items to the clients. For a new company who are telecommuting or selling their things from home, our application office will be very solid and easy to understand. This sort of business can work on their deals through us. Likewise, the monetary identical framework will orchestrate a business report. We need to make an association between the vendor and the root level customers through our application.

### **1.4 Expected Outcome**

We are fostering our venture zeroing in on our undergrad last as well as to make this venture our future business startup. Also we predominantly select this for its tremendous market worth and learning extension while fostering this entire framework completely. On the off chance that we can give our best by the finesse of God, we are expecting these results will be acquired before our projection submission date:

- The UI will be user friendly.
- Smart product selection system.
- The monetary identical will be kept up with by the application.
- Simple to make a record in this application to get entrancing organizations.
- The android application ought to be worked without a hitch and liberated from bug.

## 1.5 Project Management and Finance

Project management is the way for the achievement of a task. It ensures that all experts included will work agreeably to convey results that mean a positive profit from venture. Without formal organization, a couple of issues might occur. They fuse a shortfall of participation, obfuscated objectives, inadequate resources, low quality, and conceded assumptions.

The leaders have a few assessments:

**Innovation:** The framework improvement of “FreshNin: A Reliable Mobile Application for Authentic and Traditional Food Supply”. is designed with the most sophisticated and successfully open advancement in mind. This framework is based on Android in the manner of a minimally interfaced Android Application, which is uncomplicated to use. This structure was created using the Java programming language, MySQL for the database, and XML for the layout.

**Time:** This implausible assessment quantifies the designs' perspective in relation to the period, which is likely the most fundamental motivation to consider. The time component is crucial in this endeavor, as this structure is destined to be introduced in a timely manner. This structure is not huge and, as such, should be feasible within the timeframe specified for its shellfish. Time is an important factor to consider, since we may conclude that this framework can be constructed within a reasonable time limit.

**Resources:** This estimation considers the resources that will be required to create the system. The resources necessary for this system are readily obvious and can be met; the resources required for this structure are critical hardware and a functional system. With the assistance of this comprehensive evaluation, we can ascertain the structure's viability and decide whether to proceed with the project. By examining the estimations and their placement inside this particular structure, we can conclude that this system is feasible from a variety of estimating perspectives and that it is conceivable to complete the project.

**Finance:** This assessment factored in the resources required to build the construction. The resources required for this structure are extremely obvious and attainable; the resources required

for this system are critical gear and a functional movement structure. With the assistance of this total evaluation, we can ascertain the structure's use and decide whether to proceed with the project. By keeping the estimations and their occupation within this specified system within reasonable bounds, we can conclude that this structure is attainable from all of these estimations' perspectives and that it is prudent to proceed with the errand.

## 1.6 Report Layout

Report layout portrays a kind of brief of all the part. A kind of brief, all things considered, is given below:

- **Chapter 1:** Depicts a guidance of the “FreshNin: A Reliable Mobile Application for Authentic and Traditional Food Supply”, Motivation, Objectives, Finance, Awaited result and the report management.
- **Chapter 2:** Portrayed the background, the connected works, Comparatives Studies, extent of the issue and Challenges of the application.
- **Chapter 3:** Describes the System requirements, Use case modeling, Business process model, Logical data model and design requirement.
- **Chapter 4:** Depict the design (Front and Back end), connection and UX. Implementation prerequisite.
- **Chapter 5:** Implementation of database, Detail the execution of front-end design, back-end design, testing methodology, Functional testing, Unit test, Compatibility test, result and report.
- **Chapter 6:** End Discussion and extension for future turn of events.

## **CHAPTER 2**

### **BACKGROUND**

#### **2.1 Preliminaries/Terminologies**

There is numerous item conveyance or food conveyance application in Bangladesh which is dynamic and getting their administrations to the clients appropriately. Then again, they generally need to offer their types of assistance to the eateries and the finance manager who have their shop. There is such a lot of less specialist organization which offers types of assistance of home conveyance for a nonprofessional money manager. Hence financial specialist from little urban communities faces such a difficult situation to get acquainted.

So, our job will be to let people know of the different traditional and authentic foods across the country through a user-friendly mobile application.

#### **2.2 Related Works**

This section will describe recent projects and related studies that have been evaluated in this field.

**Foodpanda:** Are you famished? Have you had a particularly long and tiring day? Are you interested in having a delicious food delivered to your workplace or in avoiding the weekly grocery store? If so, foodpanda Bangladesh seems to be the place for you! foodpanda provides a comprehensive list of the top restaurants and retailers in your area to make your life simpler. Whether you're in the mood for a delicious cheeseburger from Takeout, delicious sushi from Samdado, or peri peri meat from Nando's, foodpanda has over 3000 eateries accessible spanning Dhaka to Chittagong and Sylhet. Did you realize you can also order groceries and other items from foodpanda? Visit foodpanda stores to find favorite partners such as Unimart, Suborno, Shwapno, and Bengal Meat, among others. Sit back and relax - foodpanda Bangladesh will take care of the rest [1].

**PathaoFood:** "Pathao," the country's premier app-based bike riding service, announced a new facility last week dubbed "Pathao Food" and for country's food aficionados. The capital's Pathao Headquarters hosted the inauguration event. Food enthusiasts may have been using the Pathao App to order from every restaurant within their zone, without having to walk outside and wait in line. Users will only need to choose their chosen local eateries and then select their desired meal items from the complete menu available on the App. They may search for, find, and order food from restaurants around them using the App, and the local Pathao Food Delivery driver will make the orders and bring the food to the app users' doors [2].

**HungryNaki:** This is Bangladesh's very first online meal delivery business, started in July 2013 and operated entirely by Bangladeshis. Over 10 million people utilize it. Currently operating in five cities including Dhaka, Narayanganj, Sylhet, Chittagong, and Coxbazar. There are almost 1100 eateries covered by Hungrynaki around the country [3].

### **2.3 Comparative Studies**

In "Related Works" area we examined some very notable undertakings which are excellent and famous for food conveyance yet in our framework, we are giving the office to convey the food things as well as any remaining things a money manager can sell. I have focused not only on the place, but also the most famous vendor of that place.

### **2.4 Scope of the Problem**

I needed to foster my central hub as a mechanized handling framework where all the assigning activities happen. Such as, taking pre orders, which item is available for this weekend's pre order, merging regular items and pre ordered items for a customer under a single order, etc. In any case, on the off chance that somebody from the administrator will keep up with that part it will be more gotten and well maintained.

## 2.5 Challenges

In this venture the fundamental lessening is web association. Without web association it won't work. Since, supposing that a client needs to arrange should require versatile information or Wi-Fi association for send information in my database.

In next, the application can be producing for IOS and blackberry client. Thusly, the client of blackberry and IOS working framework, they can utilize the application take request without any problem. Furthermore the division of client will be more extensive.

In next improvement, this android application can be producing for installment strategy. Added mobile banking, Visa card, Master card for easy purchase cafe charge by client.

In next improvement, the android application will execute with online media like Facebook, twitter, Instagram, LinkedIn etc for getting cafe and store data.



# CHAPTER 3

## REQUIREMENT SPECIFICATION

### 3.1 Business Process Modeling

This paradigm has led to a business-oriented approach to the project. The developer will be able to better encourage growth and better manage the company cycle with its assistance. In the BPM, the entire methodology of our undertaking was clarified. From begin to End, there are 2 applications, associating one another, getting refreshed data from one another, all utilizing live information which is displayed in Figure 3.1.

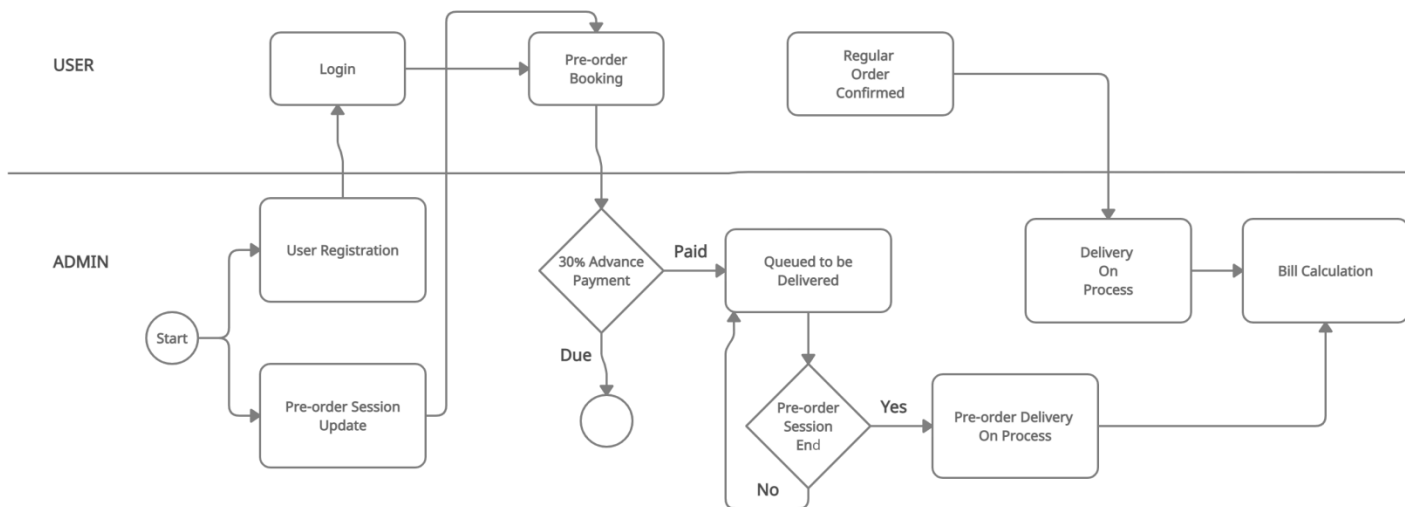


Figure 3.1: Business Process Model for the Application

### 3.2 Use Case Modeling and Description

All the system of the entire task is displayed in the Figure 3.2. On the left, the use case is for customer, which is the main part in this task. The admin application is shown in the right. In short, when a customer places an order the administrator will check whether the order is for pre ordered items or from the regular items section. If the order is for pre order items, the administrator will check if the customer has paid the 30% advance bill of the total amount. If the customer had done so, the administrator will check the transaction id and confirm the order. The order will be pending until the delivery date which will be shown in the pre order delivery section. If the order request is for the regular item, the administrator will immediately dispatch that order to the delivery service and the bill will be paid with “Cash On Delivery” procedure. The whole process is shown in the Figure 3.2.

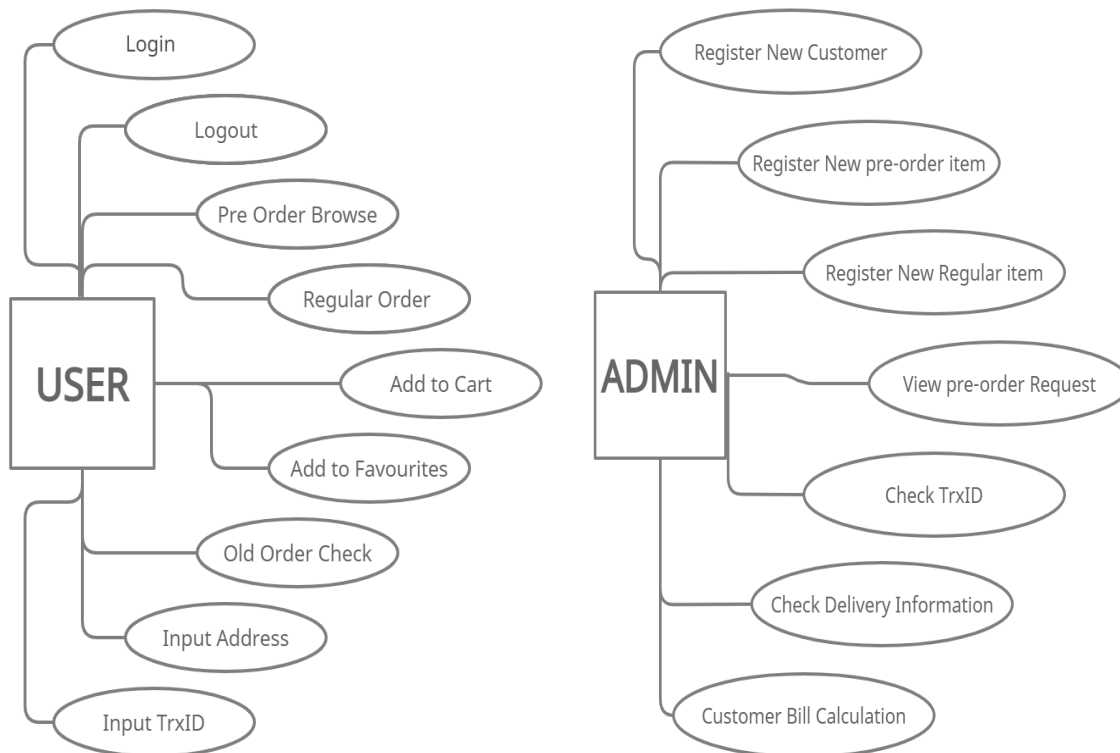


Figure 3.2: Use Case Model

### 3.3 Use Case Narrative for Actors

Our use case model addresses live customers connections done in the application. Users can Login, Logout, can browse pre-order items as well as regular items, if a customer wants to add to favorites, they can do so, they can also add to cart their favorite items for future order. If a customer wants to order an item that he ordered previously from the application, they can find that list in the previous ordered items. For pre-ordered items, the customer has to pay 30% of the total amount of the order to confirm and put the transaction id to be checked by the admin. The whole process is shown in the below Figure 3.3.

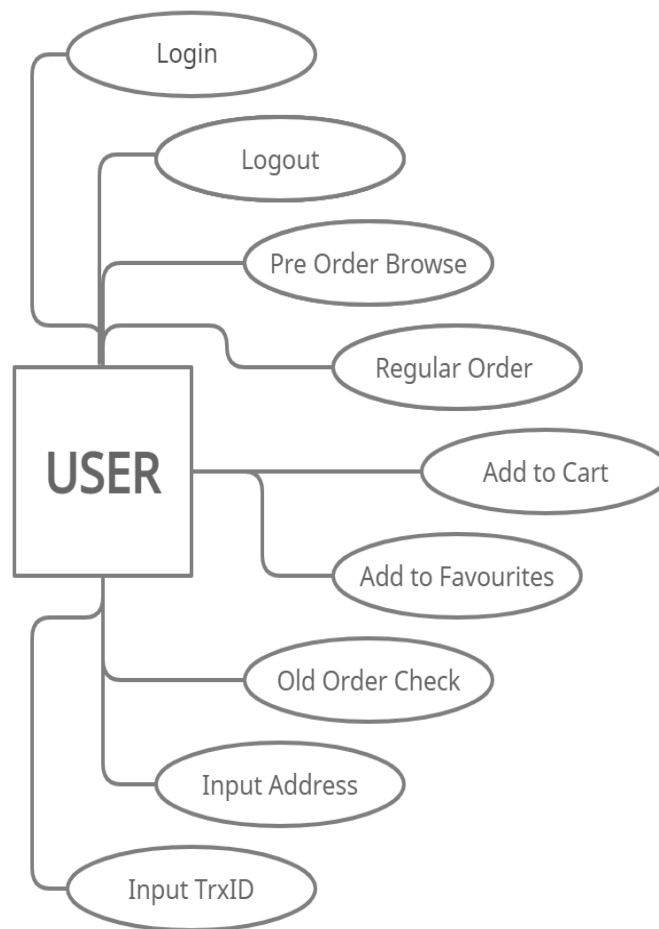


Figure 3.3: User Application Use Case Model

The below use case model is for Admin Application. Here, the administrators can enlist new customers. Admins can follow all the customer demands, and can assign their products accordingly. They can follow past delivery history, customer bill history and so on. We likewise call this the central application for this entire project which is displayed in Figure 3.4.

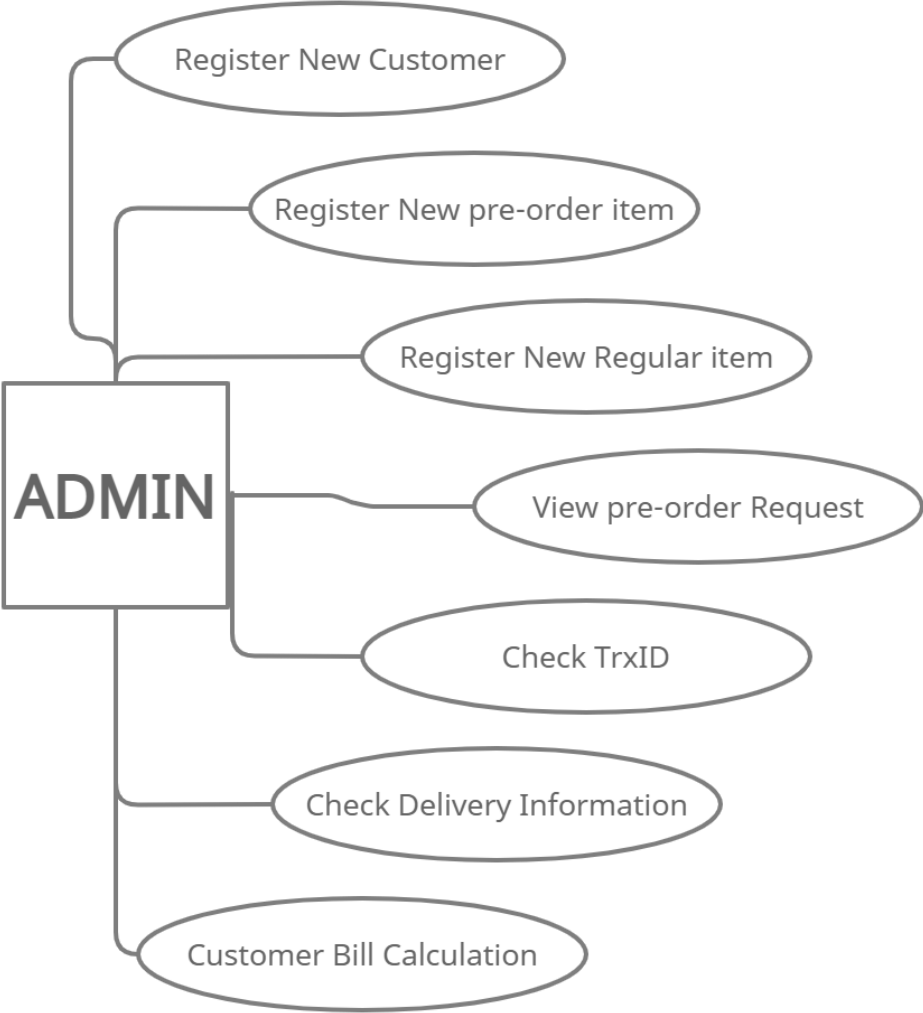


Figure 3.4: Admin Application Use Case Model

### 3.4 Logical Data Model

A logical data model defines the structure of data components and their relationships. It is devoid of the real database that determines the manner in which data will be processed. The logical data model serves as a framework for utilizing data. The logical data model enhances the components of applied data modeling by including more data. The Logical Data Model for the Application is given below in the Figure

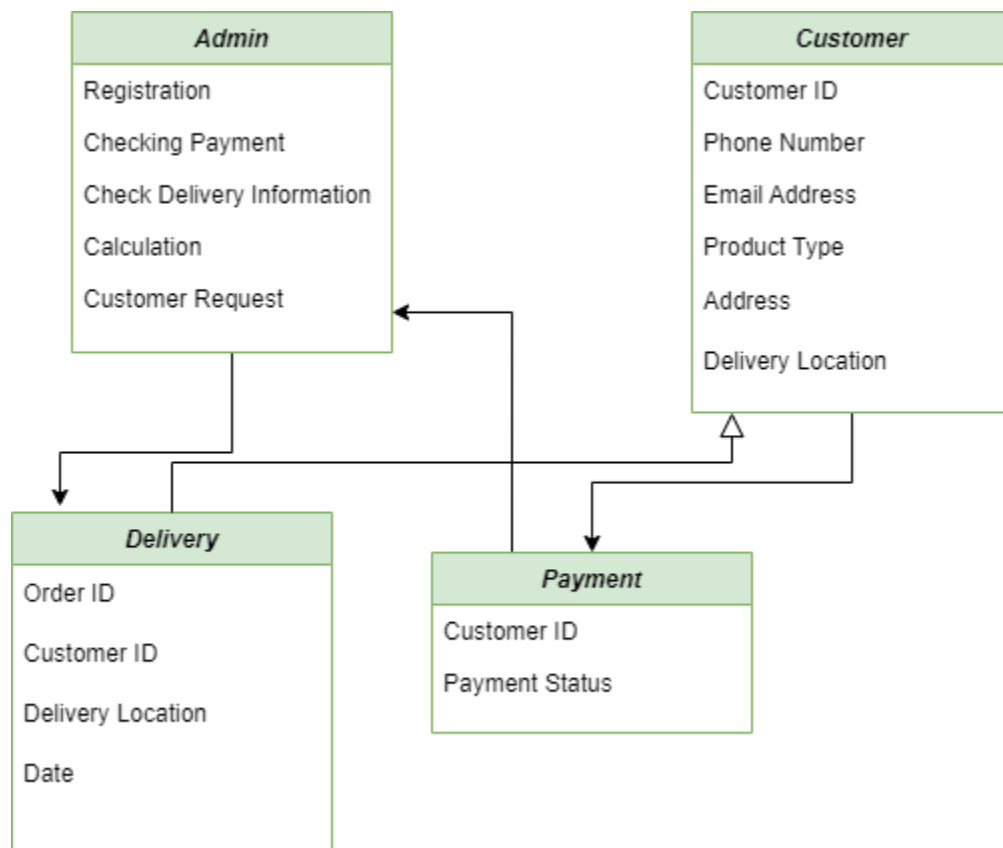


Figure 3.5: Logical Data Model

### 3.5 Design Requirements

The principle objective of our task is to give a straightforward, yet easy to understand application to the clients. The arrangement of our task is exceptionally simple to utilize, we endeavored to design our application in that comparing way.

For Admin application, when the admin first opens the application, it will show the continuous conveyances, solicitations, and all the essential status. We attempted to limit the time and attempted to show to-the-point working techniques. An admin can follow every one of the things happening in the application, and can refresh, make changes, and can drop any continuous conveyances whenever. For client application, they need to login utilizing their certifications. From that point onward, a customer can demand for an item, track continuous things for pre-order, track installment status, track new standard things, etc. Lastly, both admin and user need to login effectively for further approach.

Designing requirements for users:

- Welcome screen
- Pre-order items and schedule
- Regular items
- My cart
- User profile
- Ongoing orders
- Previous orders
- Favorites

Designing requirements for admins:

- Welcome screen
- Registration [in/out]
- Pre-order request
- Advance payment check
- Ongoing orders
- Daily bill collection screen

# CHAPTER 4

## DESIGN SPECIFICATION

### 4.1 Front-End Design

#### Coordinator Layout

Coordinator Layout is a supercharged version of the Frame Layout. The Coordinator Layout was created with two major use cases in mind. One, as an application's or chrome layout's top-level décor. Two, by providing Behaviors for child views of a Coordinator Layout, you may enable a variety of distinct interactions inside a single parent, and those views can also interact with one another. By implementing the default behavior annotation, view classes can provide a default behavior when used as a child of a Coordinator Layout. [4].

#### Constraint Layout

Constraint Layout is an Android layout that enables us to construct adaptive and flexible displays for our apps. The Constraint Layout, which is currently the default layout in Android Studio, provides a plethora of placement options for items. We can bind them to their container, to one another, or to rules. This enables you to construct views that are huge, complicated, dynamic, and responsive while maintaining a flat hierarchy. The best aspect is that it supports animations as well [4].

#### Recycler View

The Recycler View enables the implementation of horizontal, vertical, and expandable lists. It is mostly utilized when dealing with data sets whose elements might alter dynamically in response to user actions or network events. We must provide the Adapter and Layout Manager in order to use this widget [4].

## **Text View**

Text View is a graphical user interface control in Android that is used to configure and show text to the user depending on our specifications. The Text View control will behave similarly to a label control, except that users will be unable to alter the text. In Android, we can build a Text View control in one of two ways: via an XML layout file or programmatically in an Activity file [4].

## **Buttons**

A button is a piece of text or perhaps an icon (or both) that indicates the action that occurs only when user presses it [4].

## **Bottom Sheet**

A bottom sheet is a layer that moves upward from the screen's bottom border. Bottom sheets are presented in response to user input, and may also be swiped up to disclose extra material [5].

## **4.2 Back-End Development**

### **Room Database**

On top of a SQLite database, Room is really a database layer. Room handles routine operations that were previously handled by a SQLiteOpenHelper. Room makes use of the DAO to do database queries. By default, Room prevents you from issuing queries mostly on main thread in order to minimize degraded UI performance [4].

### **Retrofit**

Retrofit is a type-safe REST client written in Java and Android that attempts to simplify the consumption of RESTful web services. We will skip over the intricacies of Retrofit older versions and straight discuss Retrofit 2, which has a slew of new capabilities and a revised internal API in comparison to prior versions [5].



## RX Java

RxJava is a Java Virtual Machine (JVM) toolkit for developing and running asynchronous and event-based applications using observable sequences. Its fundamental components are the triple O's: Operator, Spectator, and Observables. And by utilizing them, we are able to carry out asynchronous operations in our project. It simplifies multithreading in our project significantly. It assists us in determining which thread to perform the job on [6].

## Firestore authentication

Firestore Authentication enables you to authenticate users in your app using backend services, simple-to-use SDKs, and pre-built UI frameworks. It works with passwords, phone numbers, and prominent federated identity providers such as Google, Facebook, and Twitter, among others [7].

## Database

We utilized firestore's real-time dataset using firestore to maintain our application's data. Firestore Real-Time Database enables the development of incredible collaborative apps. We have 6 tables in our Database which is shown in Figure 4.1.

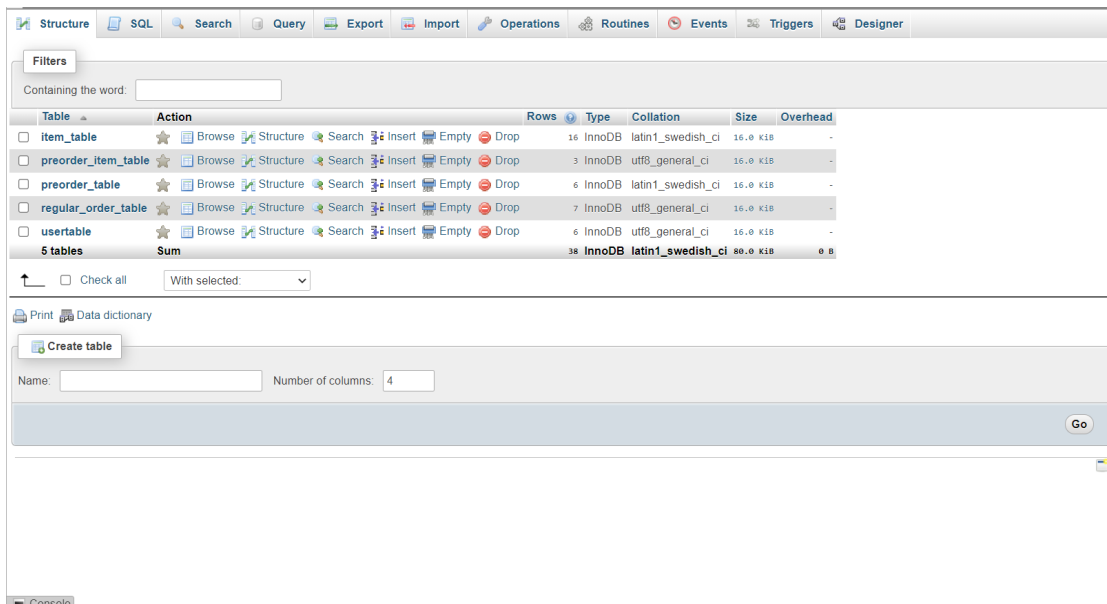


Table	Action	Rows	Type	Collation	Size	Overhead
<input type="checkbox"/> item_table		16	InnoDB	latin1_swedish_ci	16.0 K1B	-
<input type="checkbox"/> preorder_item_table		3	InnoDB	utf8_general_ci	16.0 K1B	-
<input type="checkbox"/> preorder_table		6	InnoDB	latin1_swedish_ci	16.0 K1B	-
<input type="checkbox"/> regular_order_table		7	InnoDB	utf8_general_ci	16.0 K1B	-
<input type="checkbox"/> usertable		6	InnoDB	utf8_general_ci	16.0 K1B	-
5 tables	Sum	38	InnoDB	latin1_swedish_ci	80.0 K1B	0 B

Filters  
Containing the word:

Check all    With selected:

Print    Data dictionary

Create table

Name:     Number of columns:

Console

Figure 4.1: Visual Representation of Database Tables

## **4.3 Interaction Design and UX**

### **User Application**

#### **Dashboard View:**

- Pre-order Items
- Dry Food
- Edible Oil
- Herbal Items
- Honey & Ghee
- My Cart (icon)
- Navigation Bar

#### **Navigation Bar:**

- Profile
- My cart
- Pre-order
- Ongoing Order
- Previous Order
- Favorite
- Logout

### **Admin Application**

#### **Dashboard View:**

- Add/Remove Pre-order Items
- Add/Remove Regular Items
- Navigation bar

### **Navigation Bar:**

- View Pre-orders
- View Ongoing Orders
- View Favorite Items
- Daily Bill Clearance
- Delivery Information
- Logout

### **UX**

User experience design is the method through which design teams collect items that provide clients with intelligent and crucial experiences. This system configuration is easy to use, which enhances the user experience. To simplify, we conducted a user needs analysis and built a UX around it.

## **4.4 Implementation Requirement**

We utilized Android studio to develop our Android apps for this project. Additionally, we deployed Firebase as authentication as well as push notification purposes. Java was required for the majority of the backend code. Additionally, we utilized dependencies for registration.

### **Software Requirements for Our Application:**

- Windows x64 System
- Android Studio
- JRE 1.5 or Higher
- JDK 1.5 or Higher
- Android OS least SDK version 21

**Hardware Requirements for Our Application:**

- Android Phone with minimum 2 GB Ram
- 1 GB free space

# CHAPTER 5

## IMPLEMENTATION AND TESTING

### 5.1 Implementation of Database

Database is utilized to store data of any application. An engineer normally utilizes a secured database to store data. Designers additionally add, alter and erase data from database. There are various sorts of data base like Firebase, mySQL, and so on.

Database execution is one of the primary and emotional pieces of our undertaking. We utilized mySQL for our database. MySQL got The Flexibility of Open Source The ensured getting ready and genuinely thought programming of MySQL join to give convincing trades to enormous volume projects. It makes backing, researching and overhauls speedy and basic while updating the end-customer experience. In figure 5.1 we have our full database initially where it's appearance the all tables we have utilized for our full system. In Figure 5.2, we have the Pre-order table where every data is stored regarding pre-order section. In Figure 5.3, we have the pre-order item table where the data from admin is stored regarding pre-order items. In Figure 5.4, we have the regular item table. In Figure 5.5, we have the information of regular items updated by Admins. In Figure 5.6, we have the informational data of every user.

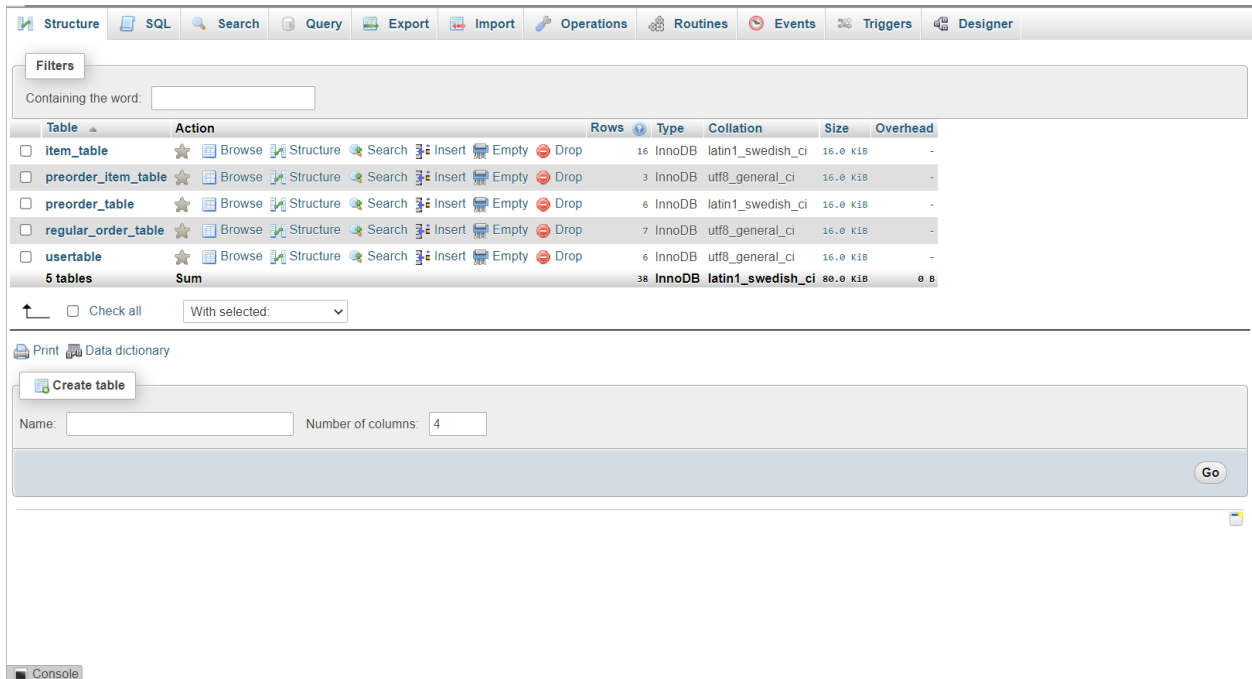


Figure 5.1: Database Tables

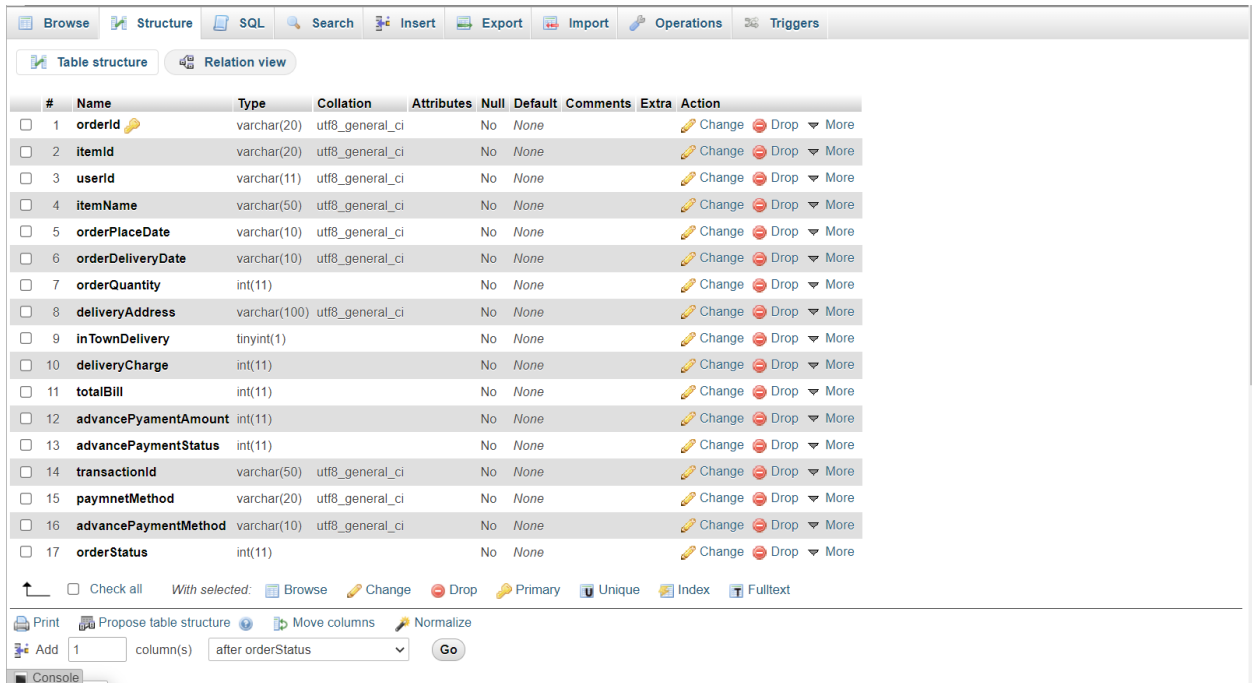


Figure 5.2: Pre-order Table

Table structure view for the Pre-order Item Table. The table has 9 columns:

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	productId	varchar(11)	utf8_general_ci		No	None			Change Drop More
2	productName	varchar(50)	utf8_general_ci		No	None			Change Drop More
3	productShortDes	varchar(150)	utf8_general_ci		No	None			Change Drop More
4	productPicUrl	varchar(100)	utf8_general_ci		No	None			Change Drop More
5	productUnitPrice	int(11)			No	None			Change Drop More
6	productUnitWeight	int(11)			No	None	Unit Gram		Change Drop More
7	sessionStartDate	varchar(10)	utf8_general_ci		No	None			Change Drop More
8	sessionEndDate	varchar(10)	utf8_general_ci		No	None			Change Drop More
9	sessionStatus	int(10)			No	None	1:created 2:published 3:unpublished		Change Drop More

Indexes:

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
Edit Drop	PRIMARY	BTREE	Yes	No	productId	3	A	No	

Partitions: No partitioning defined!

Figure 5.3: Pre-order Item Table

Table structure view for the Regular Item table. The table has 8 columns:

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	productId	varchar(20)	utf8_general_ci		No	None			Change Drop More
2	productName	varchar(20)	utf8_general_ci		No	None			Change Drop More
3	productDes	varchar(200)	utf8_general_ci		No	None			Change Drop More
4	productPicUrl	varchar(100)	utf8_general_ci		No	None			Change Drop More
5	productUnitPrice	int(11)			No	None			Change Drop More
6	productUnitWeight	int(11)			No	None			Change Drop More
7	inStock	tinyint(1)			No	None			Change Drop More
8	productCategory	varchar(50)	utf8_general_ci		No	None			Change Drop More

Indexes:

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
Edit Drop	PRIMARY	BTREE	Yes	No	productId	14	A	No	

Partitions: No partitioning defined!

Figure 5.4: Regular Item table

Figure 5.5 shows the table structure for the 'Regular Order Table' in a database management tool. The interface includes a top menu bar with options like 'Browse', 'Structure', 'SQL', 'Search', 'Insert', 'Export', 'Import', 'Operations', and 'Triggers'. Below the menu, there are tabs for 'Table structure' and 'Relation view'. The main area displays a table with 13 columns, each with a checkbox, a name, a type, a collation, attributes, nullability, default value, comments, extra options, and an action menu.

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
<input type="checkbox"/>	orderId	varchar(20)	utf8_general_ci		No	None			Change Drop More
<input type="checkbox"/>	userId	varchar(20)	utf8_general_ci		No	None			Change Drop More
<input type="checkbox"/>	itemIds	varchar(100)	utf8_general_ci		No	None			Change Drop More
<input type="checkbox"/>	itemQuantities	varchar(50)	utf8_general_ci		No	None			Change Drop More
<input type="checkbox"/>	totalBill	int(11)			No	None			Change Drop More
<input type="checkbox"/>	deliveryCharge	int(11)			No	None			Change Drop More
<input type="checkbox"/>	deliveryAddress	varchar(100)	utf8_general_ci		No	None			Change Drop More
<input type="checkbox"/>	inTownDelivery	tinyint(1)			No	None			Change Drop More
<input type="checkbox"/>	orderPlaceDate	varchar(20)	utf8_general_ci		No	None			Change Drop More
<input type="checkbox"/>	orderPlaceTime	varchar(20)	utf8_general_ci		No	None			Change Drop More
<input type="checkbox"/>	contactNumber	varchar(11)	utf8_general_ci		No	None			Change Drop More
<input type="checkbox"/>	paymetType	varchar(20)	utf8_general_ci		No	None			Change Drop More
<input type="checkbox"/>	orderStatus	int(11)			No	None			Change Drop More

Below the table structure, there are options to 'Check all', 'With selected', 'Browse', 'Change', 'Drop', 'Primary', 'Unique', 'Index', and 'Fulltext'. There are also buttons for 'Print', 'Propose table structure', 'Move columns', and 'Normalize'. An 'Add' button is present with a dropdown menu set to 'column(s) after orderStatus' and a 'Go' button. The 'Indexes' section shows a table with columns: Action, Keyname, Type, Unique, Packed, Column, Cardinality, Collation, Null, Comment. The index is named 'PRIMARY' and is of type 'BTREE'.

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
Edit Drop	PRIMARY	BTREE	Yes	No	orderId	6	A	No	

The 'Console' shows 'Index on 1 column(s) Go'.

Figure 5.5: Regular Order Table

Figure 5.6 shows the table structure for the 'User Table' in a database management tool. The interface is similar to Figure 5.5, with a top menu bar and tabs for 'Table structure' and 'Relation view'. The main area displays a table with 4 columns: userName, userPhoneNumber, userPassword, and userPhotoUrl.

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
<input type="checkbox"/>	userName	varchar(20)	utf8_general_ci		No	None			Change Drop More
<input type="checkbox"/>	userPhoneNumber	varchar(11)	utf8_general_ci		No	None			Change Drop More
<input type="checkbox"/>	userPassword	varchar(20)	utf8_general_ci		No	None			Change Drop More
<input type="checkbox"/>	userPhotoUrl	varchar(200)	utf8_general_ci		Yes	NULL			Change Drop More

Below the table structure, there are options to 'Check all', 'With selected', 'Browse', 'Change', 'Drop', 'Primary', 'Unique', 'Index', and 'Fulltext'. There are also buttons for 'Print', 'Propose table structure', 'Move columns', and 'Normalize'. An 'Add' button is present with a dropdown menu set to 'column(s) after userPhotoUrl' and a 'Go' button. The 'Indexes' section shows a table with columns: Action, Keyname, Type, Unique, Packed, Column, Cardinality, Collation, Null, Comment. The index is named 'PRIMARY' and is of type 'BTREE'.

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
Edit Drop	PRIMARY	BTREE	Yes	No	userPhoneNumber	5	A	No	

The 'Console' shows 'Create an index on 1 column(s) Go'. Below the indexes section, there is a 'Partitions' section with a warning icon and the text 'No partitioning defined!'. There is a 'Partition table' button. The 'Information' section is also visible.

Figure 5.6: User Table



## 5.2 Implementation of Front-end Design

With our requirements, we have accomplished our full project into two different sections. These two sections are, Admin Section where the admin section will be maintained by the admins. User Section will be used by the users.

### Admin Section

Admin can add products, product details, product prices and other essential offerings. Offering section can be updated and deleted. An Admin can also review user activities and through that user can be removed from database. While users are confirming their orders, transaction id will be verified and completed by the admin and show the user on completion of the transaction process.

Some of the screen shots of Admin Section is given below.

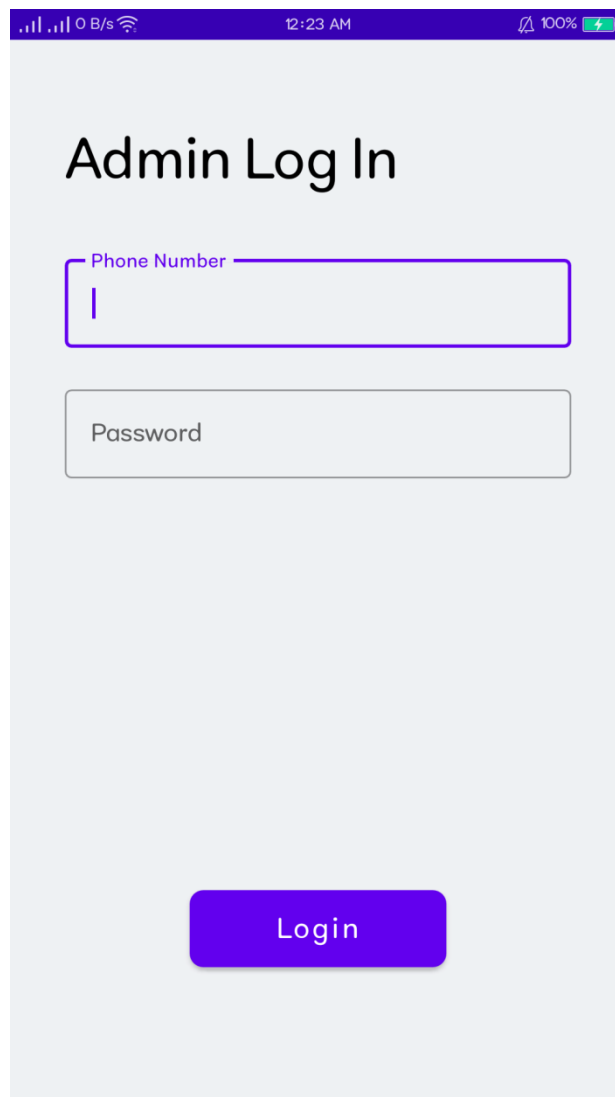



Figure 5.2.1: Admin Login

317 B/s 11:35 PM 98%

← Add Item



Product Category

Product Name

Description

Product Unit Price

Product Unit Weight

Add Item

Figure 5.2.2: Adding New Item

In use for development, tap to close

←

প্রতি সরা  
২৩০৮

স্বাদে অতুলনীয়  
বগুড়ার দই

Upload Photo

বগুড়ার সরার দই

WHATEVER YOU TAKE, TAKE IT FRESH! freshNin

Product Name

Description

Product Unit Price

Product Unit Weight

Session Start Dtae

Session End Dtae

Create Session

Figure 5.2.3: Admin Creating New Pre Order Session



Session Status

Running Stop Session

Product Name

Description

Price (Tk)

450

Weight (gram)

700

Session

Start Date	End Date
21-12-2021	21-12-2021

Edit

Figure 5.2.4: Admin Controlling Current Session

## **User's Section**

Initially a User can register to the application with his credentials. After successfully logging in to the application, user can see different offerings and services from different sections. User can browse items, item details, can book pre-order items. Also the user can add items to Favorites. A user can manage his profile by updating details of a profile where user can change his name, address, contact number, and other useful credentials. After selecting a product while confirming the transaction there is a process of verifying transaction where user has to provide his transaction id and wait for the admin to confirm.

### **5.3 Implementation of Interactions**

We developed an application where our main focus was the client goal of using a lite, user friendly as well as user interactive. The process we followed directly connected ourselves with the large consumers that are of vast majorities and ages. That makes our application far more interactive to our users.

In FreshNin, user gets registered to the application through phone number verification and password offering a profile of his own. After successfully logging into the application, user sees the dashboard where different kinds of services and products are sorted sequentially with product and service's description and the offered pricing. After selecting a product, user can increase or decrease the quantity as well as add the item to the favorites. If the selected product is on pre-order list, user has to pay 30% advance payment in order to book the product for next shipment. If the selected product is from the regular items, then there is an option from where to choose if the payment will be paid through online payment or Cash On Delivery (COD). If any payment is paid through online, there is a confirmation state which will be confirmed by the admin after the user provides the transaction id.

The admins of the application will be notified of any changes from the offering services like orders will be notified in the admin dashboard. If any user adds anything to his favorites, the admin will get notified of that also. While admin supervises, if there is any fraudulent activity or any inappropriate suspicious movement, the admin can remove the user or block the user from database. For any emergencies, or any completed order related issues, a hotline number is provided for the user to contact with the admins.

#### 5.4 Testing Implementation

When several of our projects were in the early stages of development, we tested our cooperation intent to intent. As we lack professional testers and have gathered needs from our company expertise, we are intimately familiar with customer requirements. Thus, we can claim that we do all types of testing, including unit testing, integration testing, and acceptance testing. Additionally, for the sake of perfection, we establish certain special requirements for such goal of this exam.

Table 5.1: Testing implementation of the application

01	Checking if the program runs
02	Checking for registration
03	Checking the login program
04	Checking for Google location API
05	Checking billing equation
06	Checking the notification bar
07	Checking database connection
08	Checking the OTP

## 5.5 Test Results and Reports

Table 5.2 demonstrates the outcomes of the tests, as determined by the test cases presented in the previous part of this chapter.

Table 5.2: Result of testing implementation

01	Checking if the program runs	Success
02	Checking for registration	Success
03	Checking the login program	Success
04	Checking for Google location API	Success
05	Checking billing equation	Success
06	Checking the notification bar	Success
07	Checking database connection	Success
08	Checking the OTP	Success

## **CHAPTER 6**

### **CONCLUSION AND FUTURE SCOPE**

#### **6.1 Discussion and Conclusion**

If anyone wants to invest in a firm, a type of investment will not provide a sufficient return. Every day, modern life advances. Digital marketing and e-commerce-based businesses are growing in popularity daily, while the delivery mechanism is improving. Obtaining a supply chain for selling a product is not an alarming issue, and it is only available in busy and large cities. As residents of a rural community, we determined that we would also get trustworthy and comparable delivery services as a newbie to an internet company. Additionally, a rider profession is one of the easiest alternatives for jobless individuals to earn daily pocket money. Thus, a single application will fulfill two tasks.

#### **6.2 Scope for future developments**

- Create a fully developed interactive user application for consumers that is synchronized with the other apps built for this program.
- Making FreshNin more automated and Consumer friendly.
- Adding more features as per customer choice and assistance.



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