

PROJECT REPORT
Food From Home Delivery App

By

ASTU RANJAN : 2017AAPS0424H
RAJAT KOTHARI : 2017AAPS0444H
MANISH KUMAR : 2017AAPS1409H

Under the supervision of
(Dr. S. Panda)

Submitted in partial fulfillment of

CS F213: Object Oriented Programming

Github link:

<https://github.com/utsanajnar/FoodDelivery.git>

CSE Department,Bits Pilani Hyderabad Campus

Introduction

In this project we made an Android based Application which can be used as a food ordering and delivery APP to deliver food from one location to other .

Tools and Technology used in building the App:

- Android Studio IDE for Android app .
- Firebase Authentication used for login activities.
- Firebase Firestore Database used for storing various data used in proper functionality of the app .
- Google Map API used for getting the exact location of Customer as well as Rider automatically and to calculate various fields like distance between customer and rider for deciding the delivery charges etc .
- Generation of OTP for verification of customer and rider's phone numbers.
- SMS manager for exchange of information between customer and rider , like order id and rider's phone number for customer.

System specification and requirement to run our app:

This app can run on all the modern day Android Phones .

Functionalities of the App:

The app is build with following functionalities:

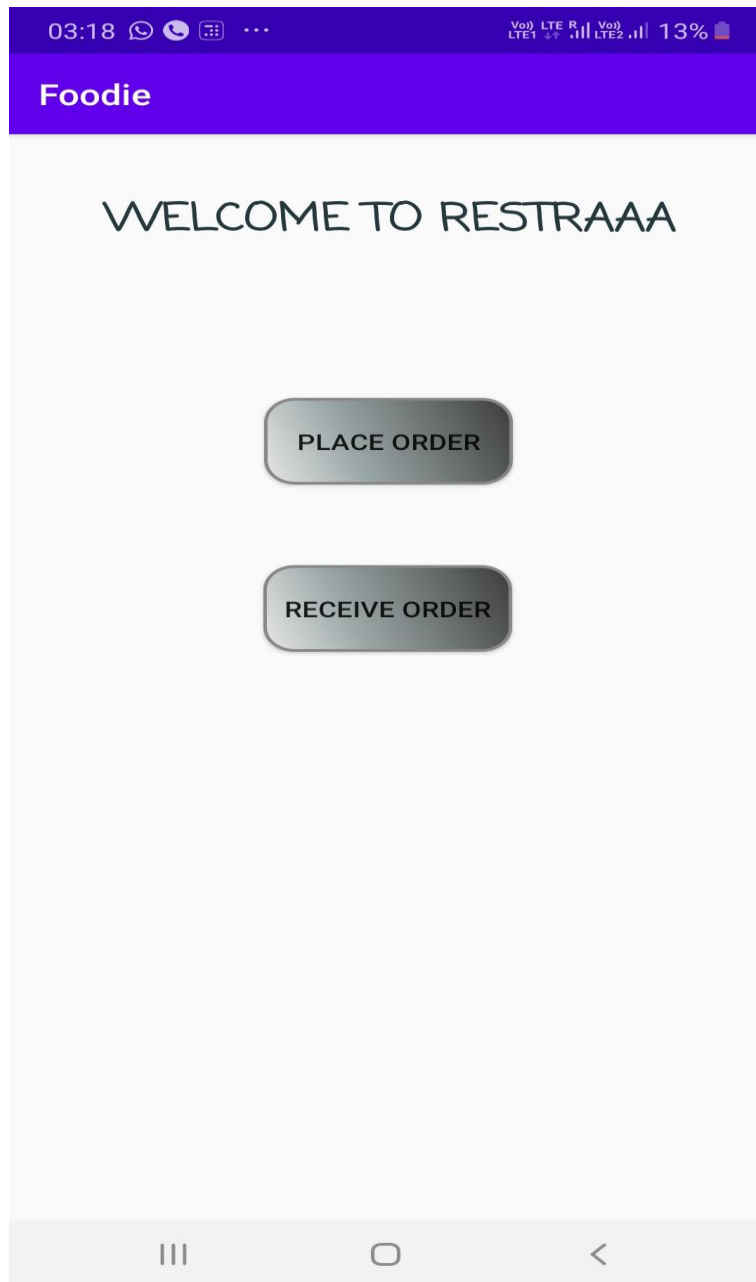
- Java Login and SignUp page for both Customer and Rider , authentication to which is done by using Firebase Authentication .
- Name , Phone number, E-mail id are mandatory fields of SignUp / Login page , all of which are stored in Firebase Firestore Database .
- In order to add pickup point or delivery point, auto-location enabling feature is added to help customer and Rider to get their location easily and accurately .
- Pricing for the order is done in two categories
 1. Regular basis:

The pricing is based on the distance between pickup and delivery point , and the weight of the packet . Regular booking can avail of 20% discount.
 2. Occasional basis:

No availability of discount here , pricing completely depends on the distance between pickup point and delivery point and, weight of packet .
- One Time Password (OTP) is sent to the user as well as the rider for verification of their phone numbers .
- Once the booking is confirmed from the rider's side , an SMS of Order Confirmation is sent to the customer from the rider's side which will contain the unique order ID along with the phone number of the Rider.
- A SMS containing the order ID and customer's phone number will be sent to the rider for facilitating further communication with customer.

Screenshots of GUI :

Welcome page , where you will be asked whether you are a Customer(place order) or a Rider(Receive order) .



- **If you are a customer then you will be forwarded to the following pages/ GUIs:**

1. SignUp page : Here you will be asked to sign up and your credentials will be stored in Firebase Auth as well as Firebase Firestore Database for future needs , or if you already have an account then do click on 'Already have an account tab'.

03:18 03:18 13%

Foodie

WELCOME FOODIE

NAME

PHONE NUMBER

EMAIL-ID

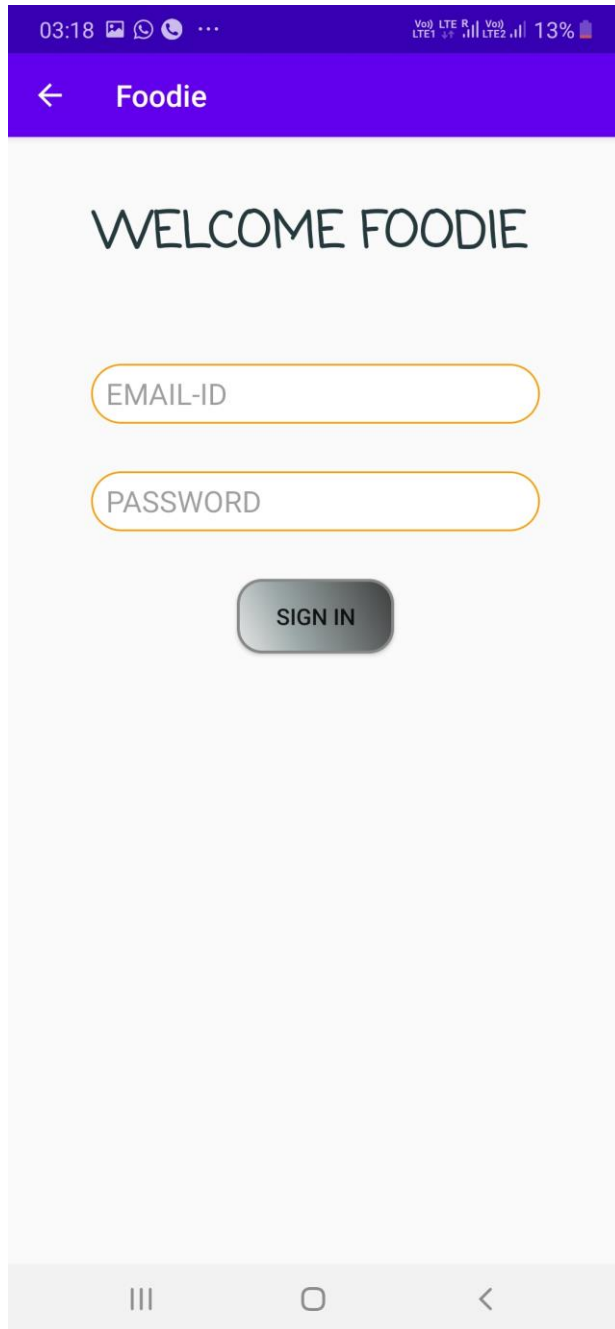
PASSWORD

SIGN UP

ALREADY HAVE AN ACCOUNT?

SIGN OUT

2. Sign In page: If you already have an account then you just need to sign in by your ee-mail ID and password , as rest of your informations are already stored in Firestore Database.



The screenshot shows a mobile application interface for a sign-in page. At the top, there is a purple header bar with a back arrow icon and the text "Foodie". Below the header, the text "WELCOME FOODIE" is displayed in a large, dark, sans-serif font. Underneath, there are two input fields: "EMAIL-ID" and "PASSWORD", both with orange borders and rounded corners. Below these fields is a dark gray button with the text "SIGN IN" in white. The bottom of the screen shows the standard Android navigation bar with three icons: a square, a circle, and a triangle.

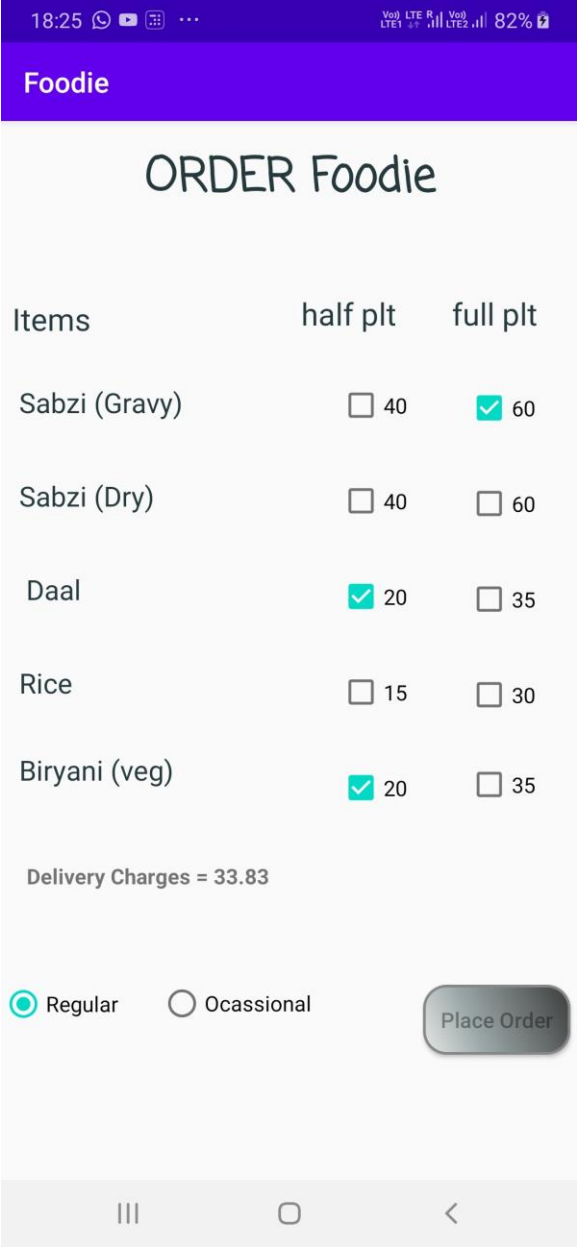
3. Auto Location enabling : Here you will be directed to your current location in google map , and your location coordinates will be stored in database for future needs , this is going to be the Delivery point for the rider.



4. Setting up the pickup point: Here the customer will be asked to set the pickup point from where the rider has to pickup the food to deliver it to the customer.



5. Menue page: Here few home made items are given in the menu and priced according to their weights (full plate , half plate), customer can opt the items they want to order . Here you can see at the bottom Delivery charge is written , which is calculated on the basis of distance between pickup point and Delivery point . Along with that you can see the Regular customer is selected which will avail the customer a total discount of 20% on the price of food ordered (excluding delivery charges) .



The screenshot displays the 'ORDER Foodie' app interface. At the top, there's a status bar with the time 18:25, signal strength, and battery level at 82%. Below this is a purple header with the text 'Foodie'. The main title 'ORDER Foodie' is centered in a large, dark font. The menu is organized into three columns: 'Items', 'half plt', and 'full plt'. Five items are listed: Sabzi (Gravy), Sabzi (Dry), Daal, Rice, and Biryani (veg). Each item has two checkboxes corresponding to the plate sizes, with prices listed next to them. For example, Sabzi (Gravy) has a half plate option for 40 and a full plate option for 60, with the full plate option being selected. Below the menu, the 'Delivery Charges = 33.83' are displayed. At the bottom, there are two radio buttons for customer selection: 'Regular' (selected) and 'Occasional'. A 'Place Order' button is located to the right of these options. The bottom of the screen shows standard Android navigation icons.

Items	half plt	full plt
Sabzi (Gravy)	<input type="checkbox"/> 40	<input checked="" type="checkbox"/> 60
Sabzi (Dry)	<input type="checkbox"/> 40	<input type="checkbox"/> 60
Daal	<input checked="" type="checkbox"/> 20	<input type="checkbox"/> 35
Rice	<input type="checkbox"/> 15	<input type="checkbox"/> 30
Biryani (veg)	<input checked="" type="checkbox"/> 20	<input type="checkbox"/> 35

Delivery Charges = 33.83

☒ Regular ☐ Occasional

Place Order

6. Phone number verification of customer through OTP :

Here the customer will enter its phone number and an otp will be sent to the number entered , ones the customer's number is verified , it will be sent to the rider for future needs . Here on the top you can see the over all Charge of the service provided i.e' total cost = Delivery + food charges.'

03:20 13%

Foodie

Total cost = 33.84 + 80.0 = 113.84

+918919317644

SUBMIT

Enter the OTP sent

SUBMIT

03:21 13%

Truecaller 03:21

5 1 2 4 8 1

Copy

Mark as read Dismiss

Total cost = 33.84 + 80.0 = 113.84

+918919317644

SUBMIT

Enter the OTP sent

SUBMIT

03:24 12%

< 59029414

090443 is your verification code. 03:29

090443 is your verification code. 03:33

904845 is your verification code. 12:43

570051 is your verification code. 13:39

598176 is your verification code. 13:42

058497 is your verification code. 13:44

352133 is your verification code. 13:52

843718 is your verification code. 18:25

270379 is your verification code. 18:36

044899 is your verification code. 18:55

261188 is your verification code. 19:26

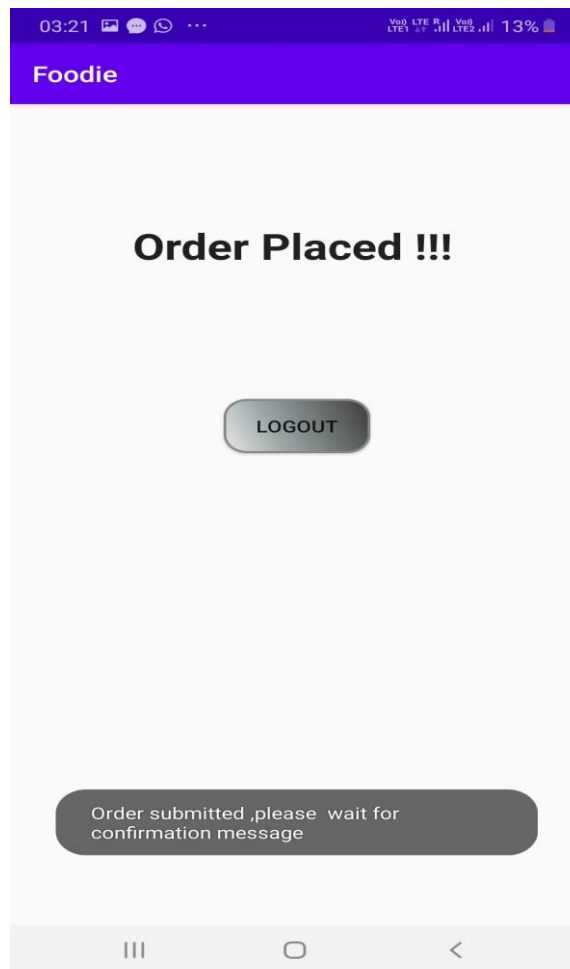
981119 is your verification code. 20:50

Wednesday, 22 April 2020

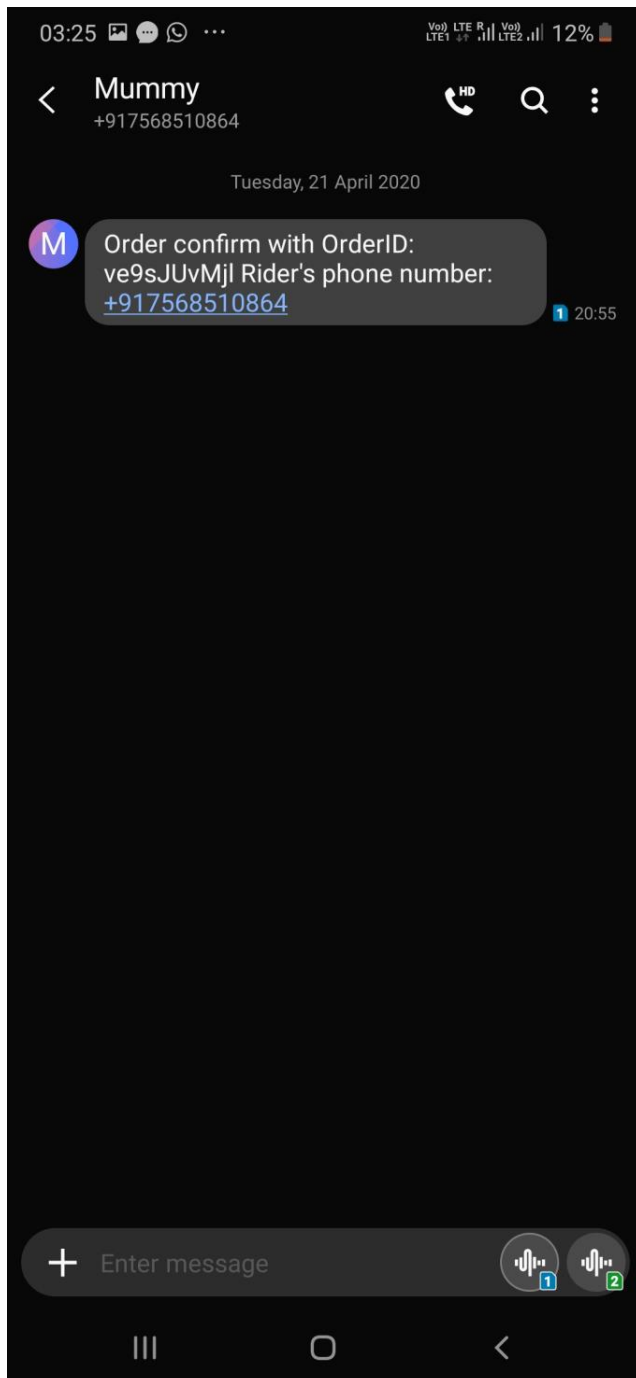
512481 is your verification code. 03:21

+ Enter message

7. Order placed from customer's side : Here you can see the Order placed message , i.e from customer's side the order is placed or registered . But since rider has to confirm this order ('how will rider confirm the order' , we will see that in rider's gui screenshot section), therefor you can see a Toast displaying 'order submitted , please wait for confirmation message' . So, when the rider will confirm the customer's order a confirmation message will be sent to customer .



8. Order confirmation message sent to customer from rider which will contain OrderID along with rider's phone number for future communication. Similarly a message containing the Order ID and customer's phone number will be sent to the rider for future communications .



- **If you are a rider you will be forwarded to following pages/GUIs.**

1.The first GUI is of signUp . The data of rier's credentials and customers's credentials are stored in different database which will help the programmer to distinguishing between customer and rider .

03:22 VoLTE1 VoLTE2 12%

← Foodie

WELCOME RIDER

NAME

PHONE NUMBER

EMAIL-ID

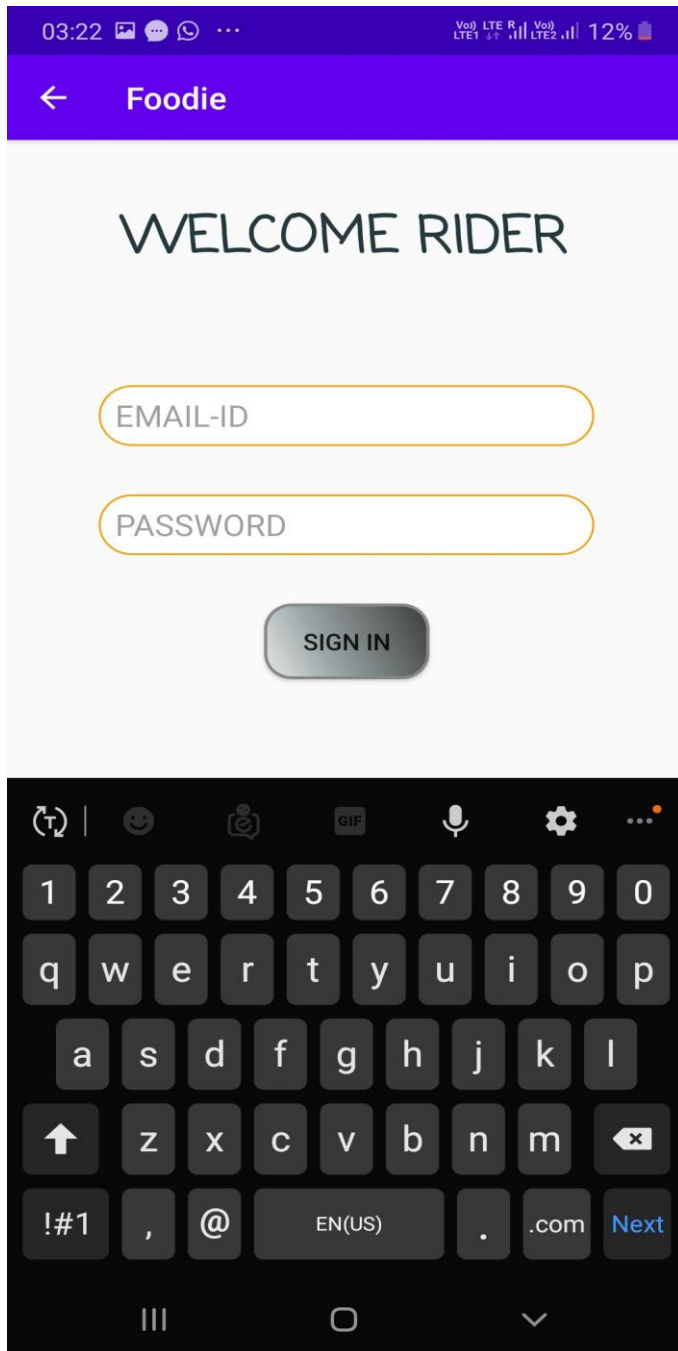
PASSWORD

SIGN UP

ALREADY HAVE AN ACCOUNT

LOGOUT

2. Sign In : If the rider already has an account the he can opt to 'already have an account ' tab which will send rider to following page.



The screenshot shows a mobile application interface for 'Foodie'. At the top, a purple header bar contains a back arrow and the text 'Foodie'. Below this, the text 'WELCOME RIDER' is displayed in a large, black, sans-serif font. Underneath, there are two input fields with orange borders: the first is labeled 'EMAIL-ID' and the second is labeled 'PASSWORD'. Below these fields is a grey, rounded rectangular button with the text 'SIGN IN' in black. At the bottom of the screen, a standard Android keyboard is visible, featuring a numeric row, a QWERTY layout, and a bottom row with symbols, a comma, an at-sign, a language selector set to 'EN(US)', a period, a '.com' domain, and a 'Next' button. The status bar at the very top shows the time as 03:22, along with icons for notifications, battery, and cellular signal.

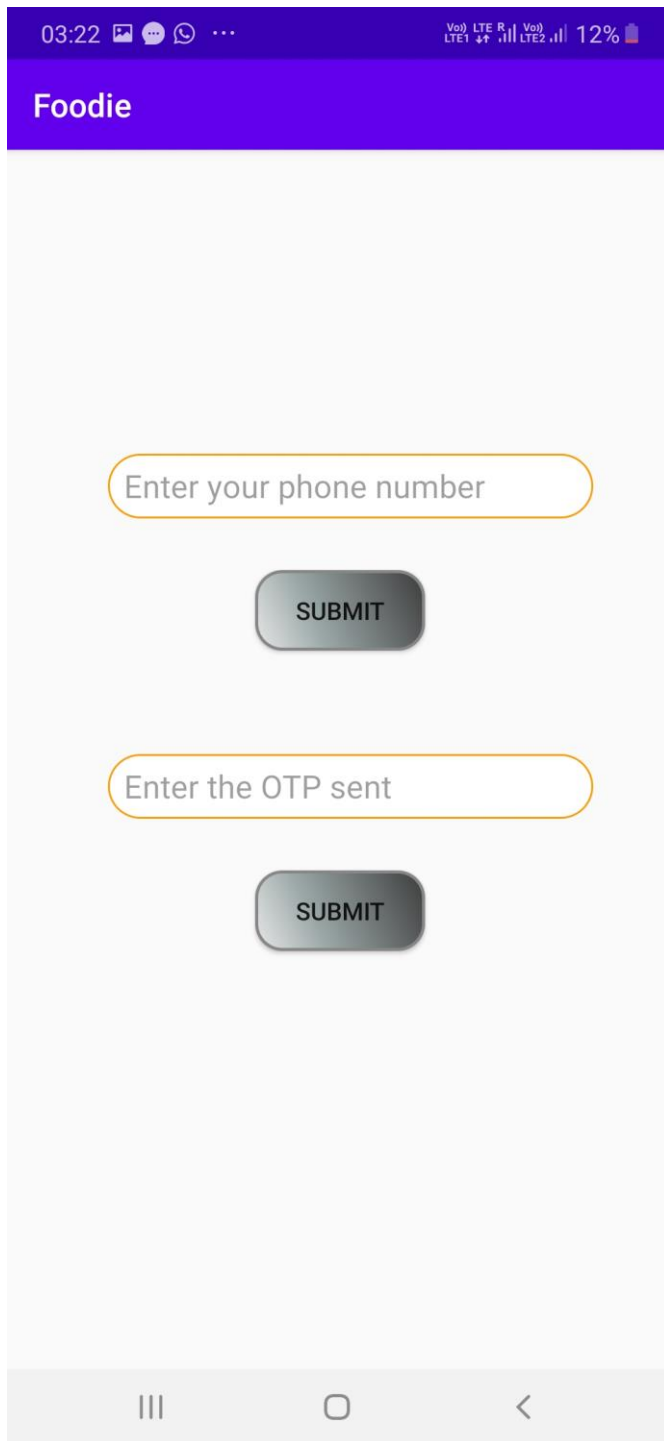
3. Auto Location enabling:

Here rider will be directed to its current location in google map , and its location coordinates will be stored in database for future needs .



4. Phone number verification of Rider :

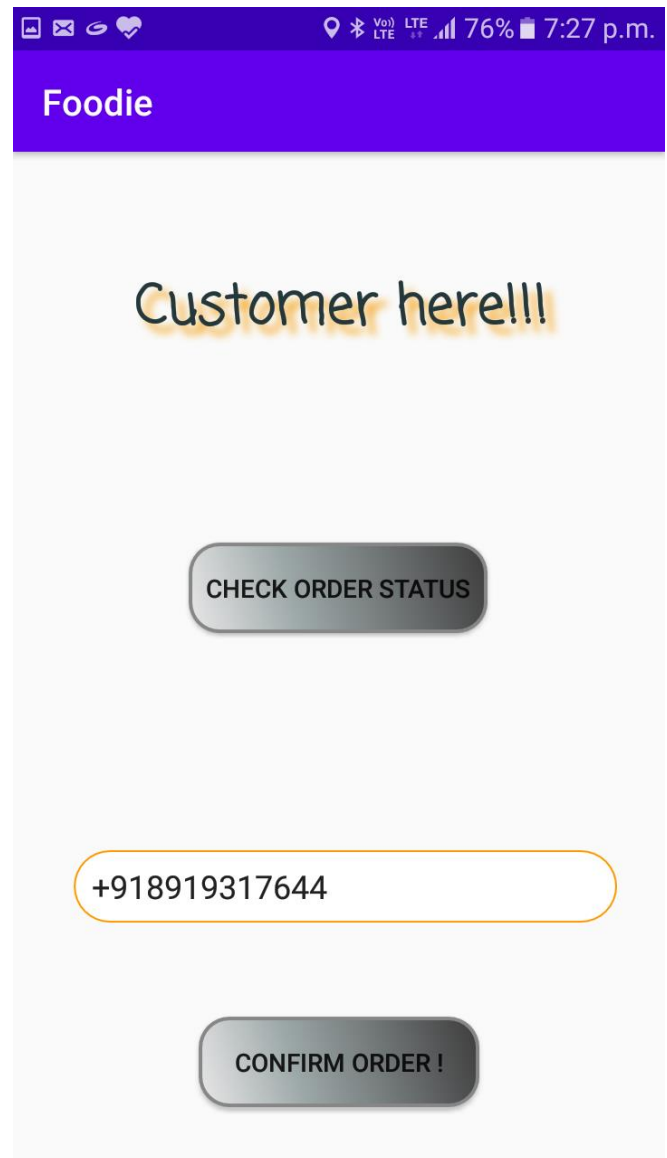
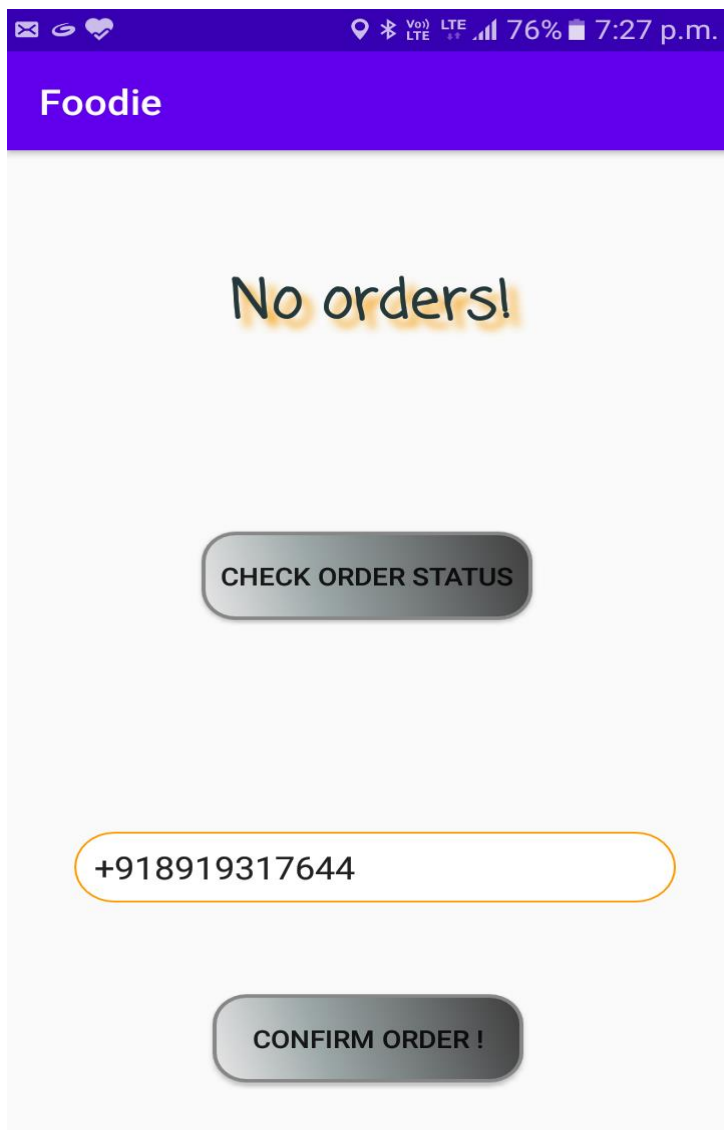
Here rider will be asked its phone number and an otp will be sent to the number given for the verification of the rider's phone number.



The screenshot shows a mobile application interface for phone number verification. At the top, there is a purple header bar with the word "Foodie" in white. Below the header, the background is light gray. The first section contains a white rounded rectangular input field with the placeholder text "Enter your phone number". Below this field is a dark gray rounded rectangular button with the word "SUBMIT" in white. The second section contains another white rounded rectangular input field with the placeholder text "Enter the OTP sent". Below this field is another dark gray rounded rectangular button with the word "SUBMIT" in white. At the bottom of the screen, there is a white bar with three icons: a hamburger menu icon (three horizontal lines), a home icon (a circle), and a back icon (a left-pointing arrow).

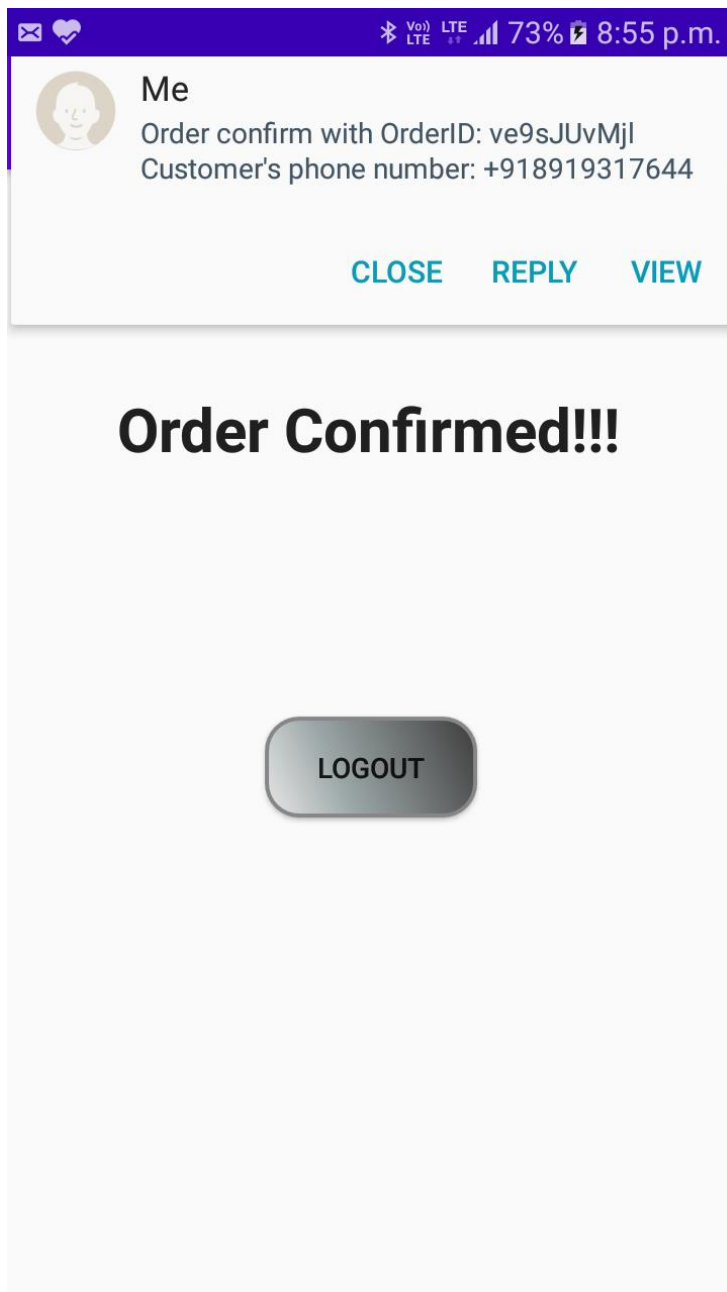
5. Order status and Confirmation :

Here the rider can check the order status , if there will be no customer then a message of 'NO ORDERS!' will be showed after the rider click on check status bar . And if there will be any customer available then 'Customer Here!!!' message will be shown . If the rider confirms the order by clicking on confirm order button then the customer's order will be confirmed .



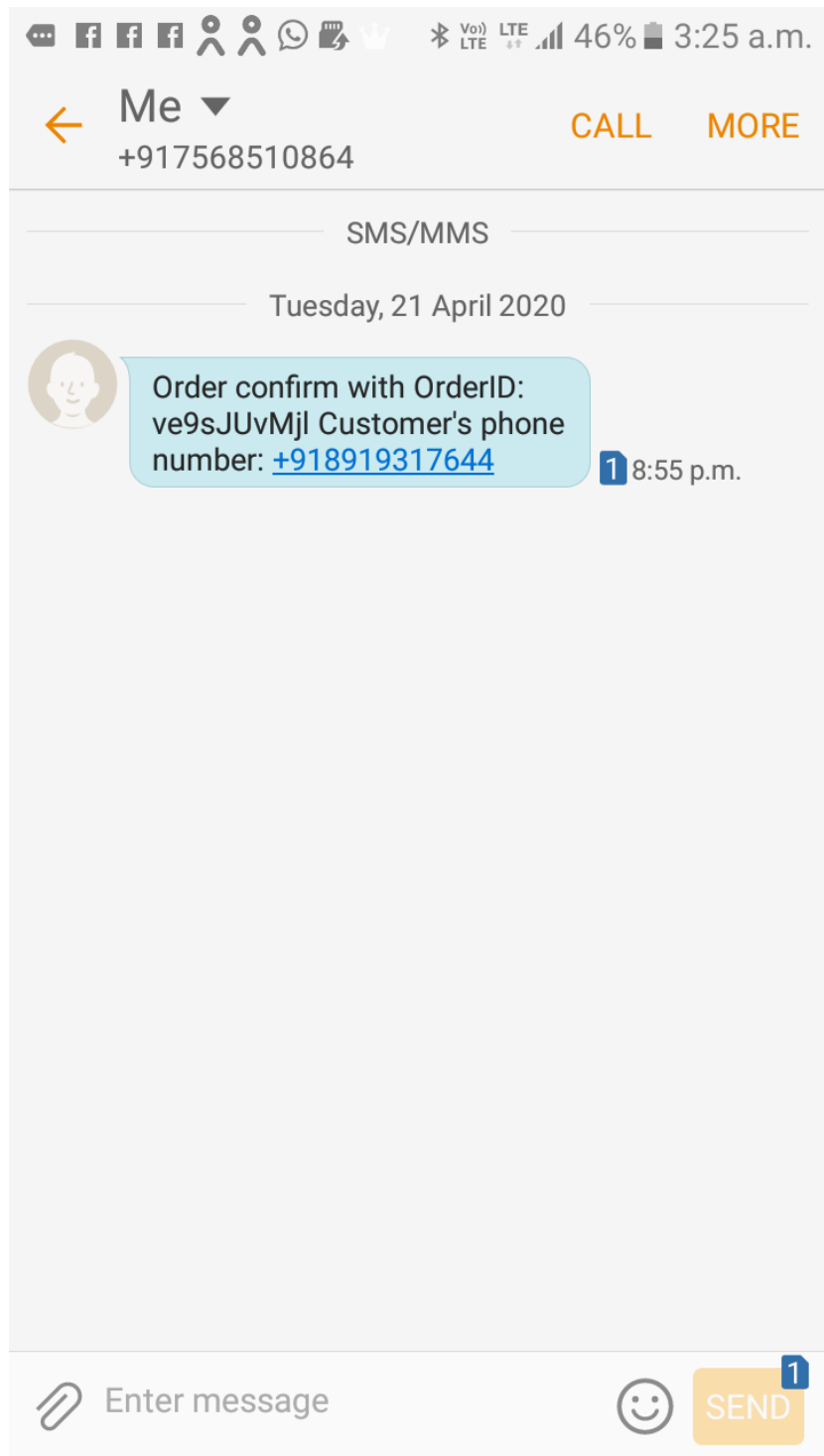
6. Conformation SMS and exchange of phone numbers :

Ones the order is confirmed from rider's side an order confirmation SMS will be sent to both customer and Ride . The SMS sent to customer will contain order ID and rider's phone number , whereas SMS sent to rider will contain the Order ID and customer's phone number .

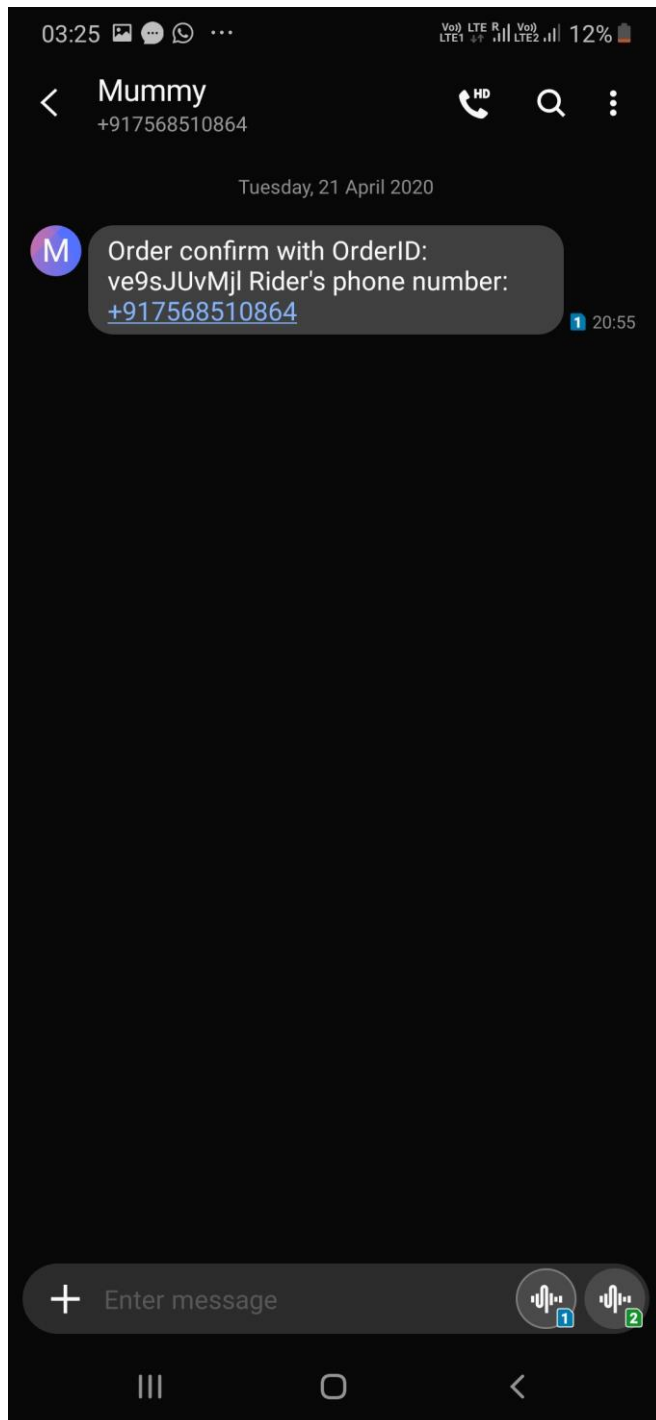


7.

SMS sent to Rider:

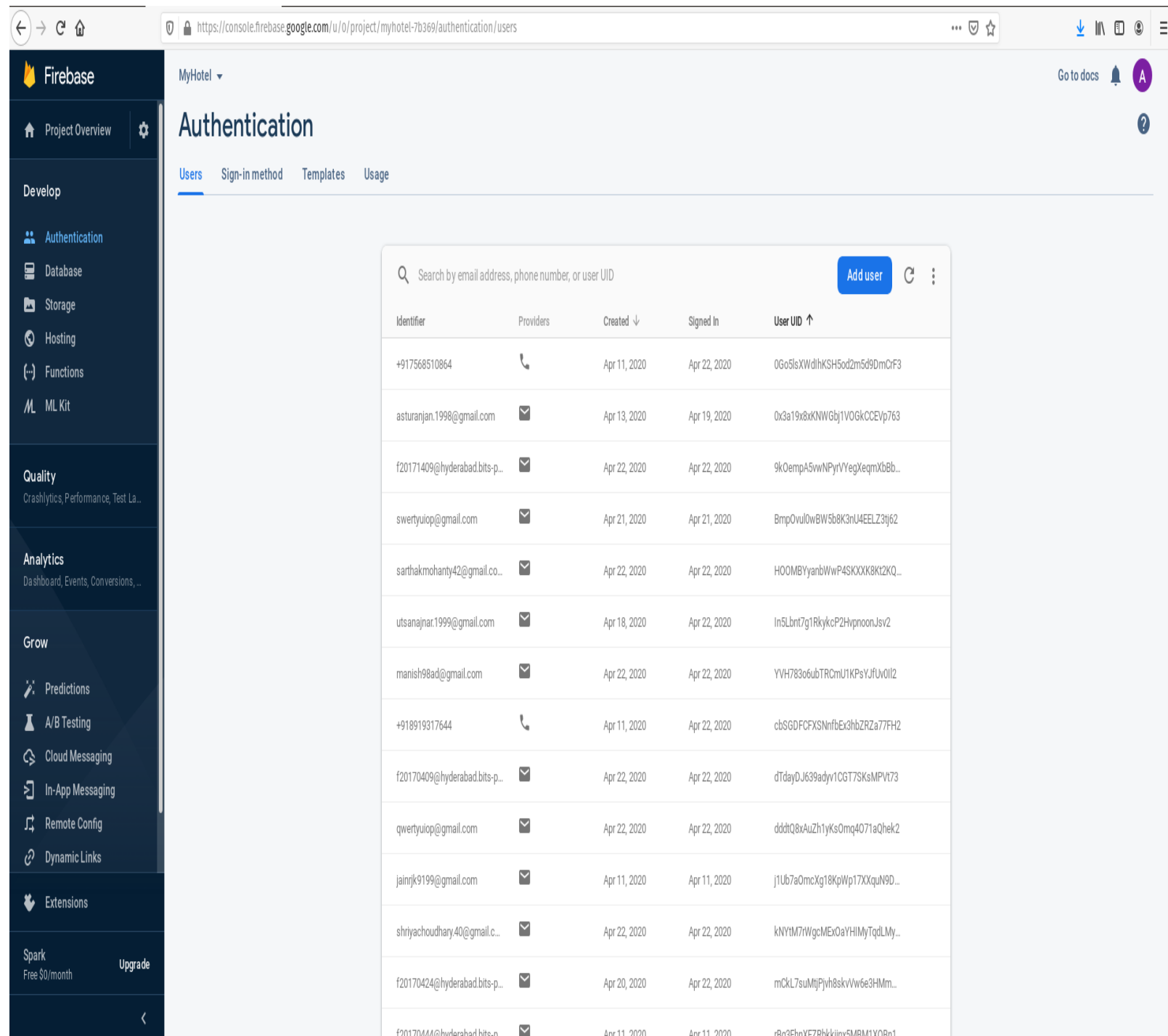


SMS sent to customer :



Firestore authentication :

Following is the screenshot of firebase account where all the signed up Ids are stored .




The screenshot displays the Firebase Authentication console for a project named 'MyHotel'. The left sidebar contains navigation links for Project Overview, Develop (Authentication, Database, Storage, Hosting, Functions, ML Kit), Quality (Crashlytics, Performance, Test Lab), Analytics (Dashboard, Events, Conversions, ...), Grow (Predictions, A/B Testing, Cloud Messaging, In-App Messaging, Remote Config, Dynamic Links), and Extensions. The main content area is titled 'Authentication' and includes tabs for Users, Sign-in method, Templates, and Usage. The 'Users' tab is active, showing a table of users with columns for Identifier, Providers, Created, Signed In, and User UID. A search bar at the top of the table allows filtering by email address, phone number, or user UID. An 'Add user' button is located in the top right corner of the table.

Identifier	Providers	Created ↓	Signed In	User UID ↑
+917568510864	Phone	Apr 11, 2020	Apr 22, 2020	0Go5lsXWdlhKSH5od2m5d9DmCrF3
asturanjan.1998@gmail.com	Email	Apr 13, 2020	Apr 19, 2020	0x3a19x8xKNWGbJ1VOGkCCEVp763
f20171409@hyderabad.bits-p...	Email	Apr 22, 2020	Apr 22, 2020	9kOempA5wwNPyrVYegXeqmXbBb...
swertyuiop@gmail.com	Email	Apr 21, 2020	Apr 21, 2020	BmpOvul0wBW5b8K3nU4EELZ3tj62
sarthakmohanty42@gmail.co...	Email	Apr 22, 2020	Apr 22, 2020	HO0MBYyanbWwP4SKXXK8Kt2K2...
utsanajnar.1999@gmail.com	Email	Apr 18, 2020	Apr 22, 2020	ln5Lbnt7gt1RkykcP2HvpmoonJsv2
manish98ad@gmail.com	Email	Apr 22, 2020	Apr 22, 2020	YVH783o6ubTRCmU1KP5YJfUv0lI2
+918919317644	Phone	Apr 11, 2020	Apr 22, 2020	cbSGDFCFXSNnfEx3hbZRZa77FH2
f20170409@hyderabad.bits-p...	Email	Apr 22, 2020	Apr 22, 2020	dTdayDJ639adyv1CGT7SKsMPVt73
qwertyuiop@gmail.com	Email	Apr 22, 2020	Apr 22, 2020	dddQ8x4uZht1yKsOm4071aQhek2
jainijk9199@gmail.com	Email	Apr 11, 2020	Apr 11, 2020	j1Ub7a0mcXg18KpWp17Xxqn9D...
shriyachoudhary40@gmail.c...	Email	Apr 22, 2020	Apr 22, 2020	kNYtM7nWgcMExOaYHIMyTqdlMy...
f20170424@hyderabad.bits-p...	Email	Apr 20, 2020	Apr 22, 2020	mCkL7suMjFjyh8skvVw6e3Hm...
f20170444@hyderabad.bits-p...	Email	Apr 11, 2020	Apr 11, 2020	rBq3FhnXEZRBkkjnxSMBM1XQBn1

Firestore Database:

Following is the screenshot of fFirestore Database where various datas which were usefull in proper functionality of app are stored .

 **Firebase**

Project Overview

Database

Storage

Hosting

Functions

ML Kit

Quality

Analytics

Grow

Extensions

Spark

Free \$0/month

Upgrade

MyHotel

Database

Cloud Firestore

DataRulesIndexesUsage

users

mCkL7suMtjPjv...

myhotel-7b369

users

mCkL7suMtjPjvh8skvVw6e3HMmm2

+ Start collection

+ Add document

+ Start collection

+ Add field

RiderLat

RiderLong

bool

riders

ridersPhone

users

usersPhone

0x3a19x8xKNWGb1VOGkCCEVp763

8204RiE1zX0mspPNx0jjwoPTQem2

Bmp0vu10wBW5b8K3nU4EELZ3tj62

H00MBYyanbWwP4SKXXK8kt2KQV02

YVH783o6ubTRCmU1KPsYJfUv0I12

dTdayDJ639adyv1CGT7SKsMPVt73

dddtQ8xAuZh1yKs0mq4071aQhek2

mCkL7suMtjPjvh8skvVw6e3HMmm2

email: "f20170424@hyderabad.bits-pilani.ac.in"

name: "astu ranjan"

phone: "+918919317644"

Cloud Firestore location: nam5 (us-central)

Assumptions Made :

1. In this app the Rider can see the order from only one customer at a time. Rider will not have multiple options to select one among all the customers .
2. Menue does not contain too many items as it is assumed that the app is to deliver home made food from one location to the other.