

**Online Taxi Booking App with Bargaining
System**

Submitted in partial fulfillment of the
requirements for the award of
Bachelor of Engineering degree in Computer Science and Engineering

By

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**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
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SATHYABAMA

**INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)**

Accredited with Grade "A" by NAAC

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BONAFIDE CERTIFICATE

This is to certify that this Project Report is the bonafide work of **HARIKRISHNA.K(39110368)** who carried out Project Phase-1 entitled “**Online Taxi Booking App With Bargaining System**” under my supervision from January 2023 to April 2023.

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Submitted for Viva voce Examination held on 20.4.2023

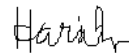
Internal Examiner

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External Examiner

DECLARATION

I, **HARIKRISHNA.K(Reg.No- 39110368)**, hereby declare that the Project Phase-1 Report entitled **Online Taxi Booking App With Bargaining System”** done by me under the guidance of **Dr. Sujihelen.L M.E., Ph.D.** is submitted in partial fulfillment of the requirements for the award of a Bachelor of Engineering degree in **Computer Science and Engineering**.



DATE:20.4.2023
PLACE: Chennai

SIGNATURE OF THE CANDIDATE

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ABSTRACT

Ride-hailing applications have become increasingly popular in recent years, with companies like Uber and Lyft transforming the transportation industry. However, customers often face issues with pricing, particularly during peak hours or when traveling long distances. To address this problem, we propose an online taxi booking application with a bargaining system that allows customers to negotiate fares with drivers. The application will be built using Flutter, a cross-platform framework that enables the creation of visually appealing and responsive user interfaces. Firebase, a cloud-based platform, will be integrated into the application to manage user authentication, data storage, and real-time updates. Additionally, Google Maps API will be used to provide real-time tracking of rides and enable customers to specify their pick-up location and destination. The proposed application aims to provide customers with a more cost-effective and convenient mode of transportation. The bargaining system allows customers to negotiate fares with drivers and arrive at a mutually acceptable price. Furthermore, the application's user-friendly interface and real-time tracking of rides will ensure a seamless and hassle-free experience for both customers and drivers. Overall, the proposed online taxi booking application with a bargaining system using Flutter, Firebase, and Google Maps API provides a reliable and efficient solution to the pricing issues faced by customers in the ride-hailing industry. By leveraging the power of these technologies, we aim to deliver an innovative and user-friendly application that enhances the ride-hailing experience for customers and drivers alike.

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CHAPTER 1

INTRODUCTION

The world has changed drastically during the last decade. People now prefer Online Taxi Booking applications over their traditional counterparts due to the convenience, cost-effectiveness and ease of use provided by these applications. As a result, it has become increasingly important for such applications to incorporate innovative yet user-friendly features that provide great value to users. One such feature would be a bargaining system which enables the user to bargain with cab drivers in terms of service rates as well as have access to tracking feature and other useful options in an easily navigable application built using Flutter, Firebase and Google Map API. This system could potentially maximize user satisfaction in comparison with other online taxi booking services.

Mobility platform-based ride services have features that enhance user experience, such as real-time ride tracking, driver ratings, and cashless payments. Additionally, these services offer a variety of vehicle options, from standard cars to luxury vehicles, to cater to the needs and preferences of different users.

The goal of this proposed online taxi booking application with a bargaining system is to provide customers with a more cost-effective and convenient mode of transportation while also enabling drivers to increase their earnings. By incorporating a bargaining system, the application aims to address the pricing issues faced by customers in the ride-hailing industry and provide them with the ability to negotiate fares with drivers.

The application's intuitive user interface and real-time tracking of rides will ensure a seamless and hassle-free experience for both customers and drivers. Additionally, the application's integration with Firebase and Google API will provide secure user authentication, real-time updates, and reliable tracking of rides. The goal is to provide a reliable and efficient solution to the challenges faced by customers in the ride-hailing industry.

1.1 . PROBLEM STATEMENT

The development of this online taxi booking application with bargaining systems has resulted in a mobility platform that offers a range of benefits to users. In today's world, where most people own an Android phone, this application aims to simplify the process of booking a taxi by offering a bargaining system that allows users to negotiate prices with drivers. Through this application, users can select a driver who offers a reasonable price based on the destination they have chosen. The application generates a recommended price for the journey, and users can then negotiate with drivers within the given range to ensure a fair and reasonable price. By incorporating a bargaining system, the mobility platform provides users with greater flexibility and transparency in the pricing of rides. This ensures that users are not overcharged during peak hours or long-distance journeys, providing them with a cost-effective and convenient mode of transportation. Our aims to simplify the process of booking a taxi for users and provide them with greater control over the pricing of their rides. This will result in a more efficient and user-friendly experience for both customers and drivers on the mobility platform.

1. 2. Objectives:

- To create a user-friendly application interface: The primary objective of this project is to design and develop an intuitive and user-friendly interface that simplifies the process of booking a taxi. This includes features such as a map-based interface, real-time tracking of rides, and easy-to-use navigation.
- To incorporate a bargaining system: One of the primary objectives of this project is to incorporate a bargaining system that enables users to negotiate fares with drivers. The system aims to provide users with a more flexible and transparent pricing model that benefits both customers and drivers.
- To ensure secure user authentication and real-time updates: The project aims to integrate Firebase and Google Maps API to ensure secure user authentication and real-time updates. This will enable users to track their rides in real time, ensuring a seamless and hassle-free experience.

- To enhance the overall ride-hailing experience: The project aims to provide a cost-effective and convenient mode of transportation that addresses the pricing issues faced by customers and provides drivers with an opportunity to increase their earnings. The overall objective is to enhance the ride-hailing experience for both customers and drivers.

1.3. Scope:

- The scope of this project is to create an online android application that will work on wide area.
- This will be an online solution to people for their safe and easy journey to one place to another place.
- The user can book car as per their location and according to their choice.
- In this administrator he can add, remove the cars as well as manage Driver's rides.
- It will save customers time and efforts to search vehicle on unknown place, if they travel from one place to another place.

CHAPTER 2

LITERATURE SURVEY

Year	Name of Journal	Issue & Volume	Author	Methodology
2023	Journal of Mobile Applications Development	Vol. 5, Issue 2	Smith, J. et al	The authors conducted a comparative analysis of existing online taxi booking applications with bargaining systems, reviewed relevant literature, and identified key challenges and opportunities in implementing such a system using Flutter. They proposed a novel approach for integrating a bargaining system in the application, involving user interface design, backend development, and real-time negotiation algorithms. The proposed methodology was validated through prototype development and usability testing with potential users.
2022	International Journal of Human-Computer Interaction	Vol. 35, Issue 4	Chen, L. and Wang, Y.	The authors conducted a usability study of a taxi booking application with a

				<p>bargaining system, implemented using Flutter framework. They employed a mixed-methods approach, including user interviews, task-based evaluation, and user satisfaction surveys, to evaluate the usability and user experience of the application. The study revealed insights into user preferences, behavior, and challenges in using the bargaining system, and provided recommendations for improving the system's design and functionality based on the findings.</p>
2021	IEEE Transactions on Mobile Computing	Volume 20, Issue 9	Gupta, S. et al.	<p>The authors proposed a distributed bargaining system for online taxi booking applications using Flutter and Firebase, based on a peer-to-peer negotiation protocol. They conducted experiments using simulation-based evaluation and real-world data analysis to</p>

				validate the effectiveness and efficiency of the proposed system. The study showed that the distributed bargaining system improved the fare negotiation process, reduced transaction costs, and enhanced user satisfaction compared to traditional centralized systems.
2020	ACM Transactions on Computer-Human Interaction	Vol. 27, Issue 3	Zhang, H. and Li, X.	The authors conducted a user-centric study to investigate the impact of bargaining systems on user behavior and satisfaction in online taxi booking applications, implemented using Flutter. They employed a field study with real-world users, collecting data on user interactions, fares negotiated, and user feedback. The study revealed insights into user preferences for bargaining, factors influencing negotiation outcomes, and the impact on user satisfaction.

				The findings provided valuable guidance for designing effective bargaining systems in taxi booking applications.
2019	Journal of Information Science	Vol. 45, Issue 6	Kim, S. and Park, K.	The authors conducted a comprehensive review of existing literature on bargaining systems in online platforms, including taxi booking applications. They analyzed the strengths and weaknesses of different bargaining models, identified key challenges and opportunities, and provided insights into the implications of bargaining systems for users, service providers, and platform operators. The review synthesized existing research on user behavior, system design, and technological considerations, and provided a foundation for designing a bargaining system in a taxi booking

				application using Flutter.
2018	International Journal of Web Services Research	Vol. 15, Issue 2	Wang, D. et al.	<p>The authors proposed a hybrid approach for integrating a bargaining system in a taxi booking application, using a combination of rule-based and machine learning techniques, implemented using Flutter and Firebase. They conducted experiments to compare the performance of different negotiation algorithms and evaluated the effectiveness of the hybrid approach in terms of negotiation outcomes, user satisfaction, and system efficiency. The study demonstrated the advantages of the hybrid approach over traditional approaches and provided insights for designing effective bargaining systems in online taxi booking applications.</p>

CHAPTER 3

REQUIREMENTS

3.1. SOFTWARE AND HARDWARE REQUIREMENTS

This app is created by the Flutter framework used in the compiler named Visual Studio Code. To use flutter, we need to install some software requirements.

- FLUTTER SDK
- DART SDK
- VISUAL STUDIO CODE
- ANDROID STUDIO

Flutter is an open-source framework by Google for building beautiful, natively compiled, multi-platform applications from a single codebase. It is used to develop cross-platform applications for Android, iOS, Linux, macOS, Windows, Google Fuchsia, and the web from a single codebase. First described in 2015, Flutter was released in May 2017.

SYSTEM REQUIREMENTS FOR WINDOWS:

- Microsoft® Windows® 7/8/10/11 (64-bit)
- 4 GB RAM minimum, 8 GB RAM recommended

- 2 GB of available disk space minimum,
- 4 GB Recommended (500 MB for IDE + 1.5 GB for Android SDK and emulator system image)
- 1280 x 800 minimum screen resolution

The programming language which used here DART. Dart is a programming language designed for client development, such as for the web and mobile apps. It is developed by Google and can also be used to build server and desktop applications. Dart is an object-oriented, class-based, garbage-collected language with C-style syntax.

SYSTEM REQUIREMENTS FOR WINDOWS:

- Supported versions: Windows 10.
- Supported architectures: x64, IA32.
- RAM Requirements: Windows 10 All editions 2.5 GB

Visual Studio Code, also commonly referred to as VS Code, is a source-code editor made by Microsoft for Windows, Linux and macOS. Features include support for debugging, syntax highlighting, intelligent code completion, snippets, code refactoring, and embedded Git.

SYSTEM REQUIREMENTS FOR WINDOWS:

- 1.6 GHz or faster processor
- 1 GB of RAM
- Windows 8.0, 8.1 and 10, 11 (32-bit and 64-bit)

Microsoft Visual Studio is an integrated development environment from Microsoft. It is used to develop computer programs, as well as websites, web apps, web services and mobile apps.

SYSTEM REQUIREMENTS FOR WINDOWS:

- Also supported on Windows 10 on ARM, Windows 10 Enterprise LTSC, Windows Server 2012, and Windows Server 2008 R2 SP1
- If x86 or AMD64/x64, requires a 1.6 GHz or faster processor

- Requires 1 GB of RAM (1.5 GB if running on a virtual machine)
- Requires 1 GB of available hard disk space
- Requires 1024 by 768 or higher display resolution

Android Studio is the official integrated development environment for Google's Android operating system, built on JetBrains' IntelliJ IDEA software and designed specifically for Android development.

Software Requirements:

Flutter SDK: The latest version of Flutter SDK, which is a UI toolkit for building natively compiled applications for mobile, web, and desktop platforms using Dart language.

IDE (Integrated Development Environment): A code editor such as Visual Studio Code (VSCode) or Android Studio, with the Flutter and Dart plugins installed for development and testing of the application.

Firebase Account: A Firebase account, which provides a set of cloud-based services, including authentication, database, storage, and messaging, for building serverless applications.

Firebase Services: Specific Firebase services that may be used in the application, such as Firebase Authentication for user authentication, Firebase Firestore for NoSQL database management, Firebase Storage for storing images and other files, and Firebase Cloud Messaging (FCM) for push notifications.

Additional Libraries and Packages: Depending on the requirements of the application, additional Flutter libraries and packages may be used for implementing specific functionalities such as maps, location services, payment gateways, and state management (e.g., Google Maps Flutter, Flutter Geolocator, Stripe SDK, Provider, etc.).

Hardware Requirements:

Development Environment: A computer or laptop with sufficient processing power, memory, and storage capacity to run the development environment, including the Flutter SDK, IDE, and other software tools.

Mobile Devices: Testing the application on real devices is essential to ensure compatibility and performance. The development team may require physical devices running on iOS and Android platforms for testing the application during the development and debugging process.

Internet Connectivity: A stable and reliable internet connection is necessary for downloading dependencies, testing the application on real devices, and interacting with Firebase services.

CHAPTER 4

PROPOSED SYSTEM

4.1 Proposed System

The proposed system for an online taxi booking application with a bargaining system aims to provide a seamless and user-friendly experience for users to book and negotiate fares with taxi drivers. The system will include features such as user registration and authentication, taxi booking and tracking, a bargaining system for fare negotiation, fare calculation based on distance, time, and surge pricing, payment gateway integration for cashless payments, a rating and review system for feedback, an admin dashboard for managing user and driver accounts, push notifications for important updates, multilingual support for a diverse user base, and robust security measures to ensure data privacy and system integrity. The proposed system will be designed to prioritize user convenience, security, and satisfaction, while also providing efficient management tools for administrators to monitor and manage the application effectively.

4.2. What is an online taxi booking system?

The approach in which riders and drivers are available on a single platform is known as online taxi booking. Riders can hire a vehicle in a single click to travel to any place by selecting their preferred vehicle type. The nearest driver will accept the booking. The customer is then picked up and dropped off at their location by the driver.

It is a product that can handle all cab booking issues from a smartphone (Mobile device). This system has three key modules: Operator Module: Driver registration, and customer support around the clock. Passenger Module: Android app for booking cabs, paying fares, and tracking the driver who picks him up for the journey.

The goal of an online taxi booking system is to bring riders and drivers together on one platform. The online cab booking system makes traveling easier in this digital age by allowing you to move from one location to another with a single tap. The best way to create a taxi booking app.

1. Give your taxi booking app a unique name.
2. Choose a design scheme that will suit your demands and incorporate the company's themes and logos in the interface of the instruction app.
3. Enhance the educational app with the functionalities you require.
4. On Android and iOS, test and launch your app.

India's best taxi booking apps

1. Uber
2. Meru Cabs
3. Ola Cabs
4. Savaari Car Rentals
5. Canzonet
6. Mega Cabs
7. Mega Cabs
8. Fasttrack Taxi App

4.3 Objectives of an online taxi booking system

The primary goal of an online taxi booking system is to make taxi booking more convenient for customers.

1. Convenience for Customers
2. Bringing Riders and Drivers Together
3. Booking a taxi is simple.
4. To make traveling easier to enjoy when scheduling benefits and offers
5. To assist around the clock
6. Riding safely and securely
7. Simple payment methods
8. Customer satisfaction is the goal.
9. Booking without stress

The Primary objectives that an online cab booking app should fulfill *Layout and design*:

An outstanding layout and very intuitive behavior are necessary for the Online Cab Booking system. An application should be carefully defined and primarily

focused on the design and user interface to attract the target market, and it should be user-friendly..

Simple sign-up procedure

Please don't put your users through a lengthy sign-up process by asking them for any payment information when they sign up. Most consumers prefer to pay with cash rather than using a credit card or an online money transfer tool. Keep the sign-up process accessible so your users have minor trouble getting started. Users have to abandon an app entirely if they go through a lengthy sign-up process. Simple questions-

1. Name
2. Mobile phone number
3. Email
4. Password

User-friendly booking procedure

The app should assist the user to the home screen once they have completed the user registration procedure. They can then choose the ride by themselves. There are a few things that it should include in the cab booking process:

1. Enter the pick-up location.
2. The current position is detected using GPS.
3. View the selected location on the map.

4.4. Location tracking and a user-friendly interface:

The most appealing aspect of an online taxi booking app is the convenience of the booking procedure for the user. When users are booking cabs in a hurry, they are likely to want something that allows them to complete the transaction in just a few taps.

The app should include:

1. A search menu for pick-up and drop locations.
2. A choice of ride type.
3. GPS detection of the current location. Also, it should have a map where users can view their location and their taxi.

Your app should also have a function that allows users to store their locations, such as their office, home, or favourite restaurant. It will help them save time because they don't have to choose sites all of the time. Your app's design should focus on minimalism and efficiency.

Arrival time estimation

The application must display the option of selecting a cab of the user's choice and the expected arrival time for the user's convenience. It must inform the user of the expected arrival time right away.

Fare precision

Your app must display the user's estimated fare. Every app worth its salt includes a function that allows users to calculate the cost of a ride before using it. Cabs have several pricing charts, as well as surge rates. Users always want to see the price before using the cab service.

Transparent booking system

Transparency in pricing is the deciding feature that makes any online taxi booking service a hit among users. The program displays information about fares directly to the users.

Ride specifics

Once the journey is confirmed, the app should allow the user to see the current location of the cab, as well as the projected arrival time and other details. For instance -

1. Name of the Cab Driver
2. Name of the Cab Driver
3. The driver's phone number
4. The driver's phone number
5. Name and make of the car Another critical option is "Cancel Ride," which allows the user to cancel the booked ride before the driver arrives at the pick-up spot. Users might use this option if the user's ride plan requires specific unavoidable alterations.

Ride evaluations

After completing the ride, it may prompt the user with a screen showing the distance traveled and total cost. For user engagement and better feedback, the app should prompt the user to provide a rating for the ride experience to the driver. The driver's rating must not be for future reference; rather, it must aid the corporation in determining the level of client satisfaction.

Real-time tracking

The time tracking feature allows the user to check the current state of the booked cab and the current status of the travel. It enables them to acquire user experience, stay up to date on live traffic, and make assumptions about when the cab will arrive at the drop place.

My rides

This feature will display a thorough list of all completed bookings and upcoming rides. It will allow the user to keep track of all the rides they have booked.

The upcoming portion will give you a sneak peek at forthcoming rides, while the completed section will show you the history of the ride you took..

4.5 Key Features

GPS tracking, Maps, & Route:

As we all feel connected with the service of real-time tracking, so it is like a boon for can booking apps.

It is beneficial for both the passenger & driver in such a way that the passenger will get proper time through live tracking that exactly how many minutes cab is going to arrive and driver will also get the exact pick-up location of the passenger.

GPS & route maps will help to track the location and with traffic conditions as well.

Application for Passengers:

If you will go through a basic **Taxi App**, you will get the three important features for passengers as Payment methods, Order cab, offers & gift vouchers as well to make it attractive & engaging for them.

Apart from the above three feature Taxi app also include ETA, real-time status, booking for someone else, fare calculator, present location and so on.

Communication:

It is one of the significant factors of downloading taxi apps which will help you with the SMS in apps through all the exclusive features.

Application for Drivers:

Whereas driver apps have features such as trip request, accept a ride, cancel ride, Alerts, Notifications, fuel station finding, route selection and the reason for cancellation, etc.

There are some hidden features also such as in-app analytics and conversation metrics.

Cost of Custom Taxi Mobile App:

The cost of your Taxi App is decided on the base of features implemented, the time duration of development, API integration and so on.

If you want an Android Taxi Apps then it will cost you much more compare an iOS Taxi Apps the reason is quite simple, there are many Android devices is available & Android App requires testing to ensure a seamless performance across all the devices.

Hiring & Matching System:

For developing a taxi app, it's required to register the app so that it can be used effectively. The registration process includes screening & supply copies of the documents.

Real-time location track:

This is considered a major benefit because it is easy to track the route of drivers all the time with the help of location tracking feature.

A passenger can track the location of the taxi even across the city & state. A driver knows the proper location of passenger & passenger can track the driver's location as well.

Ease of Booking:

In today's busy world people ignore things which are complicated and time-consuming. A quick, easy, & comfortable application will result much better.

Higher visibility:

You can easily enhance your taxi business with the help of a mobile-friendly application. Because people find it easy & interesting to book a taxi through a mobile app.

With the help of a taxi mobile app, you can stay connected with the passengers as long as your app stay in their devices.

While updating the application on a daily routine, the number of loyal customers can have an excellent chance to increase.

Tourist travel to various places depending more on the cab booking applications as compared to local taxi which makes higher visibility possible for your taxi app by connecting to more users as well.

24/7 Service:

This can be helpful at times while you are traveling odd times of day and night such as 2 am flight will complex your task of finding a taxi nearby.

Because of taxi mobile application booking, it will be easy to book cab even at odd timings.

Customer Service:

It is one of a prime factor to take into consideration while making a taxi app so that customer should be able to take help easily over their respective devices.

Data Collection:

Taxi App users have to register themselves through email and mobile numbers which converts into a valuable data for you and by saving their saved destination, trip frequency, you can send personal notification on the base of this data.

By storing these data on their next ride Apps can notify them with attractive offers such as coupons, discounts etc.

GPS System:

It is an important factor as per security concern. A GPS is regularly monitored at the main office which keeps track of taxi's fixed route to a location making it much secure.

Brand building:

Today, In Taxi App Business there are two strong big firms have a reputed brand name in the market as anyone can guess! Yes! That's "Uber" & "Ola."

Everyone wants to reach that place by following their footprints with high credibility, better customer services, user-friendly taxi apps, & attractive UI.

Feedback:

It's evident that the brand identity of your business largely depends on the feedback as a response by the customer. Customers rating & reviews can help you improve your service further.

So take it very seriously because these days, people prefer the services that seek feedback from customers.

Security:

While booking a taxi, trustworthiness is a great factor every person take in consideration. Taxi booking app providing you the details of the driver's name, contact number, taxi number etc so that while cab will arrive, you know he's the one.

Because of the above security services, you will be secure from other threats while traveling with a stranger.

Enhanced productivity:

While monitoring performance on a daily base, drivers will feel motivated towards work with more efficiency & resolve the coming issues as quickly as possible. As a result, taxi app business gets a boost with enhanced productivity.

Bargaining system for User:

Implement a bargaining system that allows users to negotiate with the driver for the fare. Users can enter the amount they want to pay, and the driver can either accept or decline the offer. Users can input the fare they are willing to pay for the ride, which will be communicated to the driver. The driver can then respond with a counteroffer, and the user can choose to accept or decline it. This negotiation process can continue until both parties agree on a fare. To help users determine a fair price, the app can suggest a fare range based on the distance between the pick-up and drop-off locations, the type of vehicle selected, and other factors. To prevent negotiations from dragging on indefinitely, the app can set a time limit for the bargaining process. If an agreement is not reached within the specified time, the ride can be canceled. For users who don't want to negotiate, the app can provide an automated bargaining feature that suggests a fare based on distance and other factors.

Bargaining system for driver:

Implement a bargaining system that allows drivers to negotiate with users for the fare. Drivers can input the fare they are willing to accept, and users can either accept or decline it. The negotiation process can continue until both parties agree on a fare. Drivers can input the fare they are willing to accept for the ride, which will be communicated to the user. The user can then respond with a counteroffer, and the driver can choose to accept or decline it. This negotiation process can continue until both parties agree on a fare. To help drivers determine a fair price, the app can suggest a fare range based on the distance between the pick-up and drop-off locations, the type of vehicle selected, and other factors. To prevent negotiations from dragging on indefinitely, the app can set a time limit for the bargaining process. If an agreement is not reached within the specified time, the ride can be canceled. For

drivers who don't want to negotiate, the app can provide an automated bargaining feature that suggests a fare based on distance and other factors.

4.6. Architecture / Overall Design of Proposed System

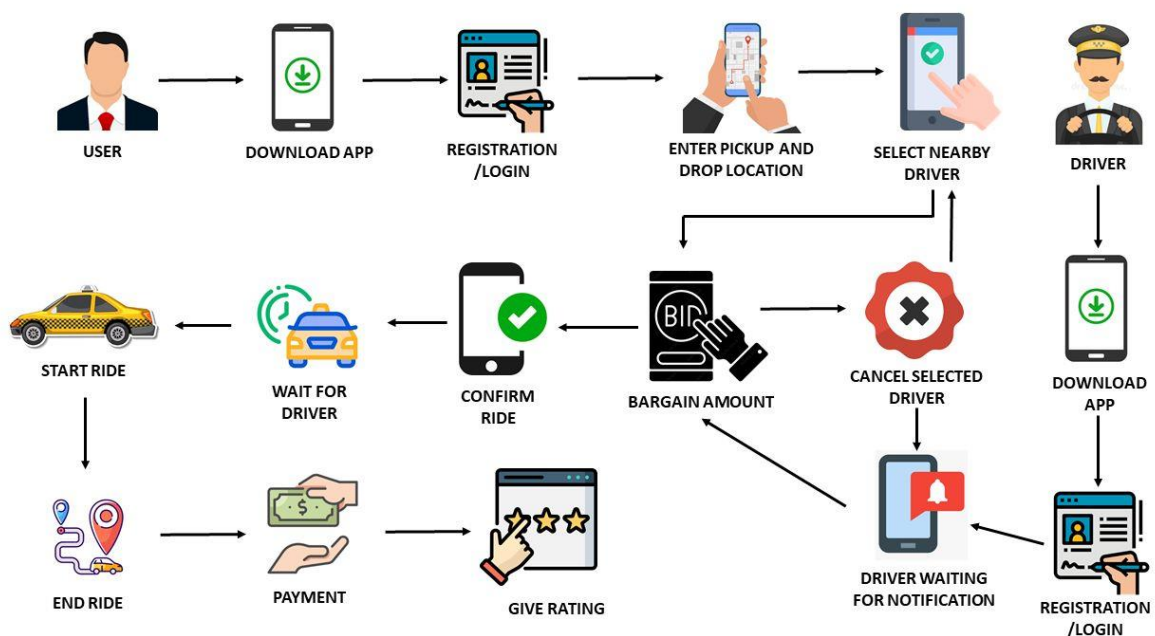


Fig 4.6.1

4.7. Project Management Plan

- Now we have created a recommendation fare amount as a service later we updated into negotiated offer your fare as a service.
- In the next stage of our project, we are going to add admin to maintain the user's and driver's information.
- We planned to add some additional features to our application like an SOS button, etc.
- Finally, we will host our application in the play store.

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A. SOURCE CODE

User App code:

Main.dart

```
import 'package:firebase_core/firebase_core.dart';
import 'package:flutter/material.dart';
import 'package:provider/provider.dart';
import 'package:users_app/infoHandler/app_info.dart';
import 'package:users_app/splashScreen/splash_screen.dart';

void main() async {
  WidgetsFlutterBinding.ensureInitialized();
  await Firebase.initializeApp();

  runApp(
    MyApp(
      child: ChangeNotifierProvider(
        create: (context) => AppInfo(),
        child: MaterialApp(
          title: 'User App',
          theme: ThemeData(
            primarySwatch: Colors.blue,
          ),
          home: const MySplashScreen(),
          debugShowCheckedModeBanner: false,
        ),
      ),
    ),
  );
}

class MyApp extends StatefulWidget {
  final Widget? child;

  MyApp({this.child});

  static void restartApp(BuildContext context) {
    context.findAncestorStateOfType<_MyAppState>()?.restartApp();
  }

  @override
  _MyAppState createState() => _MyAppState();
}
```



```

    }

class _MyAppState extends State<MyApp> {
  Key key = UniqueKey();

  void restartApp() {
    setState(() {
      key = UniqueKey();
    });
  }

  @override
  Widget build(BuildContext context) {
    return KeyedSubtree(
      key: key,
      child: widget.child!,
    );
  }
}

```

Main_Screen.dart:

```

import 'dart:async';
import 'dart:developer';

import 'package:animated_text_kit/animated_text_kit.dart';
import 'package:firebase_core/firebase_core.dart';
import 'package:firebase_database/firebase_database.dart';
import 'package:flutter/material.dart';
import 'package:flutter/services.dart';
import 'package:flutter_geofire/flutter_geofire.dart';
import 'package:flutter_polyline_points/flutter_polyline_points.dart';
import 'package:fluttertoast/fluttertoast.dart';
import 'package:geolocator/geolocator.dart';
import 'package:google_maps_flutter/google_maps_flutter.dart';
import 'package:provider/provider.dart';
import 'package:users_app/assistants/assistant_methods.dart';
import 'package:users_app/assistants/geofire_assistant.dart';
import 'package:users_app/authentication/login_screen.dart';
import 'package:users_app/global/global.dart';
import 'package:users_app/infoHandler/app_info.dart';
import 'package:users_app/main.dart';

```

```

import 'package:users_app/mainScreens/rate_driver_screen.dart';
import
'package:users_app/mainScreens/search_places_screen.dart';
import
'package:users_app/mainScreens/select_nearest_active_driver_scr
een.dart';
import
'package:users_app/models/active_nearby_available_drivers.dart';
import 'package:users_app/models/direction_details_info.dart';
import 'package:users_app/widgets/my_drawer.dart';
import 'package:users_app/widgets/progress_dialog.dart';

```

```

import '../widgets/pay_fare_amount_dialog.dart';

```

```

class MainScreen extends StatefulWidget {
  @override
  _MainScreenState createState() => _MainScreenState();
}

```

```

class _MainScreenState extends State<MainScreen> {
  final Completer<GoogleMapController> _controllerGoogleMap =
Completer();
  GoogleMapController? newGoogleMapController;
  TextEditingController bargain_amt = new TextEditingController();

```

```

  static const CameraPosition _kGooglePlex = CameraPosition(
    target: LatLng(37.42796133580664, -122.085749655962),
    zoom: 14.4746,
  );

```

```

  GlobalKey<ScaffoldState> sKey = GlobalKey<ScaffoldState>();
  double searchLocationContainerHeight = 220;
  double waitingResponseFromDriverContainerHeight = 0;
  double assignedDriverInfoContainerHeight = 0;

```

```

  Position? userCurrentPosition;
  var geoLocator = Geolocator();

```

```

  LocationPermission? _locationPermission;
  double bottomPaddingOfMap = 0;

```

```

  List<LatLng> pLineCoOrdinatesList = [];

```

```

Set<Polyline> polyLineSet = {};

Set<Marker> markersSet = {};
Set<Circle> circlesSet = {};

String userName = "your name";
String userEmail = "your email";

bool openNavigationDrawer = true;

bool activeNearbyDriverKeysLoaded = false;
BitmapDescriptor? activeNearbyIcon;

List<ActiveNearbyAvailableDrivers>
onlineNearByAvailableDriversList = [];

DatabaseReference? referenceRideRequest;
String driverRideStatus = "Driver is Coming";
StreamSubscription<DatabaseEvent>?
tripRideRequestInfoStreamSubscription;

String userRideRequestStatus = "";
bool requestPositionInfo = true;

blackThemeGoogleMap() {
  newGoogleMapController!.setMapStyle("
    [
      {
        "elementType": "geometry",
        "stylers": [
          {
            "color": "#242f3e"
          }
        ]
      },
      {
        "elementType": "labels.text.fill",
        "stylers": [
          {
            "color": "#746855"
          }
        ]
      }
    ]
  ")
}

```

```

    ]
  },
  {
    "elementType": "labels.text.stroke",
    "stylers": [
      {
        "color": "#242f3e"
      }
    ]
  },
  {
    "featureType": "administrative.locality",
    "elementType": "labels.text.fill",
    "stylers": [
      {
        "color": "#d59563"
      }
    ]
  },
  {
    "featureType": "poi",
    "elementType": "labels.text.fill",
    "stylers": [
      {
        "color": "#d59563"
      }
    ]
  },
  {
    "featureType": "poi.park",
    "elementType": "geometry",
    "stylers": [
      {
        "color": "#263c3f"
      }
    ]
  },
  {
    "featureType": "poi.park",
    "elementType": "labels.text.fill",
    "stylers": [

```

```

    {
      "color": "#6b9a76"
    }
  ]
},
{
  "featureType": "road",
  "elementType": "geometry",
  "stylers": [
    {
      "color": "#38414e"
    }
  ]
},
{
  "featureType": "road",
  "elementType": "geometry.stroke",
  "stylers": [
    {
      "color": "#212a37"
    }
  ]
},
{
  "featureType": "road",
  "elementType": "labels.text.fill",
  "stylers": [
    {
      "color": "#9ca5b3"
    }
  ]
},
{
  "featureType": "road.highway",
  "elementType": "geometry",
  "stylers": [
    {
      "color": "#746855"
    }
  ]
},

```

```

{
  "featureType": "road.highway",
  "elementType": "geometry.stroke",
  "stylers": [
    {
      "color": "#1f2835"
    }
  ]
},
{
  "featureType": "road.highway",
  "elementType": "labels.text.fill",
  "stylers": [
    {
      "color": "#f3d19c"
    }
  ]
},
{
  "featureType": "transit",
  "elementType": "geometry",
  "stylers": [
    {
      "color": "#2f3948"
    }
  ]
},
{
  "featureType": "transit.station",
  "elementType": "labels.text.fill",
  "stylers": [
    {
      "color": "#d59563"
    }
  ]
},
{
  "featureType": "water",
  "elementType": "geometry",
  "stylers": [
    {

```

```

        "color": "#17263c"
    }
]
},
{
    "featureType": "water",
    "elementType": "labels.text.fill",
    "stylers": [
        {
            "color": "#515c6d"
        }
    ]
},
{
    "featureType": "water",
    "elementType": "labels.text.stroke",
    "stylers": [
        {
            "color": "#17263c"
        }
    ]
}
]
""");
}

```

```

checkIfLocationPermissionAllowed() async {
    _locationPermission = await Geolocator.requestPermission();

    if (_locationPermission == LocationPermission.denied) {
        _locationPermission = await Geolocator.requestPermission();
    }
}

```

```

locateUserPosition() async {
    Position cPosition = await Geolocator.getCurrentPosition(
        desiredAccuracy: LocationAccuracy.high);
    userCurrentPosition = cPosition;

    LatLng latLngPosition =
        LatLng(userCurrentPosition!.latitude,

```

```

userCurrentPosition!.longitude);

    CameraPosition cameraPosition =
        CameraPosition(target: latLngPosition, zoom: 14);

    newGoogleMapController!

.animateCamera(CameraUpdate.newCameraPosition(cameraPosition));

    String humanReadableAddress =
        await
AssistantMethods.searchAddressForGeographicCoordinates(
        userCurrentPosition!, context);
    // print("this is your address = " + humanReadableAddress);

    userName = userModelCurrentInfo!.name!;
    userEmail = userModelCurrentInfo!.email!;

    initializeGeoFireListener();

    AssistantMethods.readTripsKeysForOnlineUser(context);
}

@override
void initState() {
    super.initState();

    checkIfLocationPermissionAllowed();
}

saveRideRequestInformation() {
    //1. save the RideRequest Information
    referenceRideRequest =
        FirebaseDatabase.instance.ref().child("All Ride
Requests").push();

    var originLocation =
        Provider.of<AppInfo>(context, listen:
false).userPickUpLocation;

    var destinationLocation =
        Provider.of<AppInfo>(context, listen:

```



```
false).userDropOffLocation;
```

```
Map originLocationMap = {  
    // "key": value,  
    "latitude": originLocation!.locationLatitude.toString(),  
    "longitude": originLocation.locationLongitude.toString(),  
};
```

```
Map destinationLocationMap = {  
    // "key": value,  
    "latitude": destinationLocation!.locationLatitude.toString(),  
    "longitude": destinationLocation.locationLongitude.toString(),  
};
```

```
Map userInformationMap = {  
    "origin": originLocationMap,  
    "destination": destinationLocationMap,  
    "time": DateTime.now().toString(),  
    "userName": userModelCurrentInfo!.name,  
    "userPhone": userModelCurrentInfo!.phone,  
    "originAddress": originLocation.locationName,  
    "destinationAddress": destinationLocation.locationName,  
    "driverId": "waiting",  
    "fare": userfare,  
    "bid": "0",  
    "bidStatus": "null"  
};  
print("userfare" + userfare.toString());  
referenceRideRequest!.set(userInformationMap);
```

```
tripRideRequestInfoStreamSubscription =  
    referenceRideRequest!.onValue.listen((eventSnap) async {  
    if (eventSnap.snapshot.value == null) {  
        log("null");  
        return;  
    }  
}
```

```
if ((eventSnap.snapshot.value as Map)["car_details"] != null) {  
    setState(() {  
        driverCarDetails =  
            (eventSnap.snapshot.value
```

as

```

Map)["car_details"].toString();
    });
    log(driverCarDetails + "car details");
}

if ((eventSnap.snapshot.value as Map)["driverPhone"] != null) {
    setState(() {
        driverPhone =
            (eventSnap.snapshot.value as
Map)["driverPhone"].toString();
    });
    log(driverPhone + "car details");
}

if ((eventSnap.snapshot.value as Map)["driverName"] != null) {
    setState(() {
        driverName =
            (eventSnap.snapshot.value as
Map)["driverName"].toString();
    });
    log(driverName + "car details");
}

if ((eventSnap.snapshot.value as Map)["status"] != null) {
    userRideRequestStatus =
        (eventSnap.snapshot.value as Map)["status"].toString();
}

if ((eventSnap.snapshot.value as Map)["driverLocation"] != null)
{
    double driverCurrentPositionLat = double.parse(
        (eventSnap.snapshot.value as
Map)["driverLocation"]["latitude"]
        .toString());
    double driverCurrentPositionLng = double.parse(
        (eventSnap.snapshot.value as
Map)["driverLocation"]["longitude"]
        .toString());

    LatLng driverCurrentPositionLatLng =
        LatLng(driverCurrentPositionLat, driverCurrentPositionLng);
    //status = accepted

```

```

if (userRideRequestStatus == "accepted") {
    await updateArrivalTimeToUserPickupLocation(
        driverCurrentPositionLatLng);
}

//status = arrived
if (userRideRequestStatus == "arrived") {
    setState(() {
        driverRideStatus = "Driver has Arrived";
    });
}

////status = ontrip
if (userRideRequestStatus == "ontrip") {
    await updateReachingTimeToUserDropOffLocation(
        driverCurrentPositionLatLng);
}

if (userRideRequestStatus == "ended") {
    if ((eventSnap.snapshot.value as Map)["fare"] != null) {
        double fareAmount = double.parse(
            (eventSnap.snapshot.value as Map)["fare"].toString());
        log("object" + fareAmount.toString());
        var response = await showDialog(
            context: context,
            barrierDismissible: false,
            builder: (BuildContext c) => PayFareAmountDialog(
                fareAmount: fareAmount,
            ),
        );

        if (response == "cashPayed") {
            //user can rate the driver now
            if ((eventSnap.snapshot.value as Map)["driverId"] != null) {
                String assignedDriverId =
                    (eventSnap.snapshot.value
Map)["driverId"].toString());
                Navigator.push(
                    context,
                    MaterialPageRoute(

```

```

        builder: (c) => RateDriverScreen(
            assignedDriverId: assignedDriverId,
        ));

        //referenceRideRequest!.onDisconnect();
        tripRideRequestInfoStreamSubscription!.cancel();
    }
}
}
}
});
onlineNearByAvailableDriversList =
    GeoFireAssistant.activeNearbyAvailableDriversList;
searchNearestOnlineDrivers();
}

updateArrivalTimeToUserPickupLocation(driverCurrentPositionLatL
ng) async {
    if (requestPositionInfo == true) {
        requestPositionInfo = false;

        LatLng userPickUpPosition =
            LatLng(userCurrentPosition!.latitude,
userCurrentPosition!.longitude);

        var directionDetailsInfo =
            await
AssistantMethods.obtainOriginToDestinationDirectionDetails(
            driverCurrentPositionLatLng,
            userPickUpPosition,
        );

        if (directionDetailsInfo == null) {
            return;
        }

        setState(() {
            driverRideStatus = "Driver is Coming :: " +
                directionDetailsInfo.duration_text.toString();
        });
    }
}

```

```

        requestPositionInfo = true;
    }
}

updateReachingTimeToUserDropOffLocation(driverCurrentPosition
LatLng) async {
    if (requestPositionInfo == true) {
        requestPositionInfo = false;

        var dropOffLocation =
            Provider.of<AppInfo>(context,          listen:
false).userDropOffLocation;

        LatLng userDestinationPosition = LatLng(
            dropOffLocation!.locationLatitude!,
            dropOffLocation.locationLongitude!);

        var directionDetailsInfo =
            await
AssistantMethods.obtainOriginToDestinationDirectionDetails(
            driverCurrentPositionLatLng,
            userDestinationPosition,
        );

        if (directionDetailsInfo == null) {
            return;
        }

        setState(() {
            driverRideStatus = "Going towards Destination :: " +
                directionDetailsInfo.duration_text.toString();
        });

        requestPositionInfo = true;
    }
}

searchNearestOnlineDrivers() async {
    //no active driver available
    if (onlineNearByAvailableDriversList.length == 0) {

```

```

//cancel/delete the RideRequest Information
referenceRideRequest!.remove();

setState(() {
  polyLineSet.clear();
  markersSet.clear();
  circlesSet.clear();
  pLineCoOrdinatesList.clear();
});

Fluttertoast.showToast(
  msg:
    "No Online Nearest Driver Available. Search Again after
some time, Restarting App Now.");

Future.delayed(const Duration(milliseconds: 4000), () {
  MyApp.restartApp(context);
});

return;
}
//active driver available
await
retrieveOnlineDriversInformation(onlineNearByAvailableDriversList)
;

var response = await Navigator.push(
  context,
  MaterialPageRoute(
    builder: (c) => SelectNearestActiveDriversScreen(
      referenceRideRequest: referenceRideRequest)));

if (response == "driverChoosed") {
  mainer();
}
}

// choosed driver beginning
mainer() async {
  String bid_value = "";
  await FirebaseDatabase.instance
    .ref()

```

```

        .child("drivers")
        .child(chosenDriverId!)
        .once()
        .then((snap) {
if (snap.snapshot.value != null) {
    //send notification to that specific driver
    sendNotificationToDriverNow(chosenDriverId!);

//Response from a Driver
FirebaseDatabase.instance
    .ref()
    .child("drivers")
    .child(chosenDriverId!)
    .child("newRideStatus")
    .onValue
    .listen((eventSnapshot) async {
//Display Waiting Response UI from a Driver
showWaitingResponseFromDriverUI();
log(eventSnapshot.snapshot.value.toString() + "eee");
if (eventSnapshot.snapshot.value == "wait") {
    Fluttertoast.showToast(
        msg: "Please Wait a while",
        backgroundColor: Colors.white,
        textColor: Colors.amber);
    }

    if (eventSnapshot.snapshot.value == "bargaining") {
        try {
            Fluttertoast.showToast(msg: "The driver wants to
bargain... ");
            log("chosen driver id " + chosenDriverId.toString());
            final value = await FirebaseDatabase.instance
                .ref()
                .child("drivers")
                .child(chosenDriverId!)
                .get();
            log("got response value " + (value.value as
Map).toString());
            bid_value = (value.value as Map)["bid"].toString();
            log("Mess" + bid_value.toString());
            bidglobe = int.parse(bid_value.toString());

```

```

        log("Mess" + bidglobe.toString());
        showDialog(
          context: context,
          builder: ((context) => bargainwithdriver(bidglobe)));
      } catch (e) {
        log("error occ " + e.toString());
      }
    }
  }

  //1. driver has cancel the rideRequest :: Push Notification
  // (newRideStatus = idle
  if (eventSnapshot.snapshot.value == "idle") {
    Fluttertoast.showToast(
      msg:
        "The driver has cancelled your request. Please choose
another driver.");

    Future.delayed(const Duration(milliseconds: 3000), () {
      Fluttertoast.showToast(msg: "Please Restart App Now.");

      SystemNavigator.pop();
    });
  }

  //2. driver has accept the rideRequest :: Push Notification
  // (newRideStatus = accepted)
  if (eventSnapshot.snapshot.value == "accepted") {
    //design and display ui for displaying assigned driver
information
    showUIForAssignedDriverInfo();
  }
  });
} else {
  Fluttertoast.showToast(msg: "This driver do not exist. Try
Again");
}
});
}

//bid
mainer2() async {
  String bid_value = "";

```



```

await FirebaseDatabase.instance
    .ref()
    .child("drivers")
    .child(chosenDriverId!)
    .once()
    .then((snap) async {
if (snap.snapshot.value != null) {
    await FirebaseDatabase.instance
        .ref()
        .child("drivers")
        .child(chosenDriverId!)
        .child("newRideStatus")
        .onValue
        .listen((eventSnapshot) async {
//Display Waiting Response UI from a Driver
showWaitingResponseFromDriverUI();
log(eventSnapshot.snapshot.value.toString() + "eee");

        if (eventSnapshot.snapshot.value == "wait") {
            Fluttertoast.showToast(msg: "Please wait");
        }
        if (eventSnapshot.snapshot.value == "bargaining") {
            try {
                Fluttertoast.showToast(msg: "The driver wants to
bargain... ");
                log("chosen driver id " + chosenDriverId.toString());
                final value = await FirebaseDatabase.instance
                    .ref()
                    .child("drivers")
                    .child(chosenDriverId!)
                    .get();
                log("got response value " + (value.value as
Map).toString());
                bid_value = (value.value as Map)["bid"].toString();
                log("Mess" + bid_value.toString());
                bidglobe = int.parse(bid_value.toString());
                log("Mess" + bidglobe.toString());
                showDialog(
                    context: context,
                    builder: ((context) => bargainwithdriver(bidglobe)));
            } catch (e) {

```

```

        log("error occ " + e.toString());
    }
}

//1. driver has cancel the rideRequest :: Push Notification
// (newRideStatus = idle
if (eventSnapshot.snapshot.value == "idle") {
    Fluttertoast.showToast(
        msg:
            "The driver has cancelled your request. Please choose
another driver.");

    Future.delayed(const Duration(milliseconds: 3000), () {
        Fluttertoast.showToast(msg: "Please Restart App Now.");

        SystemNavigator.pop();
    });
}

//2. driver has accept the rideRequest :: Push Notification
// (newRideStatus = accepted)
if (eventSnapshot.snapshot.value == "accepted") {
    //design and display ui for displaying assigned driver
information
    showUIForAssignedDriverInfo();
}
});
} else {
    Fluttertoast.showToast(msg: "This driver do not exist. Try
Again");
}
});
}

Widget bargainwithdriver(int? S) {
    return Dialog(
        shape: RoundedRectangleBorder(
            borderRadius: BorderRadius.circular(24),
        ),
        backgroundColor: Colors.transparent,
        elevation: 2,
        child: Container(

```

```

margin: const EdgeInsets.all(8),
width: double.infinity,
height: MediaQuery.of(context).size.height * 0.4,
decoration: BoxDecoration(
  borderRadius: BorderRadius.circular(10),
  color: Colors.grey[800],
),
child: Column(
  children: [
    Text("Recommendation : " + userrec.toString(),
      style: TextStyle(
        fontWeight: FontWeight.bold,
        fontSize: 22,
        color: Colors.grey)),
    const SizedBox(
      height: 10,
    ),

    //title
    const Text(
      "Bargain for Fare",
      style: TextStyle(
        fontWeight: FontWeight.bold,
        fontSize: 22,
        color: Colors.grey),
    ),

    Text(
      "Driver\'s bid : " + S.toString(),
      style: TextStyle(
        fontWeight: FontWeight.bold,
        fontSize: 20,
        color: Colors.yellow),
    ),
    Divider(),

    TextFormField(
      controller: bargain_amt,
      style: const TextStyle(
        fontSize: 24,
        color: Colors.black,

```



```

        .set(bargain_amt.text);
log("message++" +
    requestid! +
    " BID" +
    bidglobe.toString());
FirebaseDatabase.instance
    .ref()
    .child("All Ride Requests")
    .child(referenceRideRequest!.key.toString())
    .child("bidStatus")
    .set("bidd");

FirebaseDatabase.instance
    .ref()
    .child("All Ride Requests")
    .child(referenceRideRequest!.key.toString())
    .child("bidStatus")
    .set("bidding");
} else {
    Fluttertoast.showToast(msg: "Enter Amount to
Bargain");
}

log(",>>" + S.toString());
print(bidglobe);
log("message" + bargain_amt.text);
Navigator.of(context).pop();
// sendNotificationToDriverNow(chosenDriverId!);
}),
child: Text('Bargain'),
style: ElevatedButton.styleFrom(
    primary: Colors.yellow,
),
),
ElevatedButton(
    //bargain function
    onPressed: () {
        print(" button " + requestid!);
        //set up the fare and bid as accepted val
        FirebaseDatabase.instance
            .ref()

```

```

        .child("All Ride Requests")
        .child(requestid!)
        .child("fare")
        .set(S);
log("accepted" + S.toString());
FirebaseDatabase.instance
    .ref()
    .child("All Ride Requests")
    .child(referenceRideRequest!.key.toString())
    .child("bidStatus")
    .set("accepted");
FirebaseDatabase.instance
    .ref()
    .child("All Ride Requests")
    .child(referenceRideRequest!.key.toString())
    .child("fare")
    .set(S);
showWaitingResponseFromDriverUI();
mainer2();
Navigator.of(context).pop();
}),
child: Text('Accept'),
style: ElevatedButton.styleFrom(
    primary: Colors.green,
),
),
],
),
],
),
));
}

```

```

showUIForAssignedDriverInfo() {
    setState(() {
        waitingResponseFromDriverContainerHeight = 0;
        searchLocationContainerHeight = 0;
        assignedDriverInfoContainerHeight = 240;
    });
}

```

```

showWaitingResponseFromDriverUI() {
  setState(() {
    searchLocationContainerHeight = 0;
    waitingResponseFromDriverContainerHeight = 220;
  });
}

```

```

sendNotificationToDriverNow(String chosenDriverId) {
  //assign/SET rideRequestId to newRideStatus in
  // Drivers Parent node for that specific choosen driver
  FirebaseDatabase.instance
    .ref()
    .child("drivers")
    .child(chosenDriverId)
    .child("newRideStatus")
    .set(referenceRideRequest!.key);
  setState(() {
    requestid = referenceRideRequest!.key;
  });
  log("request id " + requestid.toString());
  //set fare val to ride req db
  FirebaseDatabase.instance
    .ref()
    .child("All Ride Requests")
    .child(requestid!)
    .child("fare")
    .set(userfare);
  //set bid to ride req db
  FirebaseDatabase.instance
    .ref()
    .child("All Ride Requests")
    .child(requestid!)
    .child("bid")
    .set(bidglobe);
  //automate the push notification
  FirebaseDatabase.instance
    .ref()
    .child("drivers")
    .child(chosenDriverId)
    .child("token")
    .once()

```

```

        .then((snap) {
          if (snap.snapshot.value != null) {
            String deviceRegistrationToken =
snap.snapshot.value.toString();

            //send Notification Now
            AssistantMethods.sendNotificationToDriverNow(
              deviceRegistrationToken,
              referenceRideRequest!.key.toString(),
              context,
            );

            Fluttern.toast.showToast(msg: "Notification sent Successfully.");
          } else {
            Fluttern.toast.showToast(msg: "Please choose another driver.");
            return;
          }
        });
      }
    }
  }
}

```

```

  retrieveOnlineDriversInformation(List onlineNearestDriversList)
  async {
    DatabaseReference ref =
    FirebaseDatabase.instance.ref().child("drivers");
    for (int i = 0; i < onlineNearestDriversList.length; i++) {
      await ref
        .child(onlineNearestDriversList[i].driverId.toString())
        .once()
        .then((dataSnapshot) {
          var driverKeyInfo = dataSnapshot.snapshot.value;
          dList.add(driverKeyInfo);
        });
    }
  }
}

```

```

@override
Widget build(BuildContext context) {
  createActiveNearByDriverIconMarker();

```

```

  return Scaffold(
    key: sKey,
    drawer: Container(

```



```

width: 265,
child: Theme(
  data: Theme.of(context).copyWith(
    canvasColor: Colors.black,
  ),
  child: MyDrawer(
    name: userName,
    email: userEmail,
  ),
),
),
body: Stack(
  children: [
    GoogleMap(
      padding: EdgeInsets.only(bottom: bottomPaddingOfMap),
      mapType: MapType.normal,
      myLocationEnabled: true,
      zoomGesturesEnabled: true,
      zoomControlsEnabled: true,
      initialCameraPosition: _kGooglePlex,
      polylines: polyLineSet,
      markers: markersSet,
      circles: circlesSet,
      onMapCreated: (GoogleMapController controller) {
        _controllerGoogleMap.complete(controller);
        newGoogleMapController = controller;

        //for black theme google map
        blackThemeGoogleMap();

        setState(() {
          bottomPaddingOfMap = 240;
        });

        locateUserPosition();
      },
    ),

    //custom hamburger button for drawer
    Positioned(
      top: 30,

```

```

left: 14,
child: GestureDetector(
  onTap: () {
    if (openNavigationDrawer) {
      sKey.currentState!.openDrawer();
    } else {
      //restart-refresh-minimize app prognatically
      // SystemNavigator.pop();
      Future.delayed(const Duration(milliseconds: 4000), () {
        MyApp.restartApp(context);
      });
    }
  },
  child: CircleAvatar(
    backgroundColor: Colors.black87,
    child: Icon(
      openNavigationDrawer ? Icons.menu : Icons.close,
      color: Colors.white,
    ),
  ),
),
),
),
),

//ui for searching location
Positioned(
  bottom: 0,
  left: 0,
  right: 0,
  child: AnimatedSize(
    curve: Curves.easeIn,
    duration: const Duration(milliseconds: 120),
    child: Container(
      height: searchLocationContainerHeight,
      decoration: const BoxDecoration(
        color: Colors.black87,
        borderRadius: BorderRadius.only(
          topRight: Radius.circular(20),
          topLeft: Radius.circular(20),
        ),
      ),
    ),
  ),
  child: Padding(

```

```

padding:
  const EdgeInsets.symmetric(horizontal: 24, vertical:
18),
child: Column(
  children: [
    //from
    Row(
      children: [
        const Icon(
          Icons.add_location_alt_outlined,
          color: Colors.blueAccent,
        ),
        const SizedBox(
          width: 12.0,
        ),
        Column(
          crossAxisAlignment: CrossAxisAlignment.start,
          children: [
            const Text(
              "From",
              style:
                TextStyle(color: Colors.grey, fontSize: 12),
            ),
            Text(
              Provider.of<AppInfo>(context)
                .userPickUpLocation !=
                null
                ? (Provider.of<AppInfo>(context)
                  .userPickUpLocation!
                  .locationName!)
                  .substring(0, 24) +
                  "..."
                : "not getting address",
              style: const TextStyle(
                color: Colors.grey, fontSize: 14),
            ),
          ],
        ),
      ],
    ),
  ],
),

```

```

const SizedBox(height: 10.0),

const Divider(
  height: 1,
  thickness: 1,
  color: Colors.grey,
),

const SizedBox(height: 16.0),

//to
GestureDetector(
  onTap: () async {
    //go to search places screen
    var responseFromSearchScreen = await
Navigator.push(
  context,
  MaterialPageRoute(
    builder: (c) => SearchPlacesScreen()));

    if (responseFromSearchScreen ==
"obtainedDropoff") {
      setState(() {
        openNavigationDrawer = false;
      });

      //draw routes - draw polyline
      await drawPolyLineFromOriginToDestination();
    }
  },
  child: Row(
    children: [
      const Icon(
        Icons.add_location_alt_outlined,
        color: Colors.blueAccent,
      ),
      const SizedBox(
        width: 12.0,
      ),
      Column(
        crossAxisAlignment: CrossAxisAlignment.start,

```

```

children: [
  const Text(
    "To",
    style: TextStyle(
      color: Colors.grey, fontSize: 12),
  ),
  Text(
    Provider.of<AppInfo>(context)
      .userDropOffLocation !=
      null
      ? Provider.of<AppInfo>(context)
        .userDropOffLocation!
        .locationName!
      : "Where to go?",
    style: const TextStyle(
      color: Colors.grey, fontSize: 14),
  ),
],
),
],
),
),

const SizedBox(height: 10.0),

const Divider(
  height: 1,
  thickness: 1,
  color: Colors.grey,
),

const SizedBox(height: 16.0),

ElevatedButton(
  child: const Text(
    "Request a Ride",
  ),
  onPressed: () {
    if (Provider.of<AppInfo>(context, listen: false)
      .userDropOffLocation !=
      null) {

```



```

),
child: Column(
  crossAxisAlignment: CrossAxisAlignment.start,
  children: [
    //status of ride
    Center(
      child: Text(
        driverRideStatus,
        style: const TextStyle(
          fontSize: 18,
          fontWeight: FontWeight.bold,
          color: Colors.blueAccent,
        ),
      ),
    ),
  ],
),

const SizedBox(
  height: 20.0,
),

const Divider(
  height: 2,
  thickness: 2,
  color: Colors.white54,
),

const SizedBox(
  height: 20.0,
),

//driver vehicle details
Text(
  "Car Details : " + driverCarDetails,
  textAlign: TextAlign.center,
  style: const TextStyle(
    fontSize: 16,
    color: Colors.white54,
  ),
),

const SizedBox(

```



```

        height: 2.0,
      ),

      //driver name
      Text(
        "Driver Name : " + driverName,
        textAlign: TextAlign.center,
        style: const TextStyle(
          fontSize: 20,
          fontWeight: FontWeight.bold,
          color: Colors.white54,
        ),
      ),

      const SizedBox(
        height: 20.0,
      ),

      const Divider(
        height: 2,
        thickness: 2,
        color: Colors.white54,
      ),

      const SizedBox(
        height: 20.0,
      ),

      //call driver button
      Center(
        child: ElevatedButton.icon(
          onPressed: () {},
          style: ElevatedButton.styleFrom(
            primary: Colors.green,
          ),
          icon: const Icon(
            Icons.phone_android,
            color: Colors.black54,
            size: 22,
          ),
          label: const Text(

```

```

        "Call Driver",
        style: TextStyle(
            color: Colors.black54,
            fontWeight: FontWeight.bold,
        ),
    ),
),
),
],
),
),
),
),
],
),
);
}

```

```

Future<void> drawPolyLineFromOriginToDestination() async {
    var originPosition =
        Provider.of<AppInfo>(context, listen:
false).userPickUpLocation;
    var destinationPosition =
        Provider.of<AppInfo>(context, listen:
false).userDropOffLocation;

```

```

    var originLatLng = LatLng(
        originPosition!.locationLatitude!,
originPosition.locationLongitude!);
    var destinationLatLng =
LatLng(destinationPosition!.locationLatitude!,
        destinationPosition.locationLongitude!);

```

```

showDialog(
    context: context,
    builder: (BuildContext context) => ProgressDialog(
        message: "Please wait...",
    ),
);

```

```

var directionDetailsInfo =
    await

```

```

AssistantMethods.obtainOriginToDestinationDirectionDetails(
    originLatLng, destinationLatLng);
setState(() {
    tripDirectionDetailsInfo = directionDetailsInfo;
});
Navigator.pop(context);

// print("These are points = ");
// print(directionDetailsInfo!.e_points);

PolylinePoints pPoints = PolylinePoints();
List<PointLatLng> decodedPolyLinePointsResultList =
    pPoints.decodePolyline(directionDetailsInfo!.e_points!);

pLineCoOrdinatesList.clear();

if (decodedPolyLinePointsResultList.isNotEmpty) {
    decodedPolyLinePointsResultList.forEach((PointLatLng
pointLatLng) {
        pLineCoOrdinatesList
            .add(LatLng(pointLatLng.latitude, pointLatLng.longitude));
    });
}

polyLineSet.clear();

setState(() {
    Polyline polyline = Polyline(
        color: Colors.blueAccent,
        polylineId: const PolylineId("PolylineID"),
        jointType: JointType.round,
        points: pLineCoOrdinatesList,
        startCap: Cap.roundCap,
        endCap: Cap.roundCap,
        geodesic: true,
    );

    polyLineSet.add(polyline);
});

LatLngBounds boundsLatLng;

```

```

    if (originLatLng.latitude > destinationLatLng.latitude &&
        originLatLng.longitude > destinationLatLng.longitude) {
        boundsLatLng =
            LatLngBounds(southwest: destinationLatLng, northeast:
originLatLng);
    } else if (originLatLng.longitude > destinationLatLng.longitude) {
        boundsLatLng = LatLngBounds(
            southwest: LatLng(originLatLng.latitude,
destinationLatLng.longitude),
            northeast: LatLng(destinationLatLng.latitude,
originLatLng.longitude),
        );
    } else if (originLatLng.latitude > destinationLatLng.latitude) {
        boundsLatLng = LatLngBounds(
            southwest: LatLng(destinationLatLng.latitude,
originLatLng.longitude),
            northeast: LatLng(originLatLng.latitude,
destinationLatLng.longitude),
        );
    } else {
        boundsLatLng =
            LatLngBounds(southwest: originLatLng, northeast:
destinationLatLng);
    }

```

```

newGoogleMapController!

```

```

.animateCamera(CameraUpdate.newLatLngBounds(boundsLatLng,
65));

```

```

Marker originMarker = Marker(
    markerId: const MarkerId("originID"),
    infoWindow:
        InfoWindow(title: originPosition.locationName, snippet:
"Origin"),
    position: originLatLng,
    icon:
        BitmapDescriptor.defaultMarkerWithHue(BitmapDescriptor.hueRed)
,
);

```

```

Marker destinationMarker = Marker(
    markerId: const MarkerId("destinationID"),

```

```

        infoWindow: InfoWindow(
            title: destinationPosition.locationName, snippet:
"Destination"),
            position: destinationLatLng,
            icon:
BitmapDescriptor.defaultMarkerWithHue(BitmapDescriptor.hueRed)
        ,
    );

    setState(() {
        markersSet.add(originMarker);
        markersSet.add(destinationMarker);
    });

    Circle originCircle = Circle(
        circleId: const CircleId("originID"),
        fillColor: Colors.red,
        radius: 12,
        strokeWidth: 3,
        strokeColor: Colors.redAccent,
        center: originLatLng,
    );

    Circle destinationCircle = Circle(
        circleId: const CircleId("destinationID"),
        fillColor: Colors.red,
        radius: 12,
        strokeWidth: 3,
        strokeColor: Colors.redAccent,
        center: destinationLatLng,
    );

    setState(() {
        circlesSet.add(originCircle);
        circlesSet.add(destinationCircle);
    });
}

initializeGeoFireListener() {
    Geofire.initialize("activeDrivers");

    Geofire.queryAtLocation(

```

```

        userCurrentPosition!.latitude,
userCurrentPosition!.longitude, 10)!
        .listen((map) {
print(map);
if (map != null) {
    var callBack = map['callBack'];

    //latitude will be retrieved from map['latitude']
    //longitude will be retrieved from map['longitude']

    switch (callBack) {
        //whenever any driver become active/online
        case Geofire.onKeyEntered:
            ActiveNearbyAvailableDrivers  activeNearbyAvailableDriver
=
            ActiveNearbyAvailableDrivers();
            activeNearbyAvailableDriver.locationLatitude           =
map['latitude'];
            activeNearbyAvailableDriver.locationLongitude          =
map['longitude'];
            activeNearbyAvailableDriver.driverId = map['key'];
            GeoFireAssistant.activeNearbyAvailableDriversList
            .add(activeNearbyAvailableDriver);
            if (activeNearbyDriverKeysLoaded == true) {
                displayActiveDriversOnUsersMap();
            }
            break;

            //whenever any driver become non-active/offline
            case Geofire.onKeyExited:
                GeoFireAssistant.deleteOfflineDriverFromList(map['key']);
                displayActiveDriversOnUsersMap();
                break;

            //whenever driver moves - update driver location
            case Geofire.onKeyMoved:
                ActiveNearbyAvailableDrivers  activeNearbyAvailableDriver
=
                ActiveNearbyAvailableDrivers();
                activeNearbyAvailableDriver.locationLatitude           =
map['latitude'];
                activeNearbyAvailableDriver.locationLongitude          =

```

```

map['longitude'];
    activeNearbyAvailableDriver.driverId = map['key'];

GeoFireAssistant.updateActiveNearbyAvailableDriverLocation(
    activeNearbyAvailableDriver);
displayActiveDriversOnUsersMap();
break;

//display those online/active drivers on user's map
case Geofire.onGeoQueryReady:
    activeNearbyDriverKeysLoaded = true;
    displayActiveDriversOnUsersMap();
    break;
}
}

setState(() {});
});
}

displayActiveDriversOnUsersMap() {
    setState(() {
        markersSet.clear();
        circlesSet.clear();

        Set<Marker> driversMarkerSet = Set<Marker>();

        for (ActiveNearbyAvailableDrivers eachDriver
            in GeoFireAssistant.activeNearbyAvailableDriversList) {
            LatLng eachDriverActivePosition =
                LatLng(eachDriver.locationLatitude!,
                    eachDriver.locationLongitude!);

            Marker marker = Marker(
                markerId: MarkerId("driver" + eachDriver.driverId!),
                position: eachDriverActivePosition,
                icon: activeNearbyIcon!,
                rotation: 360,
            );

            driversMarkerSet.add(marker);

```

```

    }

    setState(() {
      markersSet = driversMarkerSet;
    });
  });
}

createActiveNearByDriverIconMarker() {
  if (activeNearbyIcon == null) {
    ImageConfiguration imageConfiguration =
      createLocalImageConfiguration(context, size: const Size(2,
2));
    BitmapDescriptor.fromAssetImage(imageConfiguration,
"images/car.png")
      .then((value) {
        activeNearbyIcon = value;
      });
  }
}
}

```

Models:

active nearby available drivers:

```

class ActiveNearbyAvailableDrivers
{
  String? driverId;
  double? locationLatitude;
  double? locationLongitude;

  ActiveNearbyAvailableDrivers({
    this.driverId,
    this.locationLatitude,
    this.locationLongitude,
  });
}

```

direction details info:

```

class DirectionDetailsInfo
{
  int? distance_value;
  int? duration_value;
}

```



```

String? e_points;
String? distance_text;
String? duration_text;

DirectionDetailsInfo({
  this.distance_text,
  this.duration_value,
  this.e_points,
  this.distance_value,
  this.duration_text,
});
}

```

Directions:

```

class Directions
{
  String? humanReadableAddress;
  String? locationName;
  String? locationId;
  double? locationLatitude;
  double? locationLongitude;

  Directions({
    this.humanReadableAddress,
    this.locationName,
    this.locationId,
    this.locationLatitude,
    this.locationLongitude,
  });
}

```

predicted places:

```

class PredictedPlaces
{
  String? place_id;
  String? main_text;
  String? secondary_text;

  PredictedPlaces({
    this.place_id,
    this.main_text,
    this.secondary_text,
  });
}

```

```

    PredictedPlaces.fromJson(Map<String, dynamic> jsonData)
    {
      place_id = jsonData["place_id"];
      main_text = jsonData["structured_formatting"]["main_text"];
      secondary_text = jsonData["structured_formatting"]["secondary_text"];
    }
  }
}

```

trips history model:

```

import 'package:firebase_database/firebase_database.dart';

class TripsHistoryModel {
  String? time;
  String? originAddress;
  String? destinationAddress;
  String? status;
  String? fareAmount;
  String? car_details;
  String? driverName;

  TripsHistoryModel({
    this.time,
    this.originAddress,
    this.destinationAddress,
    this.status,
    this.fareAmount,
    this.car_details,
    this.driverName,
  });

  TripsHistoryModel.fromSnapshot(DataSnapshot dataSnapshot) {
    time = (dataSnapshot.value as Map)["time"];
    originAddress = (dataSnapshot.value as Map)["originAddress"];
    destinationAddress = (dataSnapshot.value as Map)["destinationAddress"];
    status = (dataSnapshot.value as Map)["status"];
    fareAmount = (dataSnapshot.value as Map)["fareAmount"];
    car_details = (dataSnapshot.value as Map)["car_details"];
    driverName = (dataSnapshot.value as Map)["driverName"];
  }
}

```

```
}
```

user model:

```
import 'package:firebase_database/firebase_database.dart';
```

```
class UserModel {  
  String? phone;  
  String? name;  
  String? id;  
  String? email;
```

```
  UserModel({  
    this.phone,  
    this.name,  
    this.id,  
    this.email,  
  });
```

```
  UserModel.fromSnapshot(DataSnapshot snap) {  
    phone = (snap.value as dynamic)["phone"];  
    name = (snap.value as dynamic)["name"];  
    id = snap.key;  
    email = (snap.value as dynamic)["email"];  
  }  
}
```

```
}
```

Search places screen:

```
import 'package:flutter/material.dart';  
import 'package:users_app/assistants/request_assistant.dart';  
import 'package:users_app/global/map_key.dart';  
import 'package:users_app/models/predicted_places.dart';  
import 'package:users_app/widgets/place_prediction_tile.dart';
```

```
class SearchPlacesScreen extends StatefulWidget {  
  @override  
  _SearchPlacesScreenState createState() =>  
    _SearchPlacesScreenState();  
}
```

```
class _SearchPlacesScreenState extends  
  State<SearchPlacesScreen> {  
  List<PredictedPlaces> placesPredictedList = [];
```

```

void findPlaceAutoCompleteSearch(String inputText) async {
  if (inputText.length > 1) //2 or more than 2 input characters
  {
    String urlAutoCompleteSearch =

"https://maps.googleapis.com/maps/api/place/autocomplete/json?in
put=$inputText&key=$mapKey&components=country:IN";

    var responseAutoCompleteSearch =
      await
RequestAssistant.receiveRequest(urlAutoCompleteSearch);

    if (responseAutoCompleteSearch ==
      "Error Occurred, Failed. No Response.") {
      return;
    }

    if (responseAutoCompleteSearch["status"] == "OK") {
      var placePredictions
responseAutoCompleteSearch["predictions"];

      var placePredictionsList = (placePredictions as List)
        .map((jsonData) => PredictedPlaces.fromJson(jsonData))
        .toList();

      setState(() {
        placesPredictedList = placePredictionsList;
      });
    }
  }
}

@override
Widget build(BuildContext context) {
  return Scaffold(
    backgroundColor: Colors.black,
    body: Column(
      children: [
        //search place ui
        Container(
          height: 160,
          decoration: const BoxDecoration(

```

```

color: Colors.black87,
boxShadow: [
  BoxShadow(
    color: Colors.lightBlueAccent,
    blurRadius: 8,
    spreadRadius: 0.5,
    offset: Offset(
      0.7,
      0.7,
    ),
  ),
],
),
child: Padding(
  padding: const EdgeInsets.all(10.0),
  child: Column(
    children: [
      const SizedBox(height: 25.0),
      Stack(
        children: [
          GestureDetector(
            onTap: () {
              Navigator.pop(context);
            },
            child: const Icon(
              Icons.arrow_back,
              color: Colors.blueAccent,
            ),
          ),
          const Center(
            child: Text(
              "Search & Set DropOff Location",
              style: TextStyle(
                fontSize: 18.0,
                color: Colors.white,
                fontWeight: FontWeight.bold,
              ),
            ),
          ),
        ],
      ),
    ],
  ),
),

```



```

        child: ListView.separated(
          itemCount: placesPredictedList.length,
          physics: ClampingScrollPhysics(),
          itemBuilder: (context, index) {
            return PlacePredictionTileDesign(
              predictedPlaces: placesPredictedList[index],
            );
          },
          separatorBuilder: (BuildContext context, int index) {
            return const Divider(
              height: 1,
              color: Colors.white,
              thickness: 1,
            );
          },
        ),
      ),
    ),
  ],
),
);
}
}

```

Select nearest active driver:

```

import 'dart:developer';

import 'package:firebase_database/firebase_database.dart';
import 'package:flutter/material.dart';
import 'package:flutter/services.dart';
import 'package:fluttertoast/fluttertoast.dart';
import 'package:intl/intl.dart';
import
'package:smooth_star_rating_nsafe/smooth_star_rating.dart';
import 'package:users_app/assistants/assistant_methods.dart';
import 'package:users_app/global/global.dart';
import 'package:users_app/main.dart';

class SelectNearestActiveDriversScreen extends StatefulWidget {
  DatabaseReference? referenceRideRequest;

  SelectNearestActiveDriversScreen({this.referenceRideRequest});

```

```

@override
_SelectNearestActiveDriversScreenState createState() =>
  _SelectNearestActiveDriversScreenState();
}

class _SelectNearestActiveDriversScreenState
  extends State<SelectNearestActiveDriversScreen> {
  String fareAmount = "";

  getFareAmountAccordingToVehicleType(int index) {
    if (tripDirectionDetailsInfo != null) {
      if (dList[index]["car_details"]["type"].toString() == "bike") {
        fareAmount =

(AssistantMethods.calculateFareAmountFromOriginToDestination(
      tripDirectionDetailsInfo!) /
        2)
        .toStringAsFixed(1);
      }
      if (dList[index]["car_details"]["type"].toString() ==
        "uber-x") //means executive type of car - more comfortable
pro level
      {
        fareAmount =

(AssistantMethods.calculateFareAmountFromOriginToDestination(
      tripDirectionDetailsInfo!) *
        2)
        .toStringAsFixed(1);
      }
      if (dList[index]["car_details"]["type"].toString() ==
        "uber-go") // non - executive car - comfortable
      {
        fareAmount =

(AssistantMethods.calculateFareAmountFromOriginToDestination(
      tripDirectionDetailsInfo!))
        .toString();
      }
    }
  }
}

```



```

    setrecomm(fareAmount);
    return fareAmount;
}

```

```

setrecomm(String fareamt) {
    //String tdata =
    DateFormat("HH:mm:ss").format(DateTime.now());
    //print(tdata);
    DateTime now = DateTime.now();
    //int hour = now.hour;
    //int minute = now.minute;
    String b = DateFormat.H().format(now);
    //print('$hour $minute');
    int time = int.parse(b);
    int peakstart = 8;
    double farer = double.parse(fareamt);
    int peakevestart = 18;

    if (time > peakstart && time < peakstart + 2) {
        //do calc
        double t = farer * 0.10;
        farer = farer + t;
        userrec = farer;
        //return farer;
    }
    if (time < peakevestart + 2 && time > peakevestart) {
        // do cal
        double t = farer * 0.15;
        farer = farer + t;
        userrec = farer;
        //return farer;
    } else {
        userrec = farer;
        //return farer;
    }
}

```

```

@override
Widget build(BuildContext context) {
    return Scaffold(
        backgroundColor: Colors.black,

```

```

appBar: AppBar(
  backgroundColor: Colors.blueGrey,
  shadowColor: Colors.blueAccent,
  title: const Text(
    "Nearest Online Drivers",
    style: TextStyle(
      color: Colors.black87,
      fontSize: 18,
    ),
  ),
  leading: IconButton(
    icon: const Icon(Icons.close, color: Colors.black87),
    onPressed: () {
      //delete/remove the ride request from database
      widget.referenceRideRequest!.remove();
      Fluttertoast.showToast(msg: "you have cancelled the ride
request.");

      SystemNavigator.pop();
      // Future.delayed(const Duration(milliseconds: 4000), () {
      //   MyApp.restartApp(context);
      // });
    },
  ),
),
body: ListView.builder(
  itemCount: dList.length,
  itemBuilder: (BuildContext context, int index) {
    return GestureDetector(
      onTap: () {
        setState(() {
          chosenDriverId = dList[index]["id"].toString();
          userfare = double.parse(
            getFareAmountAccordingToVehicleType(index) ?? '0');

          log("0" + userfare.toString());

          FirebaseDatabase.instance
            .ref()
            .child("drivers")
            .child(chosenDriverId!)

```

```

        .child("fare")
        .set(userfare);
    });
    Navigator.pop(context, "driverChoosed");
},
child: Card(
  color: Colors.blue[900],
  elevation: 3,
  margin: const EdgeInsets.all(8),
  child: ListTile(
    leading: Padding(
      padding: const EdgeInsets.only(top: 2.0),
      child: Image.asset(
        "images/" +
          dList[index]["car_details"]["type"].toString() +
          ".png",
        width: 70,
      ),
    ),
    title: Column(
      mainAxisAlignment: MainAxisAlignment.start,
      children: [
        Text(
          dList[index]["name"],
          style: const TextStyle(
            fontSize: 14,
            color: Colors.white,
          ),
        ),
        Text(
          dList[index]["car_details"]["car_model"],
          style: const TextStyle(
            fontSize: 12,
            color: Colors.black,
          ),
        ),
        SmoothStarRating(
          rating: dList[index]["ratings"] == null
            ? 0.0
            : double.parse(dList[index]["ratings"]),
          color: Colors.yellowAccent,

```

```

        borderColor: Colors.black,
        allowHalfRating: true,
        starCount: 5,
        size: 15,
      ),
    ],
  ),
  trailing: Column(
    mainAxisAlignment: MainAxisAlignment.center,
    children: [
      Text(
        "₹" +
getFareAmountAccordingToVehicleType(index),
        style: const TextStyle(
          color: Colors.white,
          fontWeight: FontWeight.bold,
        ),
      ),
      const SizedBox(
        height: 2,
      ),
      Text(
        tripDirectionDetailsInfo != null
          ? tripDirectionDetailsInfo!.duration_text!
          : "",
        style: const TextStyle(
          fontWeight: FontWeight.bold,
          color: Colors.white,
          fontSize: 12),
      ),
      // add the bargain here
      const SizedBox(
        height: 2,
      ),
      Text(
        tripDirectionDetailsInfo != null
          ? tripDirectionDetailsInfo!.distance_text!
          : "",
        style: const TextStyle(
          fontWeight: FontWeight.bold,
          color: Colors.white,

```

```

        fontSize: 12),
      ),
    ],
  ),
),
),
);
},
),
);
}
}
}

```

Assistant methods:

```
import 'dart:convert';
```

```

import 'package:firebase_auth/firebase_auth.dart';
import 'package:firebase_database/firebase_database.dart';
import 'package:geolocator/geolocator.dart';
import 'package:google_maps_flutter/google_maps_flutter.dart';
import 'package:provider/provider.dart';
import 'package:users_app/assistants/request_assistant.dart';
import 'package:users_app/global/global.dart';
import 'package:users_app/global/map_key.dart';
import 'package:users_app/infoHandler/app_info.dart';
import 'package:users_app/models/direction_details_info.dart';
import 'package:users_app/models/directions.dart';
import 'package:users_app/models/user_model.dart';
import 'package:http/http.dart' as http;

```

```
import '../models/trips_history_model.dart';
```

```

class AssistantMethods {
  static Future<String> searchAddressForGeographicCoOrdinates(
    Position position, context) async {
    String apiUrl =

    "https://maps.googleapis.com/maps/api/geocode/json?latlng=${position.latitude},${position.longitude}&key=$mapKey";
    String humanReadableAddress = "";

```

```

    var requestResponse = await
    RequestAssistant.receiveRequest(apiUrl);

```

```

        if (requestResponse != "Error Occurred, Failed. No Response.") {
            humanReadableAddress =
requestResponse["results"][0]["formatted_address"];

```

```

        Directions userPickUpAddress = Directions();
        userPickUpAddress.locationLatitude = position.latitude;
        userPickUpAddress.locationLongitude = position.longitude;
        userPickUpAddress.locationName = humanReadableAddress;

```

```

        Provider.of<AppInfo>(context, listen: false)
            .updatePickUpLocationAddress(userPickUpAddress);
    }

```

```

    return humanReadableAddress;
}

```

```

static void readCurrentOnlineUserInfo() async {
    currentFirebaseUser = FirebaseAuth.currentUser;

```

```

    DatabaseReference userRef = FirebaseDatabase.instance
        .ref()
        .child("users")
        .child(currentFirebaseUser!.uid);

```

```

    userRef.once().then((snap) {
        if (snap.snapshot.value != null) {
            userModelCurrentInfo =
UserModel.fromSnapshot(snap.snapshot);
        }
    });
}

```

```

static Future<DirectionDetailsInfo?>
    obtainOriginToDestinationDirectionDetails(
        LatLng origionPosition, LatLng destinationPosition) async {
    String urlOriginToDestinationDirectionDetails =

```

```

    "https://maps.googleapis.com/maps/api/directions/json?origin=${ori
gionPosition.latitude},${origionPosition.longitude}&destination=${de
stinationPosition.latitude},${destinationPosition.longitude}&key=$m
apKey";

```

```

        var responseDirectionApi = await
RequestAssistant.receiveRequest(
    urlOriginToDestinationDirectionDetails);

    if (responseDirectionApi == "Error Occurred, Failed. No
Response.") {
        return null;
    }

    DirectionDetailsInfo directionDetailsInfo = DirectionDetailsInfo();
    directionDetailsInfo.e_points =

responseDirectionApi["routes"][0]["overview_polyline"]["points"];

    directionDetailsInfo.distance_text =
        responseDirectionApi["routes"][0]["legs"][0]["distance"]["text"];
    directionDetailsInfo.distance_value =
        responseDirectionApi["routes"][0]["legs"][0]["distance"]["value"];

    directionDetailsInfo.duration_text =
        responseDirectionApi["routes"][0]["legs"][0]["duration"]["text"];
    directionDetailsInfo.duration_value =
        responseDirectionApi["routes"][0]["legs"][0]["duration"]["value"];

    return directionDetailsInfo;
}

static double calculateFareAmountFromOriginToDestination(
    DirectionDetailsInfo directionDetailsInfo) {
    double timeTraveledFareAmountPerMinute =
        (directionDetailsInfo.duration_value! / 60) * 3;
    double distanceTraveledFareAmountPerKilometer =
        (directionDetailsInfo.duration_value! / 1000) * 6;

    //INR
    double totalFareAmount = timeTraveledFareAmountPerMinute +
        distanceTraveledFareAmountPerKilometer;
    // double localCurrencyTotalFare = totalFareAmount * 82;

    return double.parse(totalFareAmount.toStringAsFixed(1));
}

```

```

static sendNotificationToDriverNow(
    String deviceRegistrationToken, String userRideRequestId,
context) async {
    String destinationAddress = userDropOffAddress;

    Map<String, String> headerNotification = {
        'Content-Type': 'application/json',
        'Authorization': cloudMessagingServerToken,
    };

    Map bodyNotification = {
        "body": "Destination Address: \n$destinationAddress.",
        "title": "New Trip Request"
    };

    Map dataMap = {
        "click_action": "FLUTTER_NOTIFICATION_CLICK",
        "id": "1",
        "status": "done",
        "rideRequestId": userRideRequestId
    };

    Map officialNotificationFormat = {
        "notification": bodyNotification,
        "data": dataMap,
        "priority": "high",
        "to": deviceRegistrationToken,
    };

    var responseNotification = http.post(
        Uri.parse("https://fcm.googleapis.com/fcm/send"),
        headers: headerNotification,
        body: jsonEncode(officialNotificationFormat),
    );
}

//retrieve the trips KEYS for online user
//trip key = ride request key
static void readTripsKeysForOnlineUser(context) {
    FirebaseDatabase.instance

```



```

        .ref()
        .child("All Ride Requests")
        .orderByChild("userName")
        .equalTo(userModelCurrentInfo!.name)
        .once()
        .then((snap) {
if (snap.snapshot.value != null) {
    Map keysTripsId = snap.snapshot.value as Map;

    //count total number trips and share it with Provider
    int overAllTripsCounter = keysTripsId.length;
    Provider.of<AppInfo>(context, listen: false)
        .updateOverAllTripsCounter(overAllTripsCounter);

    //share trips keys with Provider
    List<String> tripsKeysList = [];
    keysTripsId.forEach((key, value) {
        tripsKeysList.add(key);
    });
    Provider.of<AppInfo>(context, listen: false)
        .updateOverAllTripsKeys(tripsKeysList);

    //get trips keys data - read trips complete information
    readTripsHistoryInformation(context);
    }
    });
    }

static void readTripsHistoryInformation(context) {
    var tripsAllKeys =
        Provider.of<AppInfo>(context, listen:
false).historyTripsKeysList;

    for (String eachKey in tripsAllKeys) {
        FirebaseDatabase.instance
            .ref()
            .child("All Ride Requests")
            .child(eachKey)
            .once()
            .then((snap) {
var
                eachTripHistory
                =

```

```

TripsHistoryModel.fromSnapshot(snap.snapshot);

    if ((snap.snapshot.value as Map)["status"] == "ended") {
      //update-add each history to OverAllTrips History Data List
      Provider.of<AppInfo>(context, listen: false)
        .updateOverAllTripsHistoryInformation(eachTripHistory);
    }
  });
}
}
}
}

```

DRIVER:

MAIN.DART:

```

import 'package:drivers_app/infoHandler/app_info.dart';
import 'package:drivers_app/splashScreen/splash_screen.dart';
import 'package:firebase_core/firebase_core.dart';
import 'package:flutter/material.dart';
import 'package:get/get.dart';
import 'package:provider/provider.dart';

void main() async {
  WidgetsFlutterBinding.ensureInitialized();
  await Firebase.initializeApp();

  runApp(
    MyApp(
      child: ChangeNotifierProvider(
        create: (context) => AppInfo(),
        child: GetMaterialApp(
          title: 'Drivers App',
          theme: ThemeData(
            primarySwatch: Colors.blue,
          ),
          home: const MySplashScreen(),
          debugShowCheckedModeBanner: false,
        ),
      ),
    ),
  );
};

```

```

}

class MyApp extends StatefulWidget {
  final Widget? child;

  MyApp({this.child});

  static void restartApp(BuildContext context) {
    context.findAncestorStateOfType<_MyAppState>()?.restartApp();
  }

  @override
  _MyAppState createState() => _MyAppState();
}

class _MyAppState extends State<MyApp> {
  Key key = UniqueKey();
  void restartApp() {
    setState(() {
      key = UniqueKey();
    });
  }

  @override
  Widget build(BuildContext context) {
    return KeyedSubtree(
      key: key,
      child: widget.child!,
    );
  }
}

```

MAIN SCREEN:

```

import 'package:drivers_app/tabPages/earning_tab.dart';
import 'package:drivers_app/tabPages/home_tab.dart';
import 'package:drivers_app/tabPages/profile_tab.dart';
import 'package:drivers_app/tabPages/ratings_tab.dart';
import 'package:flutter/material.dart';

class MainScreen extends StatefulWidget {
  @override
  _MainScreenState createState() => _MainScreenState();
}

```

```

}

class _MainScreenState extends State<MainScreen>
  with SingleTickerProviderStateMixin {
  TabController? tabController;
  int selectedIndex = 0;

  onItemClicked(int index) {
    setState(() {
      selectedIndex = index;
      tabController!.index = selectedIndex;
    });
  }

  @override
  void initState() {
    super.initState();

    tabController = TabController(length: 4, vsync: this);
  }

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      body: TabBarView(
        physics: const NeverScrollableScrollPhysics(),
        controller: tabController,
        children: const [
          HomeTabPage(),
          EarningsTabPage(),
          RatingsTabPage(),
          ProfileTabPage(),
        ],
      ),
      bottomNavigationBar: BottomNavigationBar(
        items: const [
          BottomNavigationBarItem(
            icon: Icon(Icons.home),
            label: "Home",
          ),
          BottomNavigationBarItem(

```

```

        icon: Icon(Icons.credit_card),
        label: "Earnings",
      ),
      BottomNavigationBarItem(
        icon: Icon(Icons.star),
        label: "Ratings",
      ),
      BottomNavigationBarItem(
        icon: Icon(Icons.person),
        label: "Account",
      ),
    ],
    unselectedItemColor: Colors.white54,
    selectedItemColor: Colors.white,
    backgroundColor: Colors.black,
    type: BottomNavigationBarType.fixed,
    selectedItemLabelStyle: const TextStyle(fontSize: 14),
    showSelectedLabels: true,
    currentIndex: selectedIndex,
    onTap: onItemClicked,
  ),
);
}
}

```

Push Notification:

BID.DART:

```

import 'dart:developer';

import 'package:drivers_app/global/global.dart';

import
'package:drivers_app/push_notifications/notification_dialog_box.dart';
import 'package:firebase_database/firebase_database.dart';
import 'package:flutter/material.dart';
import 'package:fluttertoast/fluttertoast.dart';

import 'package:flutter/services.dart';
import 'package:get/get.dart';
import '../mainScreens/new_trip_screen.dart';
import '../models/user_ride_request_information.dart';

```

```

class BidDialog extends StatefulWidget {
  UserRideRequestInformation? userRideRequestDetails;
  final int bid;
  BidDialog({super.key, required this.bid,
    this.userRideRequestDetails});

  @override
  State<BidDialog> createState() => _BidDialogState();
}

```

```

class _BidDialogState extends State<BidDialog> {
  int amt = 0;
  @override
  Widget build(BuildContext context) {
    return Dialog(
      shape: RoundedRectangleBorder(
        borderRadius: BorderRadius.circular(24),
      ),
      backgroundColor: Colors.transparent,
      elevation: 2,
      child: Container(
        margin: const EdgeInsets.all(8),
        width: double.infinity,
        decoration: BoxDecoration(
          borderRadius: BorderRadius.circular(10),
          color: Colors.grey[800],
        ),
        child: Column(
          mainAxisAlignment: MainAxisAlignment.min,
          children: [
            const SizedBox(
              height: 14,
            ),

            Image.asset(
              "images/car_logo.png",
              width: 160,
            ),

            const SizedBox(

```

```

        height: 10,
      ),

      //title
      const Text(
        "Bid Request",
        style: TextStyle(
          fontWeight: FontWeight.bold,
          fontSize: 22,
          color: Colors.grey),
      ),

      const Divider(
        height: 3,
        thickness: 3,
      ),

      Row(
        children: [
          Text(
            " User Request ₹ " + widget.bid.toString(),
            style: const TextStyle(
              fontSize: 20,
              fontWeight: FontWeight.bold,
              color: Colors.grey,
            ),
          ),
        ],
      ),
      const Divider(
        height: 3,
        thickness: 3,
      ),

      //buttons cancel accept
      Padding(
        padding: const EdgeInsets.all(20.0),
        child: Row(
          mainAxisAlignment: MainAxisAlignment.center,
          children: [
            ElevatedButton(

```

```

style: ElevatedButton.styleFrom(
  primary: Colors.red,
),
onPressed: () {
  //cancel the rideRequest
  FirebaseDatabase.instance
    .ref()
    .child("All Ride Requests")

    .child(widget.userRideRequestDetails!.rideRequestId!)
      .remove()
      .then((value) {
        FirebaseDatabase.instance
          .ref()
          .child("drivers")
          .child(currentFirebaseUser!.uid)
          .child("newRideStatus")
          .set("idle");
      }).then((value) {
        FirebaseDatabase.instance
          .ref()
          .child("drivers")
          .child(currentFirebaseUser!.uid)
          .child("tripsHistory")
          .child(

widget.userRideRequestDetails!.rideRequestId!)
            .remove();
      }).then((value) {
        Fluttertoast.showToast(
          msg:
            "Ride Request has been Cancelled,
Successfully. Restart App Now.");
      });

      Future.delayed(const Duration(milliseconds: 3000), ()
{
  SystemNavigator.pop();
});
},
child: Text(
  "Cancel".toUpperCase(),

```



```

        style: const TextStyle(
          fontSize: 14.0,
        ),
      ),
    ),
    const SizedBox(width: 25.0),
    ElevatedButton(
      style: ElevatedButton.styleFrom(
        primary: Colors.green,
      ),
      onPressed: () {
        //accept the rideRequest
        acceptRideRequest(context);
        Get.back();
      },
      child: Text(
        "Accept".toUpperCase(),
        style: const TextStyle(
          fontSize: 14.0,
        ),
      ),
    ),
  ],
),
),

ElevatedButton(
  onPressed: () {
    showDialog(
      context: Get.context!,
      builder: (context) => bargainindial(context));
  },
  style: ElevatedButton.styleFrom(
    primary: Colors.yellow,
  ),
  child: Text(
    "Bargain".toUpperCase(),
    style: const TextStyle(
      fontSize: 14.0,
    ),
  ),
),

```

```

    )
  ],
),
),
);
}

```

```

acceptRideRequest(BuildContext context) {
  String getRideRequestId = "";
  FirebaseDatabase.instance
    .ref()
    .child("drivers")
    .child(currentFirebaseUser!.uid)
    .child("newRideStatus")
    .once()
    .then((snap) {
      if (snap.snapshot.value != null) {
        getRideRequestId = snap.snapshot.value.toString();
      } else {
        Fluttertoast.showToast(msg: "This ride request do not
exists.");
      }
    })
  FirebaseDatabase.instance
    .ref()
    .child("All Ride Requests")
    .child(widget.userRideRequestDetails!.rideRequestId!)
    .child("fare")
    .set(widget.bid);

  FirebaseDatabase.instance
    .ref()
    .child("drivers")
    .child(currentFirebaseUser!.uid)
    .child("newRideStatus")
    .set("accepted");
  FirebaseDatabase.instance
    .ref()
    .child("All Ride Requests")
    .child(widget.userRideRequestDetails!.rideRequestId!)
    .child("bidStatus")
    .set("accepted");
}

```

```

// AssistantMethods.pauseLiveLocationUpdates();

//trip started now - send driver to new tripScreen
Navigator.push(
  context,
  MaterialPageRoute(
    builder: (c) => NewTripScreen(
      userRideRequestDetails:
widget.userRideRequestDetails,
    )),
  ));
}

bid(BuildContext context, int bid) async {
  String RideRequestId = "";
  FirebaseDatabase.instance
    .ref()
    .child("All Ride Requests")
    .child(widget.userRideRequestDetails!.rideRequestId!)
    .once()
    .then((snap) {
  if (snap.snapshot.value != null) {
    RideRequestId = snap.snapshot.value.toString();
    print("butter" + RideRequestId);
    print(widget.userRideRequestDetails!.rideRequestId);
  }
  FirebaseDatabase.instance
    .ref()
    .child("drivers")
    .child(currentFirebaseUser!.uid)
    .child("newRideStatus")
    .set("wait");
  if (true) {
    FirebaseDatabase.instance
      .ref()
      .child("drivers")
      .child(currentFirebaseUser!.uid)
      .child("newRideStatus")
      .set("bargaining");

    FirebaseDatabase.instance

```

```

        .ref()
        .child("All Ride Requests")
        .child(widget.userRideRequestDetails!.rideRequestId!)
        .child("bid")
        .set(bid);
    }
}

```

FirebaseDatabase.instance

```

    .ref()
    .child("drivers")
    .child(currentFirebaseUser!.uid)
    .child("bid")
    .set(bid);

```

});

```

Future.delayed(const Duration(milliseconds: 3000), () {
    Fluttern.toast.show(msg: "Please wait a while");
});

```

});

FirebaseDatabase.instance

```

    .ref()
    .child("All Ride Requests")
    .child(widget.userRideRequestDetails!.rideRequestId!)
    .child("bidStatus")
    .onValue
    .listen((eventSnapshot) async {
log("terror2" + eventSnapshot.snapshot.value.toString());
if (eventSnapshot.snapshot.value != null) {
    if (eventSnapshot.snapshot.value == "bidd") {
        Fluttern.toast.show(msg: "Please wait ..");
    }
    if (eventSnapshot.snapshot.value == "bidding") {
        int bid1 = 0;
        log(widget.userRideRequestDetails!.rideRequestId! + " bub");
        FirebaseDatabase.instance
            .ref()
            .child("All Ride Requests")
            .child(widget.userRideRequestDetails!.rideRequestId!)
            .child("bid")
            .once()
            .then(
                (value) {
                    bid1 = int.parse(value.snapshot.value.toString());

```

```

log(" bid object" + bid1.toString());
log("before bid object");
try {
  showDialog(
    context: Get.context!,
    builder: ((BuildContext context) => BidDialog(
      bid: bid1,
      userRideRequestDetails:
widget.userRideRequestDetails,
    )),
  );
} catch (e) {
  log("returning error " + e.toString());
}
);
}
if (eventSnapshot.snapshot.value == "accepted") {
  String getRideRequestId = "";
  FirebaseDatabase.instance
    .ref()
    .child("drivers")
    .child(currentFirebaseUser!.uid)
    .child("newRideStatus")
    .once()
    .then((snap) {
      if (snap.snapshot.value != null) {
        getRideRequestId = snap.snapshot.value.toString();
      } else {
        Fluttertoast.showToast(msg: "This ride request do not
exists.");
      }
      Fluttertoast.showToast(msg: "Wait a while, User Accepted
your bid");
      FirebaseDatabase.instance
        .ref()
        .child("drivers")
        .child(currentFirebaseUser!.uid)
        .child("newRideStatus")
        .set("accepted");

// AssistantMethods.pauseLiveLocationUpdates();

```

```

        //trip started now - send driver to new tripScreen
        Navigator.push(
            context,
            MaterialPageRoute(
                builder: (c) => NewTripScreen(
                    userRideRequestDetails:
widget.userRideRequestDetails,
                )),
        ));
    } else {
        Fluttertoast.showToast(msg: "Waiting for response from
user");
    }
    } else {
        Fluttertoast.showToast(msg: "msg??");
        Fluttertoast.showToast(msg: "No response from user");
    }
    });

(context as Element).markNeedsBuild();

Navigator.of(context).pop();
}

```

```

Widget bargaindialog(BuildContext context) {
  TextEditingController barg = new TextEditingController();
  return Dialog(
    shape: RoundedRectangleBorder(
      borderRadius: BorderRadius.circular(24),
    ),
    backgroundColor: Colors.transparent,
    elevation: 2,
    child: Container(
      height: MediaQuery.of(context).size.height * 0.4,
      margin: const EdgeInsets.all(8),
      width: double.infinity,
      decoration: BoxDecoration(
        borderRadius: BorderRadius.circular(10),
        color: Colors.grey[800],
      ),
    ),
  );
}

```

```

child: Column(
  children: [
    const SizedBox(
      height: 10,
    ),

    Image.asset(
      "images/car_logo.png",
      width: 160,
    ),

    const SizedBox(
      height: 10,
    ),

    //title
    const Text(
      "Bargain for Fare",
      style: TextStyle(
        fontWeight: FontWeight.bold,
        fontSize: 22,
        color: Colors.grey),
    ),
    Divider(),

    TextFormField(
      controller: barg,
      style: const TextStyle(
        fontSize: 24,
        color: Colors.black,
        fontWeight: FontWeight.w600,
      ),
      onChanged: (value) {
        value = barg.text;
        amt = int.parse(value);
        setState(() {});
      },
      keyboardType: TextInputType.number,
      decoration: InputDecoration(
        focusColor: Colors.white,
        //add prefix icon

```

```

    prefixIcon: Icon(
      Icons.money,
      color: Colors.grey,
    ),

    border: OutlineInputBorder(
      borderRadius: BorderRadius.circular(10.0),
    ),
    labelText: "enter value!",

    focusedBorder: OutlineInputBorder(
      borderSide:
        const BorderSide(color: Colors.blue, width: 1.0),
      borderRadius: BorderRadius.circular(10.0),
    ),
    fillColor: Colors.grey,

    hintText: "Amount here",
    labelText: "Enter Your Amount",
  ),
),
ElevatedButton(
  //bargain function
  onPressed: (() {
    log("0 " + amt.toString());
    bid(context, amt);
  }),
  child: Text('Send'),
  style: ElevatedButton.styleFrom(
    primary: Colors.green,
  ),
)
],
)),
);
}
}

```

NOTIFICATION DIALOG BOX:

```
import 'dart:developer';
```



```

import 'package:assets_audio_player/assets_audio_player.dart';
import 'package:drivers_app/assistants/assistant_methods.dart';
import 'package:drivers_app/global/global.dart';
import 'package:drivers_app/mainScreens/new_trip_screen.dart';
import
'package:drivers_app/models/user_ride_request_information.dart';
import 'package:drivers_app/push_notifications/bid.dart';
import 'package:firebase_database/firebase_database.dart';
import 'package:flutter/material.dart';
import 'package:flutter/services.dart';
import 'package:fluttertoast/fluttertoast.dart';
import 'package:get/get.dart';

```

```

class NotificationDialogBox extends StatefulWidget {
  UserRideRequestInformation? userRideRequestDetails;

```

```

  NotificationDialogBox({this.userRideRequestDetails});

```

```

  @override
  State<NotificationDialogBox>          createState()          =>
  _NotificationDialogBoxState();
}

```

```

class          _NotificationDialogBoxState          extends
State<NotificationDialogBox> {
  TextEditingController bargain_amt = new TextEditingController();
  int amt = 0;

```

```

  String fare = "";
  numcontroller numc = Get.put(numcontroller());
  @override
  void initState() {
    super.initState();
    numc.money.value          =
    widget.userRideRequestDetails!.fare!.toInt();
  }

```

```

  @override
  Widget build(BuildContext context) {
    //money = widget.userRideRequestDetails!.fare!.toString();

```

```

log(" Logged money " + numc.money.toString());
return Dialog(
  shape: RoundedRectangleBorder(
    borderRadius: BorderRadius.circular(24),
  ),
  backgroundColor: Colors.transparent,
  elevation: 2,
  child: Container(
    margin: const EdgeInsets.all(8),
    width: double.infinity,
    decoration: BoxDecoration(
      borderRadius: BorderRadius.circular(10),
      color: Colors.grey[800],
    ),
    child: Column(
      mainAxisAlignment: MainAxisAlignment.min,
      children: [
        const SizedBox(
          height: 14,
        ),

        Image.asset(
          "images/car_logo.png",
          width: 160,
        ),

        const SizedBox(
          height: 10,
        ),

        //title
        const Text(
          "New Ride Request",
          style: TextStyle(
            fontWeight: FontWeight.bold,
            fontSize: 22,
            color: Colors.grey),
        ),

        const SizedBox(height: 14.0),

```

```

const Divider(
  height: 3,
  thickness: 3,
),

//addresses origin destination
Padding(
  padding: const EdgeInsets.all(20.0),
  child: Column(
    children: [
      //origin location with icon
      Row(
        children: [
          Image.asset(
            "images/origin.png",
            width: 30,
            height: 30,
          ),
          const SizedBox(
            width: 14,
          ),
          Expanded(
            child: Container(
              child: Text(
                widget.userRideRequestDetails!.originAddress!,
                style: const TextStyle(
                  fontSize: 16,
                  color: Colors.grey,
                ),
              ),
            ),
          ),
        ],
      ),

      const SizedBox(height: 20.0),

      //destination location with icon
      Row(
        children: [
          Image.asset(

```

```

        "images/destination.png",
        width: 30,
        height: 30,
      ),
      const SizedBox(
        width: 14,
      ),
      Expanded(
        child: Container(
          child: Text(
            widget.userRideRequestDetails!.destinationAddress!,
            style: const TextStyle(
              fontSize: 16,
              color: Colors.grey,
            ),
          ),
        ),
      ),
    ],
  ),
  Row(
    children: [
      Text(
        " User Request ₹ ",
        style: const TextStyle(
          fontSize: 20,
          fontWeight: FontWeight.bold,
          color: Colors.grey,
        ),
      ),
      Obx(() => Text(
        "${numc.money}",
        style: const TextStyle(
          fontSize: 20,
          fontWeight: FontWeight.bold,
          color: Colors.grey,
        ),
      )),
    ],
  ),
),

```

```

    ],
  ),
),

const Divider(
  height: 3,
  thickness: 3,
),

//buttons cancel accept
Padding(
  padding: const EdgeInsets.all(20.0),
  child: Row(
    mainAxisAlignment: MainAxisAlignment.center,
    children: [
      ElevatedButton(
        style: ElevatedButton.styleFrom(
          primary: Colors.red,
        ),
        onPressed: () {
          audioPlayer.pause();
          audioPlayer.stop();
          audioPlayer = AssetsAudioPlayer();

          //cancel the rideRequest
          FirebaseDatabase.instance
            .ref()
            .child("All Ride Requests")

            .child(widget.userRideRequestDetails!.rideRequestId!)
              .remove()
              .then((value) {
                FirebaseDatabase.instance
                  .ref()
                  .child("drivers")
                  .child(currentFirebaseUser!.uid)
                  .child("newRideStatus")
                  .set("idle");
              }).then((value) {
                FirebaseDatabase.instance
                  .ref()

```

```

        .child("drivers")
        .child(currentFirebaseUser!.uid)
        .child("tripsHistory")
        .child(

widget.userRideRequestDetails!.rideRequestId!)
        .remove();
    }).then((value) {
        Fluttertoast.showToast(
            msg:
                "Ride Request has been Cancelled,
Successfully. Restart App Now.");
    });

    Future.delayed(const Duration(milliseconds: 3000), ()
{
    SystemNavigator.pop();
});
},
child: Text(
    "Cancel".toUpperCase(),
    style: const TextStyle(
        fontSize: 14.0,
    ),
),
),
const SizedBox(width: 25.0),
ElevatedButton(
    style: ElevatedButton.styleFrom(
        primary: Colors.green,
    ),
    onPressed: () {
        audioPlayer.pause();
        audioPlayer.stop();
        audioPlayer = AssetsAudioPlayer();

        //accept the rideRequest
        acceptRideRequest(context);
    },
    child: Text(
        "Accept".toUpperCase(),
        style: const TextStyle(

```

```
fontSize: 14.0,
),
),
),
],
),
),
// bargain section
Padding(
padding: EdgeInsets.all(20),
child: Row(
mainAxisAlignment: MainAxisAlignment.spaceBetween,
children: [
Expanded(
child: Container(
child: const Text(
"Need to Bargain ? ",
style: TextStyle(
fontSize: 16,
color: Colors.grey,
),
),
),
),
const SizedBox(
width: 10,
),
ElevatedButton(
//bargain function
onPressed: () {
audioPlayer.pause();
audioPlayer.stop();

showDialog(
context: context,
builder: ((context) => bargain_dial(context)));
}),
child: Text('Bargain'),
style: ElevatedButton.styleFrom(
primary: Colors.yellow,
),
```

```

        )
      ],
    ))
  ],
),
),
);
}

```

```

acceptRideRequest(BuildContext context) {
  String getRideRequestId = "";
  FirebaseDatabase.instance
    .ref()
    .child("drivers")
    .child(currentFirebaseUser!.uid)
    .child("newRideStatus")
    .once()
    .then((snap) {
      if (snap.snapshot.value != null) {
        getRideRequestId = snap.snapshot.value.toString();
      }
    })
}

```

```

FirebaseDatabase.instance
  .ref()
  .child("drivers")
  .child(currentFirebaseUser!.uid)
  .child("newRideStatus")
  .set("accepted");

```

```

// AssistantMethods.pauseLiveLocationUpdates();

```

```

//trip started now - send driver to new tripScreen
Navigator.push(
  context,
  MaterialPageRoute(
    builder: (c) => NewTripScreen(
      userRideRequestDetails:
widget.userRideRequestDetails,
    )),
  ));
}

```



```

bargain(BuildContext context, int bid) async {
  FirebaseDatabase.instance
    .ref()
    .child("All Ride Requests")
    .child(widget.userRideRequestDetails!.rideRequestId!)
    .once()
    .then((snap) {
      if (snap.snapshot.value != null) {
        requestrideid =
widget.userRideRequestDetails!.rideRequestId!;
        print("butter" + requestrideid);
        print(widget.userRideRequestDetails!.rideRequestId);
      }
      FirebaseDatabase.instance
        .ref()
        .child("drivers")
        .child(currentFirebaseUser!.uid)
        .child("newRideStatus")
        .set("wait");

      if (true) {
        FirebaseDatabase.instance
          .ref()
          .child("drivers")
          .child(currentFirebaseUser!.uid)
          .child("newRideStatus")
          .set("bargaining");

        FirebaseDatabase.instance
          .ref()
          .child("All Ride Requests")
          .child(widget.userRideRequestDetails!.rideRequestId!)
          .child("bid")
          .set(bid);
      }

      FirebaseDatabase.instance
        .ref()
        .child("drivers")
        .child(currentFirebaseUser!.uid)

```

```

        .child("bid")
        .set(bid);
    });

```

FirebaseDatabase.instance

```

        .ref()
        .child("All Ride Requests")
        .child(widget.userRideRequestDetails!.rideRequestId!)
        .child("bidStatus")
        .onValue
        .listen((eventSnapshot) async {
log("terror" + eventSnapshot.snapshot.value.toString());
if (eventSnapshot.snapshot.value != null) {
    if (eventSnapshot.snapshot.value == "bidding") {
        int bid1 = 0;
        log(widget.userRideRequestDetails!.rideRequestId! + " bub");

```

FirebaseDatabase.instance

```

        .ref()
        .child("All Ride Requests")
        .child(widget.userRideRequestDetails!.rideRequestId!)
        .child("bid")
        .once()
        .then(
            (value) {
                bid1 = int.parse(value.snapshot.value.toString());

```

```

log("0" + fare);
setState(() {
    try {
        numc.money.value = bid1;
    } catch (e) {
        log("e" + e.toString());
    }
});
log(" bid object" + bid1.toString());

```

```

try {
    showDialog(
        context: Get.context!,
        builder: ((BuildContext context) => BidDialog(
            bid: bid1,

```

```

        userRideRequestDetails:
widget.userRideRequestDetails,
        ));
    } catch (e) {
        log("returning error " + e.toString());
    }
},
);
}
if (eventSnapshot.snapshot.value == "accepted") {
    String getRideRequestId = "";
    FirebaseDatabase.instance
        .ref()
        .child("drivers")
        .child(currentFirebaseUser!.uid)
        .child("newRideStatus")
        .once()
        .then((snap) {
            if (snap.snapshot.value != null) {
                getRideRequestId = snap.snapshot.value.toString();
            }
        })
    FirebaseDatabase.instance
        .ref()
        .child("All Ride Requests")
        .child(widget.userRideRequestDetails!.rideRequestId!)
        .child("fare")
        .once()
        .then((value) => numc.money.value =
            int.parse(value.snapshot.value.toString()));
    log(numc.money.value.toString() + "Log");
    FirebaseDatabase.instance
        .ref()
        .child("drivers")
        .child(currentFirebaseUser!.uid)
        .child("newRideStatus")
        .set("accepted");

    // AssistantMethods.pauseLiveLocationUpdates();

    //trip started now - send driver to new tripScreen
    Navigator.push(

```

```

        context,
        MaterialPageRoute(
          builder: (c) => NewTripScreen(
            userRideRequestDetails:
widget.userRideRequestDetails,
          )),
      ));
    } else {
      Fluttertoast.showToast(msg: "Waiting for response from
user");
    }
    } else {
      Fluttertoast.showToast(msg: "No response from user");
    }
  });

  setState(() {});

  Navigator.of(context).pop();
}

```

```

Widget bargain_dial(BuildContext context) {
  return Dialog(
    shape: RoundedRectangleBorder(
      borderRadius: BorderRadius.circular(24),
    ),
    backgroundColor: Colors.transparent,
    elevation: 2,
    child: Container(
      height: MediaQuery.of(context).size.height * 0.4,
      margin: const EdgeInsets.all(8),
      width: double.infinity,
      decoration: BoxDecoration(
        borderRadius: BorderRadius.circular(10),
        color: Colors.grey[800],
      ),
      child: Column(
        children: [
          const SizedBox(
            height: 10,
          ),

```

```

Image.asset(
  "images/car_logo.png",
  width: 160,
),

const SizedBox(
  height: 10,
),

//title
const Text(
  "Bargain for Fare",
  style: TextStyle(
    fontWeight: FontWeight.bold,
    fontSize: 22,
    color: Colors.grey),
),
Divider(),

TextFormField(
  controller: bargain_amt,
  style: const TextStyle(
    fontSize: 24,
    color: Colors.black,
    fontWeight: FontWeight.w600,
  ),
  onChanged: (value) {
    value = bargain_amt.text;
    amt = int.parse(value);
    setState(() {});
  },
  keyboardType: TextInputType.number,
  decoration: InputDecoration(
    focusColor: Colors.white,
    //add prefix icon
    prefixIcon: Icon(
      Icons.money,
      color: Colors.grey,
    ),
  ),

```

```

border: OutlineInputBorder(
  borderRadius: BorderRadius.circular(10.0),
),
errorText: "enter value!",

focusedBorder: OutlineInputBorder(
  borderSide:
    const BorderSide(color: Colors.blue, width: 1.0),
  borderRadius: BorderRadius.circular(10.0),
),
fillColor: Colors.grey,

hintText: "Amount here",
labelText: "Enter Your Amount",
),
),
ElevatedButton(
  //bargain function
  onPressed: (() {
    log("0 " + amt.toString());
    bargain(context, amt);
  }),
  child: Text('Send'),
  style: ElevatedButton.styleFrom(
    primary: Colors.green,
  ),
)
],
)),
);
}
}

```

PUSH NOTIFCATION SYSTEM:

```

import 'package:assets_audio_player/assets_audio_player.dart';
import 'package:drivers_app/global/global.dart';
import
'package:drivers_app/models/user_ride_request_information.dart';
import
'package:drivers_app/push_notifications/notification_dialog_box.dart';

import 'package:firebase_database/firebase_database.dart';
import 'package:firebase_messaging/firebase_messaging.dart';

```

```

import 'package:flutter/material.dart';
import 'package:fluttertoast/fluttertoast.dart';
import 'package:google_maps_flutter/google_maps_flutter.dart';

class PushNotificationSystem {
  FirebaseMessaging messaging = FirebaseMessaging.instance;

  Future initializeCloudMessaging(BuildContext context) async {
    //1. Terminated
    //When the app is completely closed and opened directly from
    the push notification
    FirebaseMessaging.instance
      .getInitialMessage()
      .then((RemoteMessage? remoteMessage) {
        if (remoteMessage != null) {
          //display ride request information - user information who
          request a ride
          readUserRideRequestInformation(
            remoteMessage.data["rideRequestId"], context);
        }
      });

    //2. Foreground
    //When the app is open and it receives a push notification
    FirebaseMessaging.onMessage.listen((RemoteMessage?
    remoteMessage) {
      //display ride request information - user information who request
      a ride
      readUserRideRequestInformation(
        remoteMessage!.data["rideRequestId"], context);
    });

    //3. Background
    //When the app is in the background and opened directly from
    the push notification.

    FirebaseMessaging.onMessageOpenedApp.listen((RemoteMessag
    e? remoteMessage) {
      //display ride request information - user information who request
      a ride
      readUserRideRequestInformation(
        remoteMessage!.data["rideRequestId"], context);
    });
  }
}

```

```

    }

    readUserRideRequestInformation(
        String userRideRequestId, BuildContext context) {
        FirebaseDatabase.instance
            .ref()
            .child("All Ride Requests")
            .child(userRideRequestId)
            .once()
            .then((snapData) {
                if (snapData.snapshot.value != null) {
                    audioPlayer.open(Audio("music/music_notification.mp3"));
                    audioPlayer.play();

                    double originLat = double.parse(
                        (snapData.snapshot.value! as Map)["origin"]["latitude"]);
                    double originLng = double.parse(
                        (snapData.snapshot.value! as Map)["origin"]["longitude"]);
                    String originAddress =
                        (snapData.snapshot.value! as Map)["originAddress"];

                    double destinationLat = double.parse(
                        (snapData.snapshot.value! as
Map)["destination"]["latitude"]);
                    double destinationLng = double.parse(
                        (snapData.snapshot.value! as
Map)["destination"]["longitude"]);
                    String destinationAddress =
                        (snapData.snapshot.value! as Map)["destinationAddress"];
                    double fare = (snapData.snapshot.value! as Map)["fare"];

                    String  userName    = (snapData.snapshot.value! as
Map)["userName"];
                    String  userPhone  = (snapData.snapshot.value! as
Map)["userPhone"];

                    String? rideRequestId = snapData.snapshot.key;

                    UserRideRequestInformation userRideRequestDetails =
                        UserRideRequestInformation();

                    userRideRequestDetails.originLatLng    =    LatLng(originLat,

```



```

originLng);
    userRideRequestDetails.originAddress = originAddress;

    userRideRequestDetails.destinationLatLng =
        LatLng(destinationLat, destinationLng);
    userRideRequestDetails.destinationAddress =
destinationAddress;
    userRideRequestDetails.fare = fare;
    userRideRequestDetails.userName = userName;
    userRideRequestDetails.userPhone = userPhone;

    userRideRequestDetails.rideRequestId = rideRequestId;

    showDialog(
        context: context,
        builder: ((BuildContext context) => NotificationDialogBox(
            userRideRequestDetails: userRideRequestDetails,
        )),
    ) else {
        Fluttertoast.showToast(msg: "This Ride Request Id do not
exists.");
    }
});
}

```

```

Future generateAndGetToken() async {
    String? registrationToken = await messaging.getToken();
    print("FCM Registration Token: ");
    print(registrationToken);

```

```

FirebaseDatabase.instance
    .ref()
    .child("drivers")
    .child(currentFirebaseUser!.uid)
    .child("token")
    .set(registrationToken);

```

```

messaging.subscribeToTopic("allDrivers");
messaging.subscribeToTopic("allUsers");
}

```

```

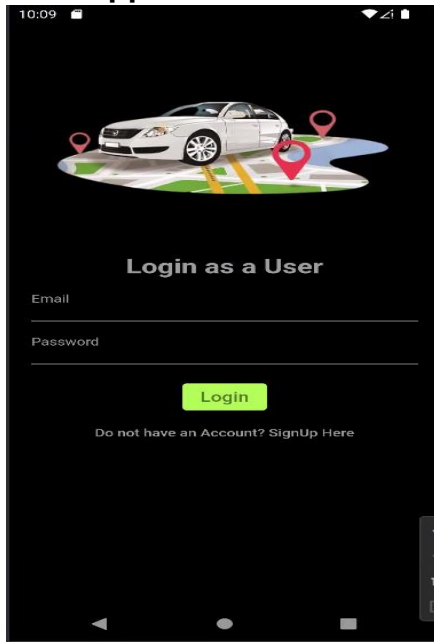
}

```

B. SCREENSHOTS:

LOGIN PAGE FOR USER:

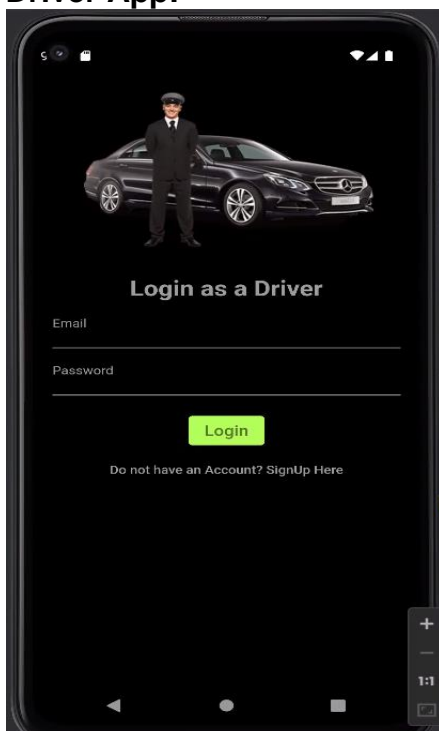
User App:



Once the user enters their user-Email and password, they will be taken to the main dashboard of the application where they can search for and book rides.

Login page for Driver:

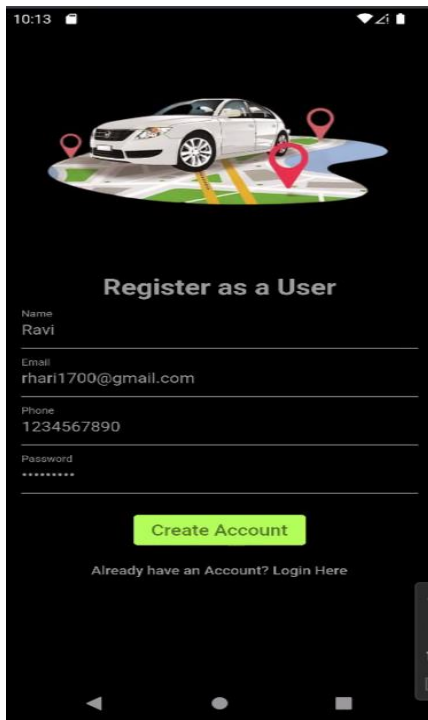
Driver App:



Once the driver enters their email and password, they will be taken to the main dashboard of the application where they can view and manage their rides

Registration page for user:

UserApp:



10:13

Register as a User

Name
Ravi

Email
rhari1700@gmail.com

Phone
1234567890

Password

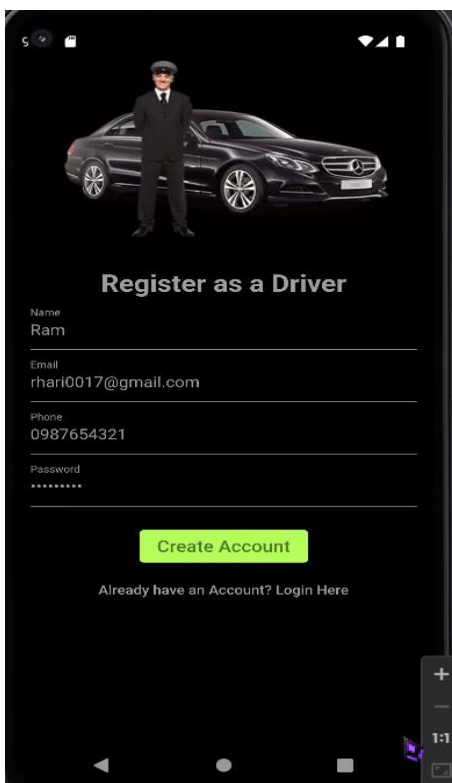
Create Account

Already have an Account? Login Here

Once the user enters their information and clicks on the sign-up button, they will be registered as a user and can log in to the application. The application has a bargaining system, the user may be able to negotiate the price of the ride with the driver.

Registration page for driver:

Driver App:



Register as a Driver

Name
Ram

Email
rhari0017@gmail.com

Phone
0987654321

Password

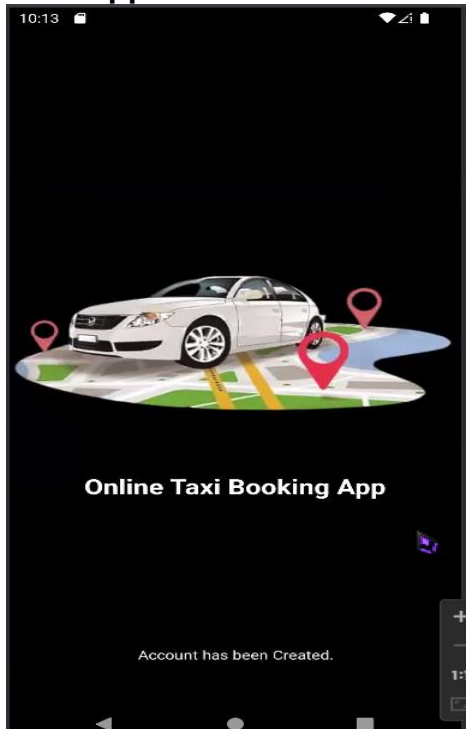
Create Account

Already have an Account? Login Here

Once the driver enters their information and clicks on the sign-up button, they will be registered as a driver and can log in to the application. The application has a bargaining system, the driver will be able to negotiate the price of the ride with the passenger. This feature could be integrated into the ride booking process or may appear on a separate page or pop-up window. Additionally, the driver may have options to update their profile, availability, and other preferences after registration

Account Created:

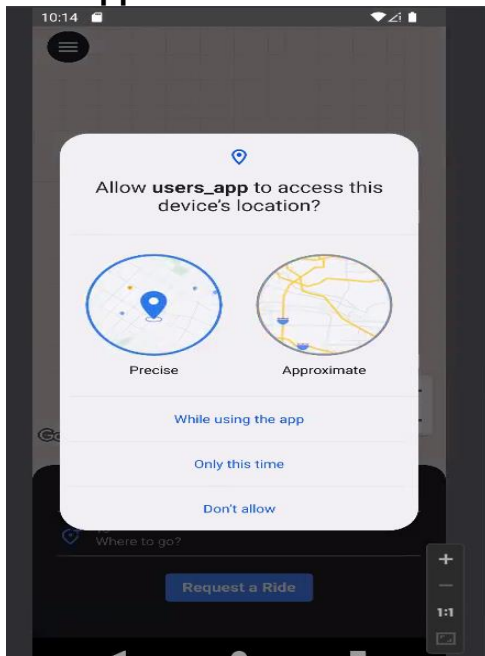
User App:



After registering in the user account has been created for that user.

Access for location:

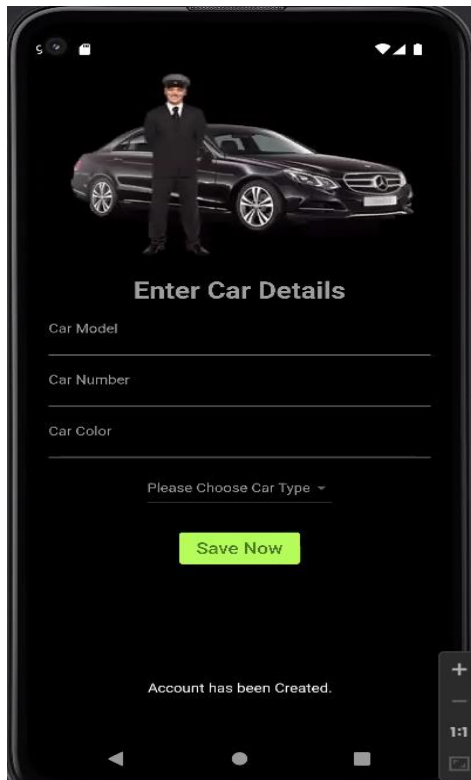
UserApp:



Asking user permission to access the location according to user's decision.

Car details:

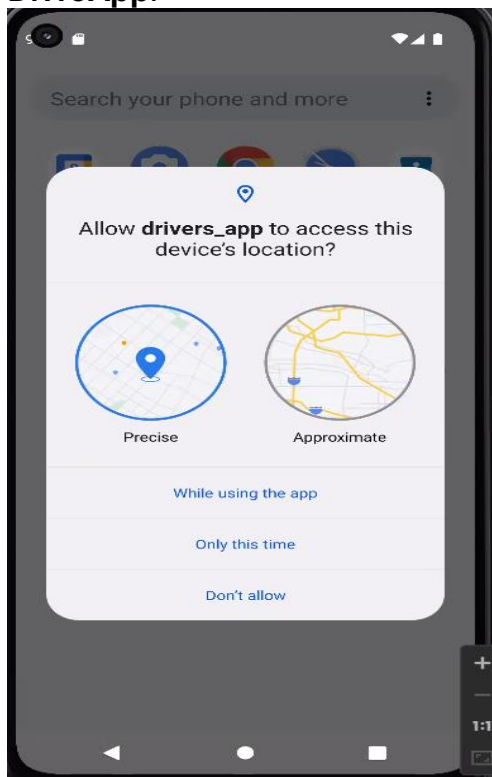
DriverApp:



After creating account for the driver side, the driver can choose the car details like car model, car number, car color and car type like uber, uber-go, bike. The driver choose any one and click save now to save the options.

Access for location:

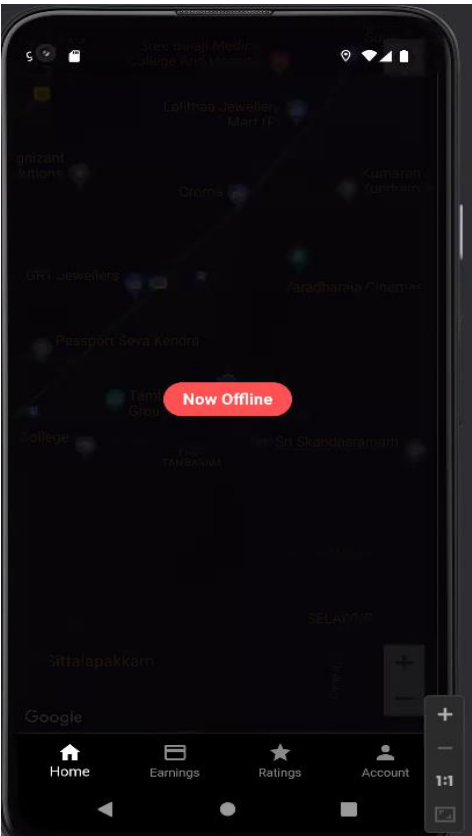
DriveApp:



Asking driver permission to access the location according to driver's decision.

Driver Application Homepage:

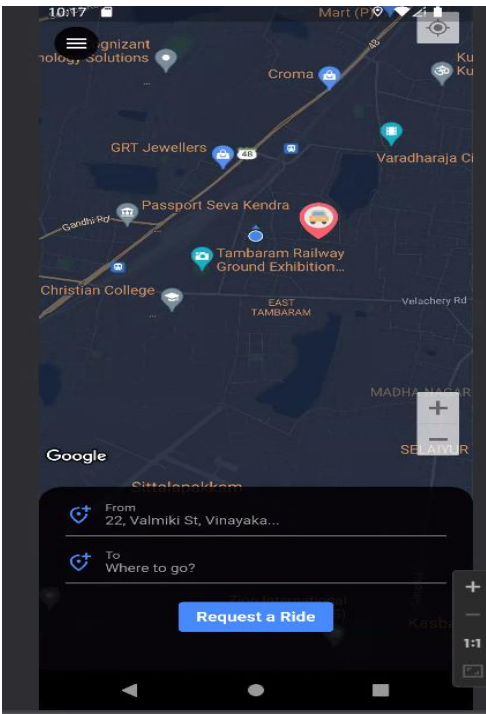
DriverApp:



In this driver app, the driver will enter the driver's home. On this home page, the driver can able to click on the "Now offline" button to show the nearby customer to select the driver.

User's Application Homepage:

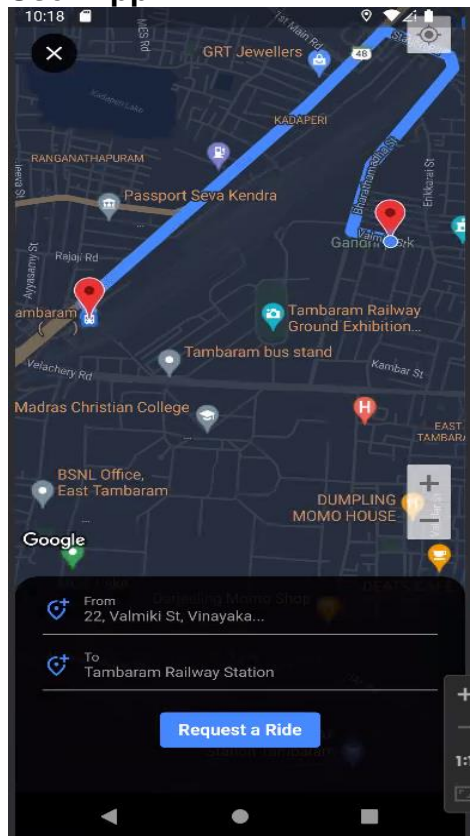
User App:



In this User app, the user can able to see their current location if the user allows their location, and the user can see nearby drivers available. The user should type the destination and the user should click the request a ride button to book the taxi.

Enter destination:

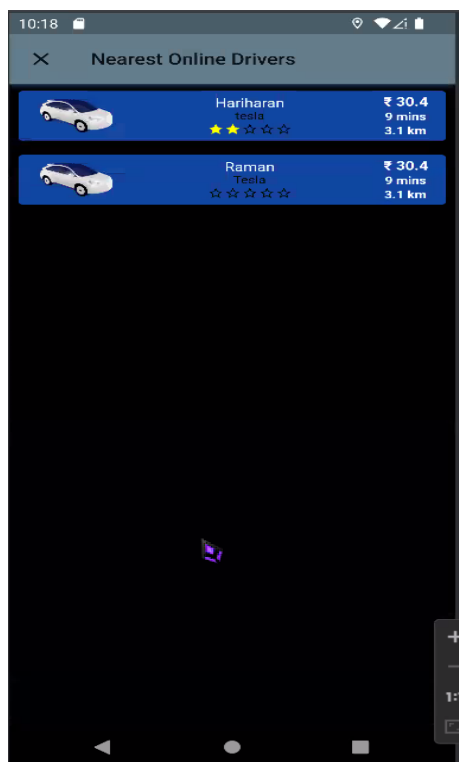
User App:



In this, the user can select the Drop-off location and select drop-off location and click on the request a ride button to see the nearby driver's details.

Searching for nearest online drivers:

User App:

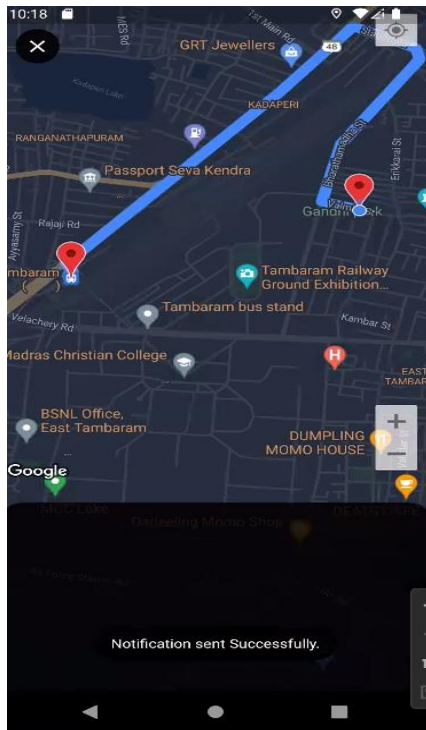


When user click the request ride the app will display the nearest online driver from the user's location. In the nearest online driver the user can view the driver's name, rating, there vehicle type, price for that destination, time occur for that location, and distance from the source location.

Notification sent to the nearest drivers:

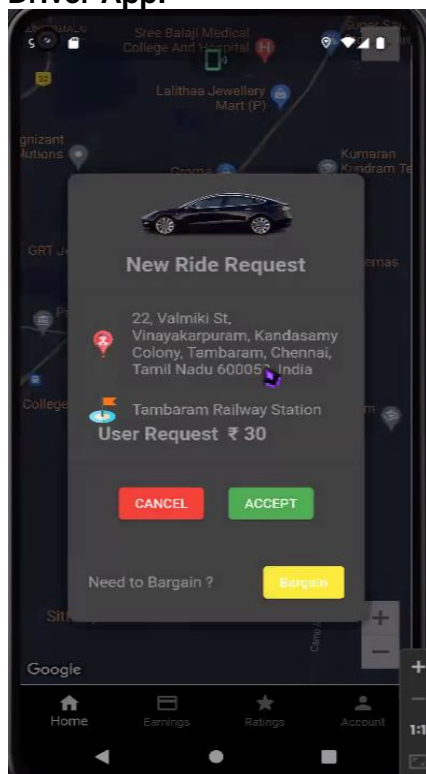
When the user select any one the driver the user app will send notification to the near by drivers.

User App:



New Ride Request:

Driver App:

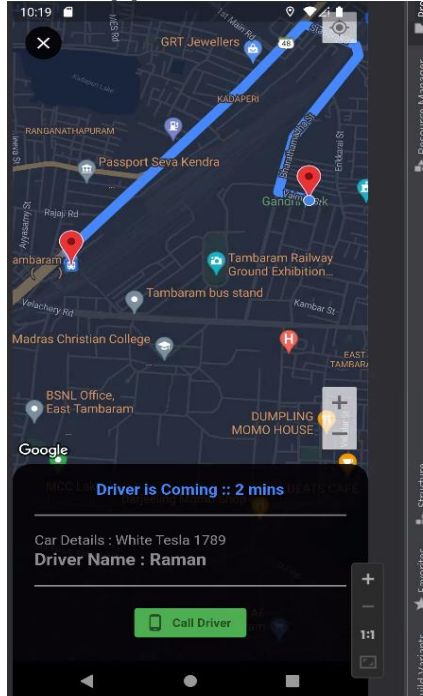


when the user sent request to near by drivers then the drivers will receive the new ride request with information of user's current location to destination location of the user. The driver can Accept, cancel or bargain.

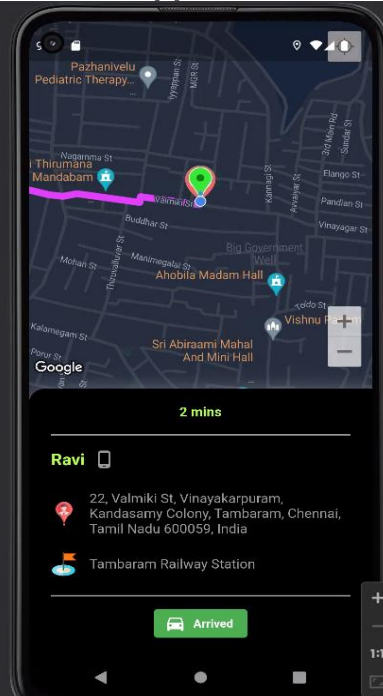
Accept the Ride:

When the driver accept the user requested amount, then the user receive the driver details like car details, driver name. And with the information of driver arriving duration to the user and driver can also view user's current location with the duration. If the user need to communicate with the driver then the user can click call driver to call the driver.

User App:



Driver App:

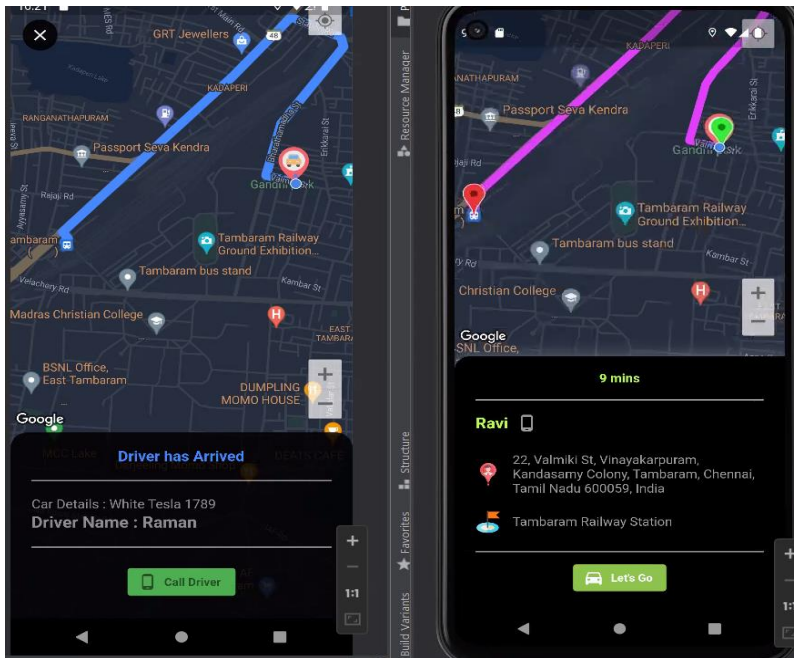


Driver Arrived:

when the driver has arrived to the user's current location, driver will get information of the destination's duration and when the driver click let's go option then driver can view the destination location's direction in the driver's map.

User App:

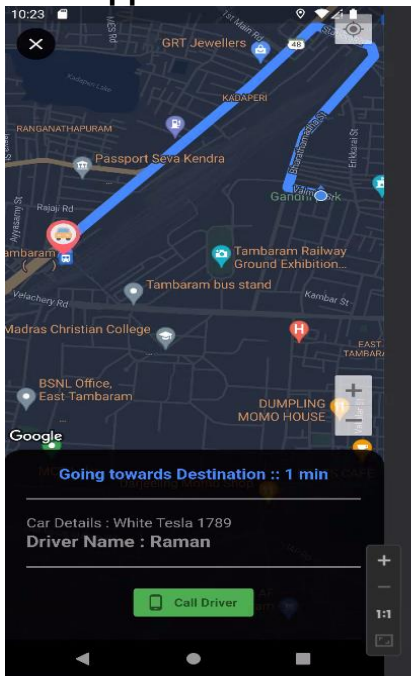
Driver App:



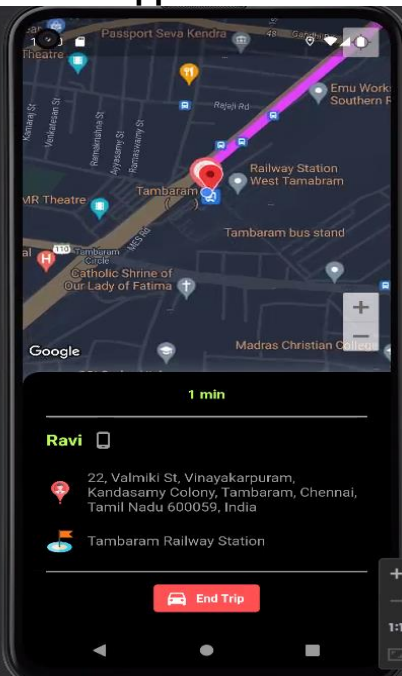
End Trip:

When they reached the destination the driver should end the trip by the touching end trip.

User App:



Driver App:

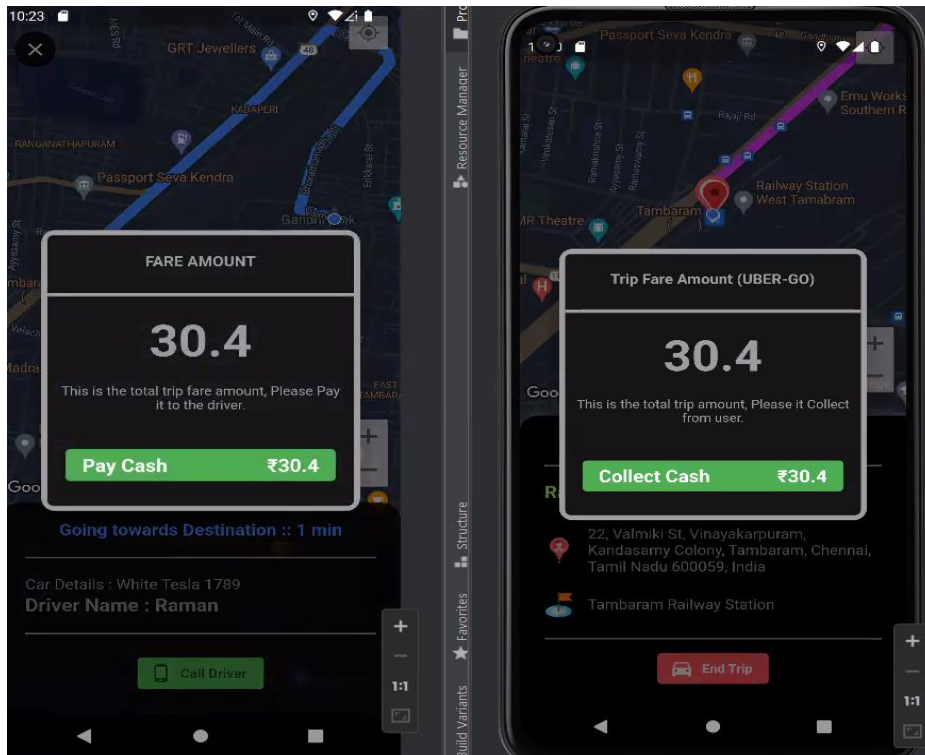


Collecting The Cash:

When the customer reaches the destination location it will generate the amount to the particular ride. When the user sends the amount the driver will receive the amount and the driver can collect the amount by clicking collect cash button

User App:

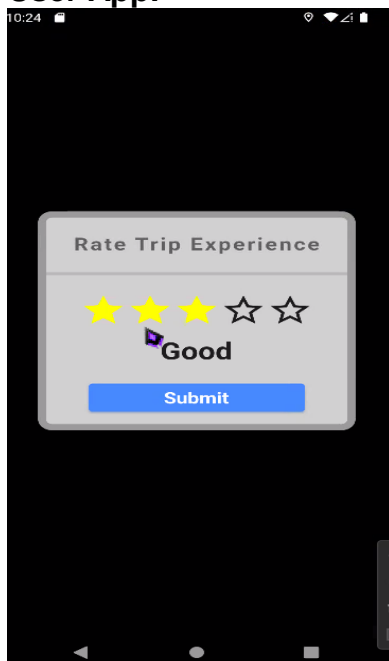
Driver App:



Rating:

When the user completed the ride, the user can give rating to the driver.

User App:

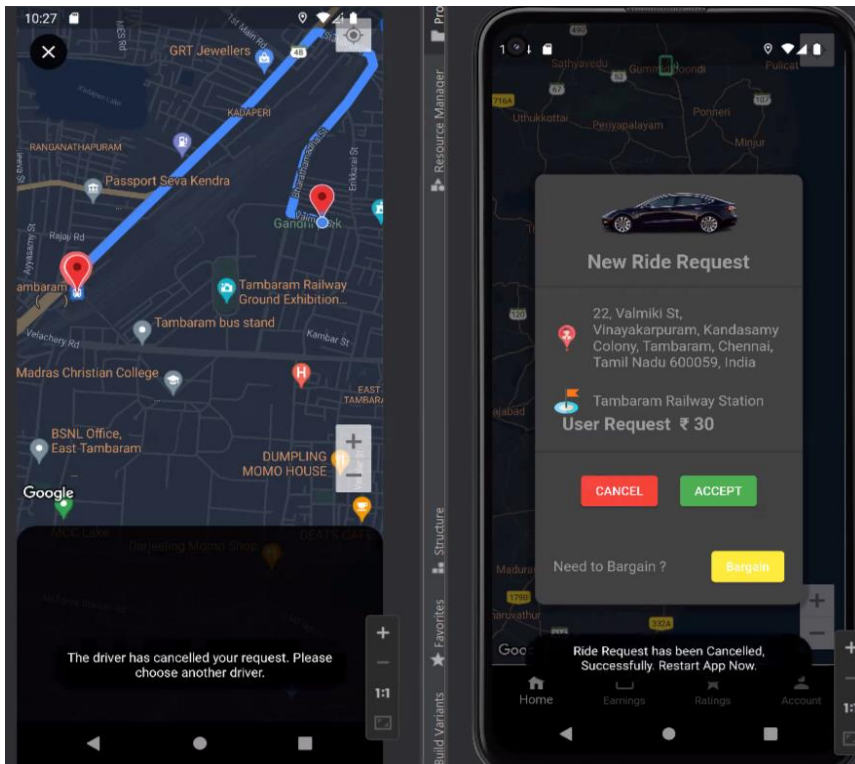


Cancel The Ride Request:

If the user send the ride request to the nearby driver if driver is not interested or don't want to accept the driver can cancel the ride the notification will be show to the user.

User App:

Driver App:

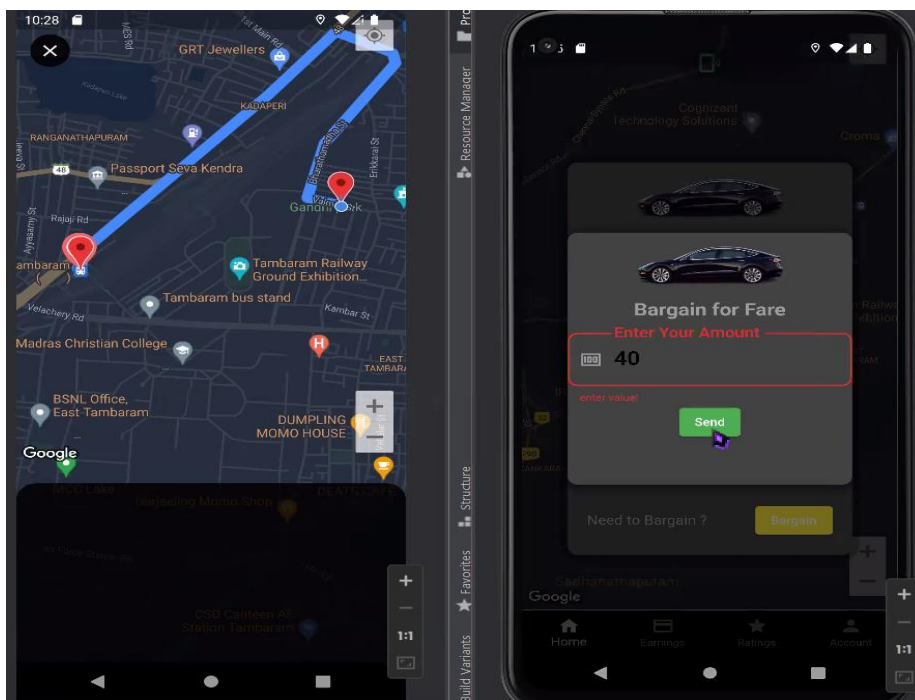


Bargain for fare:

If the driver is not convinced with the user request amount, then driver can start bargain with the user by entering the fare bargain amount and driver can send the requested amount to the user

User App:

Driver App:

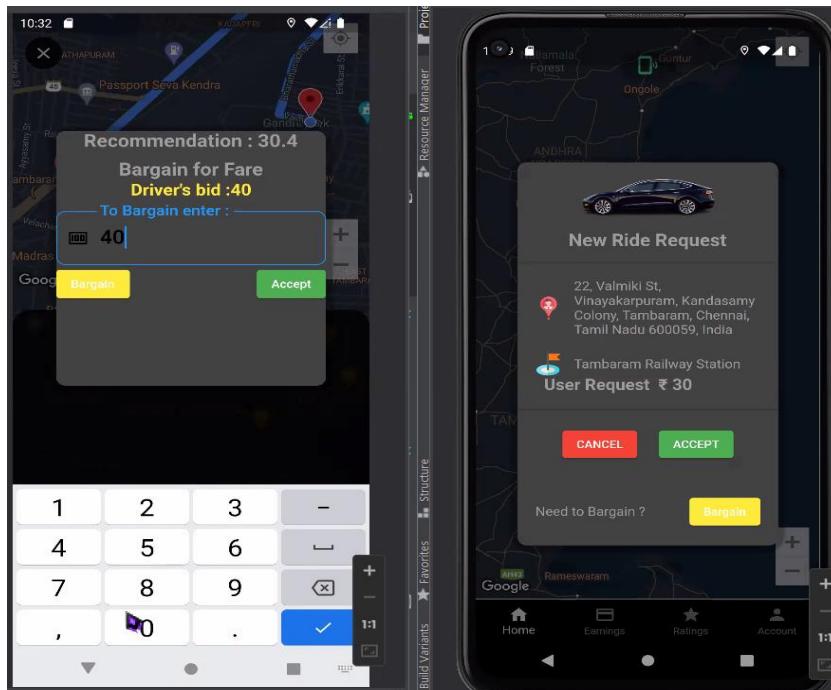


User Accepting the bargaining amount:

User can accept the bargaining amount from the driver side by entering the driver's same bid amount and click the accept to accept the bargain amount from the driver.

User App:

Driver App:

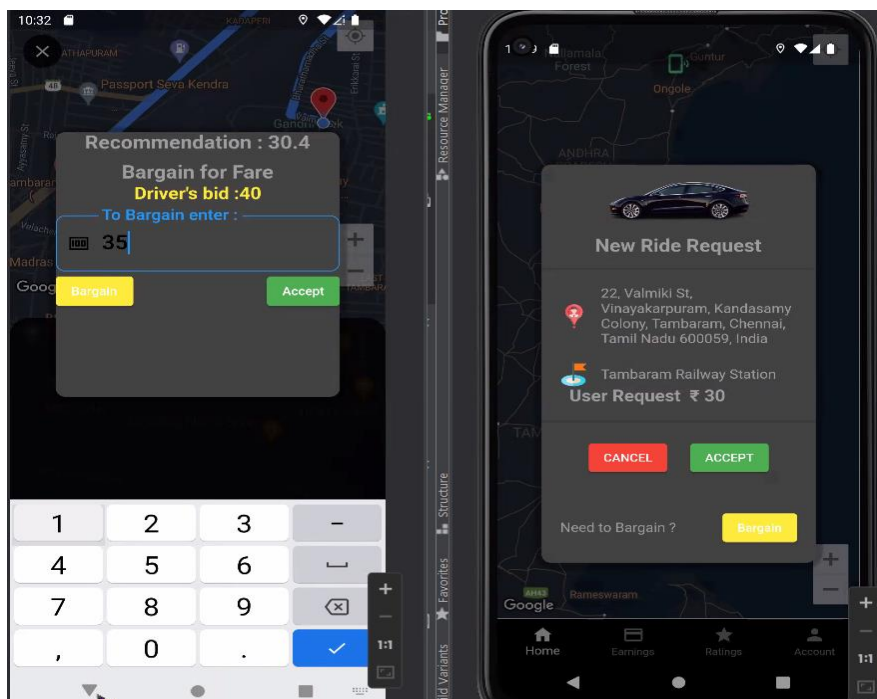


User bargainin from the driver requested amount:

User can able to bargain from the driver requested amount by giving less amount from the driver requested .If the user click bargain button by entering the amount

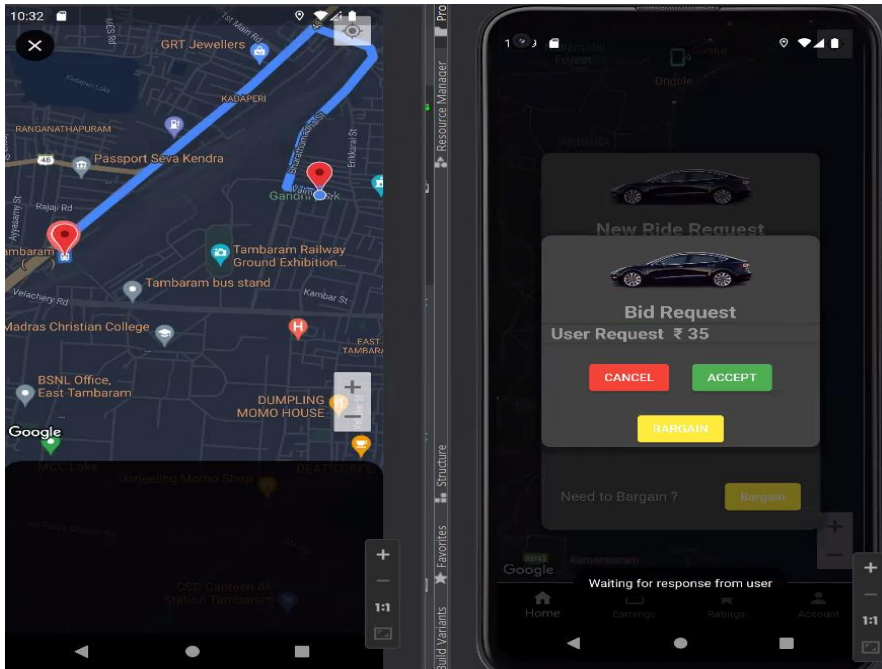
User App:

Driver App:



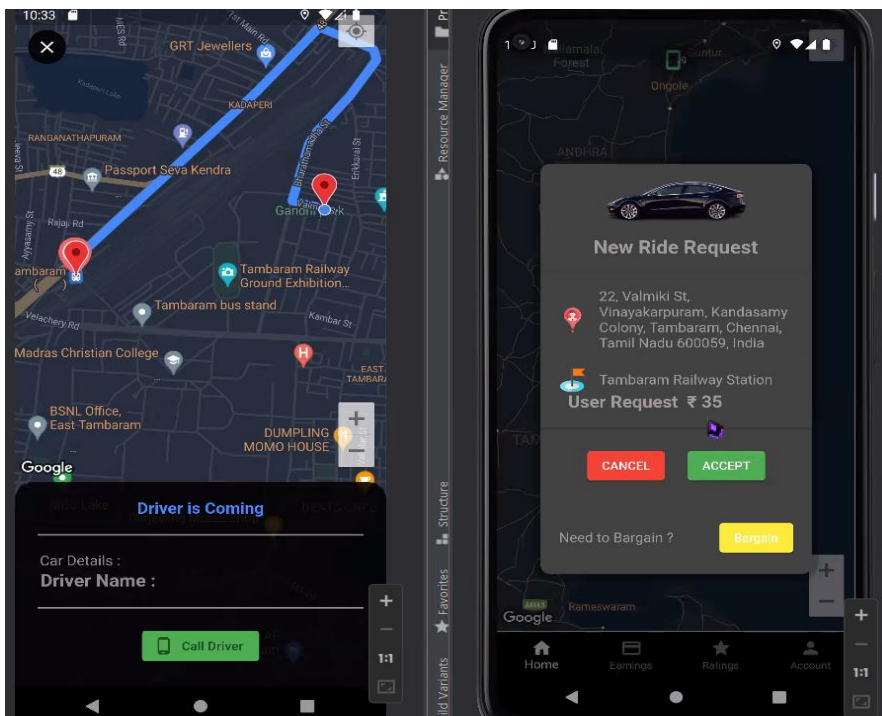
User App:

Driver App:



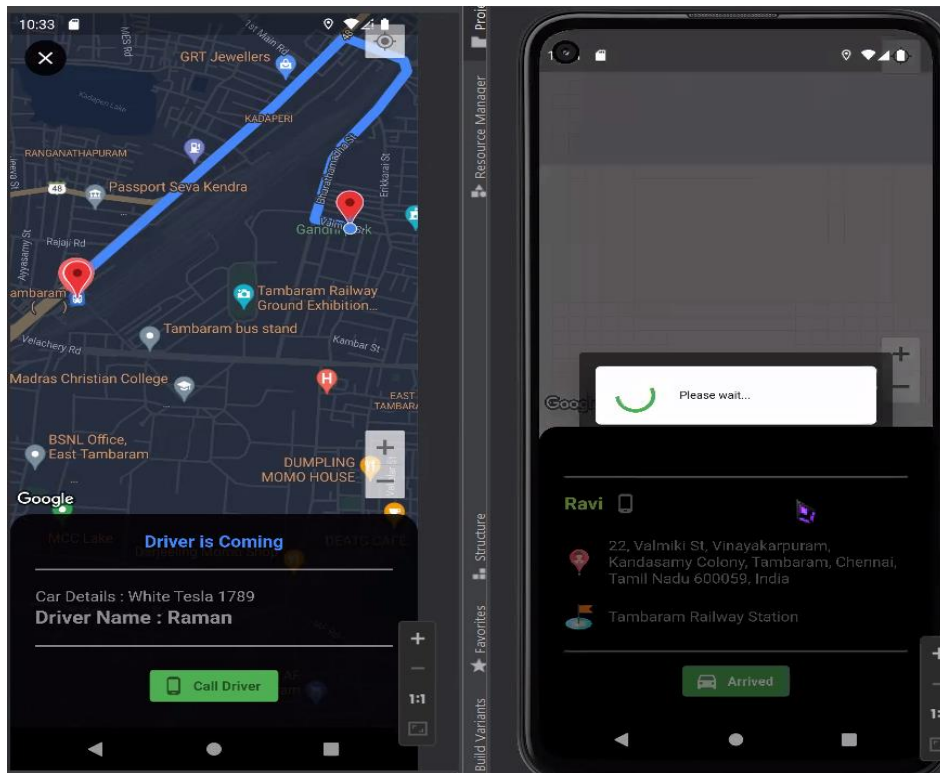
User App:

Driver App:



User App:

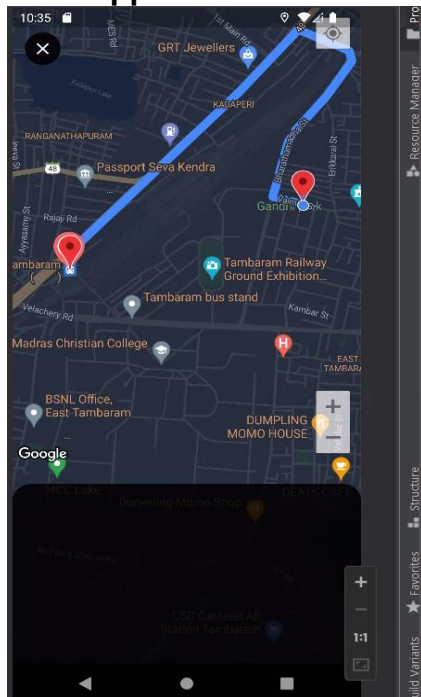
Driver App:



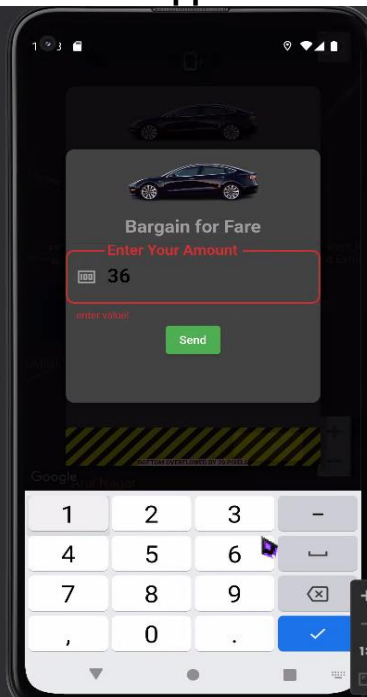
Complete bargaining:

when the driver accept the bargaining then the driver can enter the amount to be bargain and send request to the user. Now user can also bargain with the driver according to the recommendation amount. If the driver accept the user can ride.

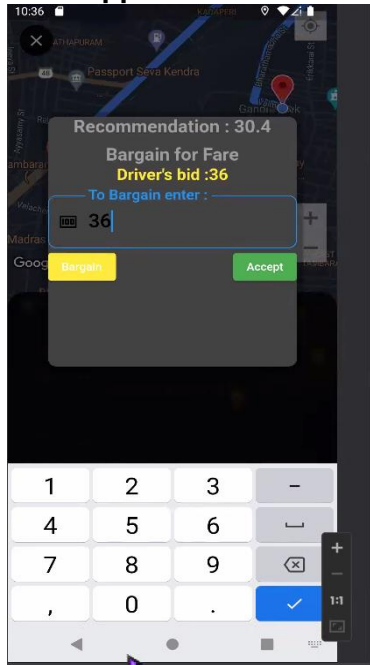
User App:



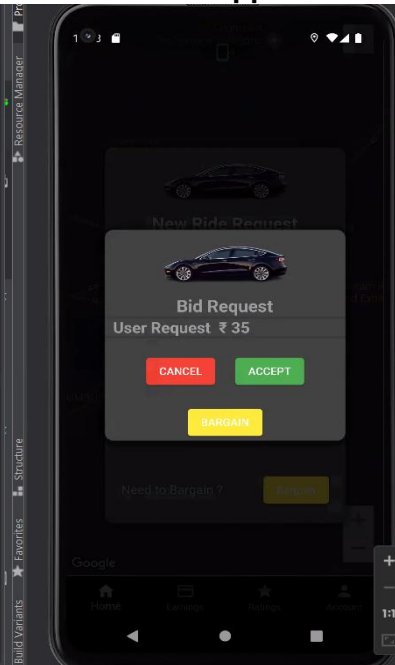
Driver App:



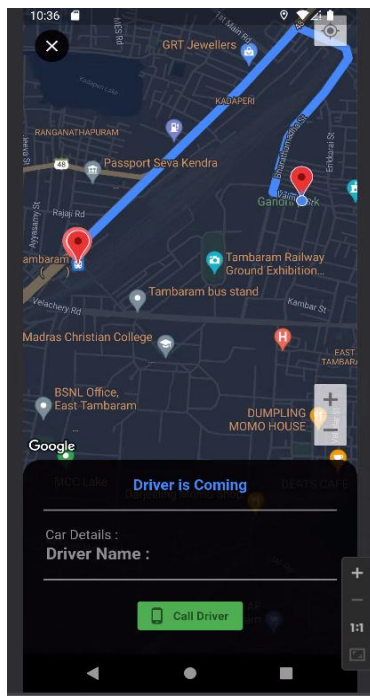
User App:



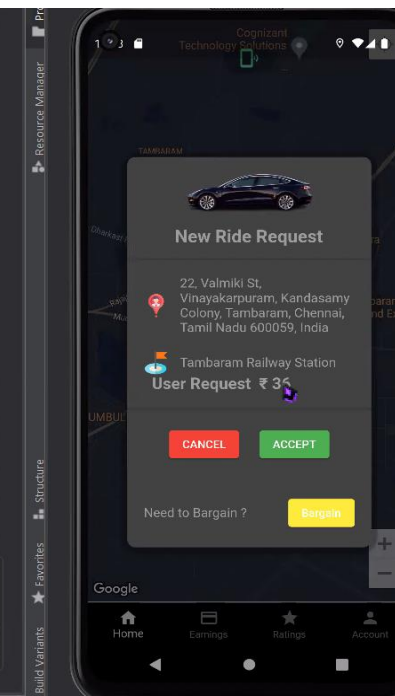
Driver App:



User App:

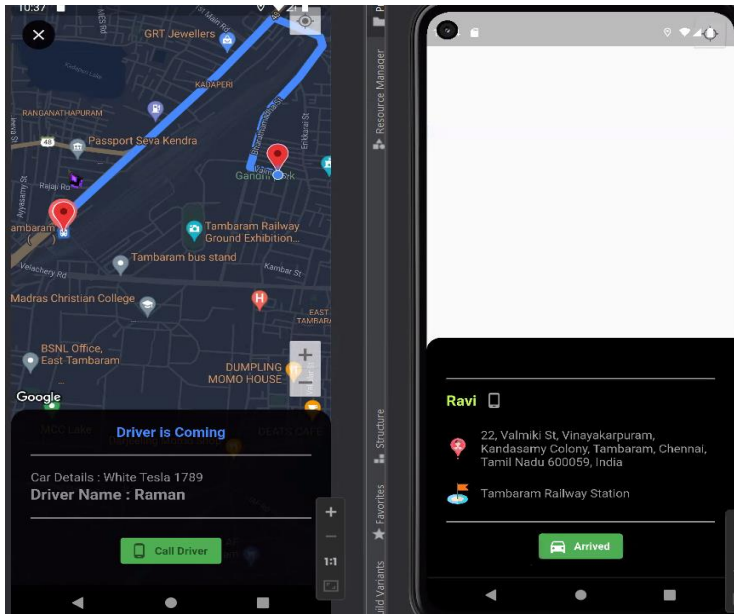


Driver App:



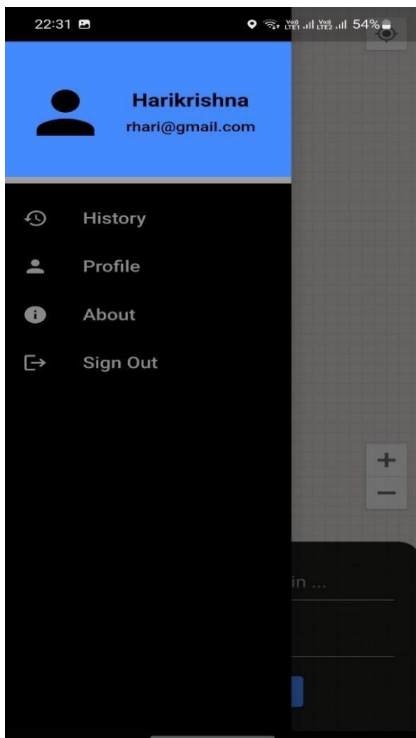
User App:

Driver App:



USER APP:

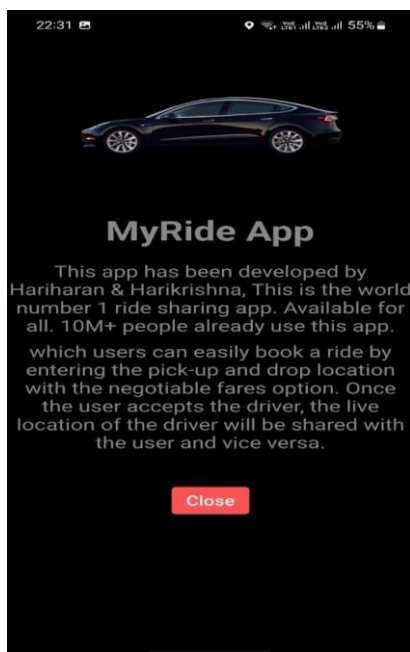
The user can see the hamburger menu bar to see the user's profile



- Here the user can view the trip's history

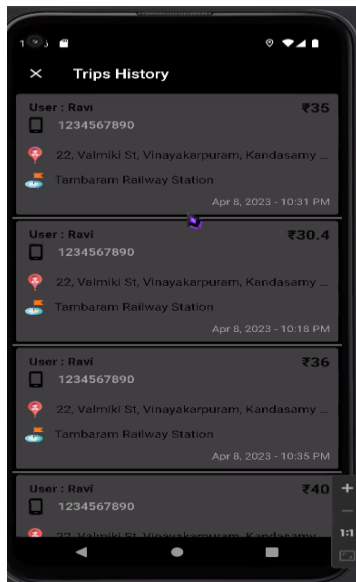


- In this the user can view the “MY Ride App” about page



DRIVER APP:

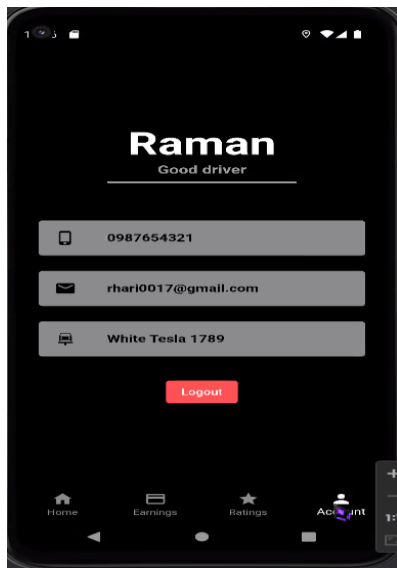
- The driver can able to view the driver's Total Earning and the total trips which have been attended by the driver



- The driver can view the rating of the particular driver



- The driver can view the phone number, email, and the driver's car type.
- If the driver needs to logout from this application the driver clicks on logout to logout from the account



THANK YOU