A

Project

On

“Quick Service By Wheel”

Submitted in Partial Fulfillment for Degree of

DIPLOMA IN COMPUTER ENGINEERING

Submitted By

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Department of Computer Engineering

TAPI DIPLOMA ENGINEERING COLLEGE,

SURAT

CERTIFICATE

This is to certify that **Mr.Pratik bharadva**, **Mr.Om Dhingani**, **Mr.Meet Mistri, Mr.Kishan Padsala, Mr.Bhavik Patel**, **Mr.Rajat Patel** having Enrolment No:196470307004, 196470307009, 196470307031, 196470307038, 196470307044 has completed Part. Respectively have completed IDP Project Work Having title 'Quick Service By Wheel' along with six group member.

He/She has undergone the process of shodh yatra, literature survey and problem definition. He/She is supposed to carry out the residue IDP Part-II work on same problem during Semester-V for the final fulfillment of the IDP work which is prerequisite to complete Diploma Engineering.

INDUSTRY GUIDE INSTITUTE GUIDE HEAD OF DEPARTMENT

Acknowledgement

The success of any task relies on the efforts made by person but it cannot be achieved without co-operation of other persons which are being helpful. So, we would like to thank **Tapi Diploma Engineering College** and **WeeTech Solution** for giving us the opportunity of doing this project.

The entire session of our phase completion was a great experience providing us with the insight & invocation into learning various software engineering concepts & benefits of team work. We would like to take this opportunity to express our sincere thanks to all those people without whose support and co-operation, it would have been difficult to complete this project.

Primarily, wear every much thankful to our internal project guide **Mr.Mitul Patel** , registration faculty **Mr.Nishant Raval** and external project guide **Mr.Shaival Mehta** for their leading guidance and sincere efforts throughout project work. They took deep interest in simplifying the difficulties. Also they have been consistent source of inspiration for us.

We are grateful to our **H.O.D. Mr.Nilesh M. Sanghani** and our beloved **Principal Dr. Y.S.Choupare** for providing us deep knowledge and all necessary resources.

We are also thankful to our Friends and all staff members of Computer Engineering Department for their valuable time and help for completion project. Once again we are grateful to all those without whom this work would not have been successful.

Team Members

Pratik Bharadva

Om Dhingani

Meet Mistri

Kishan Padsala

Bhavik Patel

Rajat Patel

ABSTRACT

Our project(app) provide service at vehicle place or provide location of service center (depend on situations) to person in emergency cases such as Running out of Fuel or oil, Tire puncture, vehicle break down, Providing towing Van in case of accident or major vehicle technical or machinery fault Etc. Our Project also help person if they want location of nearest and rating vise service center or vehicle garage.

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CHAPTER: -1

INDUSTRY INTRODUCTION

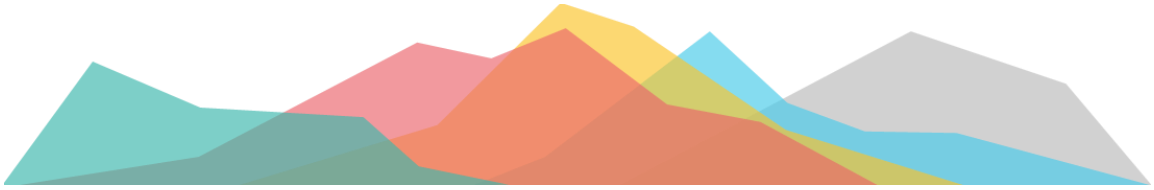
1.1 Company Profile:

Weetechsolutionpvt.Ltd.

Contact info:- +919276888885 info@weetechsolution.com

WeeTech Solution Pvt. Ltd, well-known place to develop your business in Mobile and Internet market. Here we are developing Android App, IOS Append Websites with unique & innovative ideas. Having a strong presence in India and in the global arena too, Wee Tech Solution is one of the major players in the IT consulting niche. Our IT consulting team stands unparalleled in experience and this is indeed our biggest strength. We offer full scale IT consulting and services to our clients ensuring that they gain maximum from our expertise, analysis and strategies.

How they work



Discover

At the beginning, we analyze and agreeing client requirements, documenting, communication planning, define and verifying scope of work, identifying project goals and build a path of process with optimizing time and keeping quality.

Design

After Discovering client's requirement, Our well experienced designer create a unique sketch to show them that how client's product will look like. And we are sure about our adorable and eye catching all ways impress our clients.

Implement

Now we have a detailed action points to start implementation on approved design from client-side. Here

we create a back-end frame structure which work as a strong base line to move on the further development process.

Develop

Our well-knowledgeable developer team completes client's requirements one by one according priorities and this whole process keep in touch with client. So client can suggest us his ideas or updates to execute with current process.

Test

Out tester gives a perfect shape to client's requirement and quality assurance. They check each and every corner of project, examine whole functionality and fix all issues which might remained from whole development process and build a quality work.

Website - https://www.weetechsolution.com/

Face book - https://www.facebook.com/WeeTechSolutionPvtLtd/

Twitter - https://twitter.com/WeetechSolution

LinkedIn - https://www.linkedin.com/company/weetech-solution-pvt-ltd

CHAPTER:-2

INTRODUCTION OF PROJECT

2.1 Introduction of problem

2.1.1 Problem Statement

1. Current system not work when there is no internet connection
2. Current system not working in rural area.
3. Current system not working where there is none service center.
4. Current system doesn't provide facilities of net banking.

2.1.2 Scope of Proposed System

1. Our Service gives response to person who request for service.
2. Our system categories service types so user can simply interact.
3. Our system also provides various services such as two wheel service, four wheel services.
4. Our system also includes tow van facilities that can tow vehicle from user's place.
5. Our system provides location of nearest service center from user's place.

2.2 Environment Description

2.2.1 Hardware and Software Requirement

Software requirements:

- **Software requirements to develop system :-**
  - **Operating System:-** Windows 8 or higher version
  - **Developing language**: - Java
  - **Database:**-MySQL
- **Software requirements to use system:-**
  - **Minimum Operating system:-** Android 4.1(Jelly Bean)

Hardware requirements:

- **Hardware requirements to develop system:-**
  - **Minimum Processor requirement:-** Intel core i3
  - **Minimum RAM requirement:-** 4 GB
  - **Minimum Storage requirement**:- 25GB
- **Hardware requirements to use system:-**
  - **Minimum RAM:-** 2 GB
  - **Minimum Storage:-** 1 GB

2.2.2 Technology Used

Following are the technologies that are used to, develop the proposed system.

What is Android?

- Android is mobile operation system developed by Google, based on a modified version of the Linux Kernel and other open source software.
- User interface of android's default is based on direct manipulation.
- User's life is more comfortable and advanced.
- This system is supported which many applications such as telephony, emailing, messaging, contact management, location services, etc.
- Hardware that support android are mainly based on ARM architecture platform.

Why Android?

- Android is an open-source project and is distributed free of cost.
- It is used and chosen by larger assemblage.
- Android's User Interface (UI) is ductile and customizable.
- The operating system has a number of native applications supporting.
- Messaging, emailing, location services, mapping, social interaction, entertainment, contact management, calendar, telephony, etc.
- Third party java developers can use the android API to extend the functionality of the device.

Android Studio:

- Written mainly in JAVA, Android Studio can be used to develop applications.
- Android Studio is the official integrated development environment (IDE) for Google's Android operating system, built on Jet Brains' IntelliJ IDEA software and designed specifically for Android development. It is available for download on Windows, macOS and Linux based operating systems or as a subscription based service in 2020. It is a replacement for the Eclipse Android Development Tools (E-ADT) as the primary IDE formatives Android application development.
- Android Studio is also used to develop applications through other programming language such as:- C++, JavaScript, Kotlin.
- Since Android Studio is an Integrated Development Environment (IDE). It contains a base workspace and an extendible plug-in system for customizing the environment.

JAVA:

What is Java?

- JAVA application runs on JVM (JAVA Virtual Machine) but Android has its own virtual machine called Dalvik Virtual Machine (DVM) optimized for mobile devices.
- JAVA is a programming language which is used in Android App Development. It is class based and object-oriented programming whose syntax is influenced by C++. The primary goals of JAVA are to be simple, object-oriented, robust, secure and high level.
- Android App are mostly developed in JAVA language using Android SDK (Software Development Kit). Other languages like C, C++, Scale etc. can also be used for developing Android App, but JAVA is most preferred and mostly used programming language for Android App Development.
- The latest version is Java15, released in September 2020.
- Java was originally developed by James Gosling at Sun Micro systems (which has since been acquired by Oracle) and released in1995 as a core component of Sun Micro systems Java platform.

Why Java?

- Java was designed to be easy to use and is therefore easy to write, compile, debug, and learn than other programming languages. Java is object-oriented.
- This allows you to create modular programs and reusable code. Java is platform-independent.
- Java has an extensive set of libraries. It is easy to take advantage of these libraries.
- JAVA gives the best option for development of mobile applications that are based on Android, as Android consist of its own APIs and JAVA libraries. So, for Android applications, you use

android APIs as well as JAVA to write code for Android apps.

- The good approach towards software development is the object-oriented approach. Java is based on the oops concept. Android relies heavily on Java fundamentals like classes and objects and its other useful features of oops.

Firebase:

Firebase is a database management system.

- The Firebase Realtime Database lets you build rich, collaborative applications by allowing secure access to the database directly from client-side code. Data is persisted locally, and even while offline, realtime events continue to fire, giving the end user a responsive experience. When the device regains connection, the Realtime Database synchronizes the local data changes with the remote updates that occurred while the client was offline, merging any conflicts automatically.

Firebase data bases are realtime database.

- The Realtime Database provides a flexible, expression-based rules language, called Firebase Realtime Database Security Rules, to define how your data should be structured and when data can be read from or written to. When integrated with Firebase Authentication, developers can define who has access to what data, and how they can access it.
- The Realtime Database is a NoSQL database and as such has different optimizations and functionality compared to a relational database. The Realtime Database API is designed to only allow operations that can be executed quickly. This enables you to build a great realtime experience that can serve millions of users without compromising on responsiveness. Because of this, it is important to think about how users need to access your data and then structure it accordingly.

The Firebase Server is very fast, reliable, scalable, and easy to use.

- Firebase Hosting is built for the modern web developer. Websites and apps are more powerful than ever with the rise of front-end JavaScript frameworks like Angular and static generator tools like Jekyll. Whether you are deploying a simple app landing page or a complex Progressive Web App (PWA), Hosting gives you the infrastructure, features, and tooling tailored to deploying and managing websites and apps.
- Using the Firebase CLI, you deploy files from local directories on your computer to our Hosting servers. Beyond serving static content, you can use Cloud Functions for Firebase or Cloud Run to serve dynamic content and host micro services on your sites. All content is served over an SSL connection from the closest edge server on our global CDN.
- You can also view and test your changes before going live. Using the Firebase Local Emulator Suite, you can emulate your app and backend resources at a locally hosted URL. You can also share your changes at a temporary preview URL and set up a GitHub integration for easy iterations during development.
- Firebase Hosting has lightweight hosting configuration options for you to build sophisticated PWAs. You can easily rewrite URLs for client-side routing, set up custom headers, and even serve localized content.

Firebase Local Emulator Suite

- The Firebase Local Emulator Suite consists of individual service emulators built to accurately mimic the behavior of Firebase services. This means you can connect your app directly to these emulators to perform integration testing or QA without touching production data.
- For example, you could connect your app to the Cloud Firestore emulator to safely read and write documents in testing. These writes may trigger functions in the Cloud Functions emulator. However your app will still continue to communicate with production Firebase services when emulators are not available or configured.

CHAPTER:-3

THE WHOLE INDUSTRIAL PROCESS AND PROBLEM STUDY

3.1 System Planning

3.1.1 Requirement Analysis & data Gathering

Requirement Analysis:

Software analysis is basically the most important phase and first step to develop the software. In this we will analyses the necessity as well as complication of the system.

Questions:

1. Who will use this software?
2. Is a non-technical person can use your software?
3. Is this software feasible for customers/users?
4. What is the part of the service center in your software?
5. Is an internet connection requiring using your software?
6. Is your software only supports online payment?

Answers:

1. The customer, Service Provider (Garage).
2. Yes, anyone can get service for their vehicle from our application.
3. Yes, the software is feasible for the customers/users.
4. Service provider can perform the following activities:-
    a. Service provider can see information of customer.
    b. Service provider can receive and provide various services.
5. Yes, an internet connection is required.
6. No, the customer can direct pay to the service providers

Data gathering:

In this, we have gathered data that will be required to fulfill the requirements of the proposed system.

Our system has panels.

- User panel
- Service Provider panel

User panel:

- First of all, the User has to sign up.
- User can send request to service provider.

Service Provider panel:

- Service Provider accept user request and provide service according to user request.

Work flow of user panel:-

- First of all, the user has to login to the application. If user don't have an account then they have to signup. User can allow permissions to give their current location.
- After that, user can filter service according to their vehicle and needs and request for service.

Work flow of service provider: -

- First of all Service provide need to verify their garage or service center. The service provider has to login to the application. If user don't have an account then they have to sign up. Service provider can allow permissions to give their current location of garage.
- And After that, service provider accept request of user and provide service according to their request.

3.1.2 Expected Modules

Modules that are common for user and service provider

Login:

1. **User Panel:-**
   - Users can login into the app by their register id, mobile number and OTP respectively.
2. **Service provider Panel: -**
   - Service provider can login into the app by their register id details and OTP verification.

Modules of user Panel: -

Registration: -

- User has to register for their account in our System for shopping in supermarkets.
- We will get data from users like:-
  - Name
  - Mobile number
  - Current location

Modules of service provider : -

1. **Register:-**
   - Name
   - Mobile number
   - Address
   - Shop name
   - License
   - Service type
2. **View customer:-**
   - Service provider can view a list of customers who placed orders.
3. **View request:-**
   - Service Provider can view all request.

4. **View response:-**
    - Customer can view response of service provider.

Modules of Admin Panel: -

1. **View User:-**
    - Admin can view a list of user.
2. **View service providers:-**
    - Admin can view all service providers or company.

4.1.3 Feasibility Study

1. Technical Feasibility:

- Technical feasibility study is the complete study of project in terms of input, processes, output, fields, programs and procedure.
- Our system will use realtime database connection through firebase console.
- Requirement to develop this system includes the internet, connection, Android Studio and firebase.
- We will develop reliable, conventional and accurate upper market system using firebase and Android Studio.

2. Operational Feasibility:

- Operational feasibility determines if the human resources are available to operate the system once it has been in 1 stalled.
- This digitalized system will be used user and service provider and admin to manage this system.

3. Behavioral Feasibility:

- This system will be behaviorally feasible since, it will not require any technical guidance and all the modules will be implemented and designed user friendly.

4. Resource Feasibility:

- We need proper knowledge of Android and phpMyAdmin.
- We need one resources like Android Studio, SDK tool and phpMyAdmin to accomplish our goal.
- All above resources are available at free of cost so it will be resource feasible system.

5. Financial Feasibility:

- This system will be behaviorally feasible since, it will not require any Financial need like net banking and all to use services of our application.

6. Deadline:

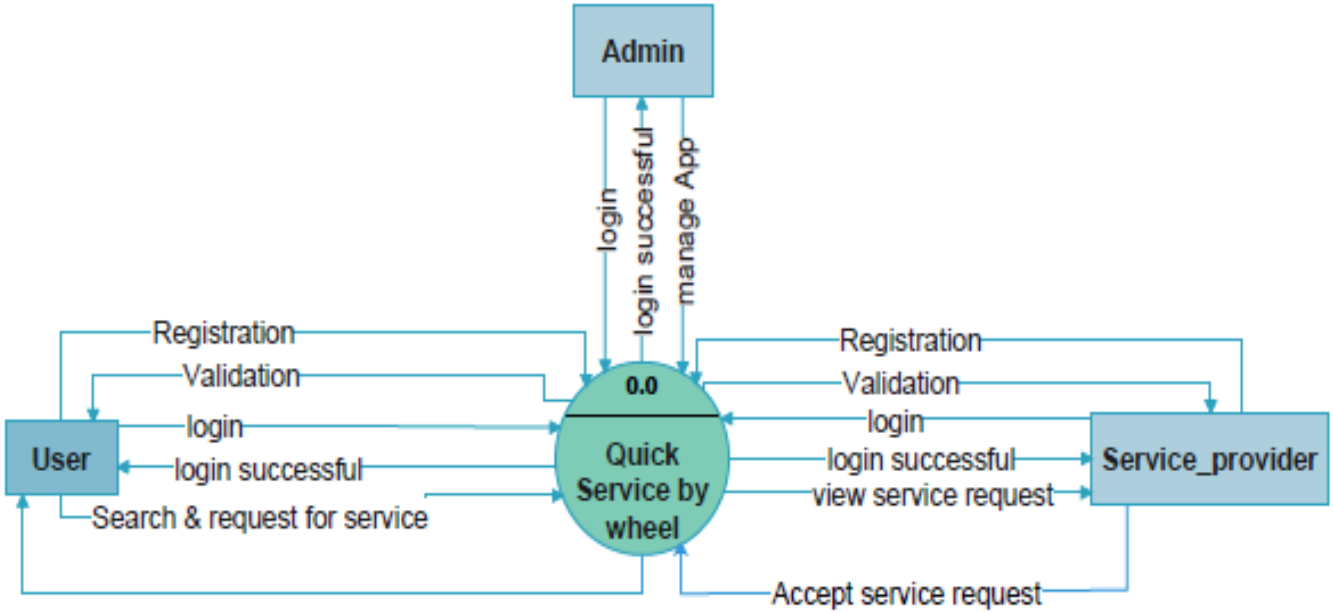
- We have one year of time to complete this such a big and complex system as our project.
- We have prepared a schedule to achieve our goal in limited amount of time period.

3.1.4 Limitation of project

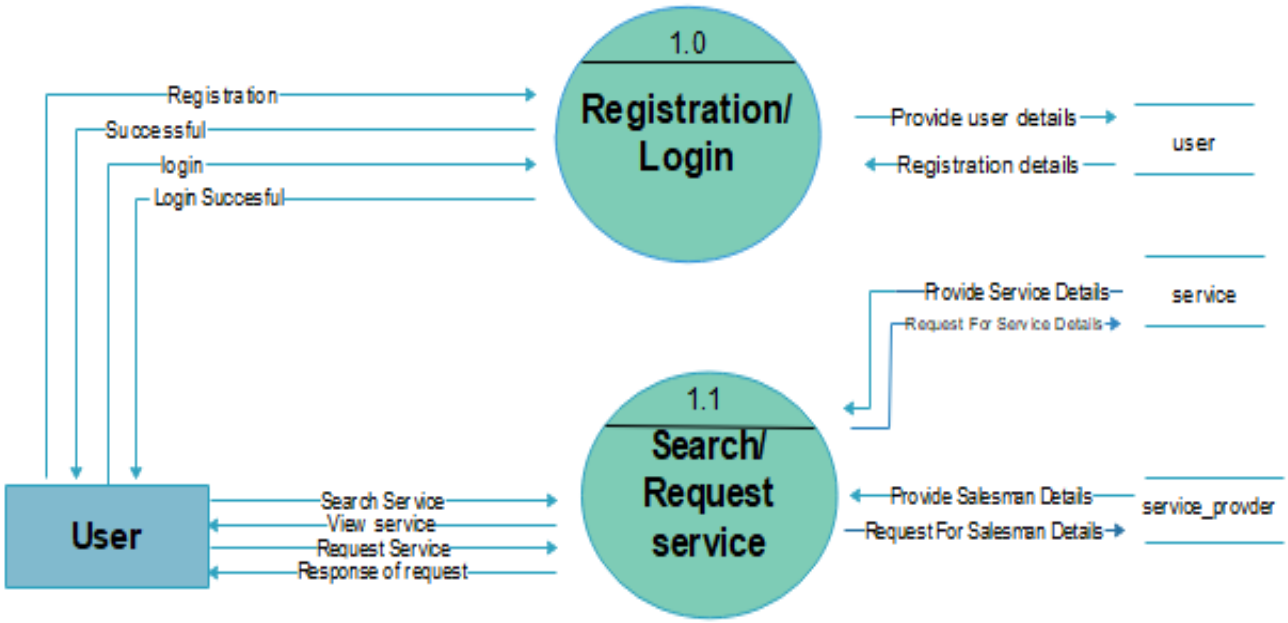
- Smart phones are necessary for user and service provider.
- User and service provider should be able to understand basic English.
- Internet connection is necessary for user and service provider.
- User and service provider must have smart phones with them at least 2GB RAM and android version 2.3.
- Our application can't be usefull without GPS.
- Our application now use in surat.

3.2 Data Flow Diagram:

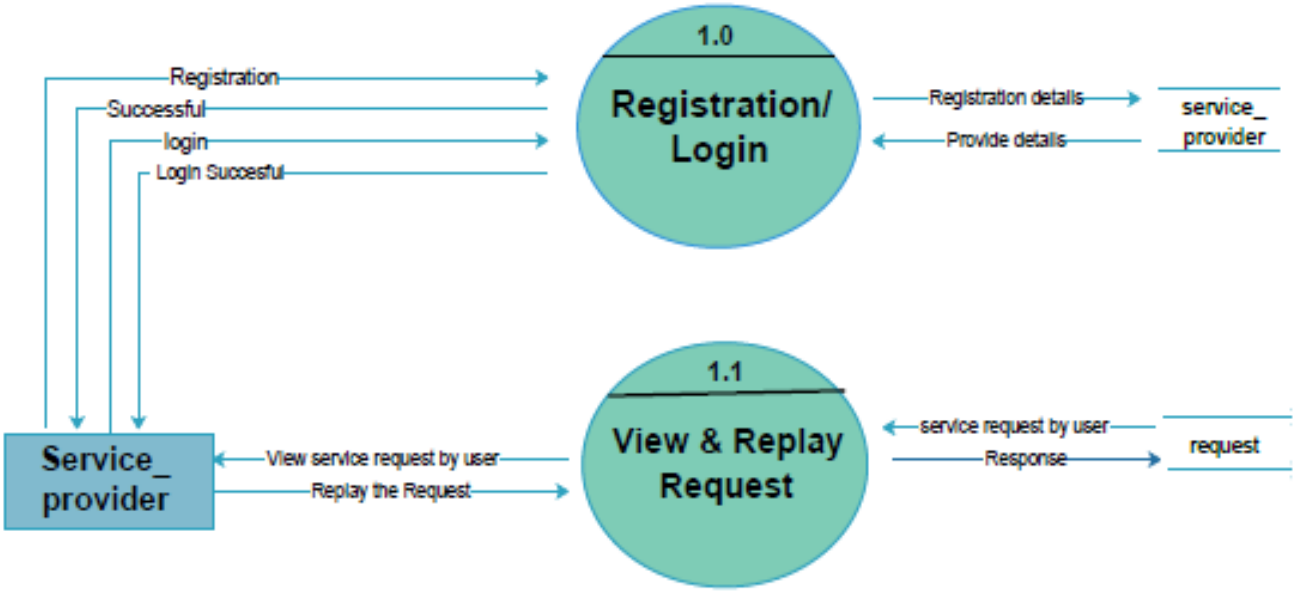
- **Context level Diagram:**



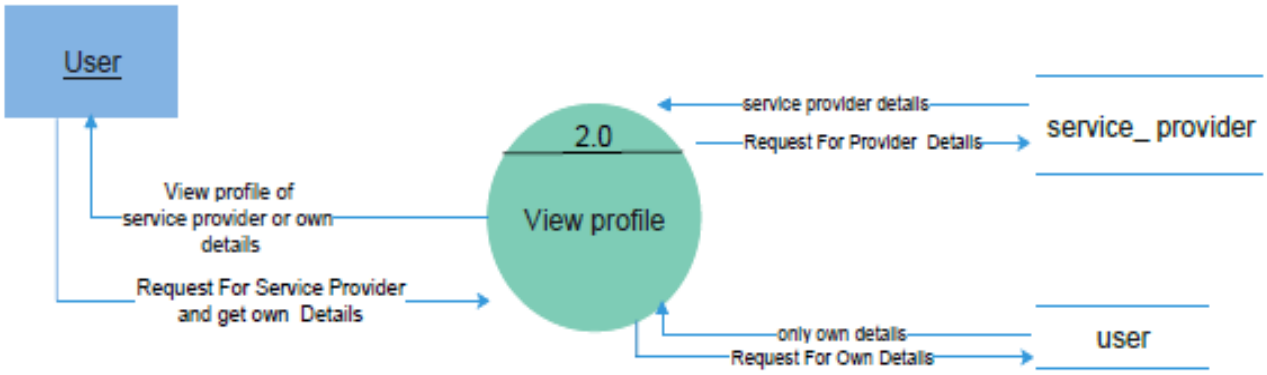
- **Level 1 Diagram for user:**



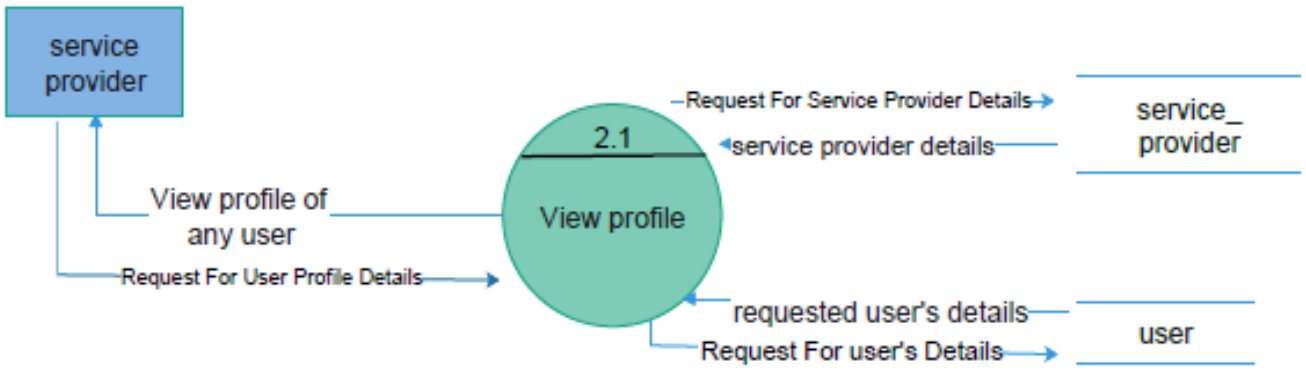
- **Level 1 for Service Provider:**



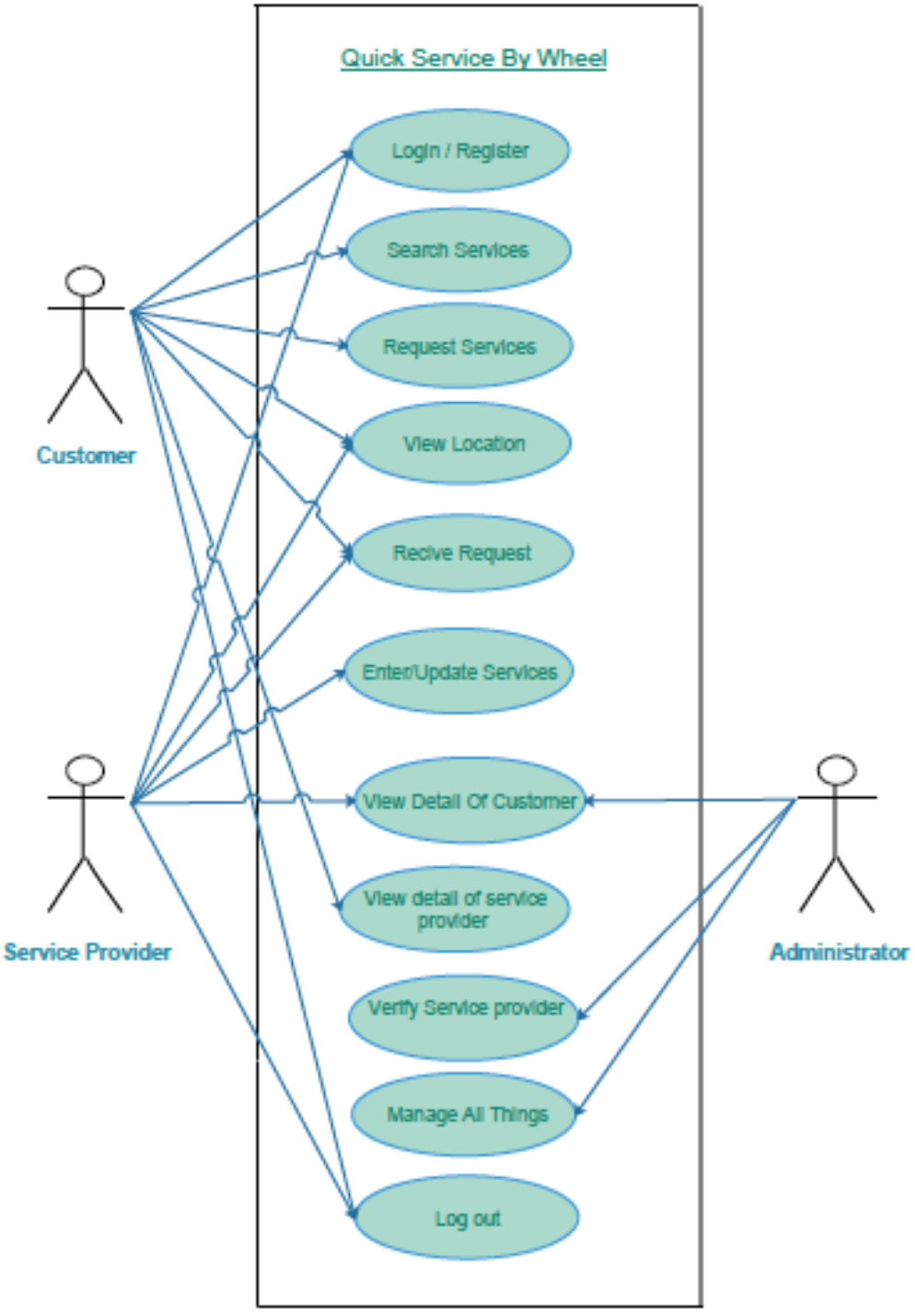
- **Level 2 for user:**



- **Level 2 For Service provider:**



3.3 Use case diagram:



3.4 DataBase Schema:


```
{
    “Fuel Price”:
    {
        “cng”:  “string”,
        “diesel”:  “string”,
        “petrol”:  “string”,
    },

    “Garage”:
    {
        “<mobile_no>”:
        {
            “Address”:”string”,
            “Bike”:”string”,
            “Car”:”string”,
            “GarageExtraPhone”:”string”,
            “GarageMainPhone”:”string”,
            “GarageName”:”string”,
            “ReuestApproved”:”string”,
            “S1”:”string”,
            “S2”:”string”,
            “S3”:”string”,
            “S4”:”string”,
            “S5”:”string”,
            “S6”:”string”,
            “S7”:”string”,
            “S8”:”string”,
            “S9”:”string”,
            “S10”:”string”,
```

```
                "Verified":"string",
                "lag":Double,
                "lat":Double,
        }
},

"Requests":
{
        "<mobile_no>":
        {
                "Location":"string",
                "Number":"string",
                "Request":"string",
                "Response":"string",
                "VehicleModel":"string",
                "VehicleNumberPlate":"string",
                "VehicalType":"string",
        }
},

"Requests":
{
        "<mobile_no>":
        {
                "Response":"string",
                "garageAddress":"string",
                "garageName":"string",
                "garagePhoneExtra":"string",
                "GaragePhoneMain":"string",
        }
```

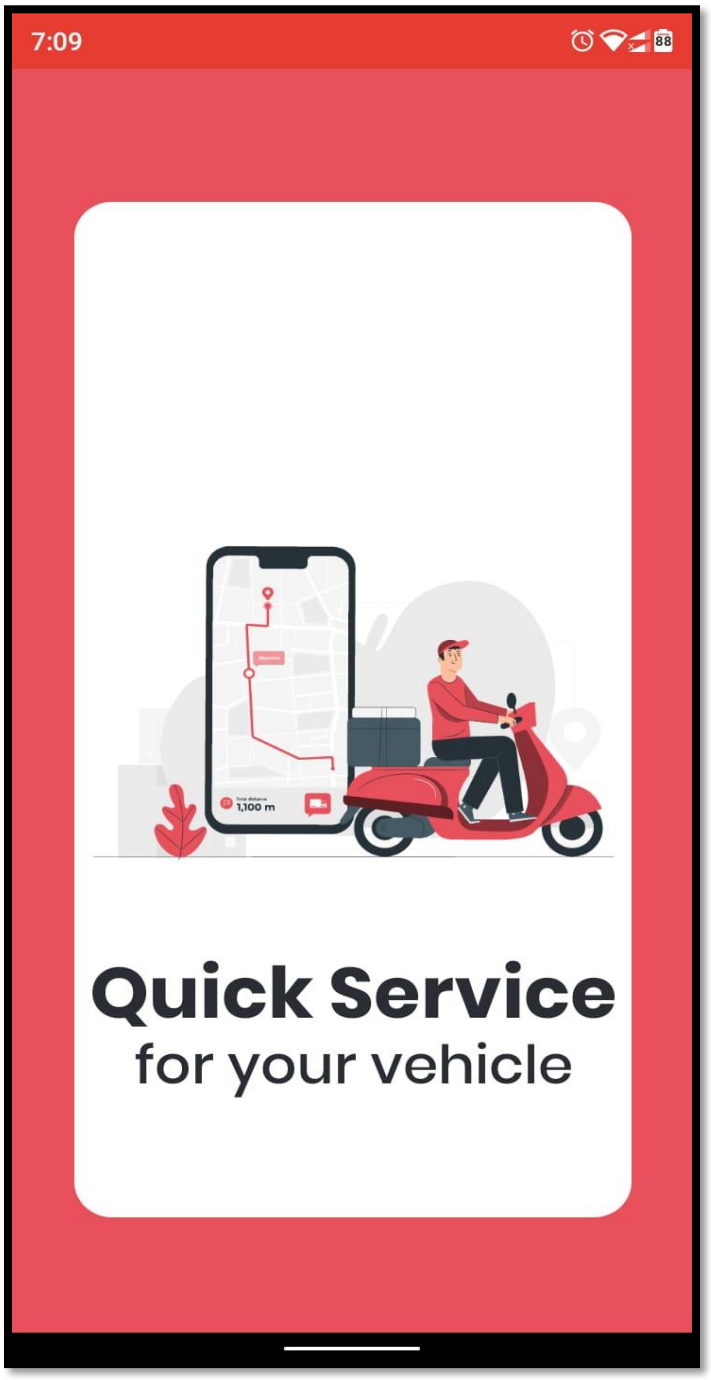
```
        },

        "user":
        {
                "<mobile_no>":
                {
                        "email":"string",
                        "lag":Double,
                        "lat":Double,
                        "phone":"string",
                        "username":"string",
                }
        },
}
```

CHAPTER:-4

THE PROBLEM SOLUTION OUTLINE

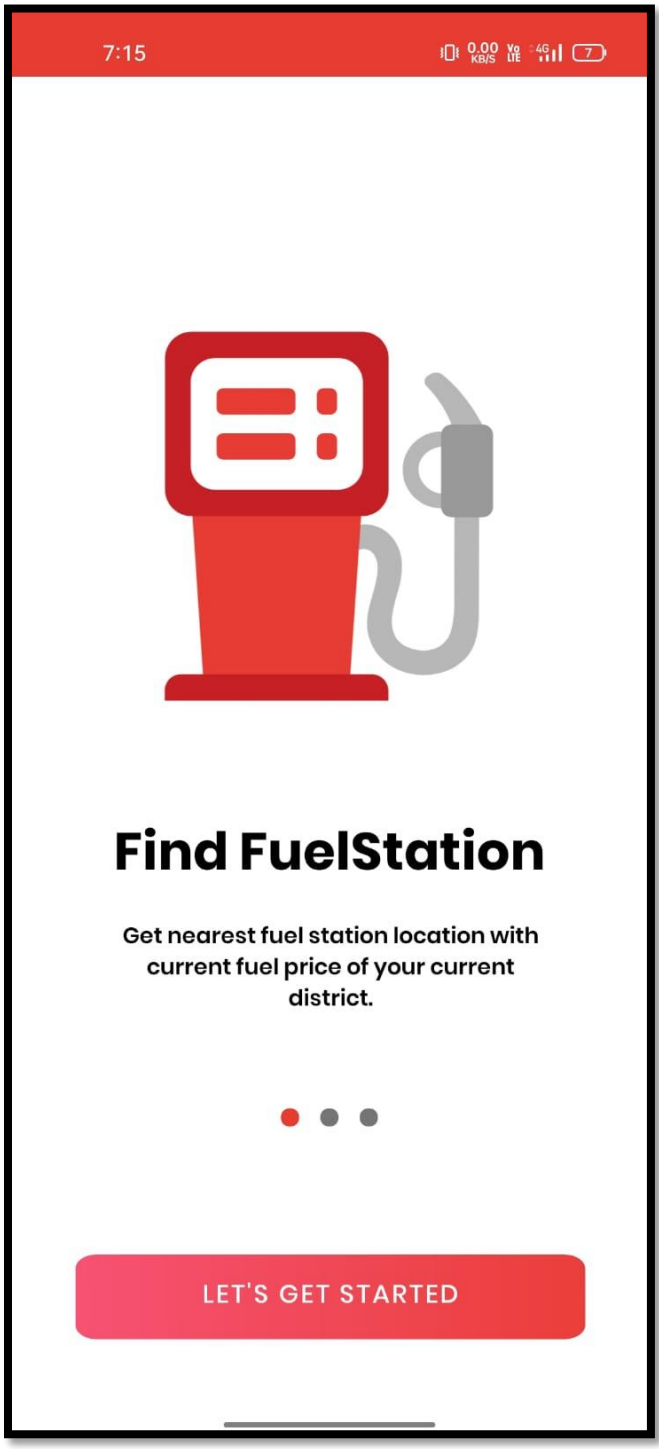
4.1 Input Design/ Outline Design

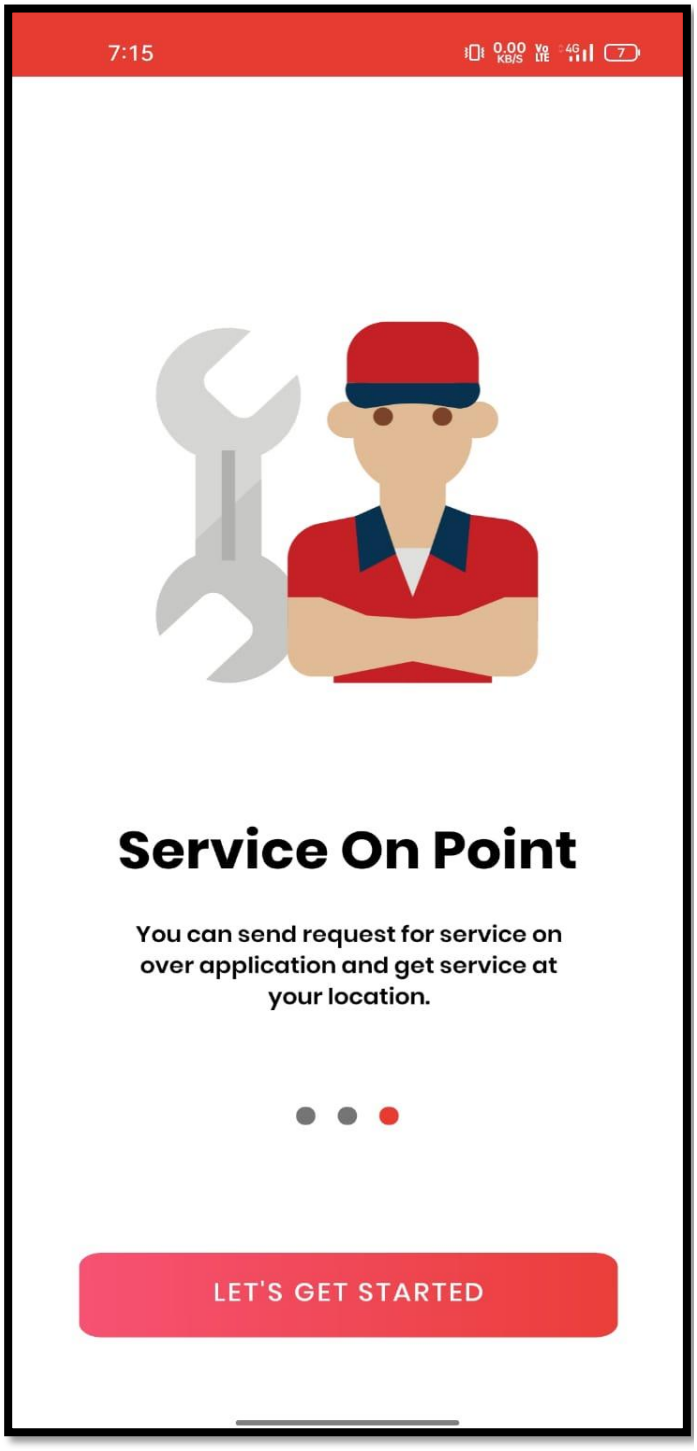
Splash Screen:-

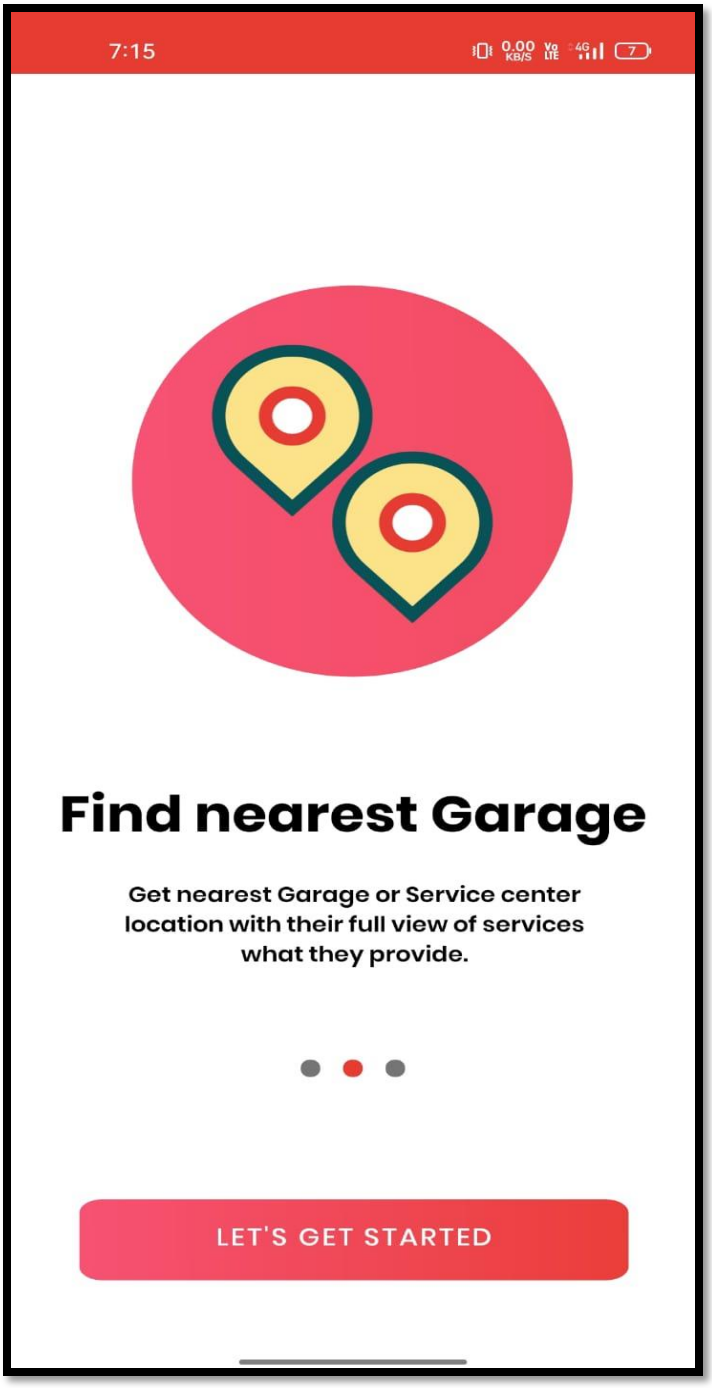


- This is splash screen of application.

Walk Though Screen:-

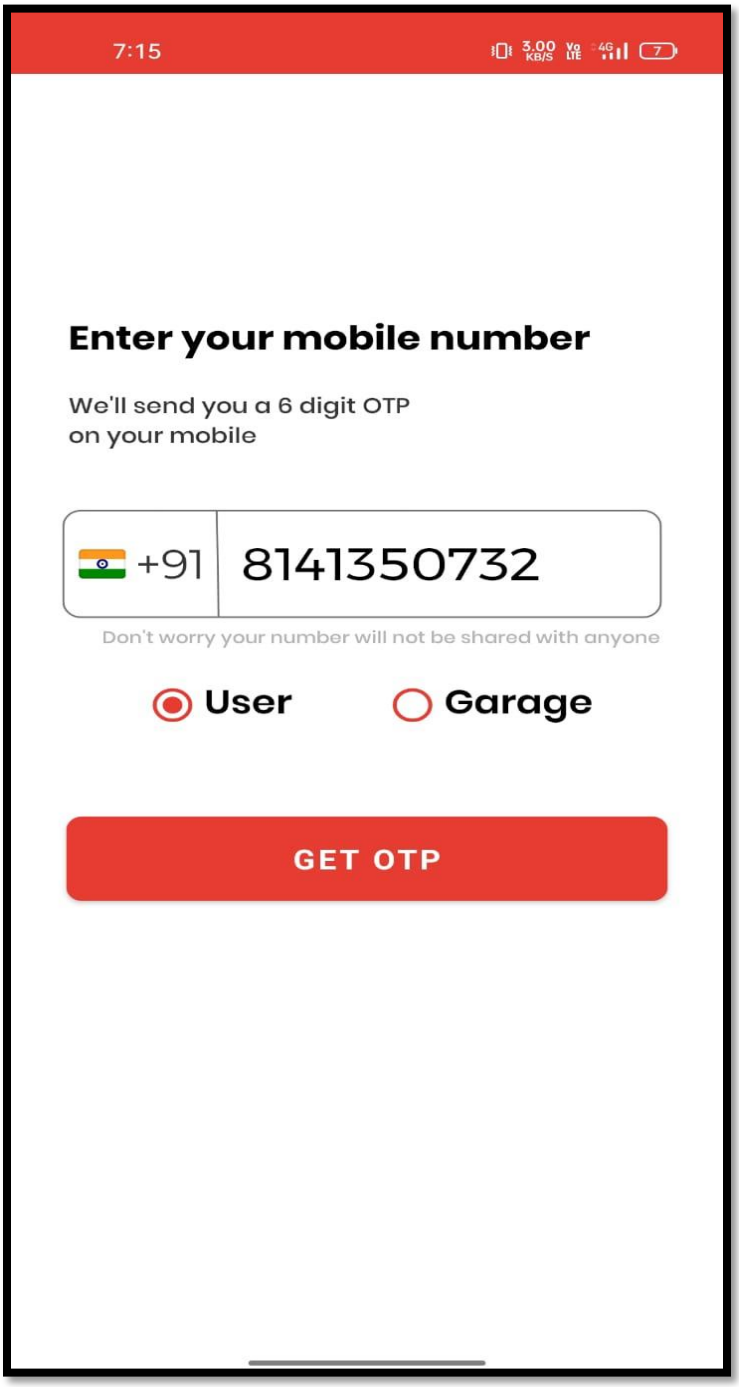




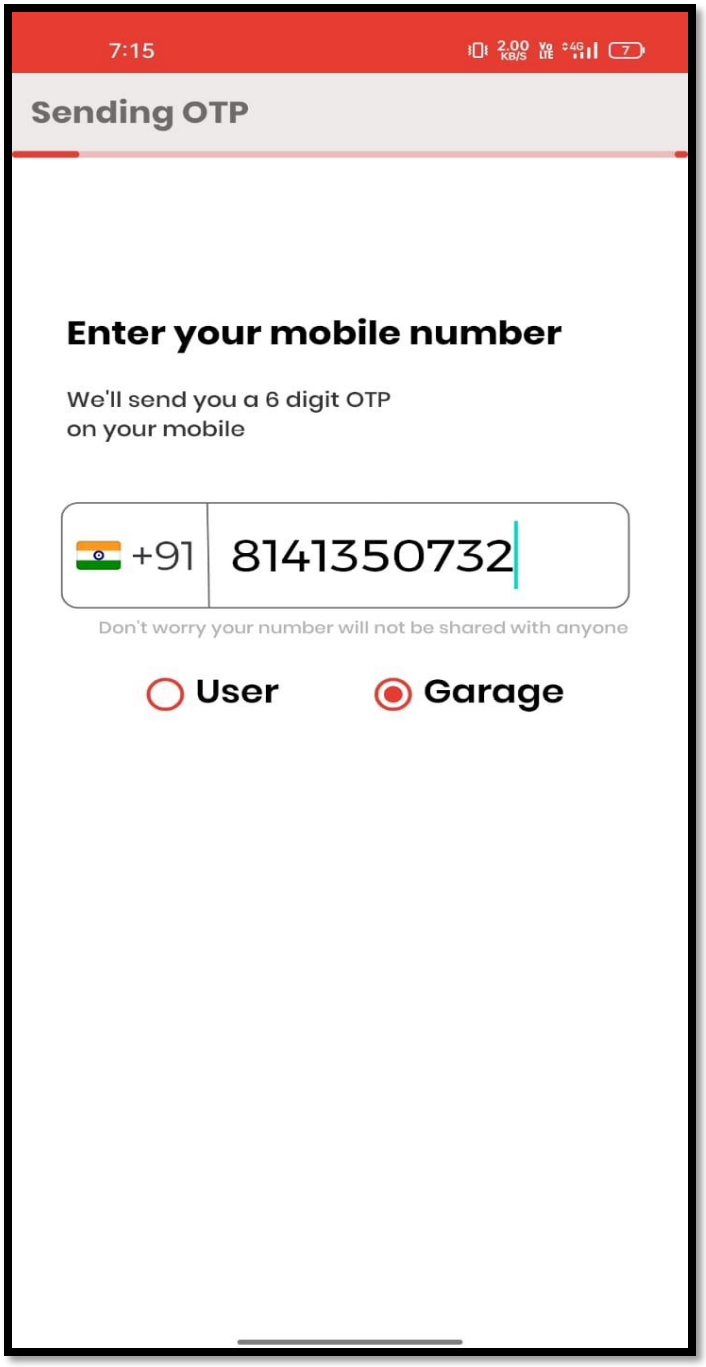


- These three screen represents the services of application.

Login Screen:-

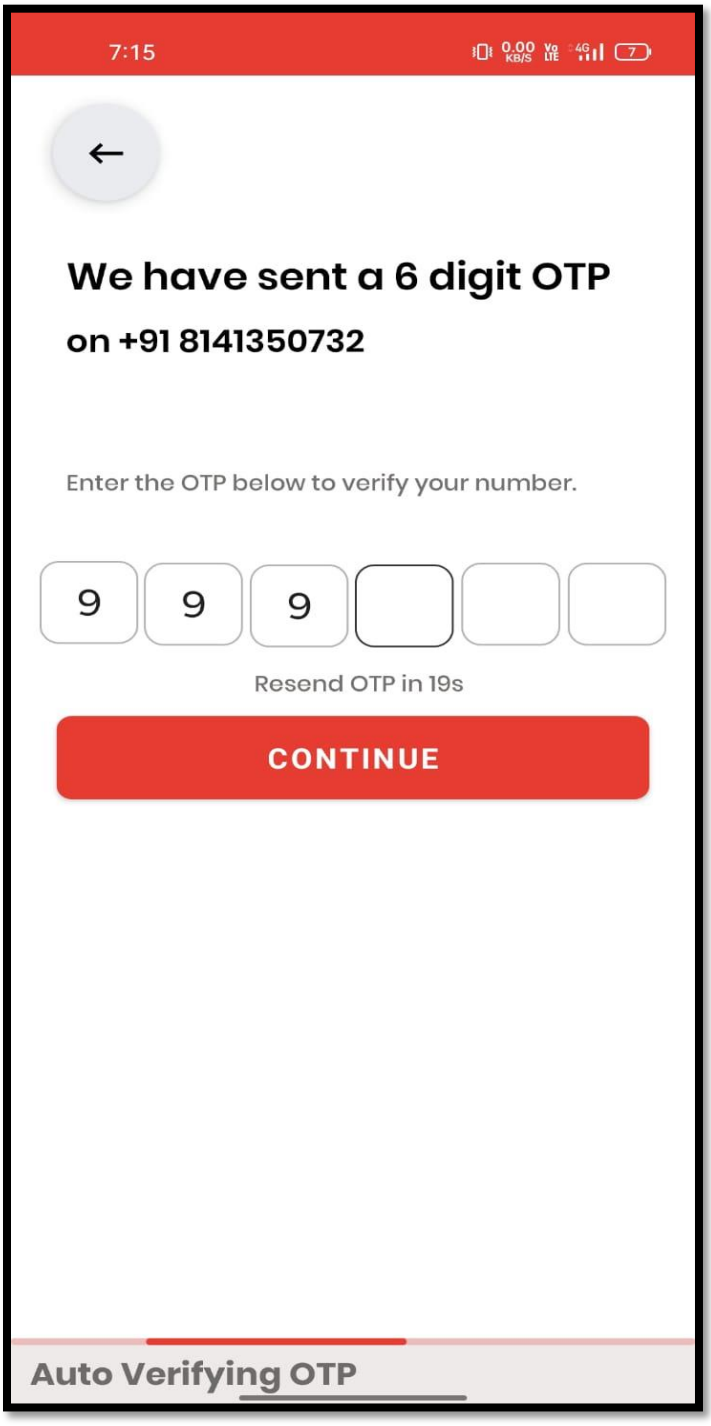


- After click on "LET'S GET STARTED" button of previous screen, then open this screen, this screen is use for login the user or garage into our application using mobile number.



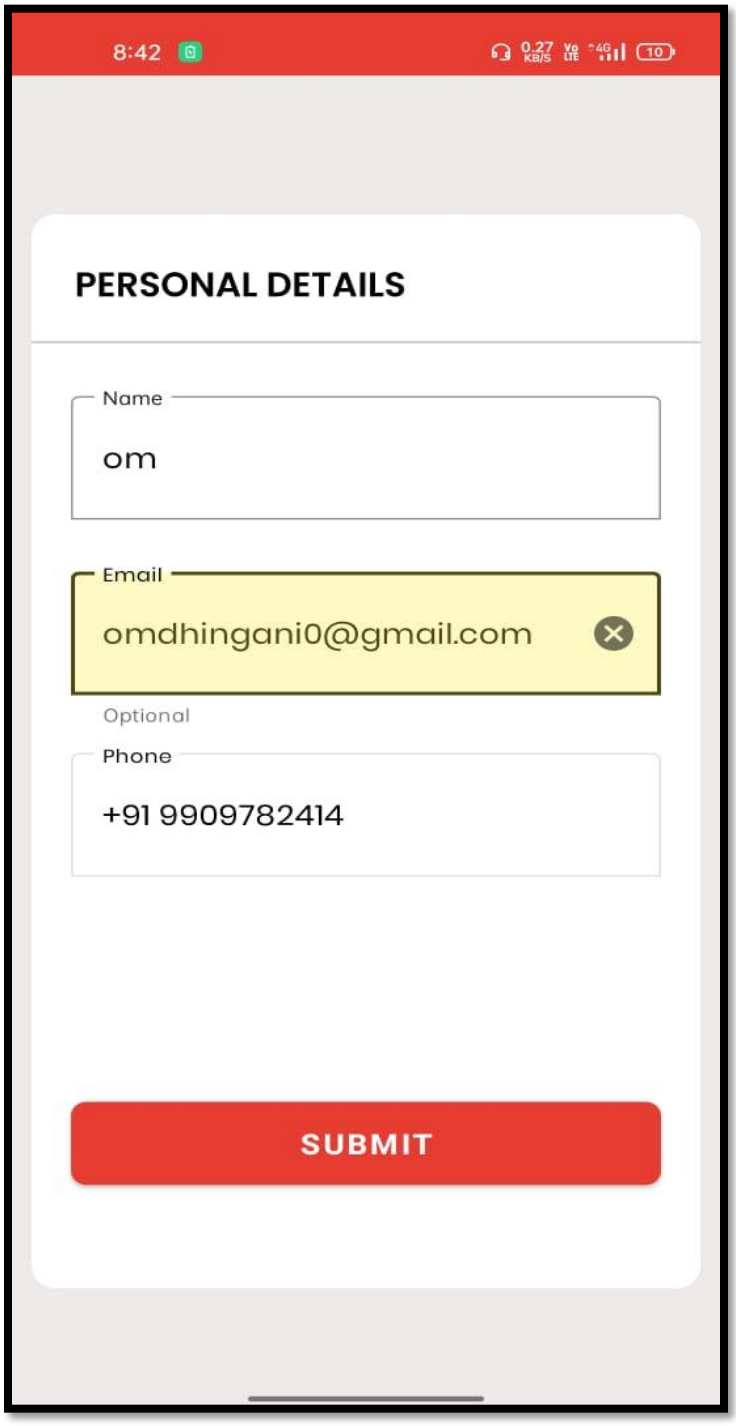
- After you enter valid mobile number, then on the top of screen, progress bar is displayed.

OTP Screen:-



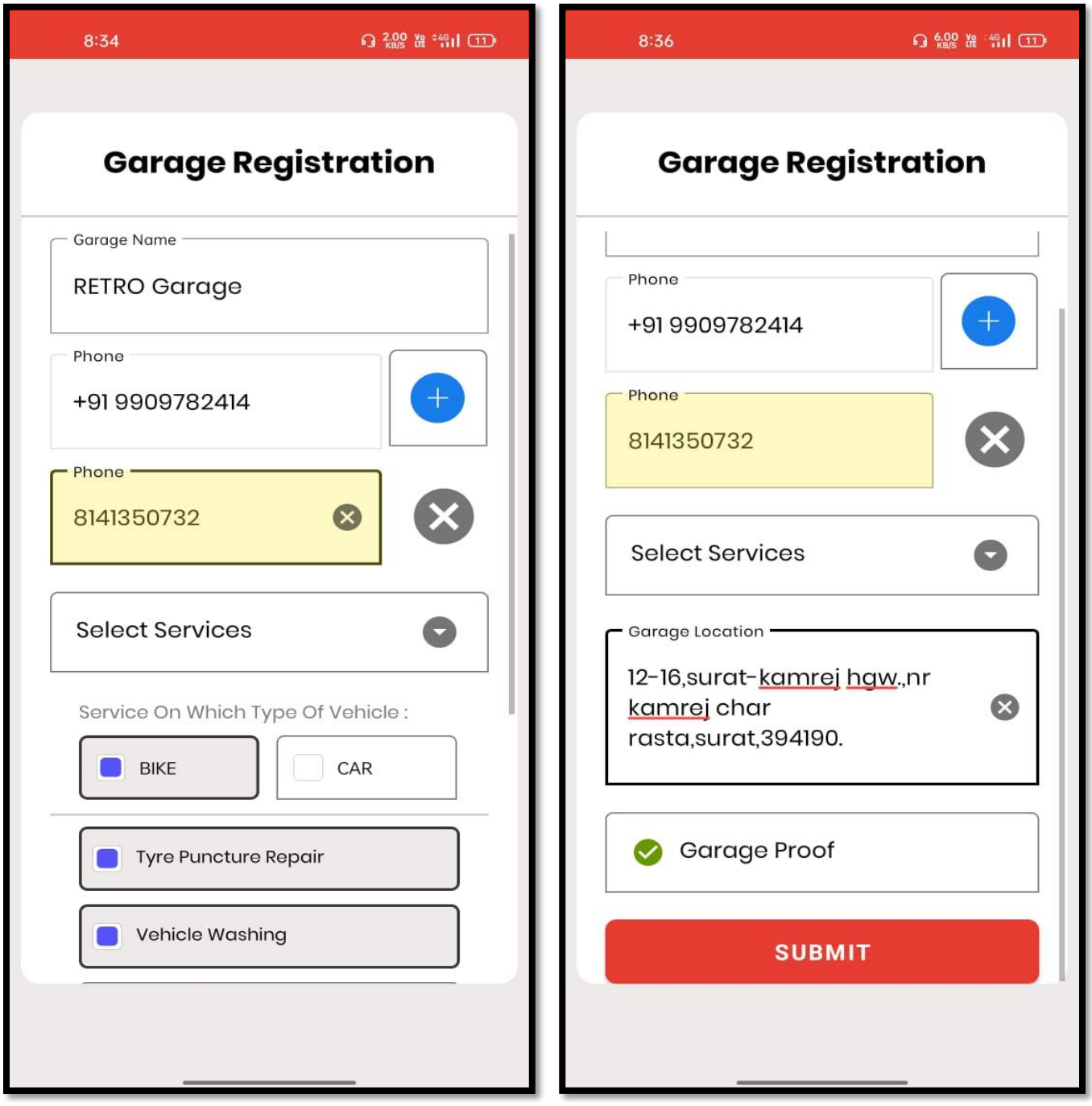
- After verify mobile number, this screen is displayed. in this screen you enter your otp that can be receive on your mobile number and then this screen verify your otp.

User Registration Screen:-



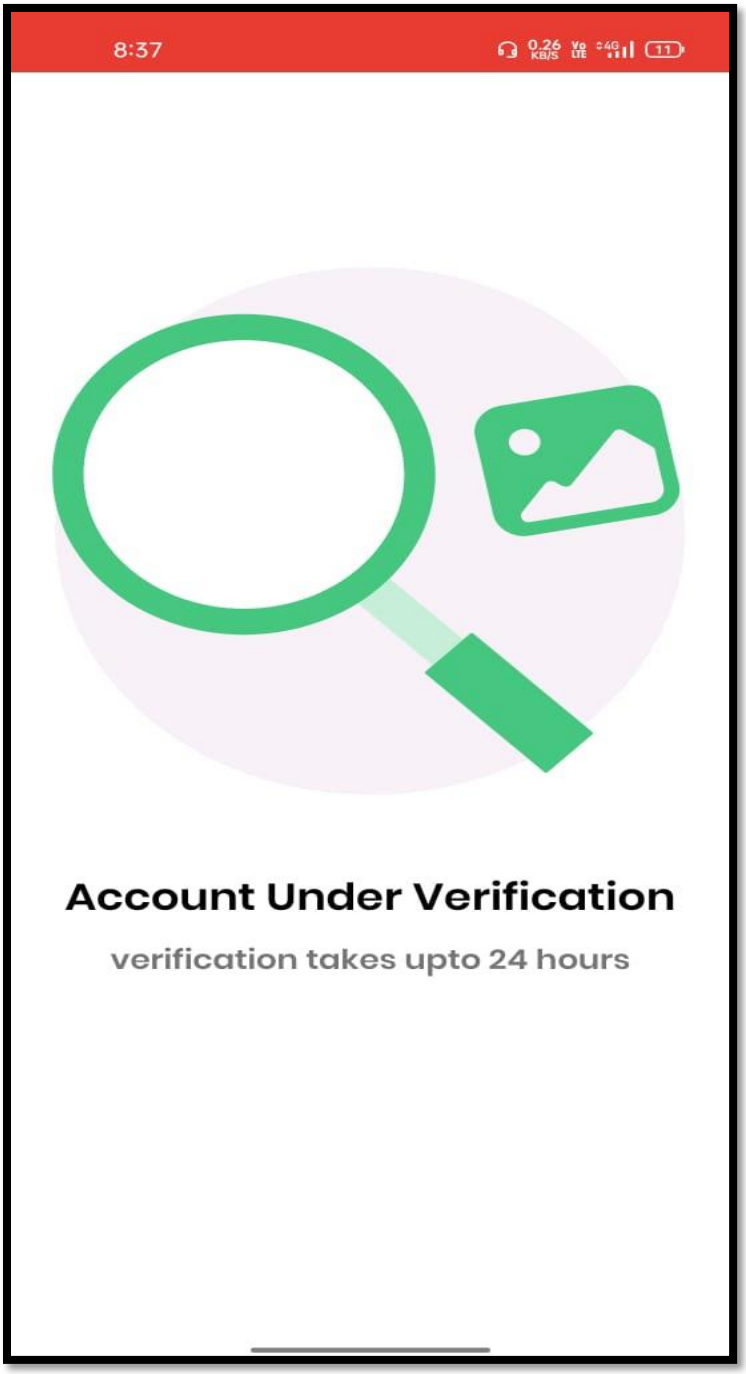
- This panel is user register panel. After submit above details then home screen will displayed.

Garage Registration Screen:-



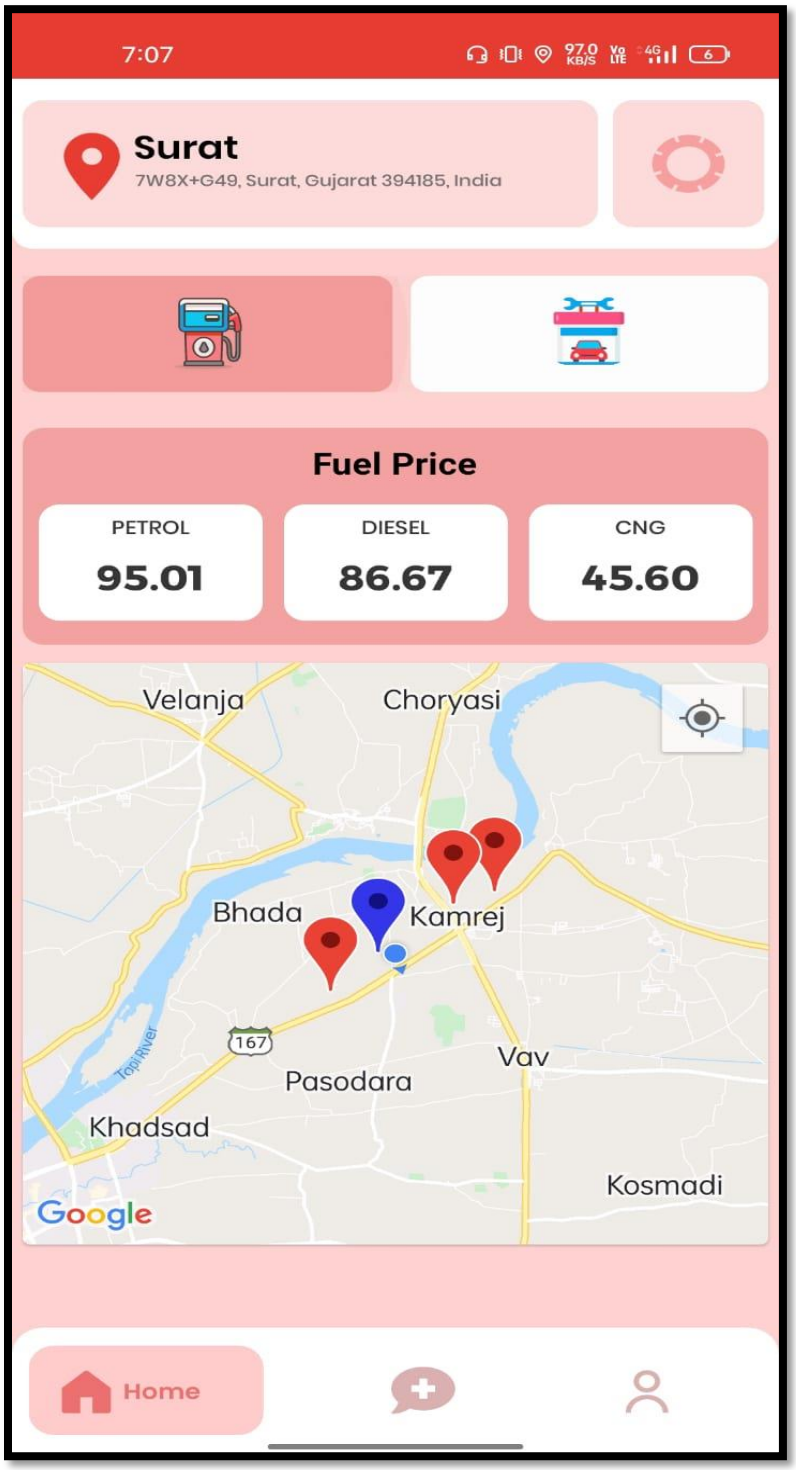
- After verify mobile number, if the service provider is not exist then display service provider registration screen.

Garage Verification Screen:-

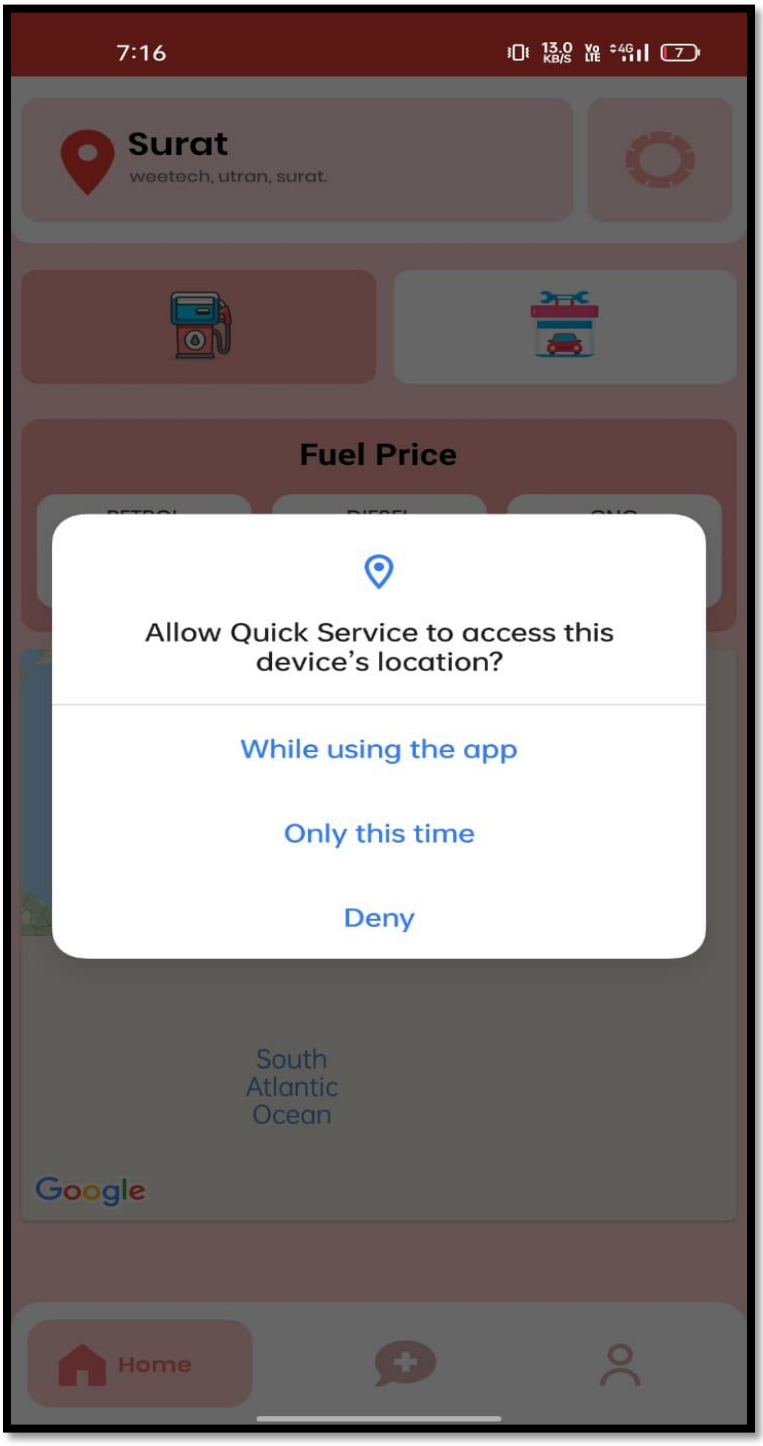


- After submit the service provider detail, the admin can verify the data, if data is valid then display home screen.

Home Screen:-

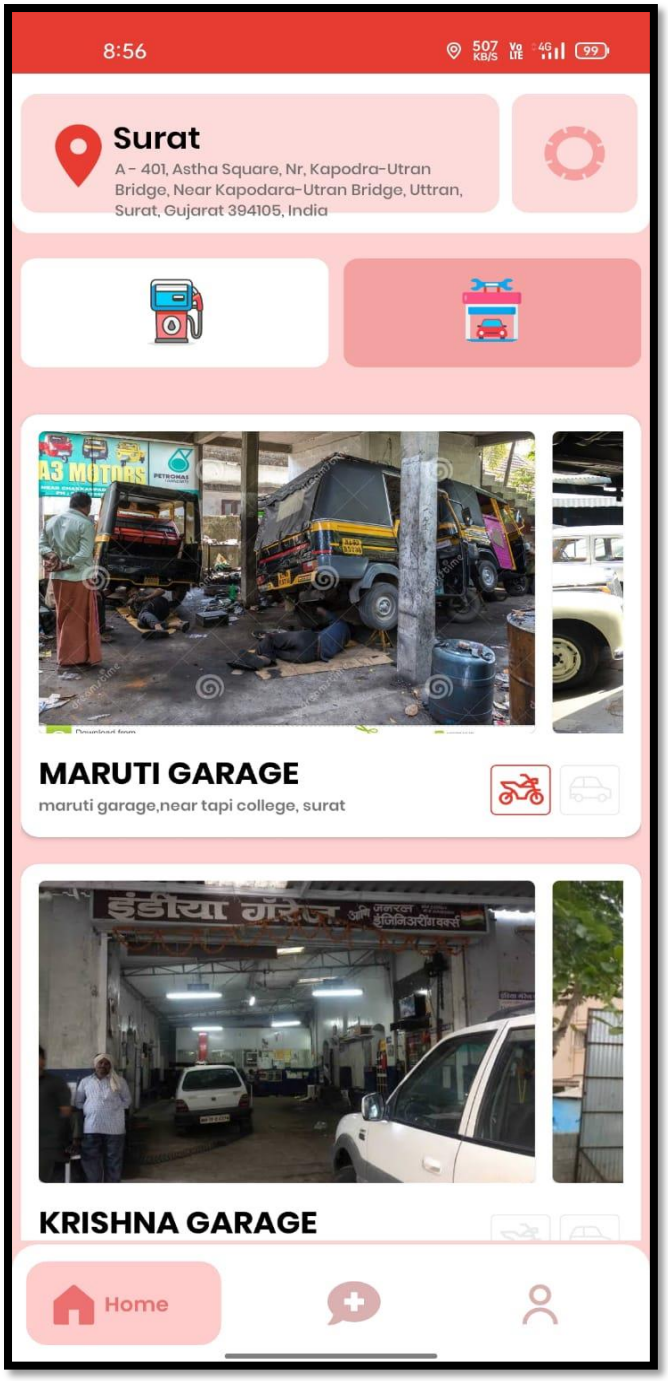

7:07
Surat
7W8X+G49, Surat, Gujarat 394185, India
Fuel Price
PETROL
95.01
DIESEL
86.67
CNG
45.60
Velanja
Choryasi
Bhada
Kamrej
167
Tapi River
Pasodara
Vav
Khadsad
Kosmadi
Google
Home

- This is home screen of application.



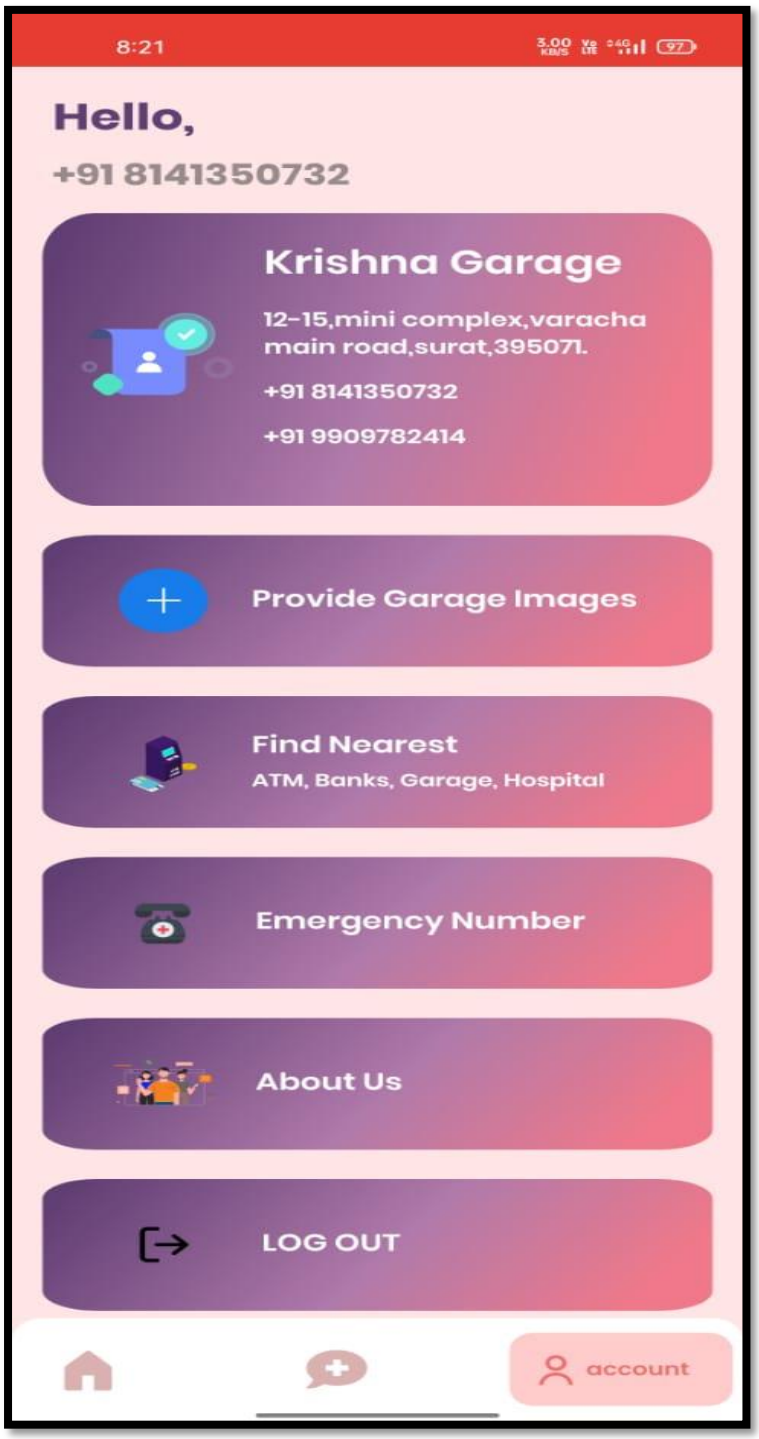
- If your GPS service is off in your mobile device, then this pop-up menu can be display. It is use to gain GPS permission from user.

Registered garages list screen:-



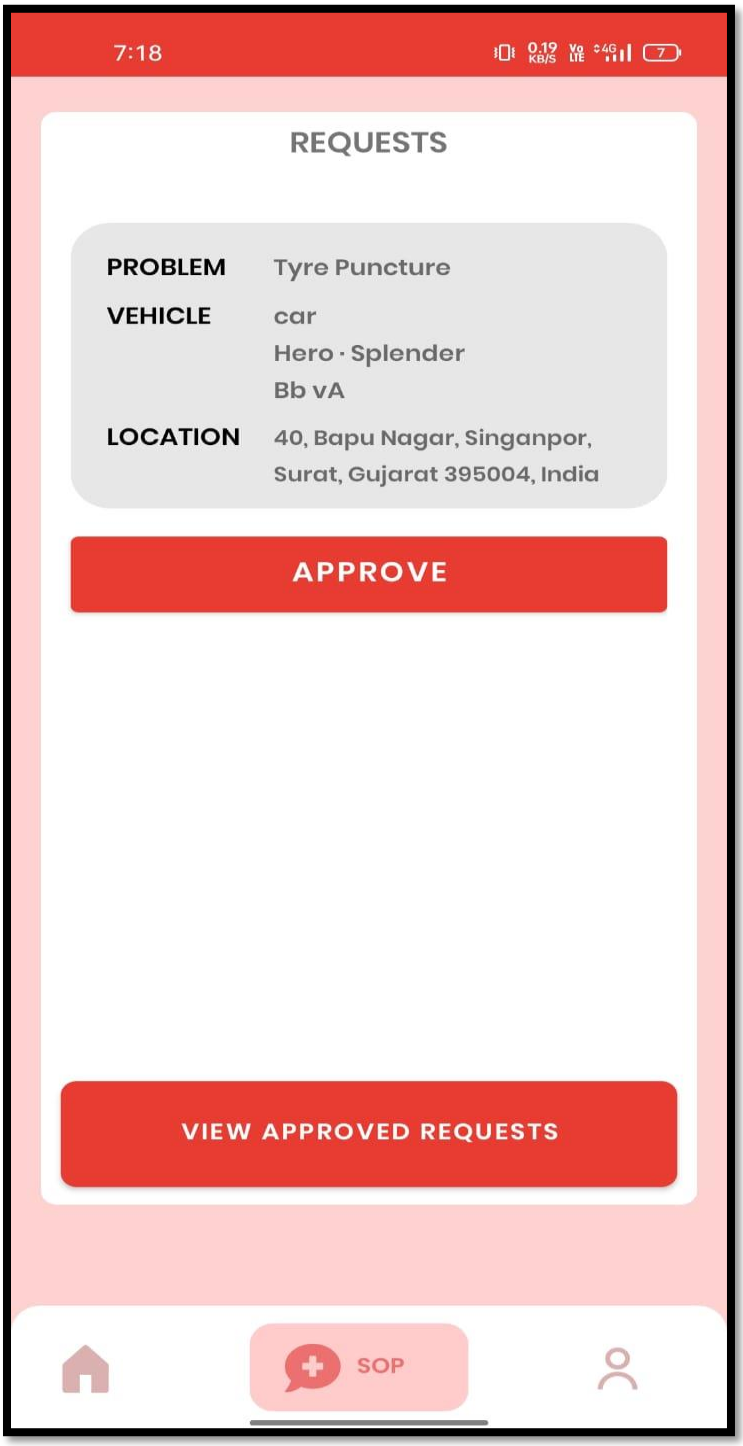
- This panel represents registered garages to user.

Garage Profile Screen:-



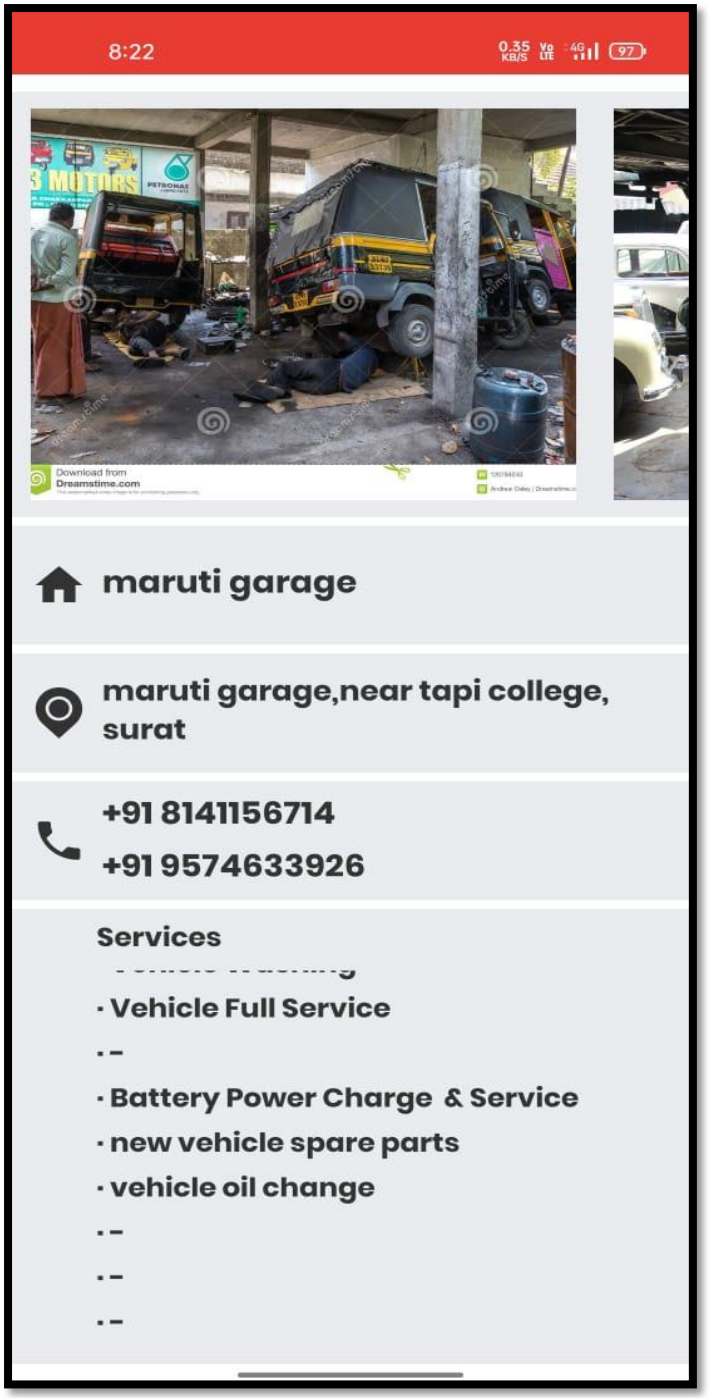
- This is profile panel of service provider.

SOP(Service On Point) Screen For Garage:-



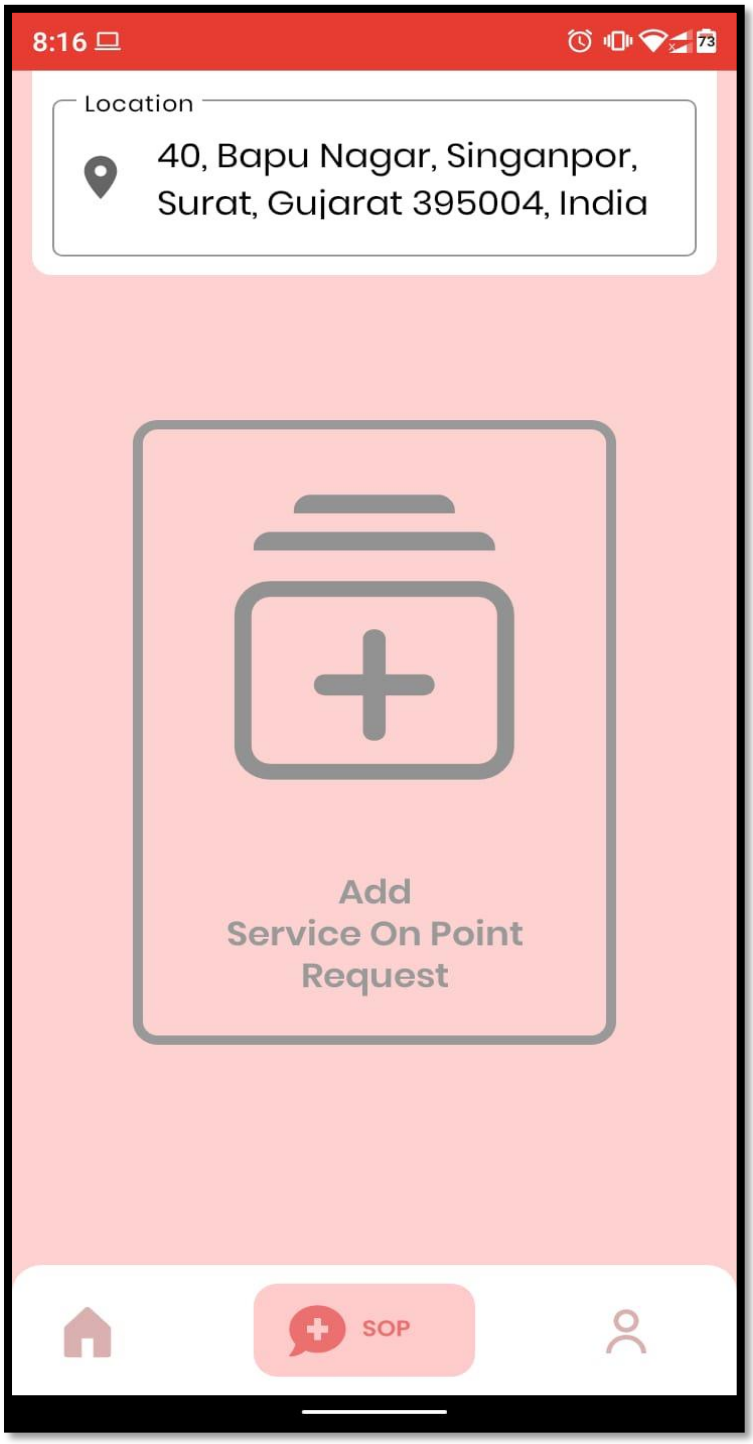
- It is sop(Service on point)panel of service provider. In this panel service provider accept the user request for vehicle services.

Full view of registered garage screen:-

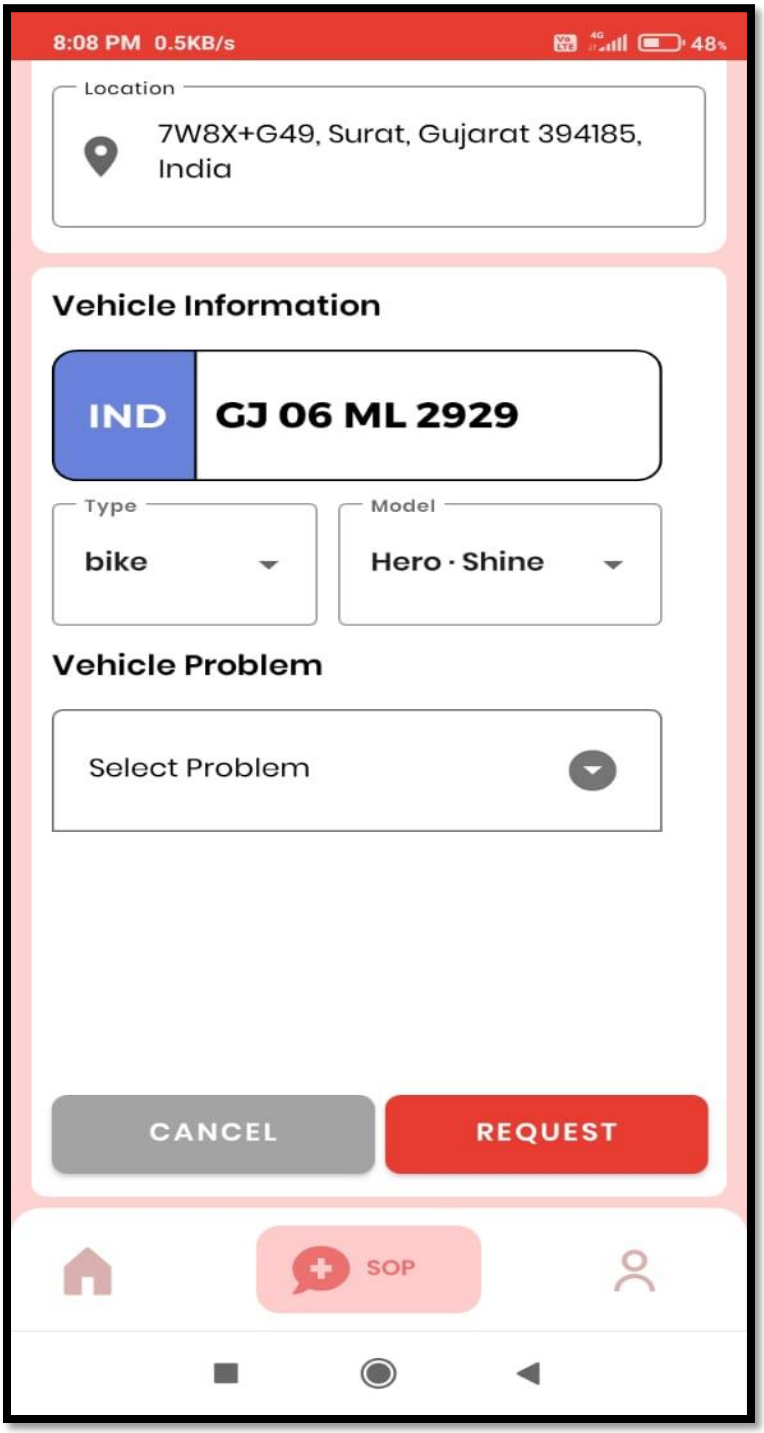


- This panel represent full view of registered garage.

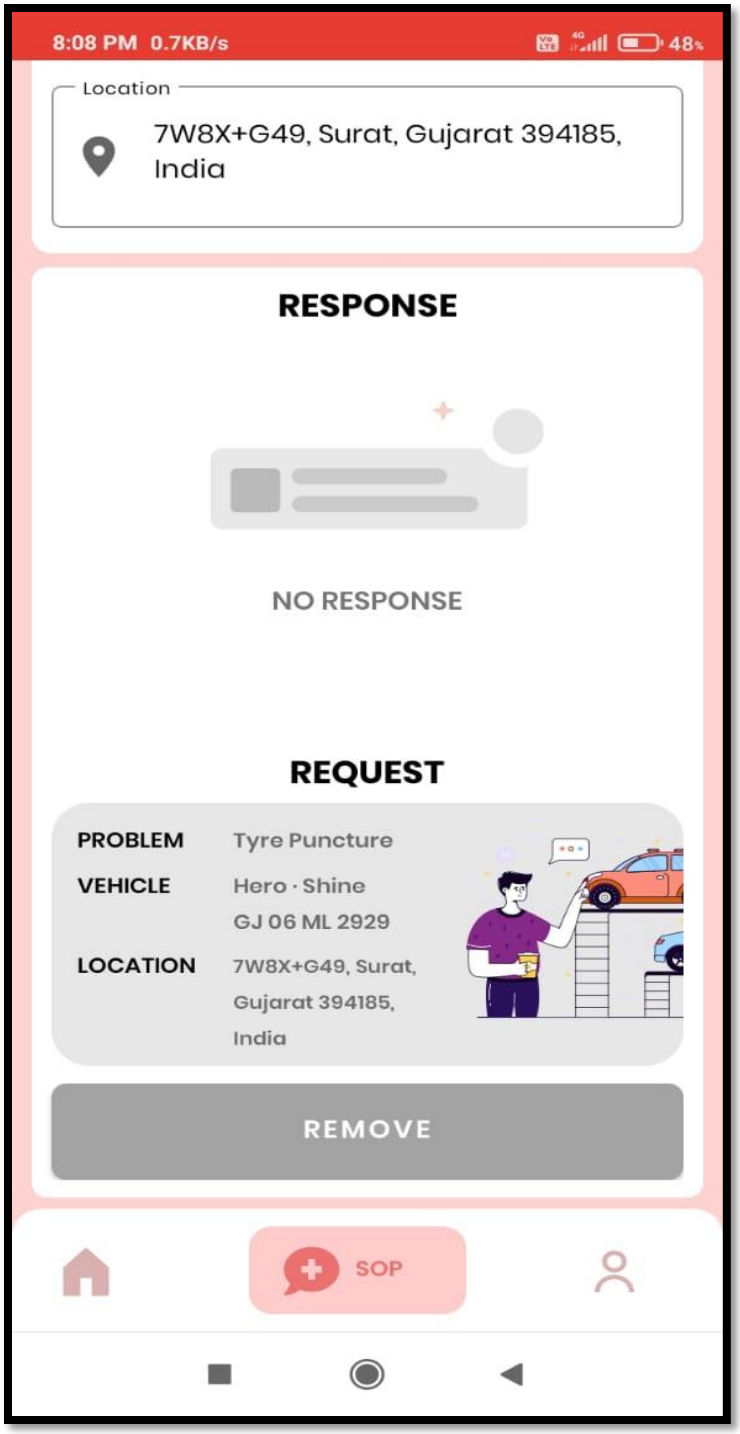
SOP(Service On Point) Screen For User:-



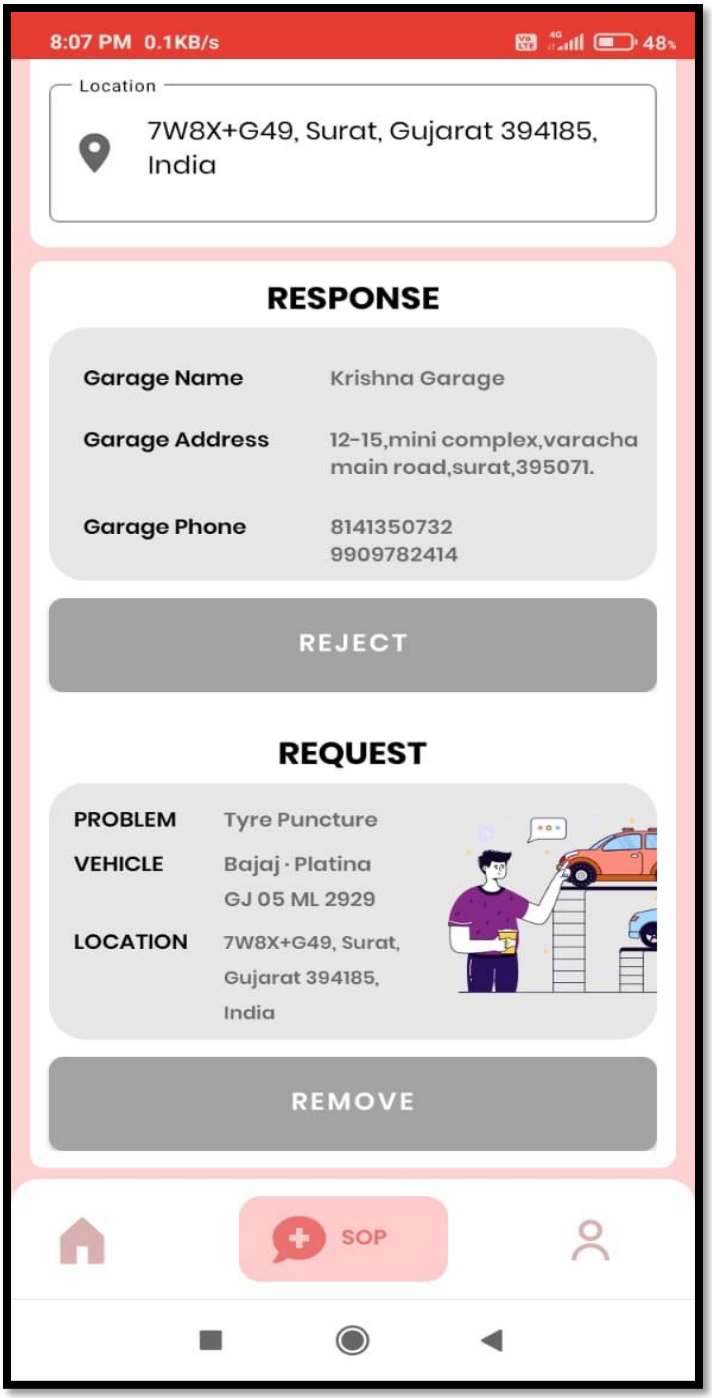
- This is sop(service on point)panel of user. using this panel user can request for vehicle services.



- Using this panel user can select problem of vehicle that can be sent request to the user.

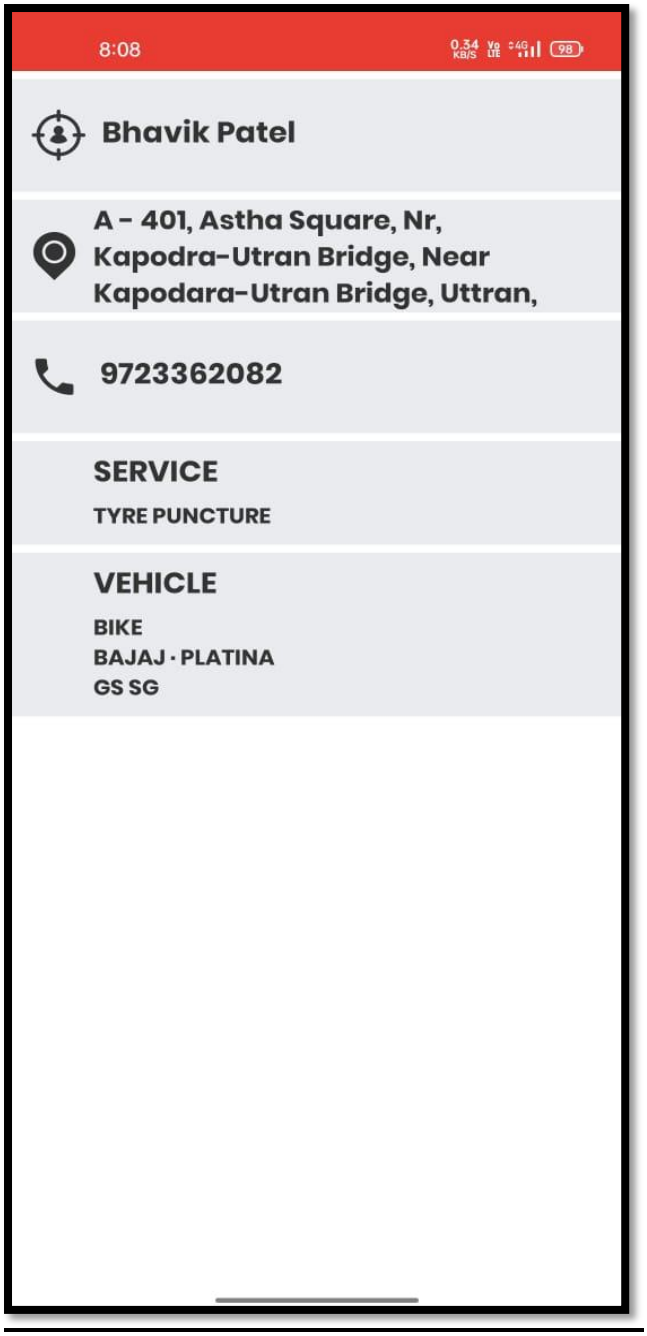


- After click on “request” button this panel will displayed.



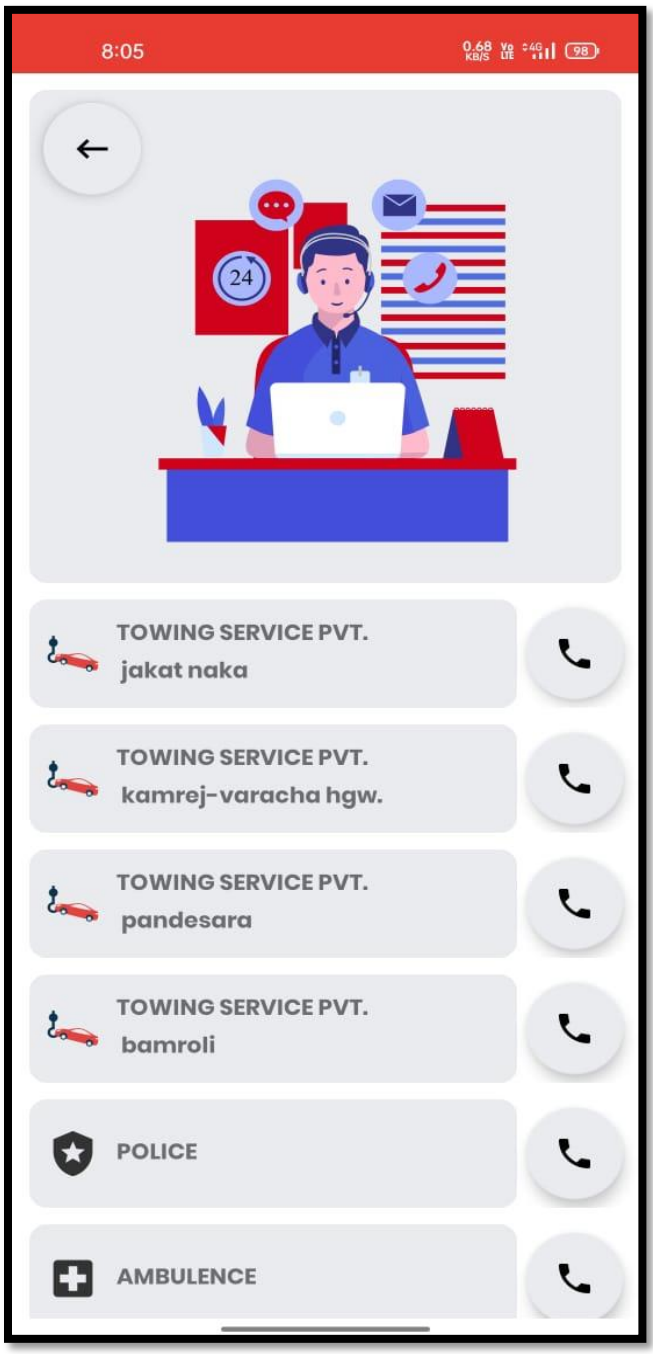
- This panel represents response of service provider.

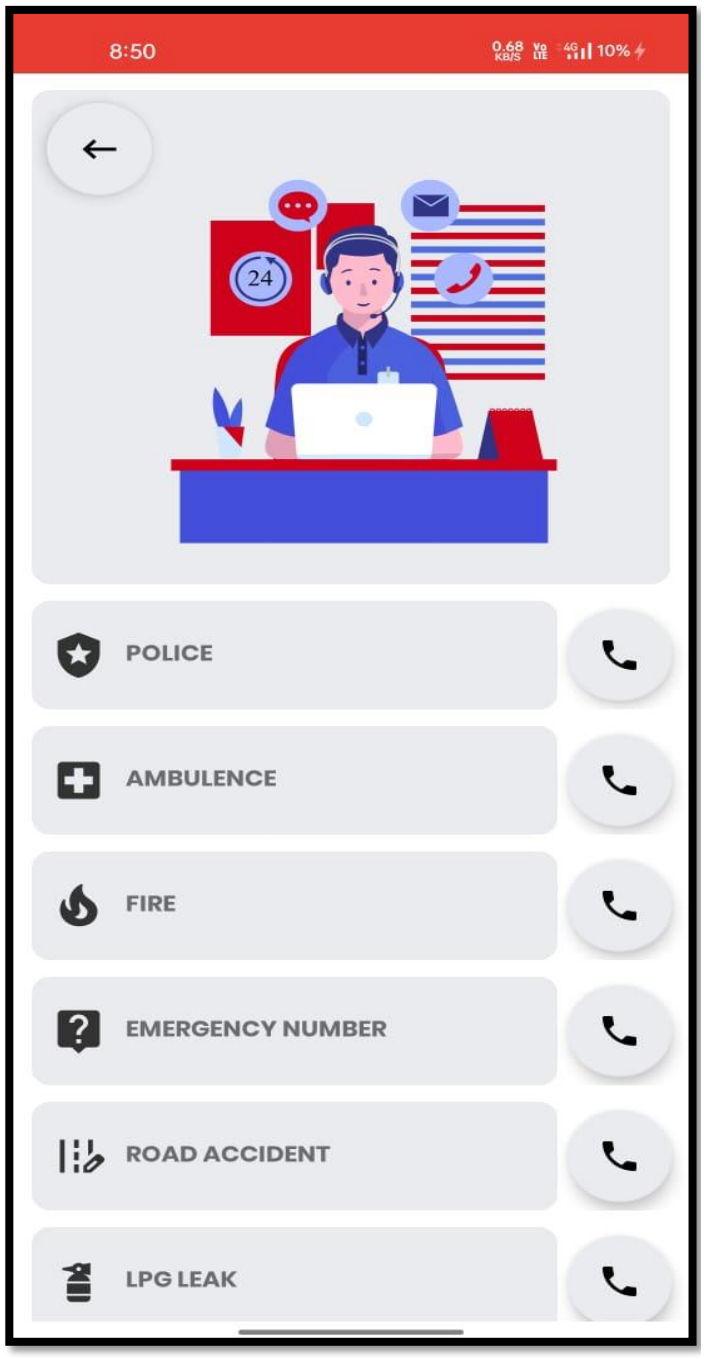
Full view of user screen:-

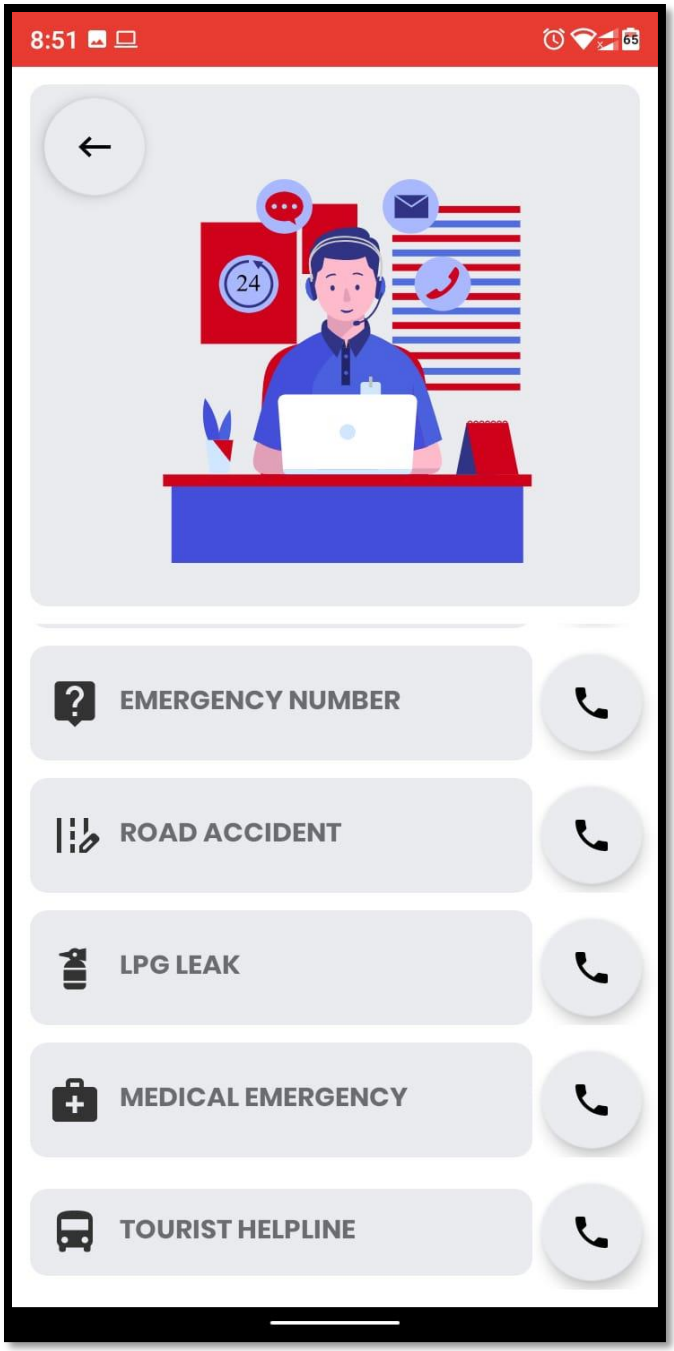


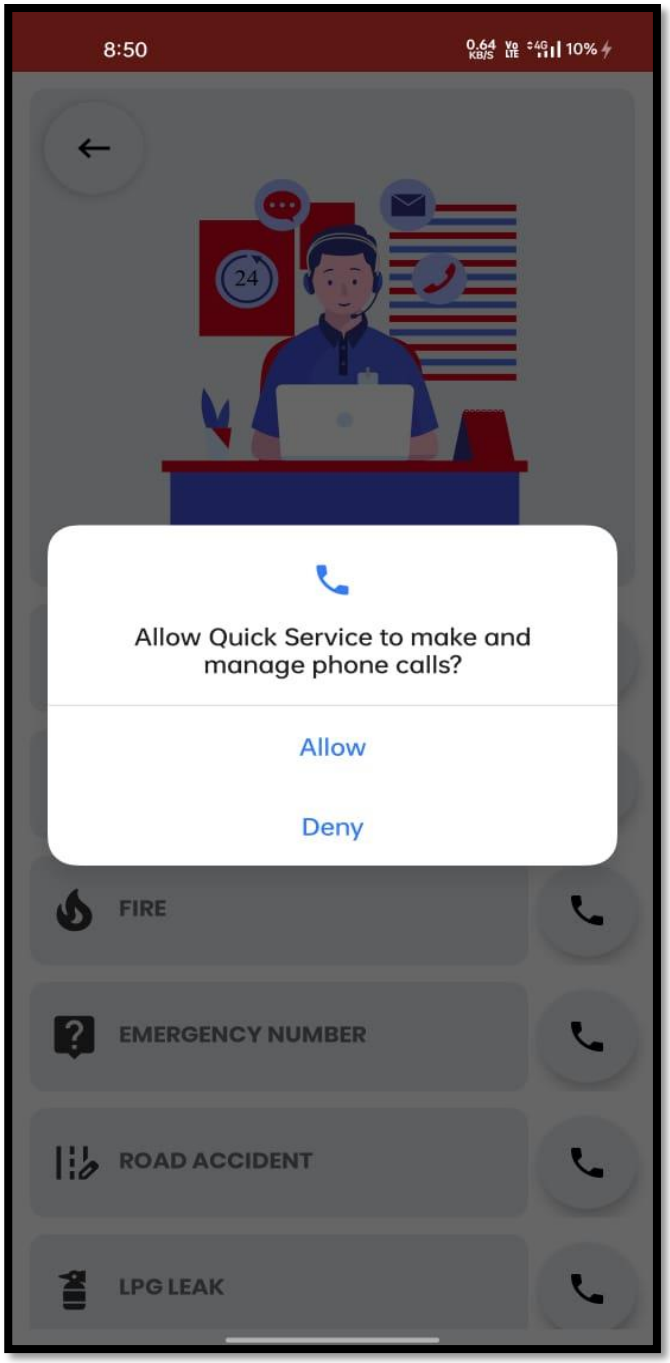
- This panel represent the full view of user.

Emergency Call Screen:-



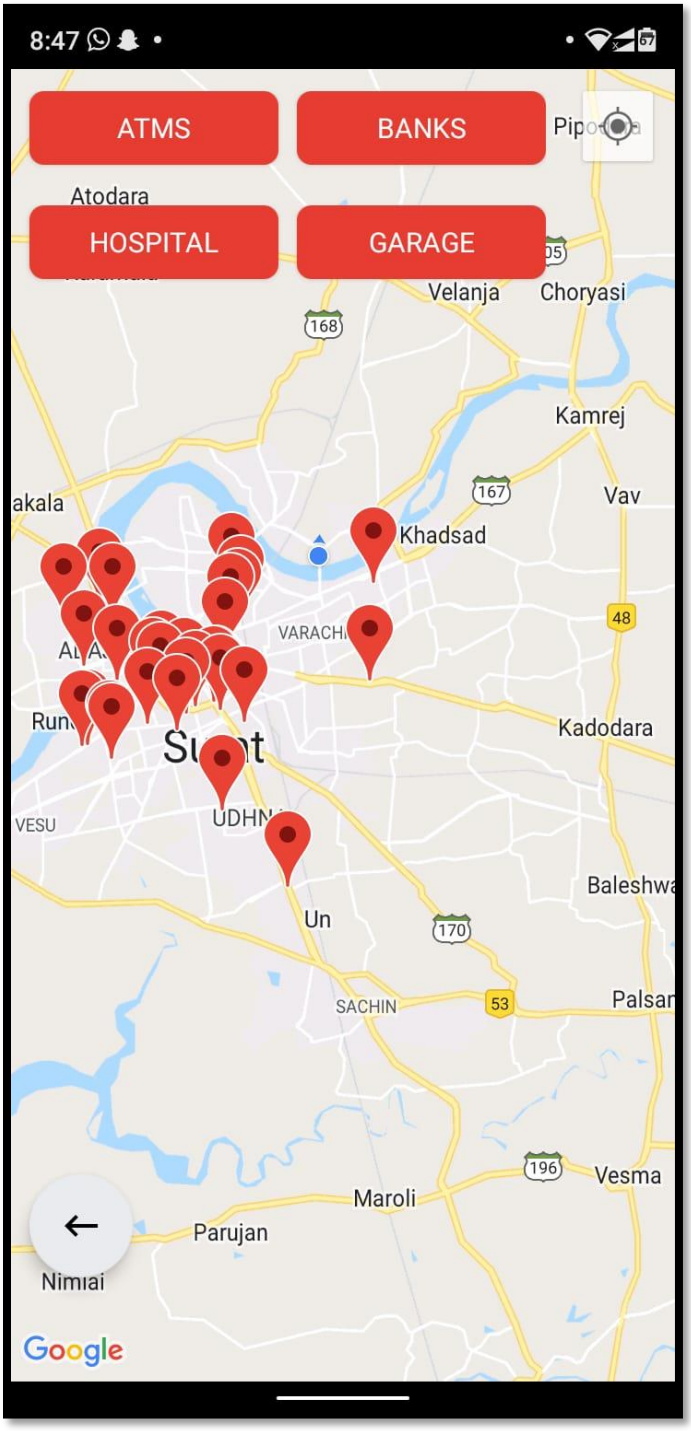






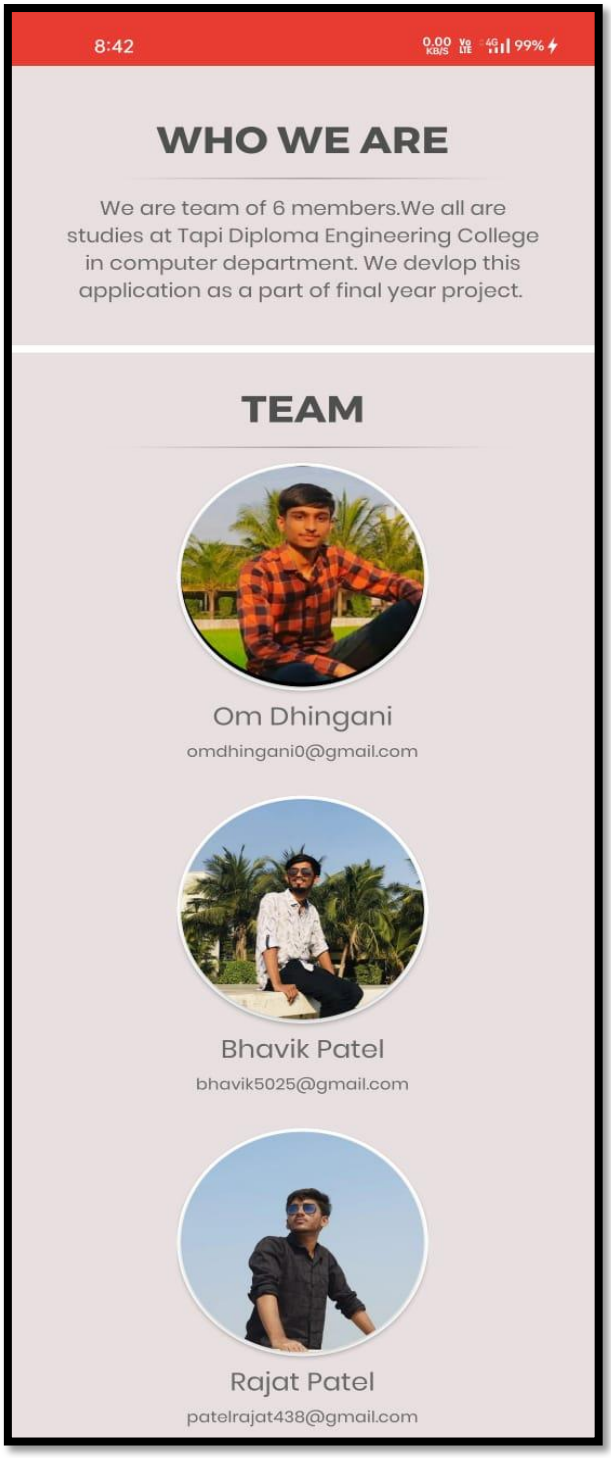
- This screen is use for emergency services of government and use for gain user phone call access permission.

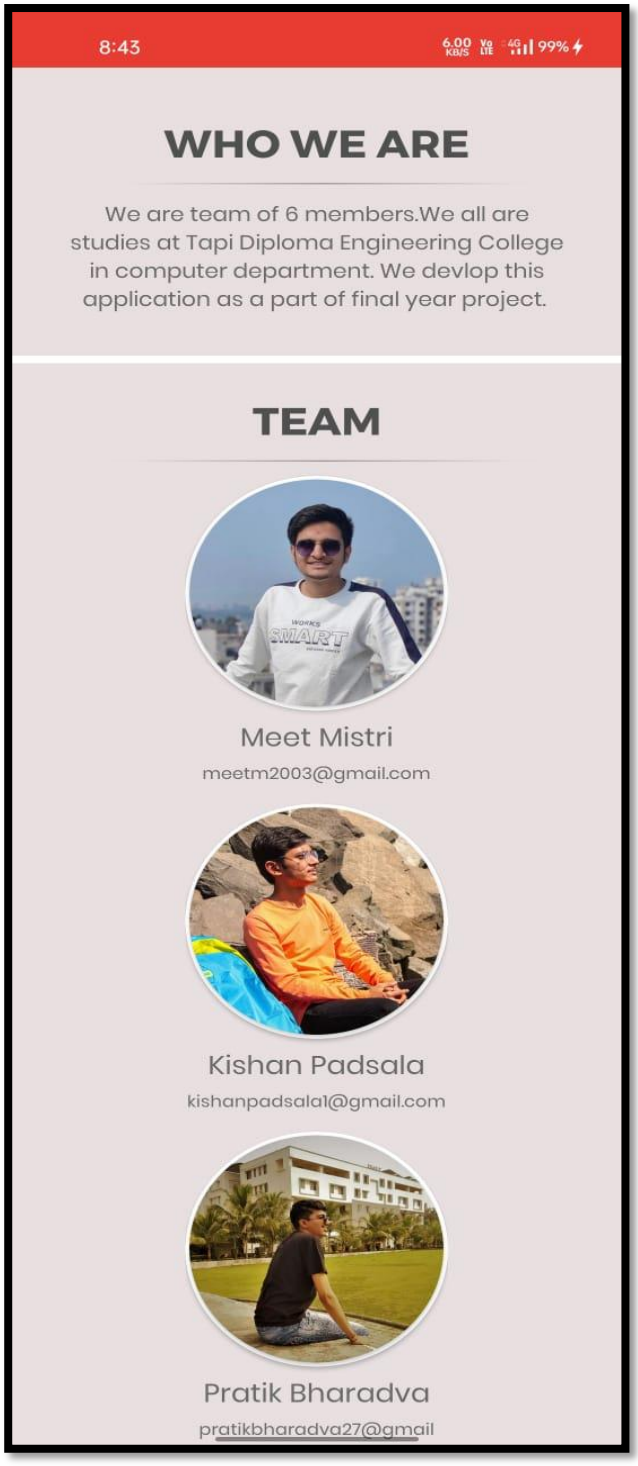
Location Screen:-



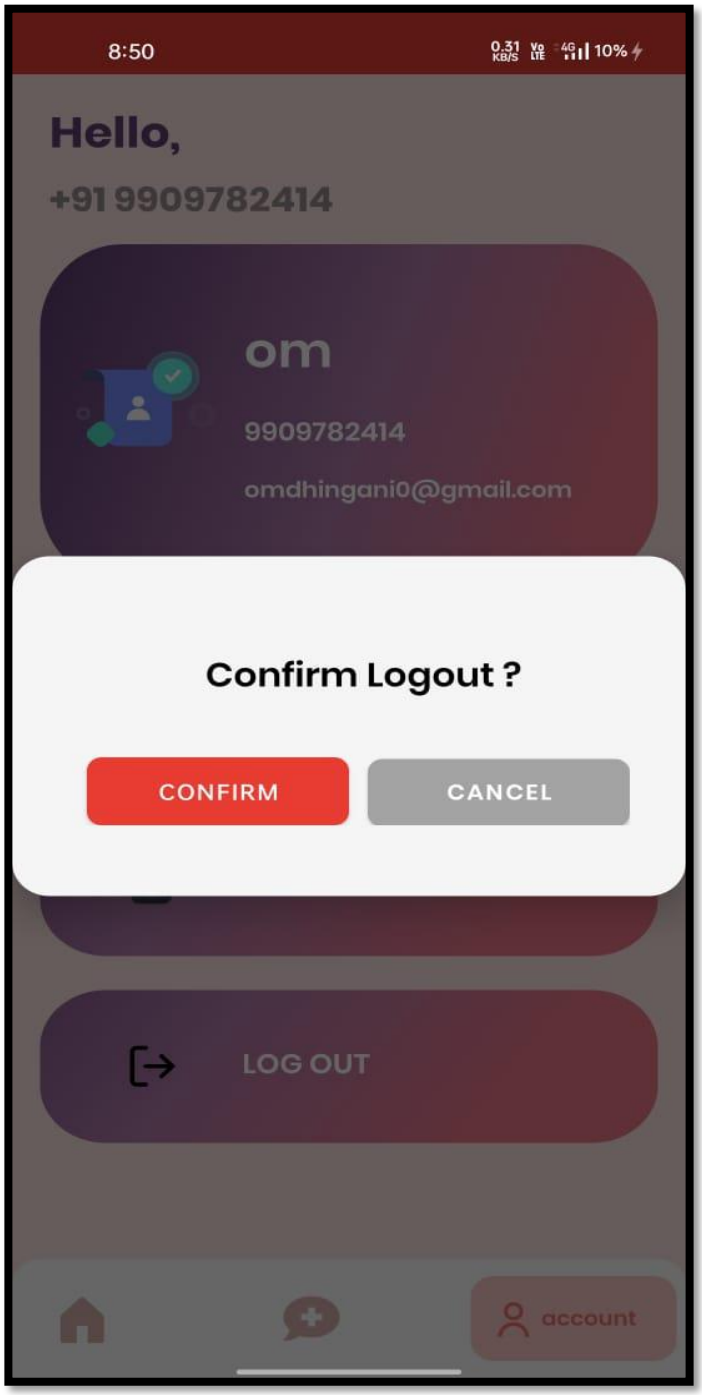
- This screen represent location of banks, atms, hospitals and garages.

About us panel:-





Logout Screen:-

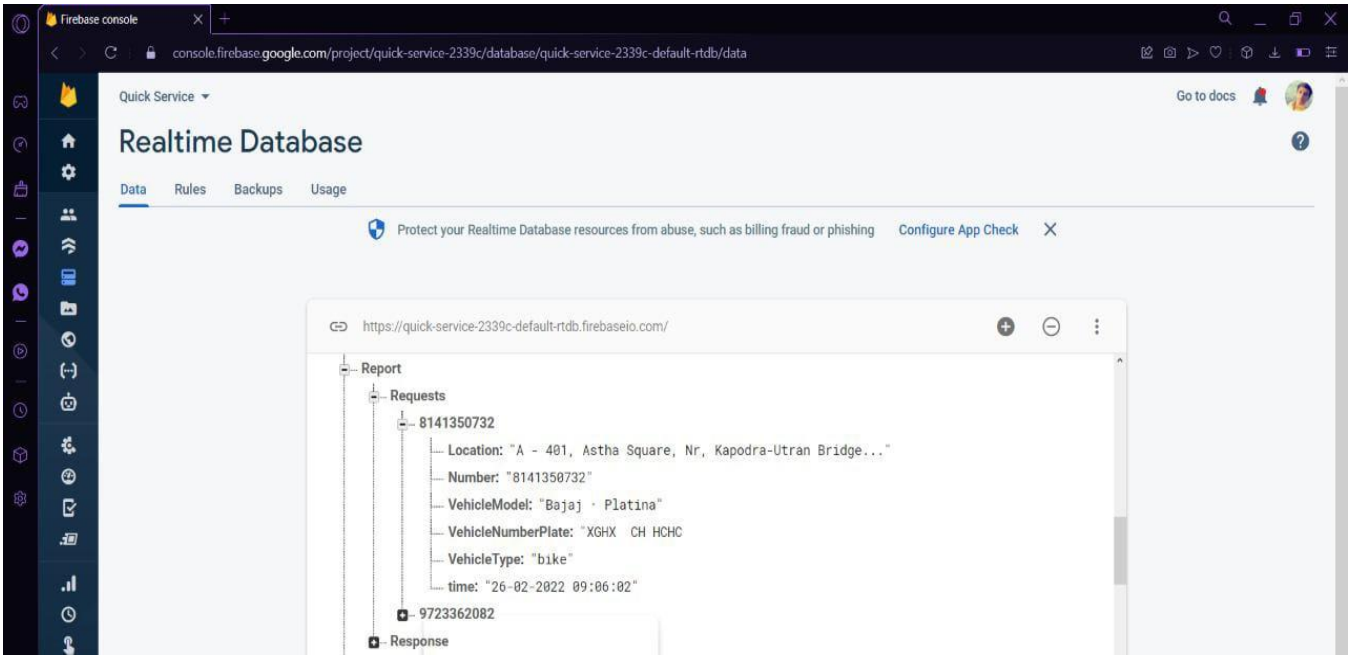


- This dialog box is use for logout user account from application

4.2 Report

We made report that includes history of each and every request send by user and response given by service provider with date and time.

Report of request:-



Report of response:-

4.3 Software Testing/Validation

1. Mobile number must be consisting of 10 digit and can`t be null at the time of login.
2. At the time of customer registration name and email id can't be null.
3. At the time of service provider registration name, mobile number, garage licence, email id, services type can`t be null.
4. First we check all garage information and their provided documents and if all details are legit than we will allow that garage and consider as a verified garage. Otherwise that garage can’t use our system.
5. At the time of profile update of customer and service provider name, phone, email can`t be null.

CHAPTER:-5

THE OUTLINE OF WORK TO BE CARRIED FUTURE

5.1 System Enhancement

- We will enhance all features.
- We will provide notification features.
- We expand our application that can be use in other cities, we will made group of users according to their cities.
- We will use barcode scanning features.
- We will provide online payment features.

Conclusion

The quick service by wheel is easy to use in this app customer can easily see its nearest vehicle related service center. Our application reduces customer time. It is easy for customer to find out service provider in surat. Our application also provide tow van feature. Tow van feature provide service to customer on place.

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  - https://www.w3schools.com/java/default.asp
  - https://en.wikipedia.org/wiki/Android_Studio
  - https://www.edrawsoft.com/ad/edrawmaxsoftt.html?gclid=CjwKCAjwpGJBhBmEiwALWBQk42_QPiyJCFJ8_NyHKlhlo5m1yMWKikc_ICHh6vk4KUOZE4r_HFRoCI5MQAvD_BwE
  - https://www.adobe.com/products/xd.html?sdid=12B9F15S&mv=Search&ef_id=CjwKCAjwp_GJBhBmEiwALWBQkyfRzzFCgdrC6eLcJB4VAJhpAfgRB8ikFT8q5tANBKolZZtde_aUxoCmbkQAvD_BwE:G:s&s_kwcid=AL!3085!3!526748867270!b!!g!!experience%20design%20adobe!1641846445!65452677271

- **Books**

  - Introduction To Android Application Development (4th Addition) Book (Publisher:-Addition Wesley Professional).
  - Learn Java For Android Development (2nd Addition) Book (Publisher:-Jeff Friesen).
  - Core Java An Integrated Approach (Black Book).
  - Android Programming: The Big Nerd Ranch Guide**.**