

Vehicle Breakdown Assistance

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Abstract: *The proposed application helps to find mechanics easily and quickly. It is difficult to find mechanics nearby area wherever you are travelling. The main objective is to provide a better service and to make the process easier and finally appointing a mechanic quickly. This system helps to overcome this issue by providing mechanic details in one click. Here the locator allows you to search mechanics from different locations. This online mechanic locator reduces work and can easily find the mechanics from various location. Reduces your time and cost.*

Keywords: GPS, Direction API, Geocoding API, Coordinates, Location, Real-Time.

I. INTRODUCTION

Travelling is a delightful experience which everyone is experienced. So we plan ahead but due to unforeseen situations there may be complications to our vehicles. The application will use the user's current location to decide the nearest mechanic workshop or their garage available and display all the remaining mechanic shops in ascending order of the distance from the user. When we take the situation of Vehicle breakdown there are different aspects which can cause problems that lead to injuries and fatalities. In such situations getting help from a person who is having in detail practical knowledge about vehicles is a life saver. The Vehicle Breakdown Service Station Locator gives accurate information about nearest garage or workshop facilities around a particular area allowing users to reduce the amount of time required searching the mechanic garage once the incident happens. The Mechanics in our vicinity have contributed for our project and in some areas we collected their information. They provided information such as the contact number, Owner of the shop, Address of the shop, Types of services provided by them, the shop establishment year etc. In this web application if the user is accessing the application for the first time then they are needed to register or else they simply login. When the details are submitted after registration they receive a confirmation link to their registered mail address to activate their account. After Login the Dashboard appears upon which the user has to give their location as input. Based on their input the shops present around the user's location are shown. we get the nearest mechanic shop details from the current location of the user. So the user can move along the path to reach the destination.

II. LITERATURE REVIEW

[1] Authors- "Akhila V Khanapuri (2015)" proposed that there has been an exponential increase in the number of cars on road, number of road accidents and vehicle breakdown cases recorded. Finding effective ways to achieve maximum fuel efficiency without hampering the internal structure of these vehicles along with providing a response system to combat mishaps is a challenging task. In this paper, android application is proposed which monitors parameters like Engine RPM, fuel status, throttle position through an On board Diagnostics (OBD-II) being able to help amateur drivers with gear changing and provide assistance in case of vehicle breakdown.

[2] Authors- "KhooJin Sheng (2016)" Analysed the car breakdown incidents on the road. It expects that through some research, the statistics of car breakdowns can be obtained to see if this project is helpful to those in need. The next step would be an analysis and comparison of those existing Car Breakdown Service portals or applications to identify the flaws. Development of a Car Breakdown Service Station Locator System will be carried out after planning and analysis. Internal testing and user testing of the application will be carried out before the system is being deployed. As part of the expected results, the proposed system connects Car Repair Service Providers (CRSP) and the Public through this system. If the car owners transportation breaks down on any highway or federal road in any part of Malaysia, the owner could enter information with regards to the place of breakdown in the system using mobile phone, tablets. The system will automatically search for any CRSP nearest to the reported incident spot. The users are able to contact the CRSP to service the vehicle.



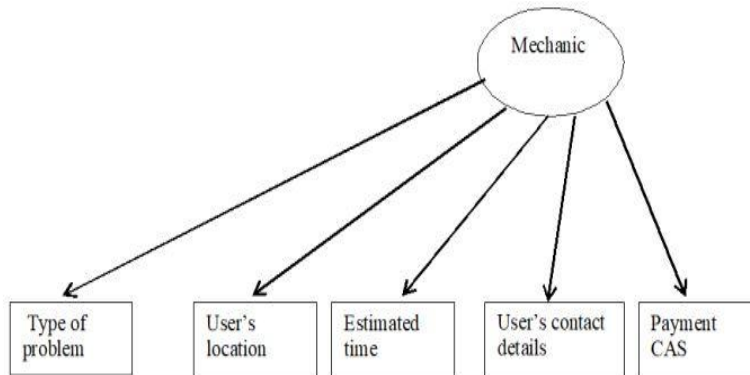
This project aims to develop a Car Breakdown Service Station Locator System. The proposed system connects Car Repair Service Providers (CRSP) and the Public through this system.

[3]Authors- "PunamKumari (2017)" discussed the various useful tools and techniques that are used in a development of a website. We also discuss about the procedure follow in a website, mostly focused on a local host named Xampp tool. Next, we compare different development frameworks web application. In addition, we discuss life cycle model and framework development of web application. In this report, various review papers result also included for understanding of problems can be facing by the users. This Paper tells about the technologies used in this development, PHP and explained in result its functionality with Xampp with screenshots. It is hoped it will give a useful framework for guiding the process.

III. PROPOSED SYSTEM

When the vehicle breakdown occurs the driver have to see a mechanic or the repair shop. The driver has to ask for help from the people. If driver using this On Road Assist Model user can find mechanic basis on user location easily. The user logging in to the App after User Registration. Then User current location track by GPS. Then user location goes to DB and match with the mechanic who registered with the App. There is shown mechanic that nearest to user location. Along with that user can search spare part shops basis on the user location. There is user can make star rate to mechanic after the repair done. This is help to mechanic that they are rated by their client. That is help to burnish the mechanic skills. The details of the functionalities are listed below:

- Phase 1: It is a process for adding Registration of Mechanic, user and Spare parts. Mechanic details are stored in the database after the validation. All the details of user and mechanic is stored in real time.
- Phase 2: It is an API for Live Tracking. User registration and requisition for the mechanic. System will pick the location using geolocator API. It will live track the mechanic and user vice-versa.
- Phase 3: It is the process of finding the nearby spare parts shop. For searching the nearby spare parts shop during the time like damage of any parts. It will search for the nearby registered spare parts shop



3.1 Project Aim and Objectives

A. Aim

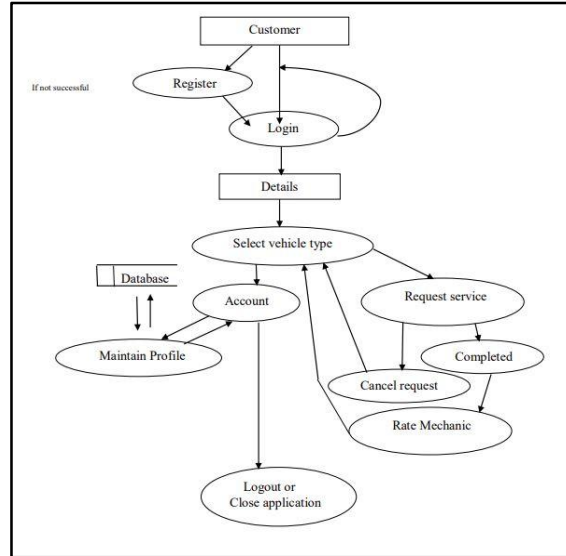
To develop a platform which improve the efficiency of mechanic and driver.

B. Objectives

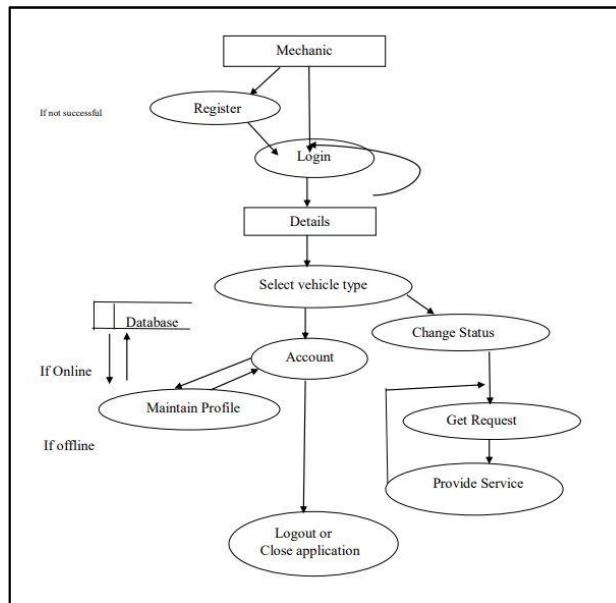
- The main objective is to provide a better service and to make the process easily and finally appointing a mechanic quickly.
- Proposed system is accessed by three entities namely, Admin, Mechanic and User.
- A mechanic can perform task such as viewing request received from users and can also send feedback to the admin.
- To build a common platform that connect with mechanic and driver.



3.2 Customer Module



3.3 Mechanic Module



3.4 Application

Android product creation is the method of creating new apps for smartphones that run the Android operating system. According to Google, Android applications can be written in Kotlin, Java, and C++ using the Android software development kit (SDK), but other languages are also supported. Google Maps is a popular tool for determining the destination location, calculating distance, and estimating travel time from your current location. Basically, Google Maps has a large number of application programme interfaces (APIs) that allow you to integrate Google Maps' excellent features and effectiveness into Smartphone applications.



3.5 Grabbing Location

The assistance given to drivers is extensive, and they can take advantage of it all at once. The services are made accessible along with the service provider's records, which the traveller may access. The Google Maps Navigation System informs travellers about system availability and

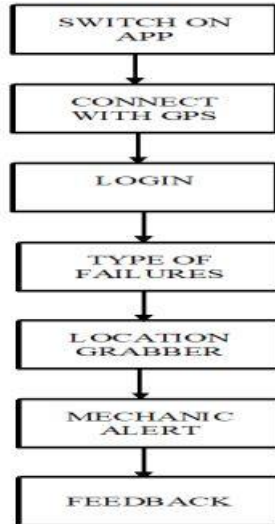
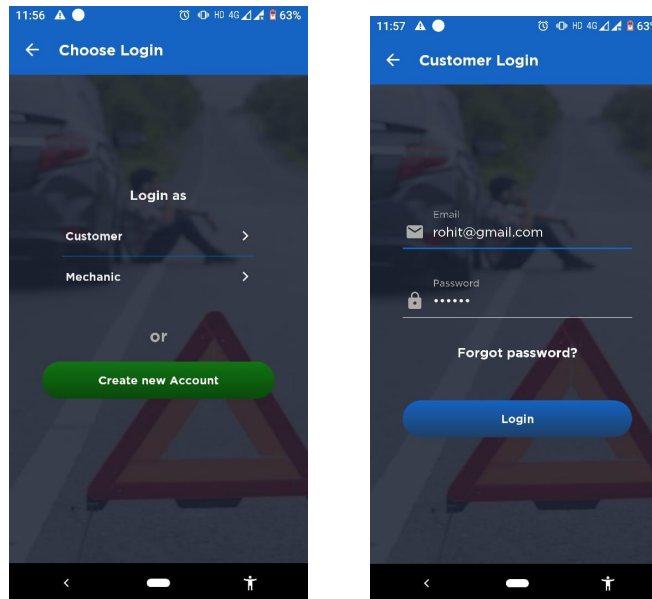
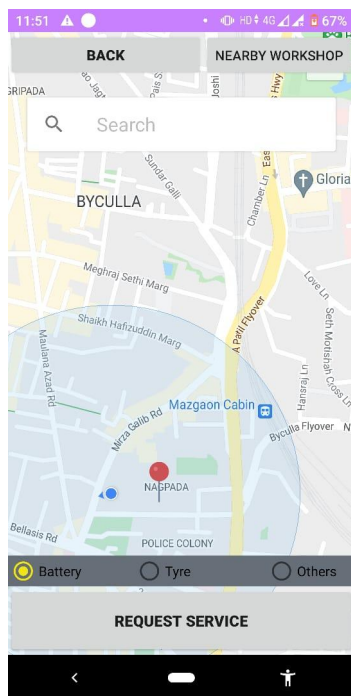
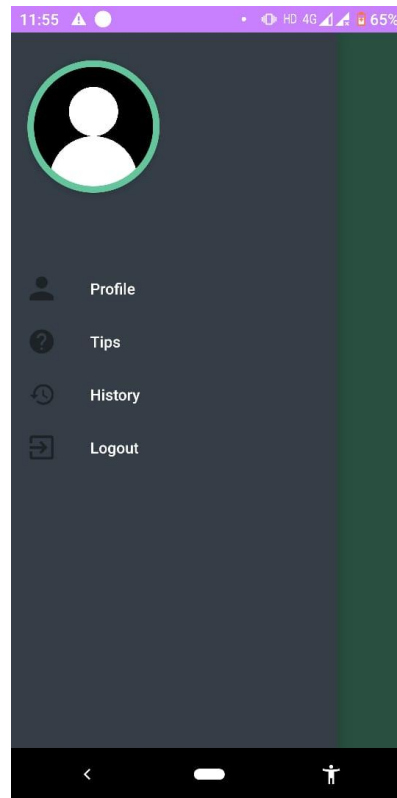
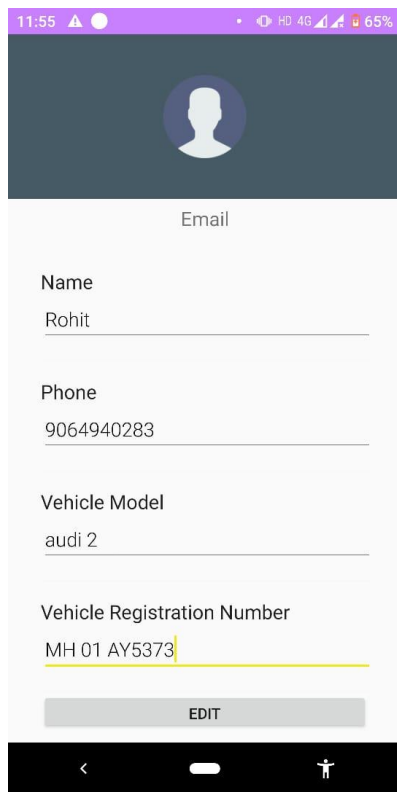


Fig.1. Work flow

IV. RESULT





V. FUTURE SCOPE

In future the system can be extended by adding modules like medical, food and so forth, for providing services like medical emergency and food supply etc. So that by adding these modules the system will become more useful and by using the system the people can reduce their time and effort.

VI. CONCLUSION

We presented the design and implementation of an android application called Road assistance system, with which mobile users can get travel related service information they need anytime and anywhere. While the chances of a properly maintained vehicle experiencing a breakdown are slim, it is never possibility to predict when the user may experience a vehicle breakdown. The Android application developed here promises to make the life of a vehicle owner that much easier, as even in the probability of breakdown, the vehicle owner is assured of the fact that he has a solution to the problem within a few steps of entering details in his smart phone and save himself from a major setback in such an undesirable situation. This System was expected to help drivers locate the nearest mechanic in the case of car breakdown. It was also expected to allow the mechanic to view the driver's location and the path to the driver's car breakdown site. The proposed system promises to act as a source of protection against the unpredictability of vehicle breakdown and offers the owner of a particular some peace of mind in the event of operational failure of the user's vehicle.

VII. ACKNOWLEDGMENT

We have taken a lot of effort into this project. However, completing this project would not have been possible without the support and guidance of a lot of individuals. We would like to extend our sincere thanks to all of them. We are highly indebted to Dr. Ashfaq Shaikh for their guidance and supervision. We would like to thank for providing the necessary information and resources for this project. Our thanks and appreciation also go to our colleague in developing the project. Thank you to all the people who have willingly helped us out with their abilities.

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