

“QUICK HELP - EMERGENCY APPLICATION FOR VEHICLES”

Mr.B.B.Vikhe¹, More Asmita S²,Jadhav Disha N³, Gorde Pranoti S⁴, Shelke Mahesh B⁵

¹ PREC,Loni Computer Department, PREC, Maharashtra, India

² PREC,Loni Computer Department, PREC, Maharashtra, India

³ PREC,Loni Computer Department, PREC, Maharashtra, India

⁴ PREC,Loni Computer Department, PREC, Maharashtra, India

⁵ PREC,Loni Computer Department, PREC, Maharashtra, India

ABSTRACT

During this crowded rush, everyone is in a hurry to reach their destination on time. Private transport is one way for everyone to reach their destination within time. But then major problems occur when there is mechanical unit breaks down. During such circumstance our application is useful for such peoples. So we designed this application using Cloud. The application is subdivided into three main sections namely the Admin's portal, Helper's portal and User's portal. Using the GPS available in mobile phones, the location of the User can be obtained. User can get the information, along with a route to reach the desired mechanic shop, using Google Map API. Further, the same data shall be utilized to study and improve the help facility for a user as fast as possible.

Keyword: - Cloud Computing, Helper Portal, Mobile Computing and User Portal.

1. INTRODUCTION

The mobile phones are used by many people in the middle of this century. This means every person on earth would be carrying a mobile phone in the upcoming years. Thus an application made to reside in these mobile phones can help solve the problem. Our project contains two sections named as the Admin portal and the Helper portal. In the Admin portal, the owners of the shops can add details regarding their shops based on the conditions. This includes the name of the shop, addresses, opening and closing timings, services offered etc.

The application can use the GPS modules inside mobile phones to get the current location. The owners can add multiple shops in the Admin portal if owned by them. The application even lets them to update or delete the already added shops to make any changes if required. The owners can view reviews provided to the shops to further improve the user's experience. The application can combine these data and make use of data services. In the Admin portal the user selects the desired mechanic around him to get detailed information about the shop and to get a route to the repairing agent with the help of Google Map APIs. The user can rate the shops based on his experience.

2. LITERATURE SURVEY

An important thing to consider here is that we have to create an application with a smooth and simplistic user design so that it can be accessed even by naive user. The mechanic portal would let the owners of the repairing shops to add details regarding their shops based on the predefined questionnaire within the application. This includes the shop name, addresses, timings, services offered etc. The User's portal let the user select the desired mechanic around him to get detail information about the shop and to get a route the repairing agent with the help of Google Map APIs.

It is the application which providing the service of mechanic to the customer. The problem of application is that when a customer wants to register their application problem, also the customer who is demanding for the mechanic must have his/her in the registration from where customer have to fill car registration number. This app provides scheduled maintenance for vehicle owner. And it is application allows you to search the mechanic area wise.

3. ARCHITECTURE

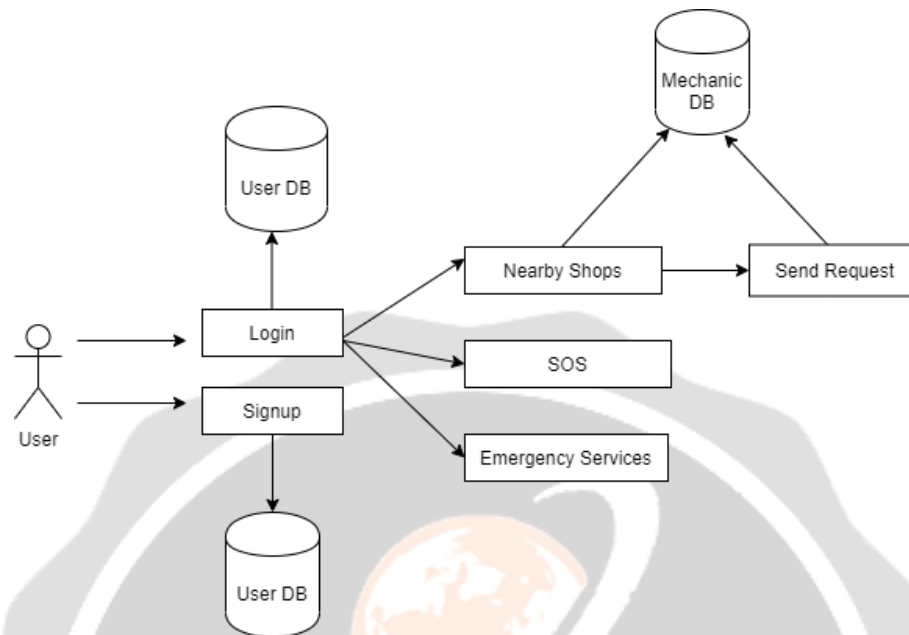


Fig. 1. System Architecture of Users Portal

Users Portal will allow user to login or sign up. The data will be fetched or stored in user's database. On successful login he/she will be displayed his/her current location. The near-by shops will be fetched from the mechanic's database and will be displayed on screen.

The same is applied to Mechanics Portal. It will allow mechanic to login or sign up. Authentication will be done through servers using mechanics database. After login mechanic will be displayed the requests from users. Then mechanic can accept the request. On accepting the request, the distance will be calculated on the basis of google location co-ordinates and mechanic will be redirected to google maps with shortest path set to the user.

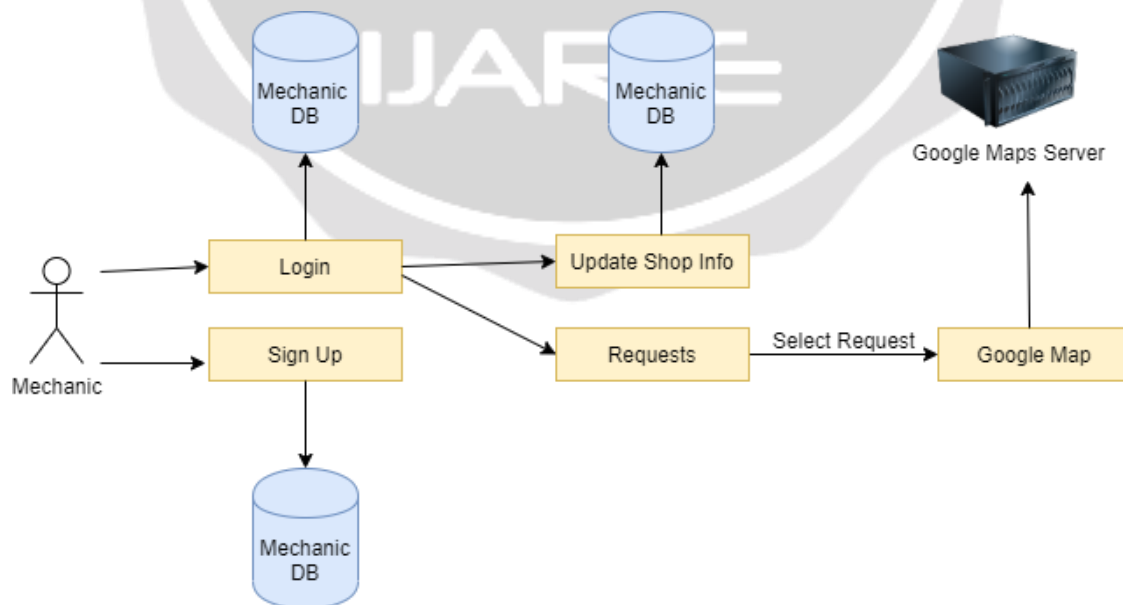


Fig. 2. System Architecture of Mechanics Portal

4. SYSTEM OVERVIEW

4.1 Users Portal

A) Select Users Portal

If we open the application for the first time, you will have options like users portal, mechanics portal, admin etc. You should select the option who you are. Here we select Users Portal.

B) Registration Page

In case you choose Users Portal, you will be redirected to User Registration Portal. For Registration you will be asked your name, contact, email, password, birthdate and the type of the vehicle you own. It is one-time registration

C) Login With Your Credentials

If you have already registered yourself then you can directly login instead of registering again. Login process is one-time activity. Onwards you just have to open application and you will have user's portal with your logged in account.

D) Main Page

After login you will be redirected to the main screen where you will be displayed your current location with the nearby registered mechanic shops. You can also see the distances of the shops from you. User Can Select any of the Mechanic shop and can send request to the shop. While sending request to the shop, you have to describe the problem with your vehicle in short. Your current location will be fetched through the GPS and will be sent with the request. Also the users will be displayed information about the shop.

There are other panic buttons like SOS, Contact Emergency services etc, which will be helpful in emergency situations. Your Current location will be fetched and will be sent to proper emergency authorities.

4.2 Mechanics Portal

A) Select Mechanics Portal

If we open the application for the first time, you will have options like users portal, mechanics portal, admin etc. You should select the option who you are. Here we select Mechanics Portal.

B) Registration Page

In case you choose Mechanics Portal, you will be redirected to Mechanic Registration Portal. For Registration you will be asked your name, contact, email, password, birthdate, name of the shop, opening and closing time and shops location. Owner can select the location on map or can fetch its real time location using GPS. It is one-time registration

C) Login With Your Credentials

If you have already registered yourself then you can directly login instead of registering again. Login process is one-time activity. Onwards you just have to open application and you will have Mechanics Portal with your logged in account.

D) Main Screen

If any user sends request to any shop, then mechanics mobile will be notified with priority notification on his android phone. Such requests are shown in main screen. Mechanic will select request and can accept or reject that request. If one accepts the request, then the user will be notified that respected mechanic is responding to his request and the mechanic will be redirected to Driving Screen.

E) Driving Screen

As soon as mechanic accepts the request he will be redirected to Driving Screen which will work on google maps. Location of the requesting user will be considered as destination point. Mechanic will be guided the shortest path to reach to the destination point which i.e. requesting user.

5. FUTURE SCOPE -

A. Multi language support

Currently this application available just in English language which will be further expanded in n number of vernacular languages. This feature will be ease he operability of the application for both mechanic as well as the user.

B. Mobile verification

The application provides a smooth email verification functionality which will be further dilated to mobile verification. In this after the user/mechanic logs in, to verify the device a OTP will be sent a recipient's device through a normal SMS. The recipient will enter received code into the application and thus the device will be verified.

C. Data Analytics

Considering the extension in the volume of usage of the application. We need to handle user data and process the extracted and categorized data to identify and analyze behavioral data and patterns, and techniques vary according to application's requirements. This feature also varies useful for business selling automotive part as they can use the data to analyze where the requirement of goods is the most and areas where there are no shops for a greater range can be an ideal location to start a new mechanic shop thus enabling a scope of employment.

6. CONCLUSION

We successfully were able to achieve the goal of creating an application where users were able to attain help at any point, anytime and anywhere in case of exigency considering a situation of vehicle breakdown. This application is over reducing the gap between a user and mechanics communication which would be almost impossible in physical environment. As a result, we victoriously were able to help mechanics to improvise and expand their business processes and thus opened floodgates to set more such businesses. As for the users, they are few clicks away from efficient mechanic's services which would have been tedious otherwise.

7. REFERENCES

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