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Emergency Vehicle Breakdown Assistance using Android

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Abstract: ***People nowadays prefer to commute in their own vehicle to avoid traffic and annoyance. However, in the event of a breakdown while travelling, finding a repair in an unfamiliar location is quite difficult. As a result, we presented a mobile and web-based help solution to solve this problem. All mechanics will be able to register with their service information using this system. The end user, on the other hand, must download and install a mobile help programme on their Android device. When the user is online, the mobile app will track his current position and save it in a database. The system will generate a list of nearby service providers based on the user's current location, which will be saved in the user's smartphone. When the user searches for a service provider, the list is presented and saved in the user's mobile phone, so that if the user's car breaks down and his phone is out of range, he may still see service providers closest to the prior position that the system monitored. When the user searches for a service provider, the list is presented and saved in the user's mobile phone, so that if the user's car breaks down and his phone is out of range, he may still see service providers closest to the prior position that the system monitored. When the user searches for a service provider, the list is presented and saved in the user's mobile phone, so that if the user's car breaks down and his phone is out of range, he may still see service providers closest to the prior position that the system monitored.***
Keywords: Vehicle, Breakdown, Assistance, Android, Flask API

I. INTRODUCTION

Most individuals nowadays go by own vehicles. Most drivers confront problems on the road when their vehicles break down. Vehicle breakdowns squander the user's valuable time. That is the worst experience they will ever have. In addition, it creates fatigue during the voyage. When a car breaks down on the road, the driver must look for a mechanic and a spare-parts store nearby. If the motorist is unable to find a good mechanic, he or she must seek assistance from someone, which may or may not be technical assistance. However, if the motorist has an Android phone and is utilizing this vehicle breakdown support, he or she can discover a suitable mechanic within minutes. A few minutes the most significant advantage is that the user may locate a mechanic based on their location. If a person needs car spear-parts, he or she can look for any business. If a user has a technical question about their car, they may ask it via chat. The assistance will be very simple where the user can just request the service by just clicking in seconds, they need to just select the location the type of vehicle and request the service. The service will be provided in minutes by the verifies mechanics in the application. Nowadays in the modern world all are running for their work where the people are not having required time to wait and get done their work so the application will be big relief to the persons who get their vehicle issues like breakdown when they are moving to a meeting, they can use this application to get instant service from the mechanics who are available in the nearest locations

II. LITERATURE SURVEY

The latest technical breakthrough in the realm of mobility has greatly astonished today's society. According to the AAM annual report, around 70% of service issues are fixed swiftly, which is regarded as a small failure breakdown issue. Minor failures have been classified into numerous categories, including engine failure start-up, engine failure heat, lockout, and others. This data comes from a single organization and does not include other services accessible around the country.

This obviously demonstrates that the number of cars facing such an emergency circumstance necessitates the availability of the service. For starters, the current manual method is incapable of dealing with the transaction request adequately. Staff are hampered by the manual approach since they are unable to respond quickly owing to a lack of a streamlined system with appropriate information available. Second, the present products lack rapid reaction capabilities. When there is an emergency request, this inhibits the consumer's ability to receive a timely answer. In the present products, the call centre hotline handles emergency requests as an intermediary before reaching the providers. As a result of the excessive wait times at the call centre, customers receive delayed replies. According to Akhila V Khanapuri et al. (2015), the number of autos on the road, the number of road accidents, and the number of vehicle breakdown occurrences reported has all increased exponentially. Finding effective strategies to maximize fuel efficiency without jeopardizing the internal structure of these vehicles, as well as providing a crisis response system, is a challenging task. The major objective is to establish an easy-to-use system that also serves as a platform for rapid access.

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III.PROPOSED MODEL AND MODEL DESIGN

A. Existing System

In the current method, the search result is only available when the user is within range, making it extremely difficult for the user to obtain the service, particularly in remote locations. Assistance through hotline is especially prone to unavailability, which exacerbates the travelers' experience. Here the user can only see the mechanic details where he cannot request any service through the application and moreover the chat system is not available so that user cannot chat with the mechanic.

B. Proposed System

More services and assistance are offered to the passenger to ensure that they have a pleasant travel experience. Using Google Maps Navigation System, the traveler may easily access services depending on their present location. The services are offered in a variety of formats to ensure that passengers get the most out of them. The system advises travelers to select the finest service.

C. Dataset Preparation

The mechanics will register in this application using their unique username and password, log in to their apps, and accept the services. The admin will be able to authorize mechanics by double-checking their identification and determining whether the mechanics are trustworthy; this information will be recorded and saved in the database as a dataset.

IV.SYSTEM DEVELOPMENT

A. Admin Module

The top-most module is the Admin Panel, which allows the system administrator to log in. Admin can approve or reject outstanding requests from various service providers. The administrator may also check the list of service providers who have registered with the system and assess their ratings**.**

B. Mechanic Module

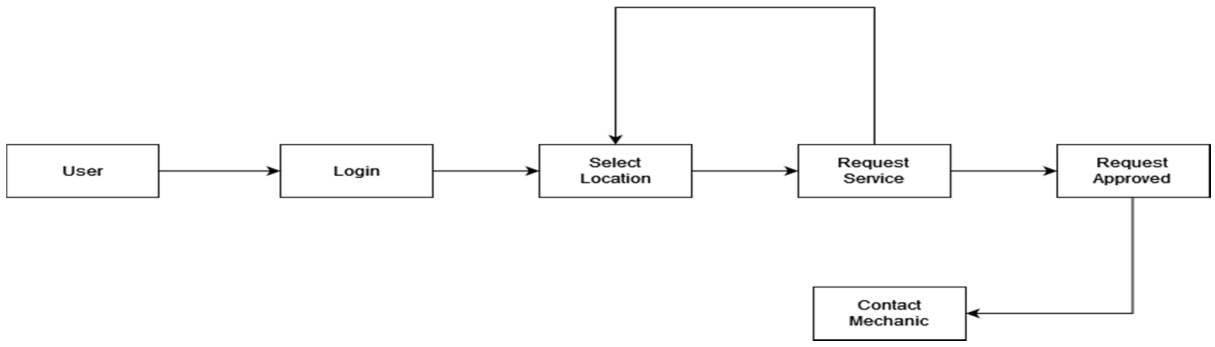
This module enables mechanics to register with the system. As soon as the admin accepted the mechanic's request, the technician became available for service to the customer. Mechanics may also manage services and profile information. When a consumer submits a request to a certain service provider, mechanics can contact the customer who submitted the request.

C. User Module

Normal users may request service using the Android app, and they can search for and contact the nearest service providers. Customers' ratings and reviews will be used to make recommendations. This module is accessible to all system users that can log in to the app. The app also recommends offline service providers. When the internet is available, the position is tracked using GPS and a summary of available service providers in the surrounding areas is generated.

V. DATA WORKFLOW

The diagram below depicts the user's workflow, including how the user will be able to create his or her own account, how he or she will login and work in the application, how the service will be requested, and whether it is approved or declined; otherwise, the request will be timed out if no service provider is available in the nearest location.



Workflow Diagram

VI. RESULT ANALYSIS

This is the result analysis where the user will be provided with an android application where the user can create account and login using the application and request the service to the mechanic.

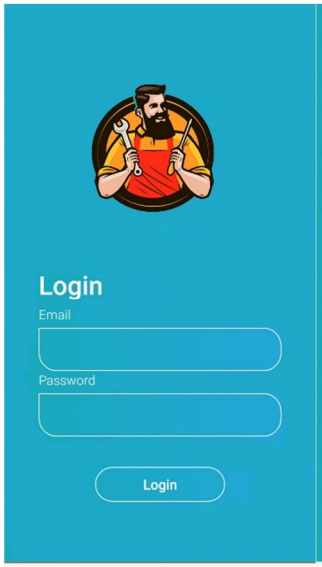


Fig.1 Login Screen

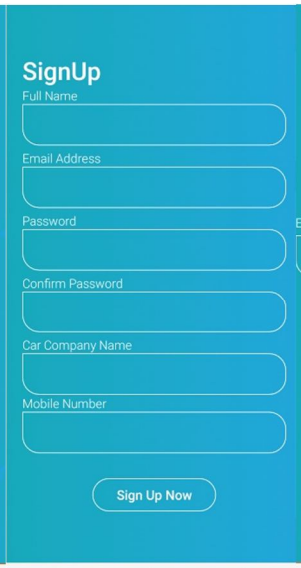


Fig.2 Signup Page

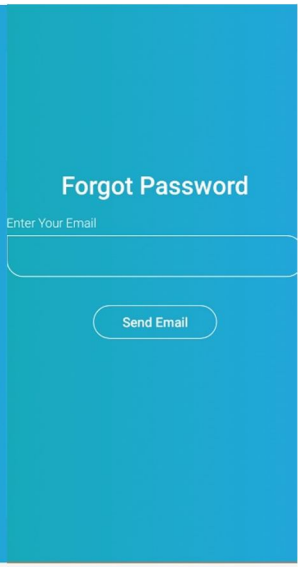


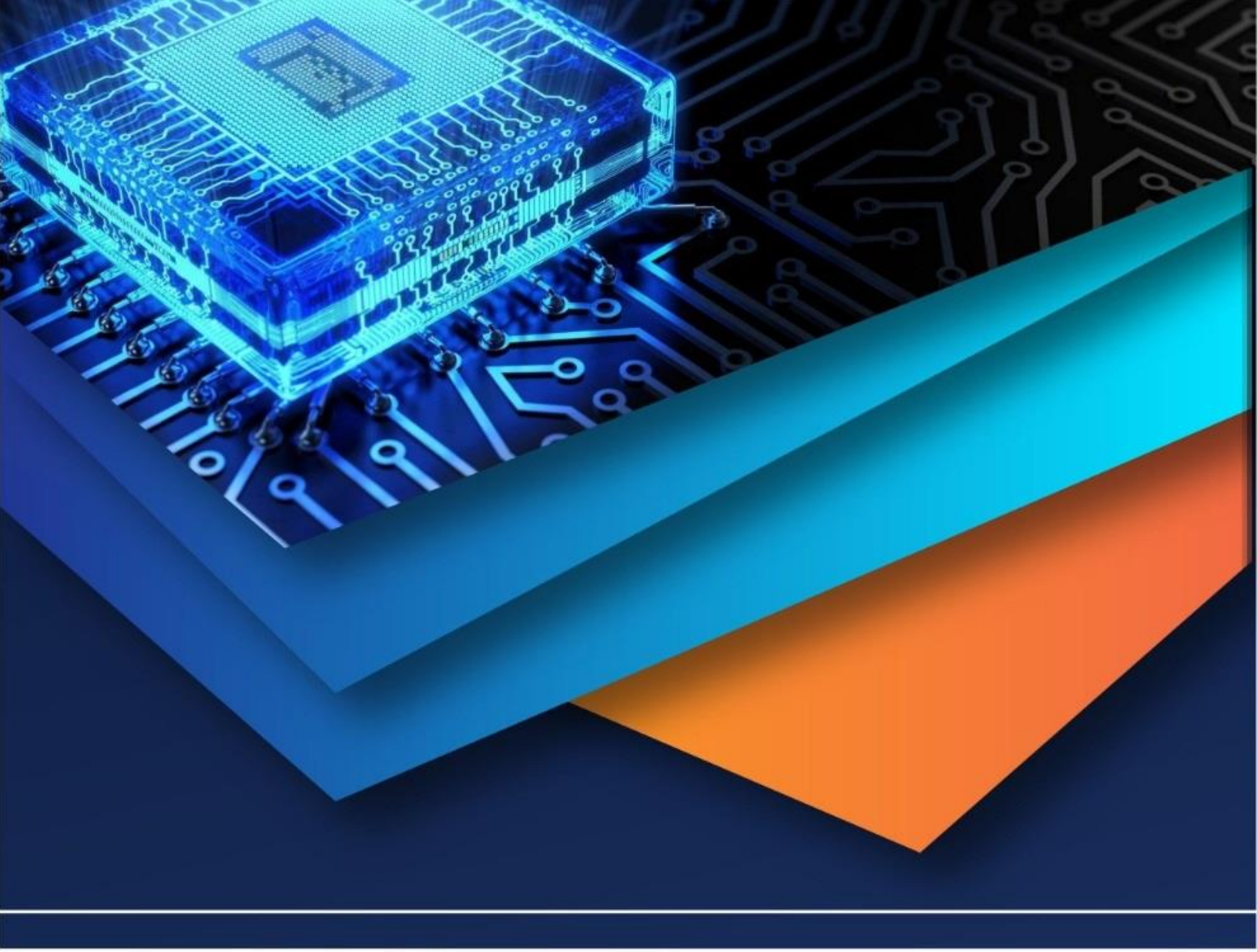
Fig.3 Forgot Password Screen

VII. CONCLUSION

As a consequence, our emergency vehicle breakdown service provides superior location results. Our programme quickly detects nearby locations, which is extremely valuable for users in emergency situations. It also features an offline mode that provides recommendations when the internet is not available. This technique simplifies the user experience and outperforms the old system in critical situations.

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