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Vehicle Breakdown Assistance System

A. Surekha[1], Y. Sri Harsha Vardhan Reddy[2*], D. Supriya[3], A. Neeharika[4], R. Venkat Hemanth[5], Y. Chenchu Reddy[6]

[1]*Assistant Professor, Department of Computer Science and Engineering, Siddartha Institute of Science and Technology, Puttur, India*
[2,3,4,5,6]*Student, Department of Computer Science and Engineering, Siddartha Institute of Science and Technology, Puttur, India*

***Abstract*: Traveling day to day became an integrated part of life for everyone. To travel from one place to another, we use different types of vehicles. A machine is not for a lifetime and has day-to-day usage in various conditions. Many breakdowns can be resolved on the spot by self-repairing or by mechanics who are nearby to us. What if the breakdown happens in a remote area when we are going to some other places. At that time, it is difficult to find a suitable mechanic to get repaired; if so, found it will be a time taking. These problems are the motivations for the development of this project to help those who are in need when their vehicle breaks down along the roads. Our project is to develop an application that solves the problem by making the availability of mechanics to the user's exact location in no time, and some other services are also provided.**

***Keywords*: Mechanic, application, traveling, breakdown.**

1. Introduction

Now-a-day's most people use their vehicles for their transportation. While traveling most of the peoples facing problem is vehicle breakdown on the road. It may have many reasons to breakdown, like low fuel, engine repair, tire puncture, hardware repair, etc., This causes a waste of time and the worst experience they have to face. In this type of situation finding a mechanic in that remote location is highly a headache to the people. So, it's hard to find a mechanic or emergency assistant in the middle of nowhere. If so, they find a mechanic also we don't know whether the mechanic will repair our vehicle type. But if the driver has an android phone, he can easily locate the workshop and mechanics with their profile details through our app. Once upon a time mobiles are rare, they were used only for particular small tasks like calling, Texting, emails, less amount of internet is used and apps usage is very less, nowadays all are changed the peoples are spending more time on mobile usage, most of the peoples are well known about the usage of an application. Our application provides a user-friendly interface. User can save their time by finding nearby mechanics with the help of a mobile phone. Another very significant benefit is that now the person can locate a specialist based on their position. It will help to create a platform that will help mechanics and drivers work more efficiently. Hence our application provides direct communication between the user and the mechanic. This device provides the problem by supplying mechanic information in a single click. The locator here helps you to look for mechanics in various locations. Through mobile assistants, finder saves time and allows you to find technicians in a variety of locations. It saves you time and money. The main goal is to have better service, make the process easier, and then quickly hire a mechanic. The user must first build an account by logging in with his phone number or a username and password, as well as mechanic, also should log in to his/her profile to be visible to the people who are near to him and seeking help. The most remote locations can now connect to the internet, so we can now use this application, which can be used by people in distress due to a breakdown to incorporate the many potential assistance that can be given during the journey. Individuals with Android phones and tablets can download our application and use our assistance service whenever they need it. Our app provides 24/7 services as we don't know which time break down happens. We provide safe and secure services.

2. Existing System

A car breakdown service station locator system is connected Car Repair Service Provider (CRSP). The user could enter information with the place of breakdown into the system and it will automatically search for nearby Car Repair Service Provider who registered with the system. The On-Road Vehicle Breakdown Assistance is like a car breakdown service station locator. But there is a chat platform to discuss the type of breakdown and exchange ideas about vehicle breakdown. In this system only provide the service only the car. The user's information should loss and the services is not effective. There is no existing road side assistance for all the vehicles. only certain manufacturers provide this service that too only for high end cars. Used cars or old cars don't have this facility.

3. Proposed System

The proposed application helps to find mechanics easily and quickly. It is difficult to find mechanics nearby area wherever you are travelling. 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. Admin is allowed to access and manage mechanic details. This online mechanic locator reduces work and can easily find the mechanics from various location. Reduces your time and cost. The main objective is to provide a better service and to make

*Corresponding author: harshastudent224466@gmail.com

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. User can send a request and can appoint a mechanic on respective date-time.

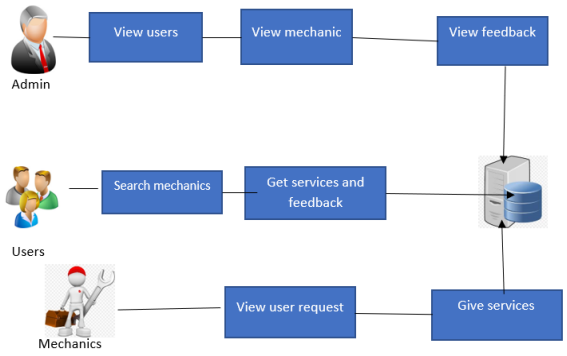

Fig. 1. System architecture

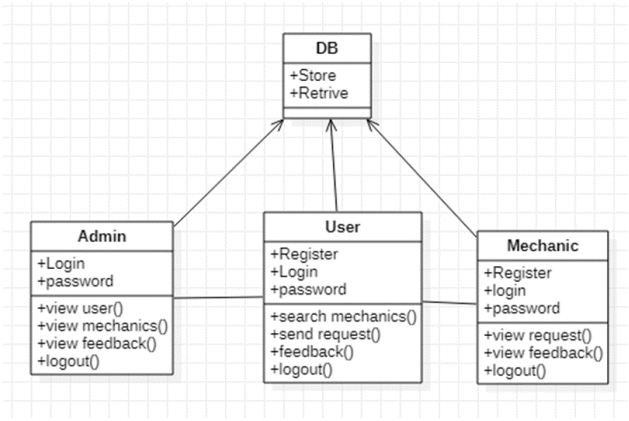

Fig. 2. Class diagram

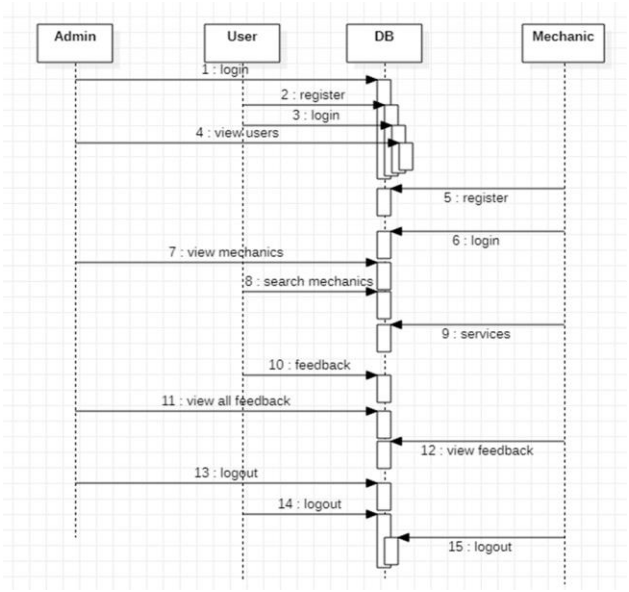

Fig. 3. Sequence diagram

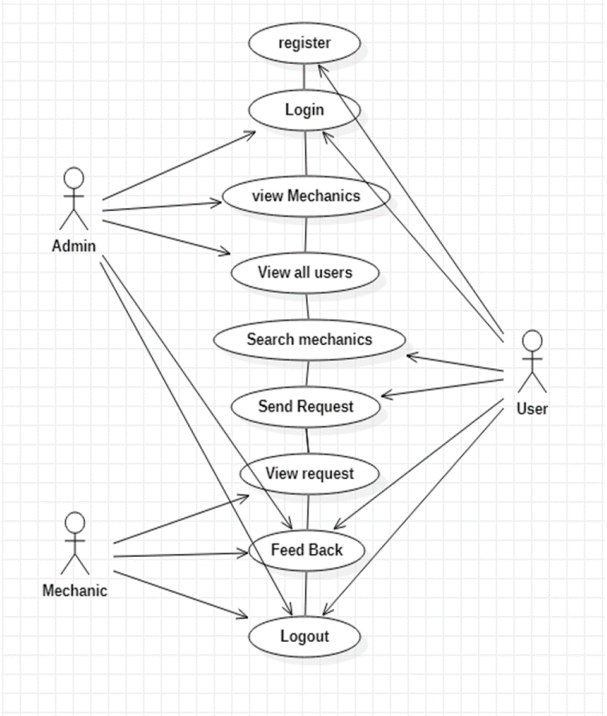

Fig. 4. Use case diagram

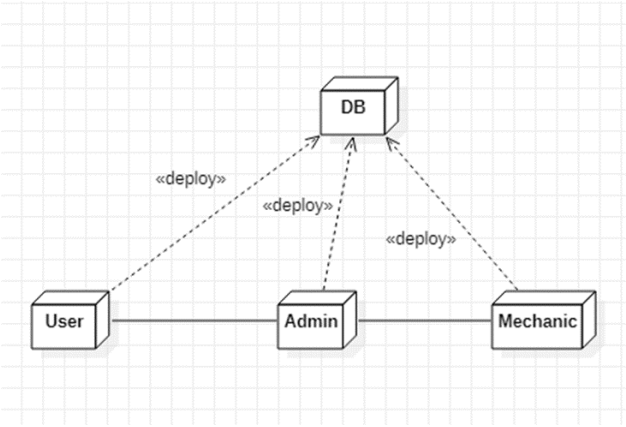

Fig. 5. Deployment diagram

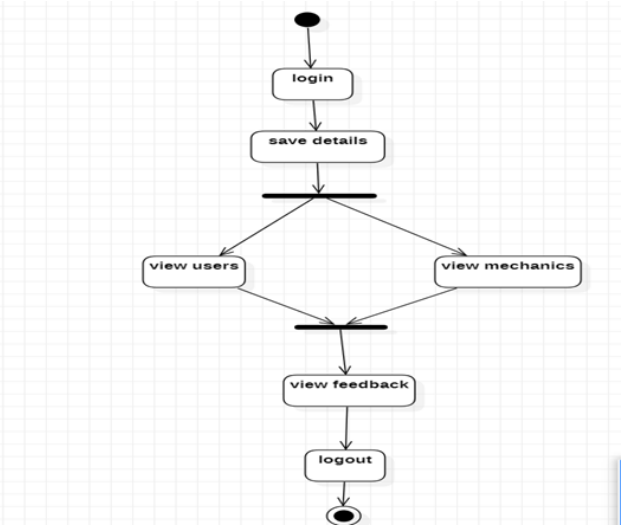

Fig. 6. Activity diagram

4. Conclusion

While the chances of a properly maintained vehicle experiencing a breakdown are slim, it is never a possibility to predict when the user may experience a vehicular breakdown. The web application developed here promises to make the life of a vehicle owner that much easier, as even in the probability of a 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. The proposed system promises to act as a source of protection against the unpredictability of a vehicular breakdown and offers the owner of a particular some peace of mind in the event of operational failure of the user's vehicle.

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