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# Automobile Workshop Management System

Sneha Mehta and P. Vishnu Vardhan Raju, Anil Challa, N.Sai Pavan, D.Shashank. Department of Computer Science and Engineering, Hyderabad Institute of Technology and Management, JNTUH, Hyderabad, Telangana, India.

"Corresponding Author: sneham.cse@hitam.org"

## Abstract

The Main objective of this Automobile Workshop Management System web application is to develop an online platform for automobile workshop so that users can book car service online, and provides live vehicle service tracking for their customers. The web application helps the customer with a hassle-less car repair service. A user can simply request for a repair service which is then forwarded to a technician who then makes a visit to customers place. The car is then picked from customer's location to the workshop and the required service is made. The whole process can be monitored by the customer from the website interface thus ensuring an absolute transparency and helps in building customer trust.

## INTRODUCTION

As per a survey conducted by a private automobile workshop based in Mumbai their customers are not satisfied with the traditional car repair service system. We proposed them a website to provide best customer service and also an efficient online platform to manage their workshop. The website helps users easily book an online car repair service and just wait for the workshop technician to arrive. The technician identifies the vehicle problems and discusses with the customer and makes a list of problems identified and updates them to workshop with the interface provided to the technician. The technician updates the pickup and drop status to the customer. When the car arrives at the workshop, the workmen are allotted and notified to the user. The user can now see a live stream of car service at the workshop. The feature is most requested; Most of the customers don't trust the workmen as there is always a doubt of extra charges and other issues related to internal parts of the vehicle. When the car service is completed the live feature is turned off and user is provided with the amount to be paid and user can pay the amount online. The technician then drops the vehicle at the customer's drop location.

## LITERATURE SURVEY

The survey regarding this application includes information gathering from various sources. These sources include some of the car
Showrooms and service centers, various related websites and similar projects developed previously.

The traditional vehicle repair service requires the customers to bring their vehicles to the workshop and has to wait till the service completes .The user cannot schedule a service so this approach doesn't to the needs of modern society.

[1] Car and Bike is a somewhat similar kind of application developed by the NDTV. The application provides a feature to book service from a list of available dealers. There are other applications which are very much like the NDTV's application.

[2] The Carcrew.in is also a similar kind of application with pickup and drop of the vehicle

from customer's place, however, the website is known to show a generalized report and estimated price of service and repair based on vehicle manufacturer and model.
The proposed system is particularly for a workshop and provides extra features that facilitate complete transparency and helps improve the consumer experience. The Features included in the proposed system are

-Live Streaming of Service
-Specified report for the vehicle after inspection
-Online booking
-Order management for Workshop
-Easy and Secure interface for customer

## METHOD AND ANALYSIS

**System Overview:**

The web application consists of three modules Customer Module, Technician Module and Workshop module. The web application provides customers to book car service, manage their orders, provide service tracking and live stream of car service and the technician module provides an interface for technician in order to update and provide status and other information to the workshop and customer. The workshop module provides the information about the order of a service which includes identified car problems, customer details and the interface consist controls to enable live stream feature on the start of servicing an order.
The application provides a fast and hassle-free way of car-repair service. The web application flow can be described as follows:

1. The customer visits the website and creates an account and then logins to his account.
2. The customer from his account panel chooses to book and selects the date of service, slot and confirms the booking. The User can now view the status of the order in the orders section.
3. The technician visits the customer's place and verifies the authenticity of customer and identifies the problems and reports to workshop with the help of technician module.
4. The workshop can see order details along with the identified problems and customers details.
5. The workshop services the vehicle and notifies the customer the start of service and enables the live feature for the customer.
6. The customer can view the service at the workshop if he wants.
7. The workshop notifies the completion of the service to the customer and the customer has to pay for the service.
8. The technician then drops the vehicle at the customer drop location.

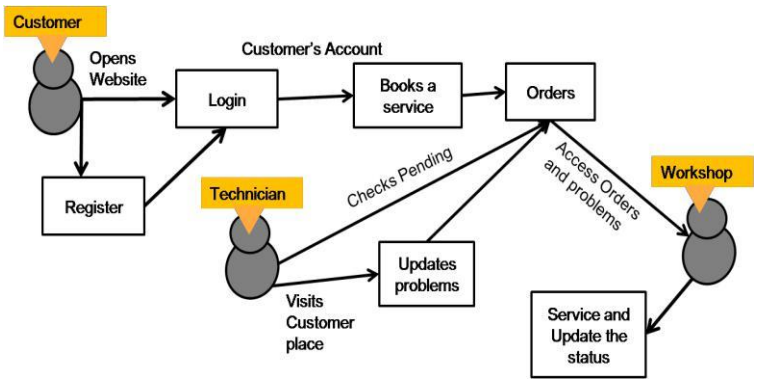


Figure 1: Process flow in automobile workshop management system

## REQUIREMENT SPECIFICATION

The system analysis is done keeping in mind the following key requirements:

- The user should be able to access the application from anywhere.
- Provide a simple and user-friendly interface on the client side.
- The system shall enable to provide the required information for the user.
- The system shall provide booking, manage his current and past orders, view live stream of service.
- The system shall allow user security and transparency

## SYSTEM

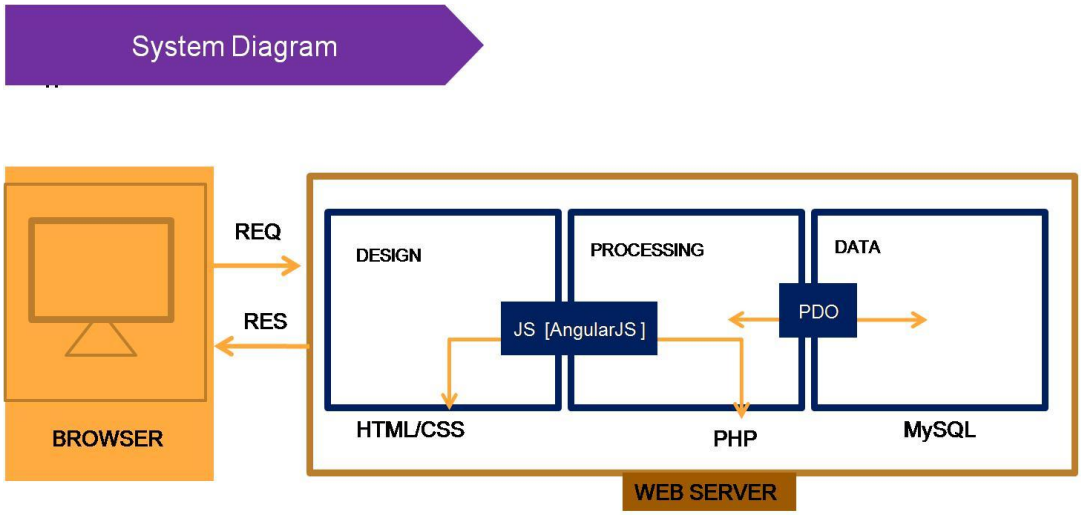


Figure 2: System diagram

The working procedure of this system can be seen in through three different modules(as shown in figure 3).

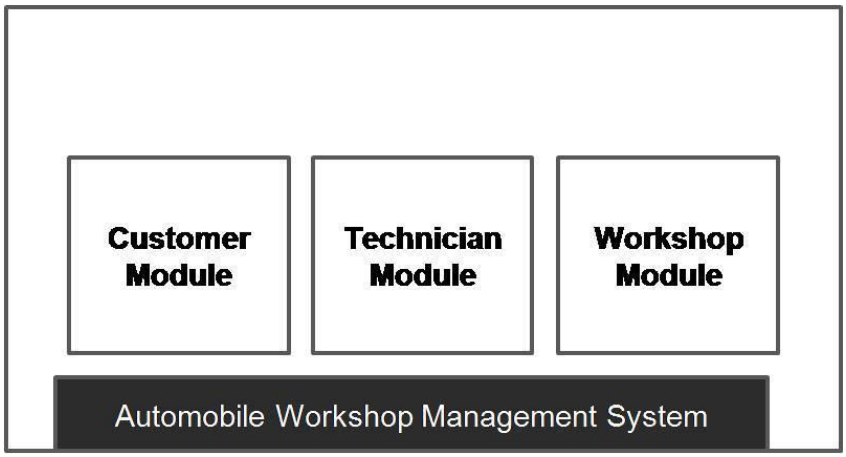

Figure 3: Modules of the application

I. Customer Module

II. Technician Module

III. Workshop Module

## I. Customer Module

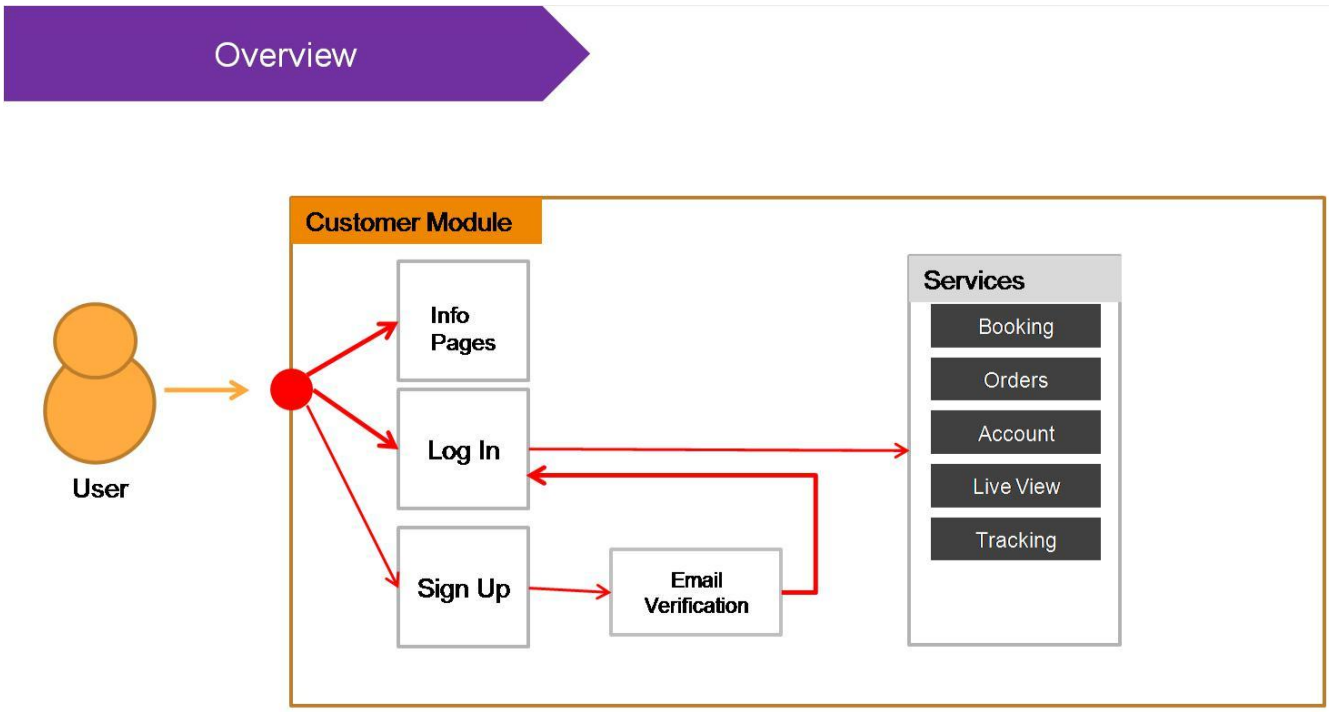


Figure 4: Services offered to the customer by customer module.

Customer module provides feature for the customer to know about the service and a customer can register an account and can login to his account.

The customer's account panel provides with features to book car service, know status of car service, manage orders and view live stream of car service.


Figure 5: Screenshot of Sign In (Login) screen.

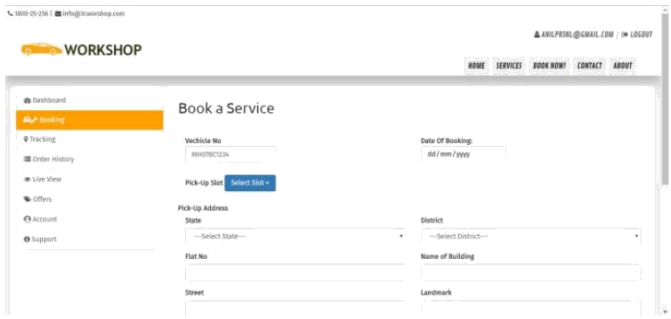


Figure 6: Screenshot of booking screen.

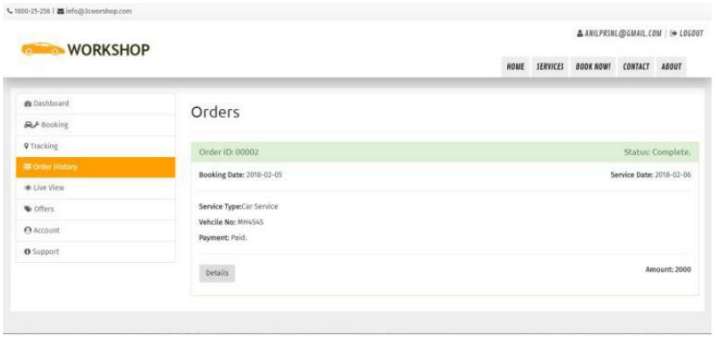


Figure 7: Screenshot of orders screen.

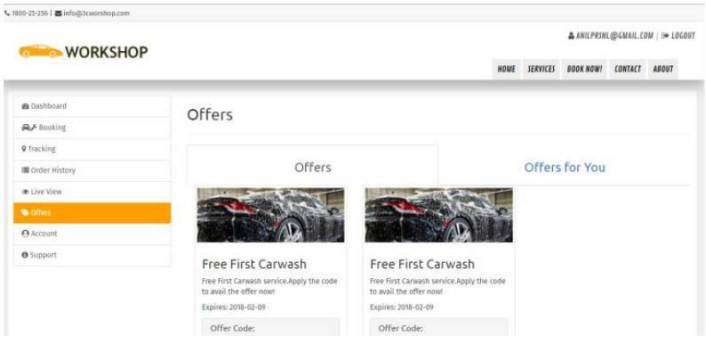


Figure 8: Screenshot of offers screen.

## II. Technician Module

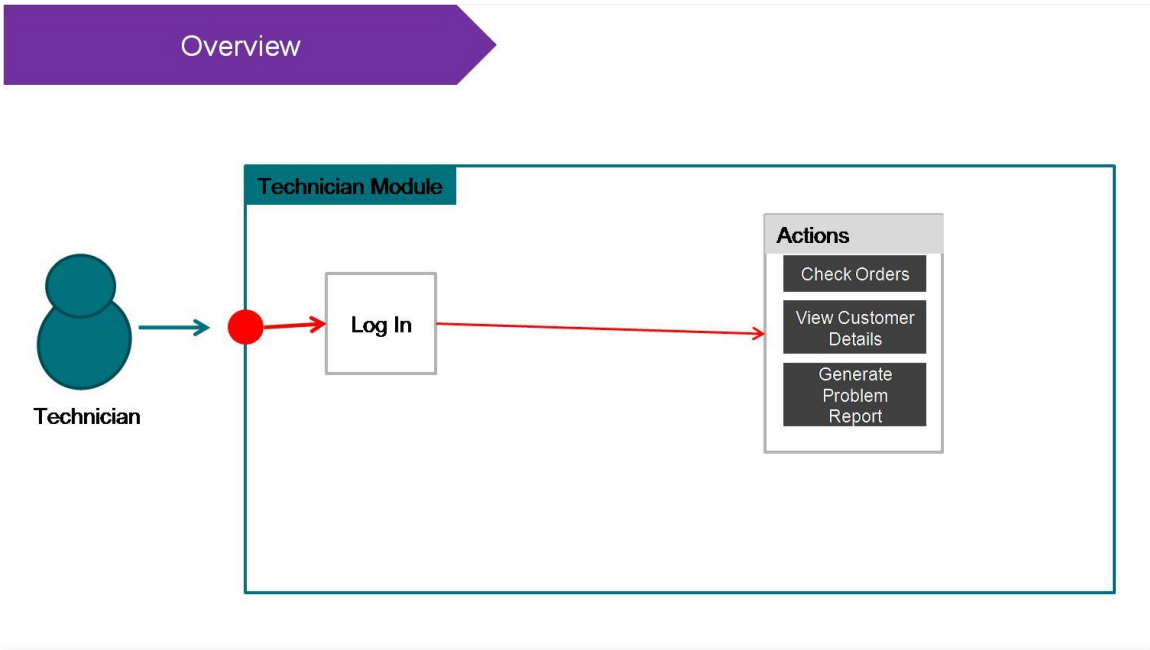


Figure 9: Technician Module Services.

In Technician module provides an interface to the technician to update vehicle problems to the workshop. It also provides interface for the technician to update vehicle status.

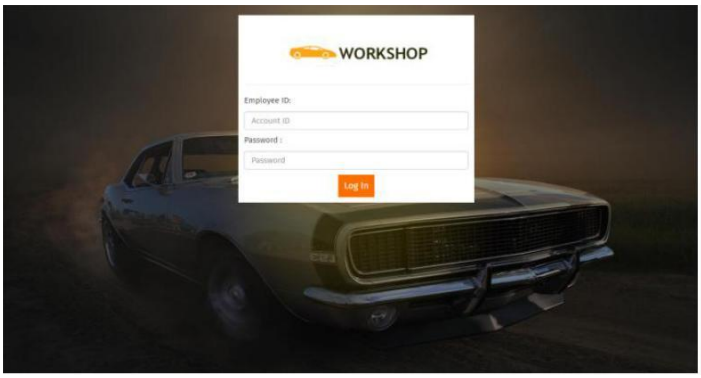


Figure 10: Screenshot of Technician Module Login Interface.

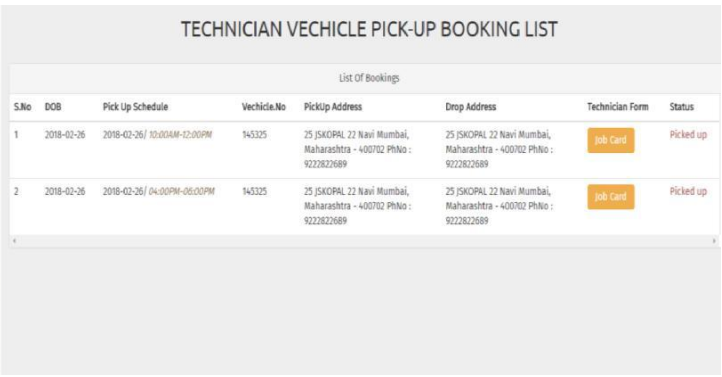


Figure 11: Screenshot of Technician Module Orders Page.

- The Technician module provides a login for the technicians to login and performs actions.
- The Technician can view all the pending orders for car service.
- The Technician can update identified problems of a vehicle to the workshop.
- Technician module provides options to update vehicle status in transit to customer

**III.Workshop Module**

- This module helps the workshop manager to view all information related to orders to be serviced.
- The module also provides the problems identified by problems for an order and extra problems and comments can be added through the interface provided.
- The module enables option to enable live stream feature so that customer can view the service.

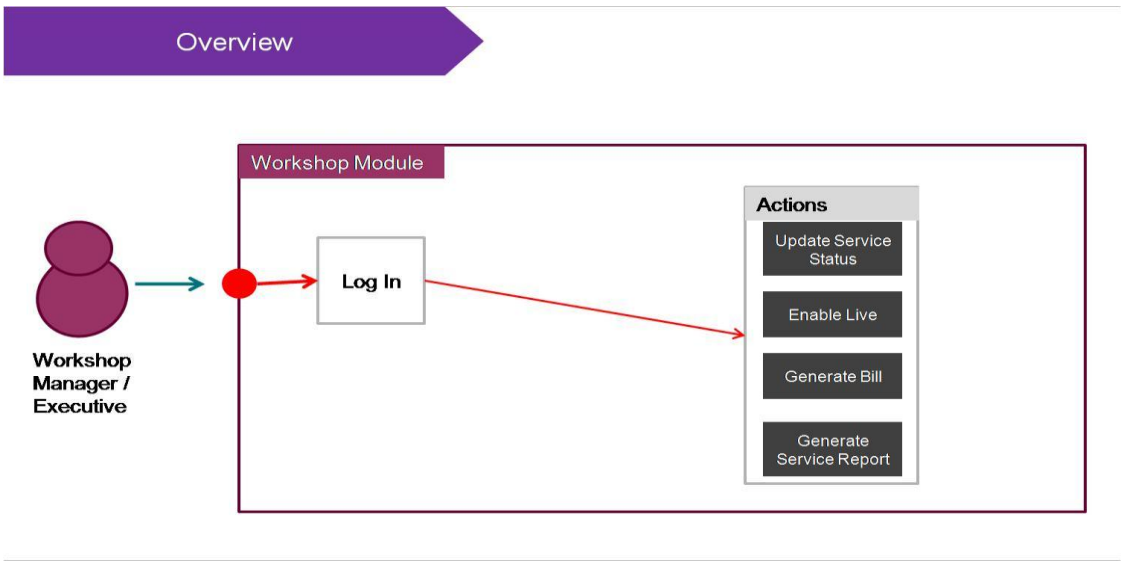


Figure 12: Workshop Module Services.

## REFERENCES

[1] Umi Sa'adah,Jauari Akhmad,Masfu Hisya "Implementing Singleton method in design of MVC-based PHP framework",IEEE,Sept 2015.

[2] Pardeep Kumar, Anupama Kaur,"Webpage Generation from Enhanced Content Management System using PHP Data Objects"IJARCSSE,Volume 6,May 2016

[3] Ms. Supriya Thombre, Gaurav Diyewar, Samruddha Barai, Pranay Tiwari "Online Video Streaming System",IJARCS,Volume 2,May 2014.

[4] Chanchai supaartagorn,"php framework for database management based on mvc pattern" ,IJCSIT, Vol 3, No 2, April 2011.

[5] Andris Paikens, Guntis Arnicans,"Use of Design patterns in php-based web application Frameworks", LATVIJAS UNIVERSITĀTES RAKSTI,2008

## AUTHORS

Sneha Mehta B.Tech, MBA is an Assistant professor of computer science at Hyderabad Institute of Technology and management.

P.Vishnu Vardhan Raju is a B.Tech Student in the Computer Science and Engineering Department at Hyderabad Institute of Technology and management.

Anil Challa is a B.Tech Student in the Computer Science and Engineering Department at Hyderabad Institute of Technology and management.

N.Sai Pavan is a B.Tech Student in the Computer Science and Engineering Department at Hyderabad Institute of Technology and management.

D.Shashank is a B.Tech Student in the Computer Science and Engineering Department at Hyderabad Institute of Technology and management.