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Automobile Workshop Business Portal

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Abstract - *Nowadays, technology is on a boost. People always wish to live a luxurious life with minimum physical work. Here we provide a website for 'Automobile Service Center'. This project is an Out-house project and is solely based on the requirements mentioned by the client. This website focuses on fulfilling the required needs mentioned by the client. The website is developed for an automobile service center i.e. "Manan Automobiles, Vapi". This website is a site which can be run on any compatible tablets, PC's, laptops and mobile phones. The website will enable any car user to search and communicate with the client service center. The user can find his way to the service center, get it's location and check and select any of the services provided by the service center. The user can search for the location, get notifications for servicing, purchase as well as even sell his vehicle to the dealer. The dealer processes the required need and provides the services mentioned by the customer. This website also enables the service providers to store customer records, worker records and also enables monthly progress tracking of the workshop. The website is provided with an extra feature of buying and selling workspace too. The application would also deal with the database and security of the data. Thus we are developing an application which matches hand in hand with the new age technology and characterizes – user friendliness, informativeness and time saving.*

***Key Words*: Web portal, database, workspace, storage.**

1. INTRODUCTION

The Internet tends to be the backbone of all the technologies. This project is a progressive step in the field of service centers. This out house project "Automobile Workshop Business Portal'' is to be developed for maintaining the service center activities such as, car maintenance, customer quotation generation, car sales, car services and spare part sales, customer follow up details, customer feedback form entry and employee details. The system is efficient in generating reports which will help in maintenance of the service center easily. It can also easily manage car booking, repair cars, delivery and various services etc.

This project is basically a website which contains different domains merged together. The website will have different options: 1. Admin side view 2. Customer side view 3. Page to buy-and-sell vehicle. This project is very helpful for customers who want to repair or service his car. Any car user can make use of such a portal to locate and communicate with the service centers in the vicinity. This system can show the location of service centers through google maps.

The system will show the monthly progress tracking of a service workshop via graph or pie chart. The progress tracking record can be seen by the admin as well as the customer. In this system, we are using a database server for storing the data in organised form without losing it. The system will store all the data of customers and employees into the database. All the data is stored on a hard drive array server which will provide and protect the privacy online. The information about customers such as customer's personal details, vehicle details, vehicle servicing details can be stored securely on the cloud. An SSL encrypts all data that passes through the website to the server, so visitor's information is safe. The system consists of a workspace for buying and selling of vehicles where the customer can buy and sell the vehicle.

2. Literature Survey

The survey regarding this application includes operations from various different sources. These sources include a variety of the car showrooms and repair centers, various related internet sites and similar projects developed previously.

Suhas Holla and Mahima M Katti et al. [1] focused on Android Based Mobile Application Development and its Security. Android Mobile Application Development can be used to create dynamic and innovative third party applications. Android Application development is a faster growing subject all over the world. Mobile Development India has worked extensively on projects ranging from gaming software, organizers, media players, picture editors to go-kart devices and more. SQLite is embedded into android which supports relational databases. The services provided by the android application are easy to use and effective for the common man to use. But the issue with android applications is that they are sometimes inaccessible and some people even do not tend to always download and use the application.

Prof. Shilpa Chavan et al. [2] proposed Automobile Service Center Management System. In this paper, it is stated that the project is an android application and the system used is serial communication system. Automobile Service Center Management system consists of two main components: a client-side application which can run on Android handsets, and a server-side application which can support and interact with various client-side features. The

user can find the service center, and get the location and select any of the services provided by the respective service center. The user can send requests for pick and drop, appointment for servicing, test drive as well as accessories purchase to the dealer.

Prof. Hanamant B. Sale et al [3] proposed an Online Management System for Automobile Services. An online website application system is explained. It uses normal front-end properties and NoSQL as a database. The application is designed to work at the user side ignoring the server side. It does process essential features but also does lack features like location specification and server side services.

Pratibha Yalagi and Chaitrali Dangare et al [4] proposed Design of an Academic Website Portal Providing. The website provides E-Learning facilities like assignment submission, learning, examinations, records. It does provide essential and basic facilities but does not meet the security criteria. They have provided effective means for E-Learning but no security mechanism was mentioned.

Dinesh Hasabe, Nikhil Mane, Rahul Sanap, Abhilash Gursale et al [5] proposed Web Portal for providing various services. The system provides basic services and additional services like the mail response system, data security using AES algorithm. Here data is secured using the AES encryption algorithm. But the proposed system fails to mention any system for scheduling tasks and handling services. That is there is no system for scheduling a service or maintenance.

3. Proposed System

The application consists of two components: the admin-side and the customer-side. The system would work for the customers and for the admin differently. The content available for the customer would be different from that of the content visible to the admin. The admin would definitely have access to view the customer side page but the customer would not have any access to the content of the admin. The data entered by the customer would be stored safely using NoSQL database and would be referred for future use.

4. System Architecture

System at the Admin side:

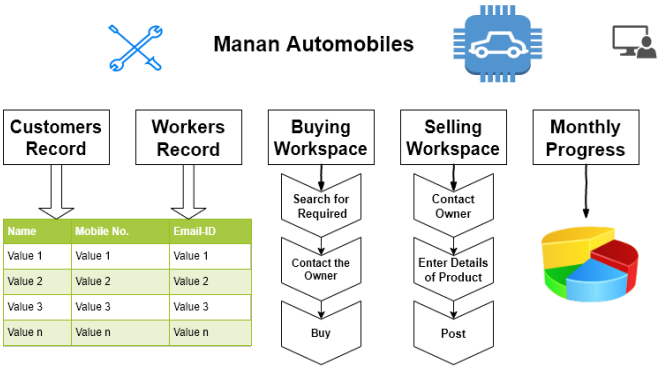

Fig.4.1 Block diagram at Admin-side

At the admin side: The admin would be able to access the customer records, the workers records, the buying and selling workspace and the monthly progress of the workshop. The customers records at the admin side refers to the details of the customers, the servicing done to their vehicles, the additional features provided as per the customers requirement, the charges paid by the customer and the track to schedule the next servicing date. The workers record at the adin side consists of the attendance of the workers, the amount of time the workers worked, the number of days the workers worked and the payment to be made as per their work. The buying and selling workspace would be more complicated at the admin side rather than the customer side because it would be a long process here. The customer who wants to sell his vehicle would be required to talk to the admin of the centre, the admin would then have a check at the vehicle if the condition is proper or not, the deal would be made and the legal progress would be carried out. After buying the vehicle from the customer now the selling process would take place where the admin needs to find the perfect buyer for the vehicle who would give a proper amount for the vehicle received. After the interested buyer agrees to buy the vehicle again the legal progress would be carried out in order to remain at a safer side. Then the last task at the admin side would consist of monthly tracking of the profit or loss at the workshop. The monthly track of the workshop would be provided using the data from the database and then analysing it in order to provide the necessary graphs. By looking at the graphs the admin would get the monthly progress of the workshop and do the required changes if he finds his business declining.

System at customer side:

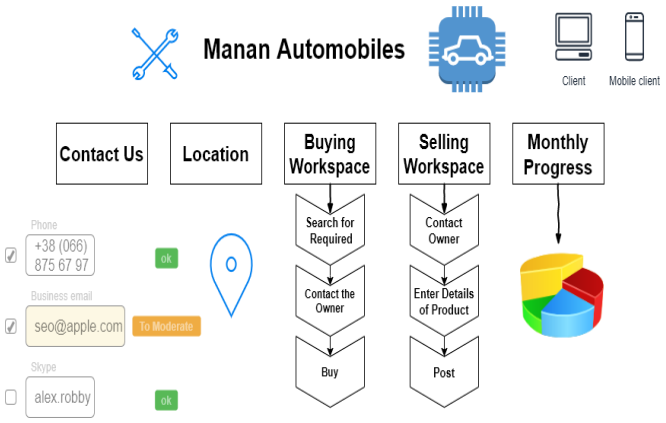

Fig. 4.2 Block diagram of the customer-side

At the customer's end:

The customer would be able to directly contact the service center and would be able to get the location of the centre when he searches for the workshop. He would be able to schedule his time for servicing as well as he would also get the notification from the centre when the servicing time has come. He does not need to track the time of the servicing of his vehicle, he would be notified whenever required. The buying and selling at the customer side would be half-half process. The one who wants to sell his vehicle would contact the admin and the one who needs to buy would again visit the workshop to buy his desired vehicle. The monthly progress the customer side comprises of the feature to keep track of his vehicle.

5. Results

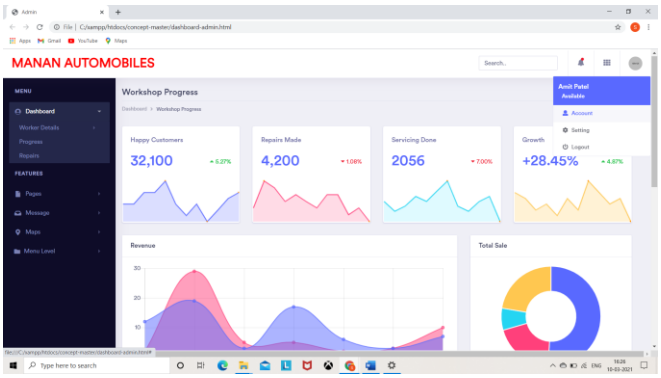

Fig. 5.1 Admin Dashboard

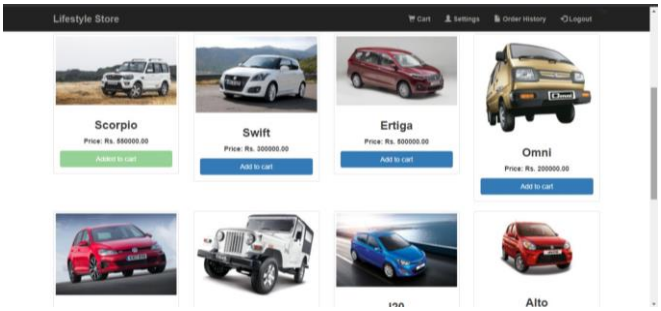

Fig. 5.2 Buy & Sell interface from Client Side

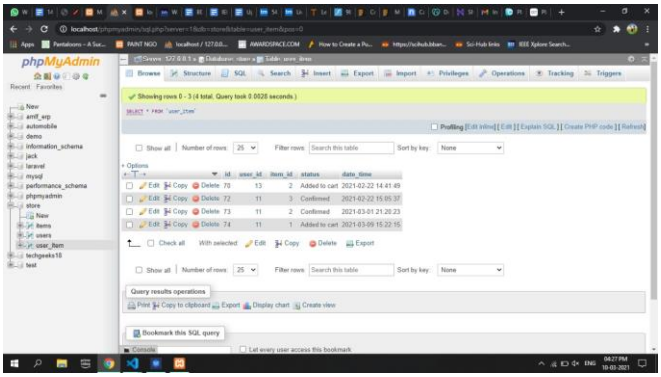

Fig. 5.3 Database storage

The admin dashboard as shown in the Fig. 5.1 specifies some of the main features for the convenience of the admin. The admin can view the notifications and the account details from the top right corner. The other features are provided at the navigation menu present to the left of the screen.

The Fig. 5.2 shows the Buy & Sell workspace that is made available at the client side. The client would easily upload the photo of the vehicle that he wants to sell and the price at which he wants to sell. The interested client who wants to buy the vehicle would contact the admin for the details.

All the data is stored safely to the database and can be retrieved only by the admin with the permission. A glimpse of the database is visible in the Fig. 5.3.

6. Conclusion and Future Scope

The proposed system shows the overall sequence, structure and working of the Automobile Workshop Business Portal. The portal provides good user interaction at the client side and visiting the site is absolutely free of cost and secure. The admin dashboard is quite easy to use and manageable, and it does provide all the necessary functionalities required for the admin at a single place. Thus, it is a cost efficient and time saving application. So, we can conclude that the provided system can be used to reduce the manual efforts and provide necessary requirements for the portal.

Future Scope can be after this successful project we can also make some changes in this project and Handover to Other workshops.

7. References

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