



WEBSITE AND MOBILE APPLICATION FOR AUTOMOBILE SERVICE CENTER

¹Prof. Uma Thakur, ²Manthan Borkar, ³Anshu Kamble, ⁴Payal Suryawanshi, ⁵Yashwant Mishra
¹Assistant Professor CSE, Priyadarshini Institute Of Engineering and Technology, Nagpur
²Co-Author's students, Priyadarshini Institute Of Engineering and Technology, Nagpur

Abstract: People always wish to live a comforting life without any physical work. Internet being the backbone of all the technologies, which provides a very robust infrastructure for any web based software. The Website and Mobile Application for Vehicle Service Center is a step forward in the field of service centers. The purpose of this project is to automate the overall process for the owner of the garage, mechanic and the user by finding out the various factors responsible for affecting servicing and maintenance process of automobiles for all in order speed up time required for it. Here, we provide the project paper on 'Design Website and Mobile Application for Vehicle Service Center'. Any Vehicle user can make use of such app to communicate with the particular service centre for which the service is provided. These are two applications an android app and website which can be used by the any automobile user according to their ease. Idea behind the proposed system is to provide as much as service to the owner of the service centre as possible. This system will provide services to the owner to monitor overall flow of the service centre like transaction of spare part, money etc. Only when user registers with necessary details, we are building this as user friendliness, in formativeness and time saving.

Index terms: Automobiles, Maintenance, Android App, Website, CSS, HTML.

I. INTRODUCTION

In the recent advancement of technology, the use of mobile applications and website have increased in this age to reduce the physical work of people. The Indian auto industry became the 4th largest in the world with sales increasing 9.5 per cent year-on-year to 4.02 million units (excluding two wheelers) in 2017. It was the 7th largest manufacturer of commercial vehicles in 2018. So it is important to make the services easy for their customer. This paper is based on to manage the work regarding servicing of automobiles and to monitor the work done by their staff. Here we provide the project on 'Design Website and Mobile Application for Vehicle Service Centre' which can be used in automobile centers to communicate with the particular service centre. It provides the services to their customers and especially to the owner of the garage to monitor overall flow of the service center. This system

communicates with the user of this service by providing them timely notification with proper details like when the car will be ready or progress of servicing. To make android app java used as a front-end language and FireBase is used for the database. Database is the main focus in this project because most of the information would be stored in database itself. For that study of different forms of normalization is necessary. Normalization is a database design technique which organizes tables in a manner that reduces redundancy and dependency of data. Now for Website the software visual studio will be used and the front-end languages we will be using are html, CSS, javascript and Django as a back-end. We are building this as user friendliness, in formativeness and time saving.

II. PROPOSED SYSTEM

Idea behind the proposed system is to provide as much as service to the owner of the service centre as possible. Here we are trying to manage 3 different entity.

1. Owner of the service centre.
2. Mechanic who is there to repair specific automobile.
3. User or vehicle owner which is taking the service.

This system will provide services to the owner to monitor overall flow of the service centre like transaction of spare part, money etc. here the information about the current progress on the vehicle and the status of the garage will be updated by the mechanic itself, which then will be differentiable whether which data is meant to which entity for displaying purposes. At first user has to make account by providing phone number and creating a password. User's personal data will be encrypted and secured. Then after validation user can opt from the given services to which the user want. Now all of the queries of the user will be handled by the system we are going to provide. Since user will be provided with an interactive interface by which user can view current progress. The same goes for the owner of the garage, can too view everything that is being carried out from anywhere owner wishes to.

- Owner Client
- Mechanic
- Customer

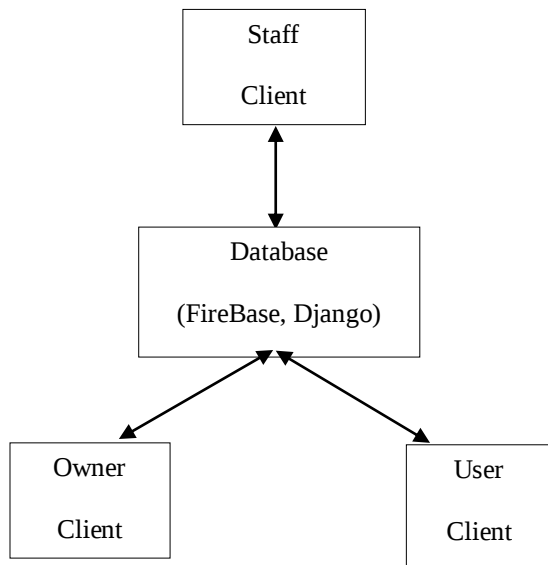


Fig. Data Flow Diagram of Proposed System

III. LITERATURE SURVEY

The survey regarding this web application and android app includes information gathering from various sources. These sources includes garage and service center, various related web sites and similar projects developed previously. Some of the online journals are used for clearing the knowledge about algorithm which will used to make the application successfully. Some online videos help to understand Google cloud messaging paper for push message services, Firebase authentication etc.

Different journals were studied and reviewed for improving current proposed system, concepts like notification for different services provided, limit of user interaction, database maintenance for data coming from different entities in the system. Timely update and reflection on the database improvement.

Improvements were made for economic feasibility like development cost, operational cost, maintenance and support cost etc.

Efforts are made in order to make existing system better for users. Complexities involved in native servicing process are reduced by this system for the convenience of the users.

Extra features added

- 1) Real time update through push notification of the services done to the respective users.
- 2) Online payment for the services involved.

- 3) Feedback from users.

IV. SYSTEM FEATURE

1. Notification services to serve user better at the communication and acknowledgement end in order to provide timely report.
2. Garage information and its different aspect like expected time and money requirement for different services available.
3. Navigation system using GPS for pick and drop services.
4. Special request section like request for towing services.

V. FUTURE SCOPE

The main goal of this project is increase productivity of the garage by supplying a system that can act as a mediator between owner of garage and mechanic, and also between mechanic and the user.

Now this model can be further expanded by providing post service notification like next servicing date, oil or tire replacement and other aspects of a vehicle.

VI. CONCLUSION

To overcome all the drawbacks of the existing system of Automobile Servicing, this System is required where the complexities in the process of management for automobile services are reduced for the convenience of automobile owners. Through this system timely updates of services of automobiles can be sent to their owners. Automobile servicing becomes easy through this system. So, the system aims at improving the existing system and providing an efficient way for managing automobile servicing.

Thus, it is time saving as well as cost efficient application. So, we can conclude that it can be used to reduce human efforts and luxuriate human lives, hand in hand, with the modern technology.

VII. REFERENCES

- [1] Hanamant B. Sale¹, Dharmendra Bari², Tanay Dalvi³, Yash Pandey⁴ Professor¹ Online Management System for Automobile Services, BE Student^{2, 3},
⁴ Department of Information Technology Bharati Vidyapeeth College of Engineering, Navi Mumbai, India.
- [2] Sarita Choudhury, I. Indira, G. Rakesh, T. Rakes E-Mechanic Service using Android Programming and Messaging Service h Dept. of CSE, MLR Institute of



Technology, Hyderabad, India.

- [3] System Prof. Shilpa Chavan Saket Adhav, Rushikesh Gujar, Mayur Jadhav, Tushar Limbore Automobile Service Center Management (Padmabhooshan Vasantdada Patil Institute of Technology, Pune).
- [4] Marko Štajcer, Marko Štajceri Dražen Oreščanin, "Using MEAN stack for development of GUI in real time big data architecture", MIPRO 2016, May 30 - June 3, 2016, Opatija, Croatia.
- [5] Prof. Shilpa Chavan, "Automobile Service Center Management System", International Journal of Scientific and Research Publications, Volume 4, Issue 3, March 2014 ISSN 22503153.
- [6] N. SHIVASANKARAN, P. SENTHILKUMAR, "SCHE DULING OF MECHANICS IN AUTOMOBILE REPAIR SHOPS", N. Shivasankaran et.al / Indian Journal of Computer Science and Engineering (IJCSE).
- [7] NehaSelokar, Vijay Masne, Roshani Pimpalkar, SrushtiPuranik, NidhiBhoyar, "24*7 Vehicle Management Systems for Automobile Industry" e-ISSN: 2395 -0056.
- [8] Gladwin.B, Ramya.R, Rathika.K, "Online Student Resource Management Using HTML5 and Angular - JS", International Journal of Computer Science and Information Technology Research ISSN 2348-120X.
- [9] Dalian Maritime Univ., Dalian, China Yan Chen ; Taoying Li ; Renyuan Wang ; Junxiong Sun "Implementation of Cloud Messaging System Based on GCM Service". Computational and Information Sciences (ICCIS), 2013 Fifth International Conference. Penghui Li Transp. Manage. Coll.,
- [10] Whipple, J "A public safety application of GPS-enabled smartphones and the android operating system"- Systems, Man and Cybernetics, 2009. SMC 2009. IEEE International Conference-.Inf. Syst. Eng. Dept., Southwest Res. Inst., San Antonio, TX, USA Arensman, W. ; Boler, M.S.
- [11] Slovakia Mojzis, M. "Unified platform for the delivery of notifications to smartphones notification" Carpathian Control Conference (ICCC), 2012 13th International. Mojzisova, A. Inst. of Control & Informatization of Production Processes, Tech. Univ. of Kosice, Kosice,
- [12] Ji-xian Xiao Coll. of Sci., Hebei Polytech. Univ., Tangshan, China FangLing Lu "An improvement of the shortest path algorithm based on Dijkstra algorithm "Computer and Automation Engineering (ICCAE), 2010 The 2nd International Conference on (Volume:2)..
- [13] Monteiro Braz, J.R.- . Serr o, T. Rangel, N. Castillo, A. Gmez, B. Rodr guez, . de Barraza, . Riley, J "Developing an Android based learning application for mobile devices", Telematics and Information Systems (EATIS), 2012 6th Euro American Conference, de Clunie, G.T.Fac. de Ing. de Sist., Computacionales, Univ. Tecnol. de Panama, Panama City, Panama Serrao, T. ;