AUTOMOBILE SERVICES AND MAINTENANCE SYSTEM

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Abstract - Nowadays technology is gaining momentum. This project "Automobile Services and Maintenance System" helps to provide online service requests to the damaged vehicle for servicing. This project makes communication between the workshops and the user easy, which is time-saving. The real power of this project lies not in the direct selling of products, but in the creation of tighter relationships with customers and delivering a high level of service and support, which in turn improves the organization's goodwill.

1. INTRODUCTION

The "Automobile Services and Maintenance System" project is based on managing the work regarding servicing automobiles and monitoring the work done by their staff. This system communicates with the users of this service by providing them with information with proper details, like when the vehicle will be ready or the progress of the service. When any situation arises where recovery or servicing is needed for the vehicle, our project helps the user provide service by providing doorstep services. Through this project, we can easily communicate with an administrator and convey our issues regarding vehicles. We are building the project for user-friendliness, informativeness, and time savings.

It includes service requests and scheduling, optimization of technicians, tools, and parts, as well as billing. User-friendly interfaces provide ease of use, and the integration technology ensures seamless and smooth registration or requests for the servicing process. This project includes various modules such as user, worker, and admin. Each module consists of sub-modules to fulfill the requirement. Vehicle service history, servicing requests, meter readings, assigning work, logging out, changing passwords, etc. are the sub-modules present in this project. Service monitoring and analysis increase the visibility of the overall fixed operation and help increase service capacity utilization, efficiency, and cost. Objectives of the projects are to provide a user-friendly website for online vehicle service requests and to provide various feature options to the admin, like adding updates or deleting the service request, we provide doorstep service to the customer.

This project introduced the ease of servicing the vehicles if any problem occurs with the vehicle. By completing the login process, this project provides doorstep services for the recovery of the vehicle as well as helps to maintain records for the servicing workshop. "Automobile Services and Maintenance System" provides services to the owner to overcome the existing problems regarding the servicing of the vehicles and manage the details of customers, workers, charges, services, and automobiles.

2. LITERATURE REVIEW

To develop a website that helps the user to communicate with the admin of the project in order to fix the damaged vehicle. By completing the registration, the user can log in and request servicing. Not only this but by providing input to the meter reading they can get the output i.e., the need for servicing in percentage. A user request to admin by filling in all his own information along with the information of the vehicle with the photographs. and admin provides the overall information to the worker in order to assign the task to them. Once the vehicle is fixed the worker conveys it to the admin and again admin conveys it to the user. While requesting the service sometimes it is impossible to type the description for the user, to overcome this problem the mic is used to speak and send the problem description. for online vehicle service requests accurately identify the presence of various diseases in animals based on their symptoms, historical health data, and environmental factors. Animal diseases can have significant impacts on animal welfare, human health, and the economy. Early detection and accurate diagnosis of animal diseases can help prevent the spread of infectious diseases, reduce animal mortality rates, and improve overall animal health. However, animal diseases can be complex and difficult to diagnose, and traditional diagnostic methods can be time-consuming and costly.

The Software required for this project includes; Operating System: Windows 7, and above versions; Web browser: Google Chrome and Mozilla Firefox; IDE Tool: Microsoft Visual Studio Code; Database IDE: Microsoft SQL Server; Languages: HTML, CSS, Bootstrap, ASP.net, C#.

The Hardware required for this project includes; Processor**:** Dual Core or more; RAM**:** 1GB; Hard Disk**:** 40 GB; Display Type**:** SVGA Color Monitor; Keyboard: Enhanced 104; StandardMouse: PS/2 2Button, USB.

Module Description:

1) User Module

- In the user module, we are going to add features as a user register in the system.
- If the user is already registered, he or she can log in to the system by using a username and password.
- The user can edit his profile and password accordingly.
- The user can request servicing for his vehicle; a voice-to-text conversion option is available for the user to avoid typing problems while making the request.
- The user receives kilometer-wise servicing output from the system from time to time.
- After servicing, the user also gets their vehicle service report so that they can confirm and satisfy their doubts.
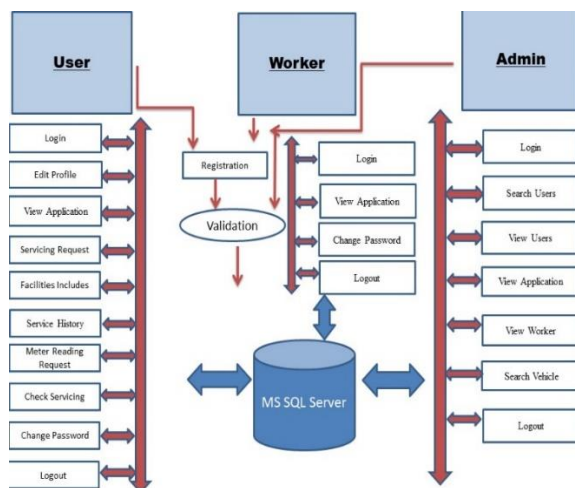- Finally, log out the user.

Fig. Modules

2) Admin Module

- In the administration module, first you want to log in with admin credentials.
- Admins can view registered users after logging in. Also, refer to the completed customer application form for servicing.
- This is possible if the administrator wants to view the employee or employee status for customer services.
- In case of any dispute or customer issue, the admin can have the option to search for the specific vehicle.

- Admin also generates customer, employee, and vehicle reports for records.
- Finally, the admin logged out.

3) Worker Module

- The worker needs to log in with his or her credentials to view the customer's application for service.
- Test the vehicle and add related vehicle problems.
- If the worker wishes to change his or her password, he or she can do so.
- Log out after you're done.

The goal of this project is to develop and implement bubble sort, decision tree, and backend connectivity algorithms. Bubble sort Algorithm: Bubble sort is used to sort the records. When the admin login into the project, he can see the list of all submitted requests from customers in ascending sorted order. Decision Tree algorithm: This Algorithm is used for prediction purposes as well as to make a decision from the available data. Database Connectivity Algorithm: We connect our front to back by using some special database classes.

Fig. Homepage

3. CONCLUSION

We conclude that the "AUTOMOBILE SERVICES AND MAINTENANCE SYSTEM" was designed in such a way that future changes can be made easily. The following conclusions can be drawn from the development of the project. It provides appropriate access to authorized users, and workers as per their permission. It effectively removes communication delays. Updating information becomes very easy. System security, data

security, and reliability are the notable features. There is ample scope for future changes in the system if necessary.

REFERENCES

[1] Oxford (2016) "Artificial intelligence", in Oxford Dictionary.

[2] Sunu Philips, "5 ways AI is driving the automobile industry", Big Data Made Simple, 29th March 2017.

[3] 2022 International Conference on Electrical, Computer and Energy Technologies (ICECET), Prague, Czech Republic,20-22 July 2022.

[4][Gong, 1995] Gong. Speech recognition in noisy environments: A survey. Speech communication, 16(3):261– 291, 1995

[5] Wrox Professional Guide

[6] http://msdn.microsoft.com/en-us/vstudio/aa496123.aspx

[7]http://www.ezzylearning.com/technology.aspx?techid=1hg&q=asp-net

[8] http://www.w3schools.com/aspnet/default.asp

[9]http://msdn.microsoft.com/en-us/library/vstudio/bb400852(v=vs.90).aspx

[10] http://www.w3schools.com/aspnet/webpages_intro.asp

[11] http://www.w3schools.com/aspnet/aspnet_intro.asp

[12] http://www.functionx.com/sqlserver2005/Lesson01.htm

[13] http://www.ibm.com/developerworks/web/library/wa-ajaxintro1/index.html

[14] http://en.wikipedia.org/wiki/Asp

[15] Professional ASP.NET 2.0 By Bill Evjen, Srinivas Sivakumar https://www.hackster.io/trivediswap25/face-and-eye-detection-in-python-usingopencv-5a5b10