
“AUTOMOBILE BILLING AND MANAGEMENT SYSTEM”

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ABSTRACT: *Proposed project is aimed to develop a web based software for managing the automobile service centers, which is helpful in maintaining automobile customers in effective manner and thus helps to establish good relations between customers, staff and automobile organization. It consist of various custom modules for maintaining automobiles and stock information perfectly and safely. The main module in proposed project is login, customer management, staff management, automobile management and billing of reports. This software helps in inventory management, stock management etc.*

Keywords: Reports, Stock Management, Admin Module, Staff Module, Bill Printing, Products Management.

1. INTRODUCTION

In manual system we have to maintain accounting Books, bills etc. We make entries for every service done in different books then we prepare the cash book. There are many Advantage and disadvantage of manual system such as there is no power requirement(advantage) but on other side it gets Difficult to maintain transaction and accounting books, Difficulty in generation of a report, It is much time consuming, Difficulty in searching a record, due to human errors data may not be perfect. So in order to overcome these manual errors we proposed a computerized system. It is very helpful for maintaining Automobile Customers, Staff, Stock and helps for establishing good relation between staff, customers and automobile organization. This will save the time and also provide accuracy and reliability.

The proposed project is developed to manage the automobiles and their parts in the automobile service center. The main module in this project are Login, Stock Management, Customer Management, Staff Management, Sales and Reports. The first module is the login. The automobile owner must have to login to the system for usage. The username and password are verified and if it is correct, next form opens. If the username and password are not correct, it gives the error message. When a user search for a automobile parts, if it is available, system will show quantity, price etc. “Automobile Billing and Management System” is useful for maintaining

automobiles, their parts and thus customers accurately and thus helps in maintaining good relation between customers, staff and automobile organization.

It contains various modules for effectively maintaining automobiles and stock information perfectly and safely. When a particular part of automobile is sold to the customer, stock is reduced by user. When a new item purchase is done, stock is increased by user. When the user tries to sale items that are not in stock, the system will prompt the user that the stock is not enough i.e. Out of stock. On other side the stock of automobile’s parts can be maintained perfectly by the automobile shop owner by overcoming existing system drawbacks. This software can be used by a automobile repair shops and service centers for keeping all the records of items which is to be purchased and sell. It helps to maintain a record of all entries done by user, transactions done, record of staffs along with their attendance etc.

The rest of this paper, Literature Review is discussed in Section 2 Methodology in Section 3 Results in section 4 and finally concludes the paper in Section 5.

2. LITERATURE REVIEW

The Number of methods is proposed by researchers in this domain.

Zhang Huaige in “Automobile after sales service management Countermeasures with Customer value based ” states that automobile service after sales is gone under queer development on the reason of very research and analysis the value of automobile service after sales and showed the essentiality of paying advertence to customer worth management of automobile service after sales to upgrade overall management. They made counter measures such as Environment of Service, Reception of Customer, Techniques of Repair, price of Products and their quality of control, management of customer information and

proposed the management countermeasures taking customer as center, strong customer records management and thorough customer lifetime value by excavation [1].

J Crookes in “Multiservice Billing System ” states that in their model term chosen for the system is multiservice billing system and the strategical issues of business that have shaped the design of multiservice billing system. It described the complexity and scale of the problem which made the structure of a multiservice platform such a hard exploit of software engineering. They introduced the concept of a general product model, which underpinned the design of system [2].

Hanamant B. Sale in “Online Management System for Automobile Services ” states that the power of financial status in addition with technology are giving path to peoples to not only bethink but also achieve their dreams as the world is stepping towards technology dominating age and also peoples financial status is increasing by time. The quantity of two wheelers and four wheelers in India will increase in future, it will increase the number of these vehicles at the mechanic shop to get service. This condition will form queues at the mechanic shop. So the Problem of waiting in long queues can be big in the future. This paper gives an “Online Management System for Automobile Services” based approach which is an onward step in service centers and garage fields. They have used various technologies like MEAN stack (a open source javascript framework) although the approach is very helpful but it can’t be used in low configuration system [3].

Mohammed Shahed Hossain in “Improvement of Service Quality at Automobile Workshop in Bangladesh” states that the repair shops plays an important role in maintaining motor vehicles efficiently, helping to make transportation services more efficient. Automobile workshops and repair shops can be partitioned into several categories. A study was also carried out on the retail sector, in particular in the supermarket segment and on the automotive sector in India to assess potential and growth. They explained the five dimensions with respect to automobile service centers as Reliability,

Assurance, Tangibles, Empathy, Responsiveness. This paper proposed a survey method and study analysis is made to achieve the predetermined objectives of shops [4].

3. METHODOLOGY

In Figure1 shows workflow diagram showing the experimental design of (ABMS) Automobile Billing and Management System. In this project there are various types of modules available to manage Products, Stock, Staff, Billing & Generation of Reports. Admin can Manage Staff and Track information related to availability of stocks, products, automobile Servicing. In this project there are various types of modules available to manage Products, Stock, Staff, Billing & Generation of Reports. Admin can Manage Staff and Track information related to availability of stocks, products, automobile Servicing. Also there are some of the privileges that are given to working staff but here Admin is main entity so he/she has given all the privileges. There are Various Modules in System the main modules are first the Log In screen for Admin and Staff. After logging into Staff or Admin there is menu for different modules in order to Perform particular task. This project is intended to be useful for maintaining automobile customers efficiently and thus helps in better growth of automobile organization. It consist of various custom modules for perfectly maintaining automobiles, stock information and Staff information accurately and safely.

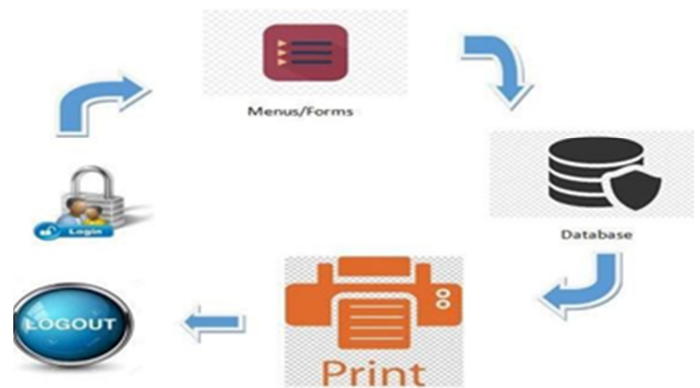


Figure 1: Flow of ABMS

There are various Modules featured in this project:

Login: User first have to login to the system. Here system is designed for Automobile Service Shop, the users are Admin and Staff. So in this login module there is option for both Admin login and Staff login.

Menu: After logging to system Menu is provided to user. Menu also consist of various modules related to billing, stock management, products management etc. Based on privileges given to users various options are provided. Thus user performs various operations in menu according to requirements.

Database: Proposed system uses MySQL database for storing the information entered by the users. Hence when user

performs various operations in menu the respective changes are reflected in the database.

Print Bill: This option prints the billing reports entered by the user. Billing reports contains various information related to customer like name, servicing details etc.

The Login Screen, Various forms for taking input from user, Menus are created and managed by using HTML, CSS etc. and for handling information inputted from users php and MySql Database is used. The information added by user is stored in the form of tables in database. The Following figure 3.2 shows the Use Case diagram for proposed System. It shows the Responsibility of each user, Admin have given all the privileges indicating higher authority of system and some privileges are given to working staff. These privileges are maintained for data confidentiality, Security of Organization. In this project, there are different types of modules available to manage the billing and generation of reports, inventory, staff and products. Admin can manage staff and track information about availability of inventory, products, and automobile services. There are also some privileges granted to the working staff, but here the administrator is the main user, so he / she has given all privileges. The main modules are the Admin and Staff Login screen first. After logging in to Staff or Admin there are menus for different modules to perform a particular task.



Figure 2: Use Case Diagram for ABMS

Proposed computerized system enables the user to better communicate with customer, provides a way to store the information related to customers like type of servicing done, what parts were changed etc. Admin of system can monitor availability of stocks, activities of working staff in his absence like who have done servicing, his attendance etc. thus system is helpful in maintaining records of customer as well as staff.

4. RESULTS

A billing system is a combination of software and hardware that gets customer and service usage information as input, aggregates this information for specific accounts, produces invoices, makes reports for management, and records payments made to customer accounts. Billing systems are made up of interfaces, computers, software and information databases. Computers are the hardware (computer servers) and operating systems are used to run programs and processes. This system collects customer information, converts it to detailed billing records, and forwards it to the billing system. The billing system uses databases to store customer information; usage records, rate tables, and billing records ready to be billed. The key functional elements of a billing system include creating usage records, processing events, calculating invoices, rendering invoices, and management reports. The Step by Step Execution is shown through flow chart which is shown in figure 4.1 as below. It describes the overall responsibility of the user of system. There are two different module first one is Admin and second one is staff.



Figure 3: Flow Chart of System

Admin and Staff have their particular task. Automobile Service Company around the world use automotive software to track, organize, and bill customers. This software can be used by automobile repair shops as well as service center as this have lots of system applications to choose like Owner can track attendance of Staff, availability of stock, staff management, there is choice given to user whether to apply GST on products or not, also system prints the name of user who done servicing and work of billing at that time. The proposed system also includes basic functions of Automobile Service Shop.

5. CONCLUSION

This paper shows the flow, overall structure and working of the Automobile Billing and Management System (ABMS).

ABMS is user friendly, interactive to user i.e. easy to use. Thus, it is not only cost efficient but also time saving application. So, we can conclude that the proposed system can be used to reduce human efforts in collaborating with modern technology. The system can be useful to Automobile organizations, Service and Repair shops so that the working strain is reduced and user can keep essential information associated to the organization. The general objective of using the database is to access information quickly, inexpensively and flexibly for other users. The software is fully interactive and user-friendly, end users will be lightened by using this software because it is easy to have invoices and reports and especially all the content to be entered by the user himself. It reduces the computational efforts to be made by staff.

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