Design and Execution of Automated Sub-Dealer Management System Software

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ABSTRACT

The competitive nature of the contemporary business scenario requires productivity- driven organizations to be aware of the efficiency level of their dealers. Most businesses need a strategy for sales and distribution of their products. The selling process comprises multiple business processes such as warranty and claim of a material produced from the manufacturer. This paper is useful for the sub-dealers to maintain sales and maintain account details. This is commonly known as ERP Software which mainly focuses on the dealers and sub-dealers of the small business sector has some extra features. Software functionality which is dealers basically needs to follow up with the customer after they purchase the product. This investigative study proposes an efficient framework for the sub-dealer management portal using oracle.

Keywords

Software, sales, service, dealers, Dealership Market, Data Envelopment Analysis.

1. INTRODUCTION

A Sub-Dealership Management System Software (SDMSS) or auto dealership management system may be a bundled management system created specifically for automotive business automobile dealerships or massive instrumentality manufactures. The Dealer Management System is an integrated package that takes care of each side of car business method at business organization. It can provide better management information and better support for customerfacing activities in both sales and after-sales services.

Our Dealership Management System Software (DMSS) features easy-to-use, partially integrated modules to suit your dealership needs in accounting, sales, service and more. DMSS is effectively a "lite" version of the systems which are used by the automotive company and their dealers to manage their operations. In recent years, the retail sector has been suffering heavily from the economic and financial crisis, which has significantly reduced consumption and sales.

1.1 Problem Statement

By using the software we can track the sales, service, spares, account details. Which can be viewed based on the product or by the customer name for the future activities. This involves the service we are giving to the product based on the warranty or paid service. And the spares buying details which all maintained in the single software which gives the company growth as well as the proper system is maintained.

1.2 Challenges

Dealers and makers square measure perpetually yearning for ways in which to differentiate themselves to shoppers, by managing cost-efficient promoting and promotional Sharif Ahamed Lecturer Department of CSE Gono Bishwabidyalay Roena Afroze Aenney Lecturer Department of CSE Gono Bishwabidyalay

campaigns and developing higher relationships. Once the deal is finished, dealerships grasp they have to develop proactive, purposeful relationships with customers to stay them returning for service, after-market add-ons, and their next vehicle. Complicating matters further, manufacturers and dealers are experiencing complex market conditions, changing distribution networks, increased product complexity, and pressure on profit margins.

1.3 Statement of Assumption

By using the software we can track the sales, service, spares, account details. Which can be viewed based on the product or by the customer name for the future activities. This involves the service we are giving to the product based on the warranty or paid service. And the spares buying details which all maintained in the single software which gives the company growth as well as the proper system is maintained.

2. AIM AND OBJECTIVE

2.1 Aim

The aim of the project is to auto dealer strength is in maintaining strong customer communications, which is vital in creating profitable long-term relationships. Auto dealer enables a dealer to sell more vehicles and maximize the profit from each sale. Auto dealer provides a single customer and product database that is used across the entire dealership.

2.2 Objective

To plan improved communication between totally different branches and with company to produce higher support to the client. It is having an in-depth management news for chase daily activities of the dealers and company like supported DO Analysis report company/dealer might determine frequently showing issues in vehicle. The main objective of this method is to stay records of the entire inventory. It supports inventory management helps you record and track materials on the idea of each amount and price.

2.3 Overview of the Proposed System

The paper suggests fully a web-based application that is used for tracking sales, services, reports, leads, accounts maintenance online for automobile dealers. Better analysis of dealership profitability through retail sales, service and parts analysis. The features included E-mail, SMS alerts, reports, sales, purchase details, transactions, leads and products and parts ordering through E-mail. DMS Solution is designed for automotive industry and it fully supports all business processes of product dealers, workshops and service companies, used card traders, product importers, and spare part traders

3. SYSTEM ANALYSIS

3.1 Existing System

The previous papers are focused on the basic ERP software and applications in the companies with the help of auditing as well the business improvements and which is common for many industries. A Windows-based software using SAP and it can be maintaining the windows server itself. SAP is licensed. And it not having a web-based future. It takes more time for developing code.

Problems in the existing system

As we know, the manual system is quite tedious, timeconsuming and less efficient and accurate in comparison to the computerized system. So following are some disadvantages of the old system:

- 1. Time Consuming.
- 2. Less Accurate.
- 3. Less Efficient.
- 4. Lot of Paper Work.
- 5. Slow Data Processing.
- 6. Not User-Friendly Environment.
- 7. Difficult to Keep Old Records.

3.2 Proposed System

In this proposed method of ours separately developing the dealership management software which is based on the requirements from the dealership peoples from the car and bikes dealers. By differentiating the sales, service and spares details. As well the business improvements also could be evaluated by adding up the accounts modules which give the full details of accounts maintenance. A web-based dealership management software to track the main dealer and subdealers. Here the technology is used PHP, it can reduce the cost and increased efficiency, reduction in errors and design changes, Better record-keeping, and compliance, open-source, time-consuming, etc. and it is secured. The scope of this technique is to supply user economical operating surroundings and additional output will be generated through this. This technique provides the user-friendly interface leading to knowing each and every usability options of the system. This technique helps in chase records so past records will be verified through them and one will build choices supported the past records. This technique completes a really less time leading to less time consumption and high level of potency. This system is developed in such how that even a naïve user can even operate the System simply. The calculations are made very quickly and the records are directly saved into databases and the databases can be maintained for a longer period of time. Each record can be retrieved and can be verified for future transactions. Also, this system provides high level of security for data leaking as only admin people can access the database no changes can be made in it until it verifies the user login id and password. We also have operator login through which operator can take orders but cannot make changes in the database. Limited access is available to the operator.

3.3 Requirement Specification

The necessities specification is a technical specification of requirements for the package merchandise. It is a primary step within the necessities analysis method it lists the necessities of a specific code together with useful, performance and security necessities. The necessities conjointly give usage eventualities from a user, an operational and body perspective. The purpose of the software requirements specification is to provide a detailed overview of the software project, its parameters, and its goals. This describes the project target audience and its user interface, hardware and software requirements. It defines how the client, team, and audience see the project and its functionality.

4. LITERATURE REVIEW

4.1 Automobile Dealers with Applying Data Envelopment Analysis

This paper analyzes the operative performances of the twenty retailers of 2 Taiwanese automobile dealers who supported the info enclosure analysis combined with the sensible expertise of the automotive trade. The paper selects vital input and output variables to gauge overall technical potency, pure technical potency, and scale potency for sleuthing the causes of unskillfulness and proposes the development comments on project management. The results indicate that there are a unit 5 retailers presenting relative potency at overall technical potency throughout the sample amount. The paper looks forward to constructing a complete business operating performance model for enhancing the performances of retailers. The findings can provide useful suggestions for the managers of project management to focus on how to find out and develop the maximum effectiveness by allocating useful human resources fitly for enhancing the operating efficiency of performance.

4.2 Agility in Auto Dealers

Agile Supply Chain Management (ASCM) progressively becomes a good and vital life to reinforce the competitive advantage of enterprises that desires the support of an agile data system to integrate they provide chain more effectively and quickly. Associate in nursing agile provides chain options model is developed to assist enterprises to reach nimbleness in them provide chain management and integration by foretelling the important demand and choosing appropriately. This paper focuses on agility in distribution system of automobile industry, in particular in their auto dealers, which are the main distribution channel of auto companies. As a result, the paper shows how agility can affect on having an integrated distribution Chain Management for auto industries and a responsive SCM for auto dealers.

4.3 Applying Supply Chain Management to Improve Excellence Competitive at Car Dealer Company

This analysis target is to enhance the excellence competitive of the company, particularly Honda Automobile saleroom residing in South Jakarta space. Chain management represents approach integrative or technique wherever knowledge sort used qualitative knowledge returning from answered of questioner respondent that later is going to be was a quantitative knowledge. The results of this analysis are Setianita Megah Motor corporation higher to create a system of Supply Chain Management desegregation between merchandise current and knowledge between division (from superior until the employees) and conjointly between company by provider. That way, information transfer can be done optimally so that excellence competitive owned companies can be improved and service to consumers more optimal.

5. DESIGN OF THE SYSTEM

5.1 SystemArchitecture



Fig. 1: System Architecture.

5.2 Methodologies Modules

- 1. User Design.
- 2. Master Management.
- 3. Sales Management.
- 4. Purchase Details.
- 5. Transaction Management.
- 6. Stock Details.
- 7. Reports Management.
- 8. Leads Management.
- 9. Settings.

5.3 Feasibility Analysis

As we know, each and every project needs to have a feasibility study for the complete understandability of the project. We consider 3 types of feasibility study they are technical feasibility, operational feasibility, and economic feasibility.

5.4 Technical Feasibility

This new system needs 6 totally trained individuals to run the system dead. One admin person to take care of information and alternative five to handle the system interface and order creating things. As our existing system is only manual, thus would like a past investment of Rs. 4 Lacs for the acquisition of six computers, five invoice printers, an electrostatic printer, AC and networking, etc. It needs approx. 10 Lacks PA as a disbursal. With the on top of details our system is technically possible as when finance 14 Lacs during a year, the corporate continues to be saving Rs 15 Lacs PA.

5.5 Operational Feasibility

The new solution is feasible in all sense but operationally it is not. The new system demands the expulsion of at least 15 people from the company. It creates an environment of joblessness and fear among the employees. It can lead to an indefinite strike in the company also. So, the management must take corrective actions prior in advance in order to start the further proceedings.

5.6 Economic Feasibility

With the manual system, the disbursal of the system is concerning 60 Lacks P.A. This price contains regular payment of twenty-five folks, stationary, building rent, electricity, water, phone, etc. However, with the new system, this reoccurring price comes bent be concerning 20 Lacks P.A. then the new system is economically possible.

6. IMPLEMENTATION OF THE SYSTEM

6.1 Introduction

For optimal sales and inventory management processes, you need robust functionality for managing your logistics facilities. Support for inventory management helps you record and track materials on the basis of both quantity and value. PHP and using java scripts management functions cover internal web-based HTML movements and storage. Using this software we can reduce costs for PHP-open source software, transportation, order fulfillment, and material handling-while improving customer service. You can significantly improve inventory turns, optimize the flow of goods, and shorten routes within your open source software or distribution center. Additional benefits of inventory management include improved cash flow, visibility and decision making. This software is user-friendly and hence easy to use.

6.2 Advantage of Dealer Management System

- 1. Standardize Business Process at Head.
- 2. Enhance Dealer Revenue and Profitability.
- 3. Better Customer Relations.
- 4. Increase Customer Satisfaction.
- 5. Increase Dealership Efficiency.
- 6. Improve ability to Manage Performance with enhancing Brand Value.

- 7. Easy accessibility of Data and Reports.
- 8. Better Sales Forecasting and Business Analysis.
- 9. Product and Parts Ordering Through E-mail.

6.3 Technologies Used Introduction to PHP

PHP could be a server-side scripting language designed for internet development, however, conjointly used as a general programming language. As of Jan 2013, PHP was put in on quite 240 million websites (39% of those sampled) and a pair of.1 million internet servers. Originally created by Rasmus Lerdorf in 1995, the reference implementation of PHP is currently made by The PHP cluster whereas PHP originally stood for the private home page, it currently stands for PHP: machine-readable text Preprocessor. PHP code is originally designed to be understood by an internet server with a PHP processor module that generates the ensuing website. PHP commands will be embedded directly into a hypertext markup language supply document instead of line Associate in nursing external file to method knowledge. It is conjointly evolved to incorporate command-line interface capability and may be utilized in standalone graphical applications. PHP is free software system discharged underneath the PHP License. PHP has been widely ported and may be deployed on most net servers on virtually every package and platform, freed from charge. PHP development began in 1994 when the developer Rasmus Lerdorf wrote a series of Common Gateway Interface (CGI) Perl scripts, which he used to maintain his personal homepage. He rewrote these scripts in C for performance reasons, extending them to add the ability to work with web forms and to communicate with databases, and called this implementation "Personal Home Page/Forms Interpreter" or PHP/FI.

6.4 PHP 6 and Unicode

PHP received mixed reviews because of lacking native Unicode support at the core language level. In 2005, a project headed by Andrei Zmievski was initiated to bring native Unicode support throughout PHP, by embedding the International elements for Unicode (ICU) library, and representing text strings as UTF-16 internally. Since this might cause major changes each to the internals of the language and to user code, it had been planned to unleash this as version half-dozen of the language, together with alternative major options than in development.

7. SCREEN SHOTS

- 6.4.1 PHP 5
 - > PHP is an acronym for "PHP Hypertext Preprocessor".
 - PHP is a widely-used, open-source scripting language.
 - > PHP scripts are executed on the server.
 - > PHP costs nothing, it is free to download and use.

- > CSS
-
- JavaScript

6.4.3 PHP is an Amazing and Popular Language!

- It is powerful enough to be at the core of the biggest blogging system on the web (Word Press).
- It is deep enough to run the largest social network (Facebook).
- It is also easy enough to be a beginner's first serverside language.

6.4.4 PHP File

- PHP files can contain text, HTML, CSS, JavaScript, and PHP code.
- > PHP code is executed on the server, and the result is returned to the browser as plain HTML.
- > PHP files have extension ".php".

6.4.5 The PHP Platform

- PHP runs on various platforms (Windows, Linux, UNIX, Mac OS X, etc.).
- PHP is compatible with almost all servers used today (Apache, IIS, etc.).
- > PHP supports a wide range of databases.
- PHP is free. Download it from the official PHP resource: www.php.net.
- > PHP is easy to learn and runs efficiently on the server-side

| Q | User Name : | |
|---|-------------|------|
| 2 | Password : | |
| | Login | Quit |

Fig 2: Admin Login page



Fig 3: Main page

| Company Entry Systems | | | | | | | | | |
|-----------------------|---------------------------|-------|-------|----------|------|-------|------|--|--|
| ID: | 400 | Name: | WALTO | ON GROUP | | | | | |
| Address: | CHONDRADR, GAZIPUR, DHAKA | | | | | | | | |
| Mobile: | 01931431373 | ; | | | | | | | |
| | | | | | | | | | |
| EDIT | | 4 | ADD | DELETE | SAVE | CLEAR | EXIT | | |

Fig 4: Company Entry page

| C | ategory I | D Category Name | |
|---|-----------|---------------------|------|
| | 27 | WALTON FREEZE 11CFT | SAVE |
| | 28 | WALTON FREEZE 16CFT | SAVE |
| | | | SAVE |

Fig 5: Product Category System

| PRODUCT ENTRY SYSTEM | | | | | | | | |
|----------------------|----------------|------------------------|--|--|--|--|--|--|
| Product ID: 401 | Product Name: | FREEZE | | | | | | |
| Category ID: 27 | Category Name: | WALTON FREEZE 11CFT | | | | | | |
| Company ID: 400 | Company Name: | WALTON GROUP | | | | | | |
| Cost Price | 20000 | Sales Price 25000 | | | | | | |
| | | | | | | | | |
| EDIT | ADD | DELETE SAVE CLEAR EXIT | | | | | | |

Fig 6: Product Entry System



Fig 7: Purchase System

| PURCHASE RETURN | | | | | | | | |
|-----------------|---------------|-----------------|------|-----|-----------|---|---------|--|
| Purchase I | d Supplier Id | | | | | | Date: | |
| PURCH | ASE DETAILS | | | | | | | |
| | Purchase | Purchase Otv | Rate | Tot | | | | |
| X | | | | | SAVE | * | Control | |
| X | | | | | SAVE | | | |
| X | | | | | SAVE | | | |
| Х | | | | | SAVE | | CLEAD | |
| X | | | | | SAVE | | CLEAR | |
| Х | | | | | SAVE | | SAVE | |
| Х | | | | | SAVE | | | |
| Х | | | | | SAVE | | EXIT | |
| Х | | | | | SAVE | | | |
| Х | | | | | SAVE | - | | |
| | | Total : | | | | | | |
| | | Disco | unt | | Payable [| | | |
| | | Paid | | | Due | | | |
| | | | 1 | | | | | |

Fig 8: Purchase Return System

| Sales Id 52 Sales Date 28/05/2018 Customer Address: Customer Mobile: | ENTRY SCREE | <u>N</u> | | |
|---|-------------------------------------|--------------------------|--|-----------------------|
| SAL | ES DETAILS | | | |
| Delete Sales Product Name | Stock QTY | <u>Rate</u> <u>Total</u> | <u>Free</u> <u>Fr</u> <u>Service</u> <u>Giv</u> | <u>ee</u> <u>Free</u> |
| x | | | | <u> </u> |
| X | | | | |
| X | | | | |
| X | | | | |
| X | | | | |
| X | | | | |
| X | | | | · · |
| NEW CLEAR SAVE | Total Commiss Payable Paid | sion | | MEMO EXIT |

Fig 9: Sales Entry System

| SALES I | RETURN ENTR | T SURE | | | | | | | | |
|------------|----------------|---------|----------------------|----------------------|--------------|--------------|----------|-----------|-------------------|---|
| Sales Id | | | SALES | S ENTRY SCR | REEN | | | | | |
| Sales Date | e 28/05/2018 | Custom | er Name: Address: | | | | | | | |
| < | | | | | | | | | | |
| | SALES DETAILS | | | | | | | | | |
| | Product Na | ame | <u>Sales</u> QTY | <u>Return</u> QTY | <u>Rate</u> | <u>Total</u> | | | | |
| x | | | | | | | | <u>Ca</u> | <u>culation</u> - | |
| X | | | | | | | | Commissio | n 🗌 | 0 |
| X | | | | | | | | Pavable | | _ |
| X | | | | | | | | Paid | | _ |
| X | | | | | | | _ | | 1 | |
| | | | | Tota | ۱ <u> </u> | | | | | |
| _ | | | DAM | AGED DETA | <u>ILS</u> — | | | | | |
| Re X | eturn Date Emp | loyee | | Prod | uct | | | | TOTAL | |
| X | | | | | | | | - | | |
| X | / | | | | | | | | | - |
| | 1 | | 1 | | | Dan | naged | Amount: | | |
| Due | | | | | | | | | | |
| MEMO | Delet | e Sales | EDIT | CLEAR | SA | VE | EXI | г | | |

SALES RETURN ENTRY SCREEN

Fig 10: Sales Return System

| TRANSACTION | | | | | | | | |
|--------------------|---------|--|-------------|-------------|------------|--|--|--|
| Transaction ID : | 35 | (Auto Numb | er) Transac | tion Date : | 28/05/2018 | | | |
| Received/Payment : | RECEIVE | RECEIVE CUSTOMER (C)ustomer / (C)ompany / (E)mployee : CUSTOMER | | | | | | |
| ID: | | Expense Type : 🗨 | | | | | | |
| NAME: | | | | Amount : | | | | |
| Remarks : | | | | | | | | |
| DELETE | EDIT | ADD | SAVE | CLEAR | EXIT | | | |

Fig 11: Transaction Entry System

Reports Systems

- 01-Total Stock Report
- O 02-Company Wise Stock Report
- O3-Date Wise Sales Report
- O4-Customer Wise Daily Sales Report
- O5-Date Wise Purchase Report
- O 06-Date Wise Receive/Payment
- O7-Date Wise Company Ledger
- O 08-Date Wise Customer Ledger
- O9-Company Ledger
- O 10-Customer Ledger
- 11-Customer Due/Receivable List
- 12-Company and Date Wise Sales Report

Exit

Fig 12: Project Report System

8. CONCLUSION

A web-based application that is used for tracking sales, services, reports, leads, accounts maintenance online for automobile dealers. Better analysis of dealership profitability through retail sales, service and parts analysis. The features included E-mail, SMS alerts, reports, sales, purchase details, transactions, leads and products and parts ordering through Email. DMS Solution is designed for automotive industry and it fully supports all business processes of product dealers, workshops and service companies, used card traders, product importers, and spare part traders. It is a completely web-based solution so it does not require software to be installed on different branches. The scope of the project includes that what all future enhancements can be done in this system to make it more feasible to use: Databases for different products range and storage can be provided, multilingual support can be provided so that it can be understandable by the person of any language, More graphics can be added to make it more userfriendly and understandable, manage and backup versions of documents online.

8.1 Benefits

- 1. Manages Track Sales.
- 2. Manages Contacts.
- 3. Manages Accounts.
- 4. Manages Opportunities.
- 5. Track Product Issues.
- 6. Track Product Features.
- 7. Manage Product Life Cycle.

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