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Distributor Management System

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Abstract: - Distributor Management System Is a web based application, which is developed for a particular company for maintaining and analyzing the sales of the product. This project is a module under website development for a particular computer hardware company. Here all communications held through internet and its database has all the updated information of the sales details. The main objective of the project is to analyze the sales of the products by a manager through the details supplied by the distributors, sales managers and representatives. It is very useful for the distributors, sales managers to know about the sales of the products done by them and by others in particular area/zone. This system gives complete analysis about the moving of the product in the market and the person responsible for selling the product in that area. It is computerized to improve the efficiency of the organization by reducing the cost of marinating data and minimizing the time involved in handling the data. Depending on the access rights given the users can process different modules.

Keywords: Distribution Management System, Customer Information System, Database

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1. Introduction

A Distribution Management System (DMS) is a collection of applications designed to monitor & control the entire distribution network efficiently and reliably. It acts as a decision support system to assist the control room and field operating personnel with the monitoring and control of the electric distribution system. Improving the reliability and quality of service in terms of reducing outages, minimizing outage time, maintaining acceptable frequency and voltage levels are the key deliverables of a DMS. Most distribution utilities have been comprehensively using IT solutions through their Outage Management System (OMS) that makes use of other systems like Customer Information System (CIS), Geographical Information System (GIS) and Interactive Voice Response System (IVRS). An outage management system has a network component/connectivity model of the distribution system. By combining the locations of outage calls from customers with knowledge of the locations of the protection devices (such as circuit breakers) on the network, a rule engine is used to predict the locations of outages. Based on this, restoration activities are charted out and the crew is dispatched for the same.

In parallel with this, distribution utilities began to roll out Supervisory Control and Data Acquisition (SCADA) systems, initially only at their higher voltage substations. Over time, use of SCADA has progressively extended downwards to sites at lower voltage levels. Distributor Management System Project is a Web-Based application using HTML. The main idea of Distributor management system project is to develop an online portal for maintaining and analyzing the sales of product in market. The database also has all the updated information of the details of the sales that are done while communication on/via internet. The main feature of the project is to anatomize the sales of product by a manager by the details given by sales manager, representatives and distributors. It is proving a very handy

tool for the sales manager to know about the sales of the products done by the employee's and by themselves in various areas. This existing system helps in giving complete figure out about the products that are moving of the market.

2. Distributed Databases Architecture

"A distributed database is a collection of multiple, logically interrelated databases distributed over a computer network" [3]. It may also be a single database divided into chunks and distributed over several locations. Distributed databases can be broadly classified into homogeneous and heterogeneous distributed database environments, each with further sub-divisions, as shown in the following illustration.

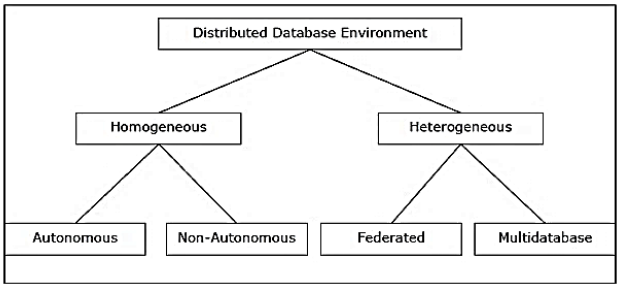

Figure 1. Distributed Database Environment

Homogeneous Distributed Databases

In a homogeneous distributed database, all the sites use identical DBMS and operating systems. Its properties are −

- The sites use very similar software.
- The sites use identical DBMS or DBMS from the same vendor.
- Each site is aware of all other sites and cooperates with other sites to process user requests.
- The database is accessed through a single interface as if it is a single database.

Types of Homogeneous Distributed Database

There are two types of homogeneous distributed database −

- **Autonomous** − Each database is independent that functions on its own. They are integrated by a controlling application and use message passing to share data updates.
- **Non-autonomous** − Data is distributed across the homogeneous nodes and a central or master DBMS co-ordinates data updates across the sites.

Heterogeneous Distributed Databases

In a heterogeneous distributed database, different sites have different operating systems, DBMS products and data models. Its properties are −

- Different sites use dissimilar schemas and software.
- The system may be composed of a variety of DBMSs like relational, network, hierarchical or object oriented.
- Query processing is complex due to dissimilar schemas.
- Transaction processing is complex due to dissimilar software.
- A site may not be aware of other sites and so there is limited co-operation in processing user requests.

Types of Heterogeneous Distributed Databases

- **Federated** − The heterogeneous database systems are independent in nature and integrated together so that they function as a single database system.
- **Un-federated** − the database systems employ a central coordinating module through which the databases are accessed.

Distributed DBMS Architectures

DDBMS architectures are generally developed depending on three parameters −

- Distribution − It states the physical distribution of data across the different sites.
- Autonomy − It indicates the distribution of control of the database system and the degree to which each constituent DBMS can operate independently.
- Heterogeneity − It refers to the uniformity or dissimilarity of the data models, system components and databases.

Architectural Models

Some of the common architectural models are −

- Client - Server Architecture for DDBMS
- Peer - to - Peer Architecture for DDBMS
- Multi - DBMS Architecture

Client - Server Architecture for DDBMS

This is a two-level architecture where the functionality is divided into servers and clients. The server functions primarily encompass data management, query

processing, optimization and transaction management. Client functions include mainly user interface. However, they have some functions like consistency checking and transaction management.

The two different clients - server architecture are −

- Single Server Multiple Client
- Multiple Server Multiple Client (shown in the following diagram)

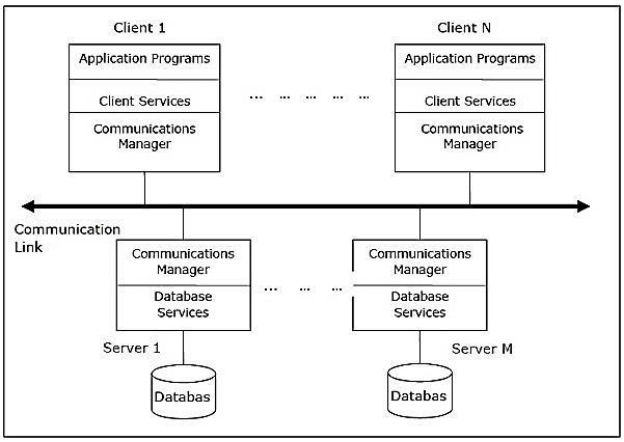

Figure 2. Clients - server architecture

3. System Study

System analysis focuses on specifying what the system or application required to do. It allows individuals see logical elements (what the system should do) apart from the physical component it uses (computers, terminals and storage system). It is the process of gathering and interpreting facts, diagnosing problem and using the information to recommend improvements to the system.

3.1 Existing System:

The existing system is the manual system. The manual system is error prone. It is time consuming. It is very difficult for a person to produce report. There are chances for manipulating the sales reports and changing it. This system involves a lot of manual entries with the applications to perform the desired task.

Limitations:

- Data maintenance adopted by the present system is not accurate.
- Inaccurate result in case of duplicating, delay and inconsistency in reporting.
- Generating consolidated reports is more difficult in manual system and it may not be consistent.
- The transactions are very time consuming.
- There is no facility for the users to know whether the data is entered is valid or not. This disadvantage is the major cause of errors in transaction.
- There is inconsistency in maintaining data's.
- No global view ability of data's.
- No chance of knowing other members sales daily.
- It is not user friendly.

3.2 Proposed System:

The proposed system is designed to eliminate the drawbacks of the existing system. It is designed by keeping in mind all the drawbacks of the present system in order to provide a permanent solution to the problems. The primary aim of the new system is to speedup transactions. The report is prepared for the sales done by the representative and the distributor. The representative code and distributor code are validated. Accuracy for all the data entered is maintained in the proposed system through validation and verification from all the files. Verification of representative code, distributor code, validation of records, etc., is performed with maximum accuracy. In short, efficiency is established. The advantages of this system are.

- User friendliness is the keyword for all the new software in the market. The proposed system incorporates this concept into itself to guide the user.
- At every stage of data entry necessary comments and validation messages are provided to the user.
- The proposed system is also expected to reduce the amount of paper work involved. The hard copies of only necessary documents need to be taken the rest can be avoided.
- Competitive environment is developed with the publications of other members of same level.
- Good communication is being held via mail options.
- Data's are maintained accurately via daily submission of sales details.

3.3 Flow model:

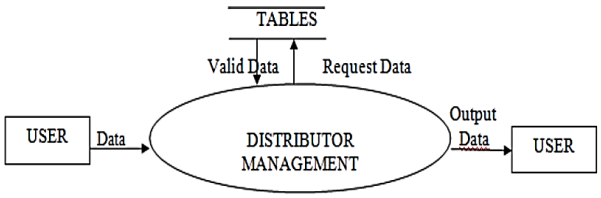

Figure 3. Flow Model

3.4 Description

The project **"Distributor management system"** deals with the process of managing the distributors of a company. This project consists of many modules like Administrative department, Manager Department, Distributor department, Sales manager department and Representative department with their access rights as sub modules.

Administrative department:

Module is mainly for the administrator. The administrator monitors the whole sales activities. The administrator is the one with veto rights. The administrator has special rights to dismiss/add any person in this system, to remove/modify the products details, to give target values, to change any ones addresses and to view various reports for monitoring purpose.

Add Distributor/Sales manager/Representative:

The administrator gets the details of the persons to be added via mails from other major modules. The details of Distributor, Sales manager, Representative are added in disp, smp, repp tables respectively with correct userid and position ids.

Removal Distributor/Sales manager/Representative:

The administrator removes Distributor/Sales manager/Representative the system according to their performance. The details of Distributor, Sales manager, Representative are deleted from disp, smp, repp tables respectively by supplying their user ids.

Product details modification:

In this sub module the product detail is modified via the product keys, if the product key has to be changed the product key is send as session value. The products can be added by specifying the required data's. These data's are updated in the protab table according to the process for which it is called.

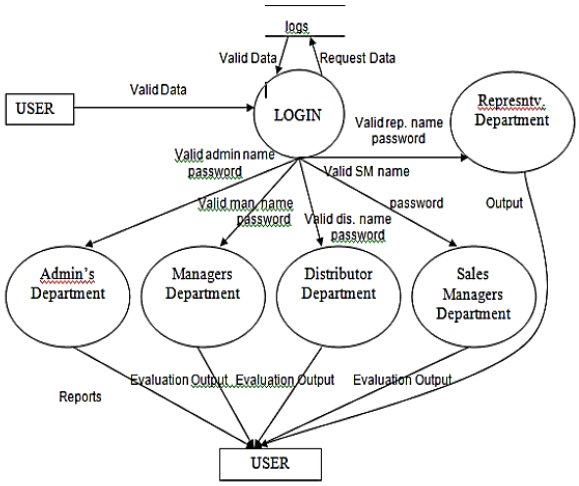

Figure 4. Use case diagram

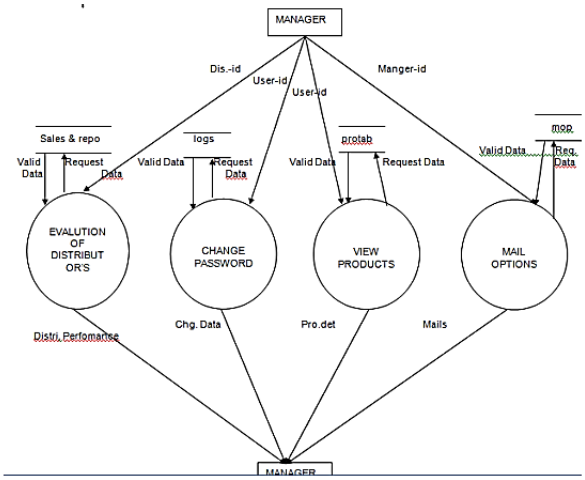

Figure 5. Flow of manager Department

Manager Department:

Manager department is the module developed for assisting the administrative department. This module has no veto rights; it just evaluates the distributors and sends details to the administrative module. The evaluation is stored in the sales, reppo tables for report generation.

Distributors department has distributors as its members. This module has the following as the sub modules Mail options, Evaluation and User input form. Each distributor has to submit their sales daily via, a sales form. The distributor's sets the target to the *SALES MANAGERs. In weekly* basics and evaluates their progress daily. The distributors cannot send mail to the administrative department.

Evaluation: This sub module is used for evaluating the sales manager of a distributor on daily basis. This evaluation is done on the comparison of target achieved and the target to

be achieved. The distributor supplies the current position of the sales manager and gives comment on the performances; the comment may include incentives also. These evaluations will be stored in the reppo table, since it will be displayed for other sales managers.

Sales Managers Department:

Sales Managers department has sales managers as its members. This module has the following as the sub modules Mail options, Evaluation and User input form. Each sales manager has to submit their sales daily via, a sales form. The sales managers set the target to the sales representatives. in daily basics and evaluates their progress daily. The sales managers cannot send mail to the administrative department nor to Managers department.

Evaluation: This sub module is used for evaluating the representatives of a sales manager on daily basis. This evaluation is done on the comparison of target achieved and the target to be achieved. The sales manager supplies the current position of the sales manager and gives comment on the performances; the comment may include incentives also. These evaluations will be stored in the reppo table, since it will be displayed for other sales mangers

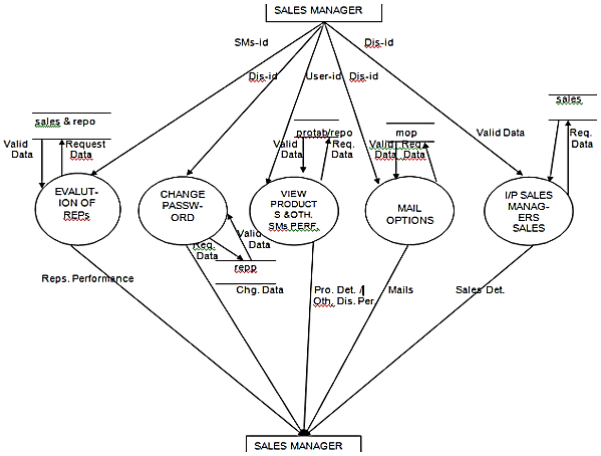

Figure 6. Flow of Sales manager

4. Result and Analysis

Home Page:

Figure 7. Home page

Registration Page

Figure 8. Registration page

Login Page:

Figure 9. Login Page

Admin Page:

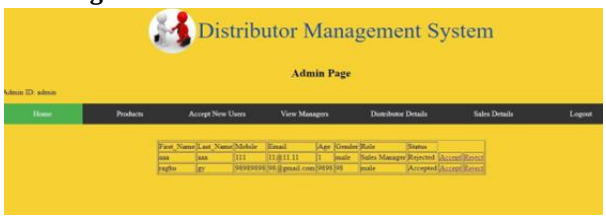

Figure 10.Admin Page

Admin Page:

Figure 11. Admin Page

5. Conclusion

The system is developed for automating the activities involved in the sales done by the company. The data maintenance and reports generated are compatible with

the daily activities of the department. The main advantage of the system over the existing system is the increase in the speed of information retrieval since that data is maintained systematically and any type of information required for the end user of the system can be generated easily. This system is of vital use to the sales in charge, to the distributor and to the representative also. They can very well know about the sales done by them on a particular day or a month, between dates, in an area, though "Distributor Management System" is so designed that not much amendment is required. This system has provisions for adapting to future enhancements.

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