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DAIRY PRODUCT MANAGEMENT SYSTEM

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Abstract: An old method of keeping records of dairy members using pen and paper is not reliable as finding old data can take a long time. The Dairy Product Management System provides dairy owners an easy way to organize the data of dairy members in one place through a web application. Through the dairy product management system, the dairy owner can keep records of dairy products like milk, ghee, curd, paneer etc. and the same will be created to the user's account so that both the owner and the user can keep track of past records. Also, the dairy owner gets a few more options in a dashboard. Only the owner can verify the user's account after the user registers in the system. With this, the owner can keep track of daily total collection, total revenue, total expenses, collections between two dates. Both the user and the owner can receive receipts from their account for milk related contributions and collection related transactions respectively.

INDEX TERMS - DAIRY, DAIRY PRODUCT DISTRIBUTION, TRANSACTIONS,

I. INTRODUCTION

The DPMS is going to be a web-based system that is accessible with an internet connection from any location. The most recent software development tools and best practices will be employed in the creation of the DPMS. The setup will be created to be simple to use and intuitive, especially for those with no background in technology. It is planned for the DPMS project to be finished in a year. The system will be developed in stages, with the first stage concentrating on the essential components of managing milk processing and collection. The next stages will concentrate on integrating other functionalities including finance and accounting administration, sales and distribution management, and inventory management. The funding for the DPMS project comes from a group of government and dairy companies.

The project is anticipated to have a major positive economic impact on the dairy sector by assisting dairy companies in increasing their profitability, productivity, and efficiency. For dairy enterprises of all sizes, dairy product management systems, or DPMS, are indispensable tools. DPMS may assist dairy businesses in increasing production, profitability, and efficiency by automating and optimizing critical business operations. From farm to fork, DPMS can be utilized to control every facet of the dairy supply chain. DPMS, for instance, can be used to schedule deliveries, manage inventory levels, track customer orders, and monitor milk output and quality. Additionally, dairy enterprises can benefit from the data and analytics

generated by DPMS, which can aid in their decision-making. Reports on inventory levels, client sales, and trends in milk production, for instance, can be produced using DPMS. All things considered, DPMS are effective instruments that dairy companies may use to boost productivity and profitability.

II. LITERATURE SURVEY

A. **Dairy Administration System: Impact on Dairy Farm Business:** In this paper author has contributed to the improvement of many national and local economics social impact. It highlights the features of former dairy business, the application supports digital payment transaction, daily report reliable and easy selling and buying of products which in turn prove to be effective way in uplifting the dairy farm business to a large extent. Their past academic performance and personal interests. Ultimately, the goal is to help students navigate the complex world of career choices more confidently.

B. **World Dairy Sector : a bright future promised:** In this paper author has provided multitude of benefits: nutrition, income, employment, manure and fuel. The three main benefits are: firstly, milk as a source of nutrition diet provides carbohydrates, vitamins, proteins and most of minerals for human body an considered as a provider of immunological protection provider of immunological protection.

C. **Global Marketing Systems in the Dairy Sector:** This paper focuses on the global dairy sector in general, and milk marketing systems in particular. The dairy sector is multifunctional in nature, and contributes to sustainable agricultural development and food security. The global trade is dominated by developed countries, contributing to 62% of the imports and 92% of the Exports.

III. EXISTING SYSTEM:

In manual system the data storage, data security is very tedious. And it is very difficult to secure and maintain for long years without any damages or corruptions. Redundancy, missing of data are the main problems by using manual process. The primary disadvantages in the modes of existing framework are:

1. If the system relies heavily on manual data entry, it can be time-consuming, error prone, and require a lot of effort to maintain accurate records..
2. If the existing system does not facilitate easy communication and collaboration among team.

IV. PROPOSED SYSTEM:

The application is comprised of two modules: The admin and The Customer. Each module has a separate login system asking for the registered email-address and the password to get access to their accounts. In case of any new user the system provides the Sign-up page to get their details records and create the user's account. The comprehensive functionalities of each module are described below:

The Admin Panel :

The admin is the owner of the dairy who supervise following work:

- Admin add or update prices and the quantity of the dairy products available in the dairy on any particular day.
- The Admin manages The Staff of the dairy. Furthermore, the staffs maintain the register of the daily milk record and money paid by the customers registered with the dairy.
- Admin provides the conformation to the order placed by the customers through verifying the details received through the SMS notification.

The Customer Panel:

The customers or buyers can perform the following operations:

- The customers log in to the system and can place or update the orders.
- The customers can get through the details of the daily milk reports and the bills of the orders placed

by them.

- After getting the confirmation of the order by the owner of the dairy, customer can pay the ordered products bill through Paytm payment gateway incorporated with the system.

IV.1 OBJECTIVE:

The primary objective of the Dairy Product Management System is :

- To improve the efficiency and productivity of dairy businesses.
- To enhance the quality and safety of dairy products.
- To improve customer service.
- To reduce the environment impact of the dairy industry.

IV.II METHODOLOGY

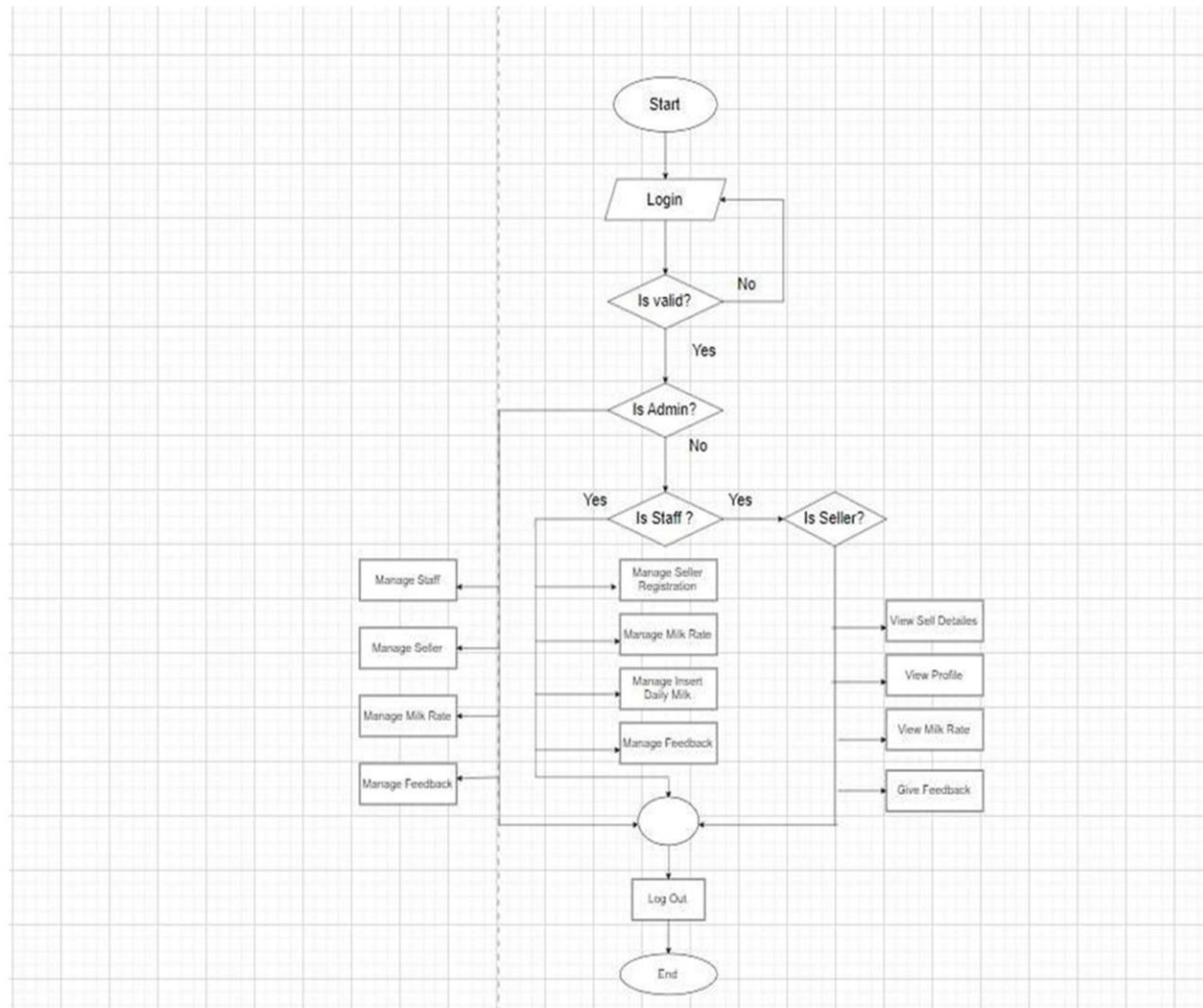


Fig. 1. Flowchart

Admin who is responsible to handle login authentication, add/delete account of customer/supplier, salary/payment transactions, and order updating/confirmations and to handle the on-shop customers as well.

Suppliers are the producers who are responsible to supply milk at dairy and get respective payment and proper supply reports instead of dairy card entry. Customers are the actual users and service gainers who can place orders, get daily milk supply, get reports, pay online, get text assurance of their orders.

Payment Gateway : Admin of the dairy approves the order placed by the customer; correspondingly the customer can pay the bill for the order through the payment gateway integrated with the system. The DMS or Dairy Administration System use Paytm

payment API; Paytm Payment Gateway provides a secure, PCI compliant way to accept payments on both website and App through different sources of payment .

IV.III Tools:

1. **MySQL:** It is a freely available open source Relational Database Management System (RDBMS) that uses Structured Query Language (SQL). SQL is the most popular language for adding, accessing and managing content in a database. It is most noted for its quick processing, proven reliability, ease and flexibility of use.
2. **XAMPP :** It is for use only as a development tool, to allow website designers and programmers to test their work on their own computers without any access to the Internet. XAMPP also provides support for creating and manipulating databases in MariaDB and SQLite among others.
3. **VS Code :** Visual Studio Code is a source-code editor that can be used with a variety of programming languages , including C, C#, C++, Java, JavaScript, Python. It is based on the Electron framework, which is used to develop Node.js web applications that run on the Blink layout Engine.

v. CONCLUSION:

The dairy product management system, which provides a flexible and adaptable solution to satisfy the various needs of dairy producers, processors, and distributors, marks a substantial improvement in the dairy business. Organizations may enhance their productivity, streamline processes, and eventually succeed more in the market by utilizing technology. We're going to keep pushing the boundaries of dairy industry management solutions with our system by staying dedicated to innovation and ongoing development.

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