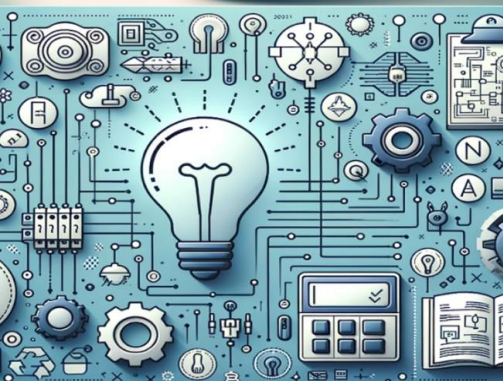




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Dairy Products Management System

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ABSTRACT: The Dairy Products Management System (DPMS) is a web-based application designed to streamline the operations of dairy shops by automating workflows and managing invoices efficiently. The system is built on a distributed architecture with centralized data storage, utilizing MySQL Server for database management and PHP for user interface development. The application ensures secure database connectivity through the MySQL Connection methodology, prioritizing data protection and security standards. DPMS features a single administrative module that oversees all aspects of the dairy shop, including product management, category and company organization, invoice generation, and sales reporting. The admin dashboard provides a comprehensive overview of key metrics such as listed categories, companies, products, and sales data. Additional functionalities include advanced product search, cart management, and report generation based on date and sales records. Admin can also manage their profiles, update credentials, and recover passwords when needed. By offering an efficient, automated, and user-friendly platform, DPMS enhances the operational efficiency of dairy shops which reduces manual workload, and ensures accurate record-keeping, ultimately leading to improved business management and decision-making. The system supports role-based access control, ensuring that only authorized personnel can perform administrative tasks, thereby enhancing security and operational integrity. It also includes automated stock management, alerting the admin when inventory levels are low to prevent product shortages. Furthermore, DPMS generates detailed financial reports, assisting in revenue tracking and expense management for better financial planning. The application is designed with a responsive user interface, making it accessible across multiple devices, including desktops, tablets, and mobile phones. Future enhancements may include integration with payment gateways and customer relationship management (CRM) features to expand its functionality.

I. INTRODUCTION

The Dairy Products Management System (DPMS) is a web-based application that can be accessed over the web. This system can be used to automate the workflow of dairy shop and their invoices. The project has been planned to be having the view of distributed architecture, with centralized storage of the database. The application for the storage of the data has been planned. Using the constructs of MySQL Server and all the user interfaces has been designed using the PHP technologies. The database connectivity is planned using the "MySQL Connection" methodology. The standards of security and data protective mechanism have been given a big choice for proper usage. The application takes care of different modules and their associated reports, which are produced as per the applicable strategies and standards that are put forwarded by the administrative staff. DFSMS is a web-based application which manages the products of dairy shop. It has one module i.e. admin who manages all the functions of the dairy shop.

II. LITERATURE REVIEW

The Dairy Products Management System (DPMS) aligns with the growing need for automation in small and medium-scale enterprises, particularly within the food and dairy industry. Traditionally, dairy shop operations such as inventory tracking, invoice generation, and product management were handled manually, leading to inefficiencies, data loss, and inaccurate reporting. Modern web-based systems provide a streamlined solution to overcome these challenges.

III. EXISTING SYSTEM

The existing Dairy Farm Shop Management System primarily relies on manual record-keeping methods, such as maintaining sales, inventory, and invoices in physical registers or spreadsheets. This traditional approach leads to inefficiencies, errors in calculations, and difficulties in tracking stock levels accurately. Without a centralized database, retrieving and analyzing data becomes time-consuming, affecting business decision-making. Additionally, the manual billing process is slow and prone to miscalculations, leading to financial discrepancies. Security concerns also arise, as



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paper records are vulnerable to loss or damage, and there is no proper backup system in place. Furthermore, generating reports on sales and inventory is challenging due to scattered data. Overall, the existing system is outdated and inefficient, highlighting the need for an automated Dairy Farm Shop Management System (DFSMS) to streamline operations, improve accuracy, and enhance overall business management.

IV. METHODOLOGY

The development of the Dairy Products Management System (DPMS) followed a structured and iterative software development methodology to ensure the delivery of a reliable, user-friendly, and secure application. The chosen methodology blends aspects of the **Waterfall Model** and **Incremental Development**, focusing on modular development, testing, and deployment.

Requirement Gathering and Analysis

The initial phase involved understanding the challenges faced by traditional dairy management practices. Meetings with potential users (shop owners and staff) were conducted to gather requirements related to sales tracking, inventory updates, product categorization, billing, and report generation.

V. SYSTEM ARCHITECTURE:

The system adopts a three-tier architecture comprising:

- Presentation Layer: Built using HTML, CSS, and JavaScript for front-end development to deliver an intuitive and responsive user interface across devices.
- Application Layer: Developed using PHP, handling all server-side operations, form validations, session handling, and business logic.
- Data Layer: MySQL is used to securely store user information, blood requests, donation events, and hospital blood availability data.

Development Tools and Environment

- Operating System: Windows/Linux/macOS
- Tools Used: XAMPP, Visual Studio Code
- Backend: PHP, MySQL
- Frontend: HTML, CSS, JavaScript
- Text Editor : Notepad for code development
- Frontend: HTML, CSS, JavaScript
- Backend: PHP, MySQL

VI. SYSTEM MODULES

Admin Dashboard Module

Provides an overview of key business statistics, including total categories, companies, products, and sales. Displays graphical reports for easy analysis of sales trends and inventory status.

Category Management Module

Allows the admin to add, edit, and delete product categories.
Helps in organizing products systematically under relevant categories.

Company Management Module

Enables the admin to add, edit, and delete company details.
Maintains a database of product suppliers or manufacturers.

Product Management Module

Allows the admin to add new products, update existing ones, and delete outdated records.
Stores product-related details such as name, price, stock quantity, category, and company.



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Search and Cart Module

Facilitates quick searching of products by name, category, or company.

Admin can add selected products to the cart for generating invoices.

Invoice Generation Module

Generates bills and receipts after completing a transaction.

Displays invoice details including product name, quantity, price, and total amount.

Provides options to view, print, and download invoices as PDF.

Reports Module

Generates two types of reports:

Between Dates Report – Displays sales within a specific date range.

Sales Report – Shows total sales for a selected period (daily, weekly, monthly).

Helps in analyzing business performance and tracking revenue trends.

Admin Profile & Security Module

Allows the admin to update profile details and change passwords.

Provides password recovery options for security.

Testing Strategy

Unit Testing : This testing helped identify and fix any bugs in isolated modules before integrating them into the system.

Integration Testing : After unit testing, integration testing was conducted to ensure that different modules of the system, such as order management, billing, and inventory, worked seamlessly together.

System Testing : The entire system was tested in a real-world environment to check its overall performance, reliability, and accuracy.

Acceptance Testing : Acceptance testing for the Dairy Products Management System (DPMS) ensures that the application meets the specified business requirements and functions correctly in real-world scenarios.

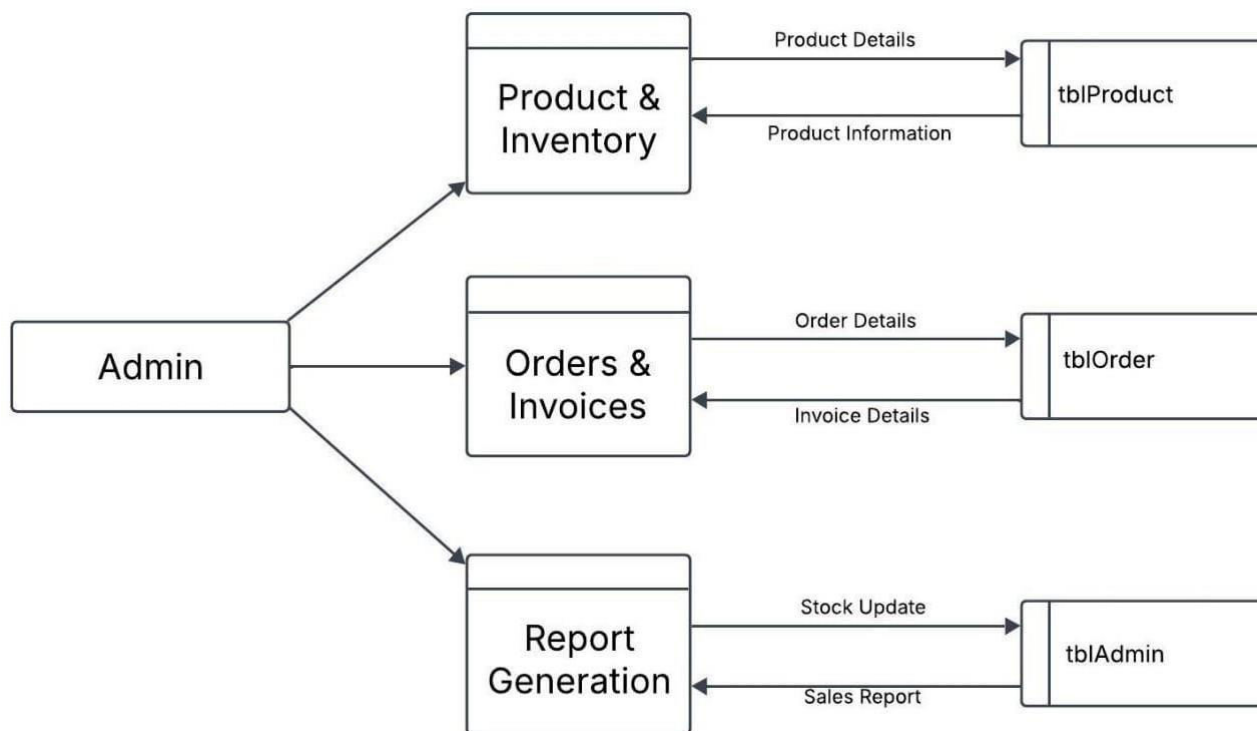
VII. DATA FLOW DIAGRAM





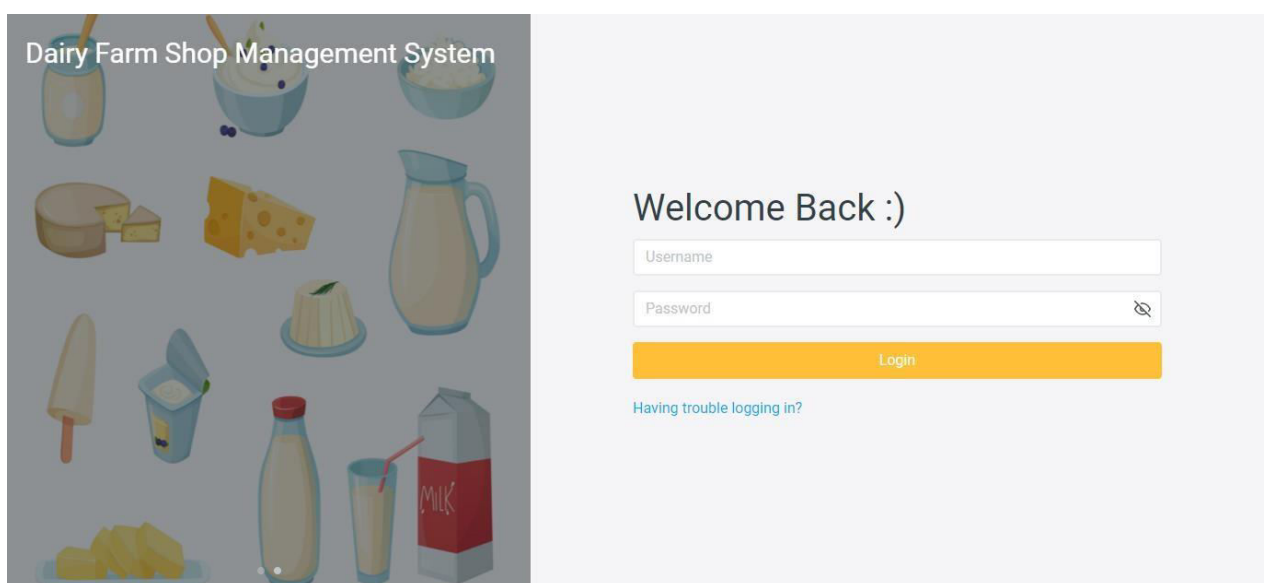
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VIII. OUTPUT

Login Page

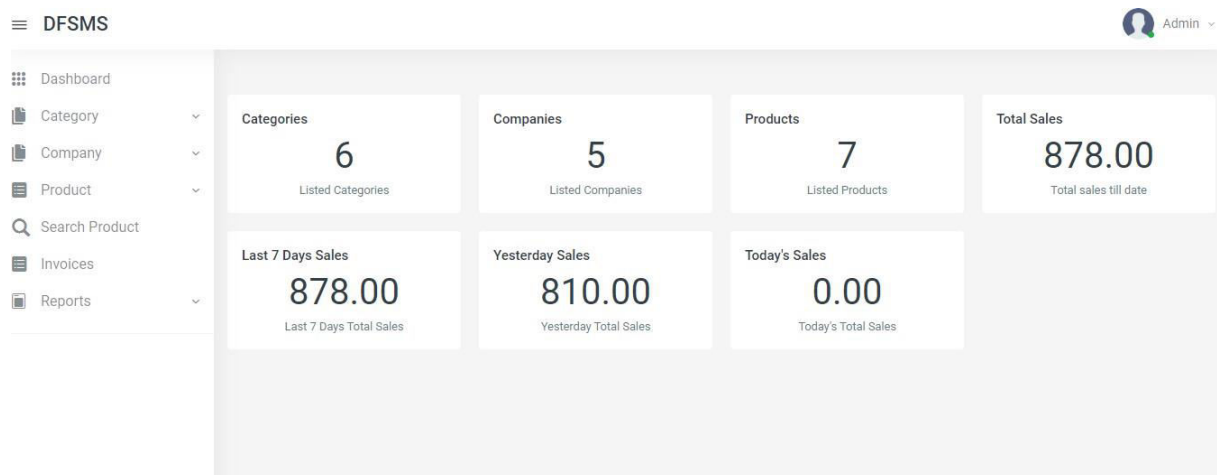




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Dashboard



Admin Profile

DFSMS Admin

Profile > Admin

Update Admin Profile

Reg. Date 2019-12-23 00:00:00
Last Updation Date 2019-12-26 11:17:21

Name

Username

Email id

Mobile Number



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Add Category

DFSMS

Category > Add

Add Category

Category

Category Code

Submit

Update Category

DFSMS

Category > Edit

Edit Category

Category

Milk

Category Code

MK01

Update

DFSMS

Product > Add

Add Product

Category

Select category

Company

Select Company

Product Name

Product Price

Product Price

Submit



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Manage product:

DFSMS Admin

Product > Manage

Manage Products

10 items

#	Category	Company	Product	Pricing	Posting Date	Action
1	Milk	Amul	Toned milk 500ml	22	2019-12-25 10:52:37	Edit
2	Milk	Amul	Toned milk 1ltr	42	2019-12-25 09:55:20	Edit
3	Milk	Mother Dairy	Full Cream Milk 500ml	26	2019-12-25 12:12:24	Edit
4	Milk	Mother Dairy	Full Cream Milk 1ltr	50	2019-12-25 12:12:39	Edit
5	Butter	Amul	Butter 100mg	46	2019-12-25 17:12:56	Edit
6	Bread	Patanjali	Sandwich Bread	30	2019-12-25 17:10:10	Edit
7	Ghee	Paras	Ghee 500mg	350	2019-12-25 20:23:33	Edit

Showing 1 to 7 of 7 entries Previous 1 Next

Update Product

DFSMS Admin

Product > Edit

Edit Product

Category:

Company:

Product Name:

Product Price:

Search Product

DFSMS Admin

Search > Product

Search Product

Product Name:

Shopping Cart

Your Cart is Empty



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View Invoice

#	Product Name	Category	Company	Quantity	Unit Price	Price
1	Ghee 500mg	Ghee	Paras	1	350	350.00
2	Butter 100mg	Butter	Amul	1	46	46.00
Total						396.00

VIII. CONCLUSION

The Dairy Products Management System (DPMS) is a well-structured web-based application designed to enhance the efficiency of dairy shop operations by automating product management, invoicing, and sales tracking. Through the analysis of the extracted project files, it is evident that the system follows a structured approach, utilizing PHP for backend development and MySQL for database management. The admin dashboard serves as the central hub, providing functionalities such as adding, editing, and managing product categories, companies, and invoices. The system also includes security measures such as password management and user authentication, ensuring controlled access to administrative features.

The database, named dfsms, is structured to store essential business data, including admin credentials, product details, sales reports, and financial records. The presence of tbladmin indicates role-based access control, restricting unauthorized users from modifying critical business information. Additionally, the system's reporting and stock management capabilities provide business insights that help in tracking sales performance and inventory levels. The Readme file outlines the installation steps, confirming that the application is designed to run on local web servers like XAMPP or WAMP, with easy integration into a MySQL database.

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