Household Supplies Sales System

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Abstract. The Household Supplies Sales System is a web-based platform developed to streamline merchandise operations. It enables efficient product registration, inventory tracking, customer management, and sales monitoring through a responsive interface. Key features include automated product code generation, category filtering, secure authentication, and real-time reporting. By reducing manual effort and ensuring accurate data management, the system improves decision-making, enhances customer satisfaction, and supports sustainable business performance.

Keywords: reliable inventory tracking, secure sales and payment processing, real-time report and admin controls for data insights

INTRODUCTION

Manual methods of managing merchandise often led to common problems such as misplaced items, inaccurate inventory counts, data redundancy, and delayed sales tracking. These inefficiencies can reduce business productivity and result in financial losses. To address these issues, the Household Supplies Sales System introduces a computerized approach to merchandise handling. The system provides secure access to different types of users, automates inventory updates, and generates accurate records of stock and sales. By replacing outdated manual methods, the system helps businesses save time, reduce errors, and operate more efficiently.

PROBLEM

Manual record-keeping can lead to errors in stock levels, sales data, and product information. Inventory tracking and report generation become time-consuming, while overstocking or stockouts may occur due to poor monitoring. The lack of real-time data makes decision-making difficult, and important information is at risk of loss or unauthorized access. These issues highlight the need for an automated system to improve accuracy, save time, and enhance overall business performance.

APPROACH

This system consists of two roles: Admin and User. The diagram shows a unified flow: all users authenticate, then role-based access routes Users to sales operations (select customer/products, apply tax, take payment methods, issue printed receipts) while Admins access full management (users, products, categories, pricing/profit margins, stock updates) and can review/modify sales. Each sale automatically updates inventory with low-stock alerts. Both

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roles can search and filter transactions, and the system generates product stock balances and sales reports (trends, best sellers, top customers) for operational oversight. Sessions end on logout.

If the employee does not have an account, credentials must be created by the admin. Once login details are provided, the employee proceeds to the login page. After successful login, the employee can access the dashboard with limited features. Employees can manage customer records, create new sales, apply tax, and select payment methods. During sales, employees can generate receipts, either print them. Employees can also filter and view past sales transactions. Once tasks are completed, the employee can log out and the session ends.

The admin enters login credentials. If invalid, the system loops back to the login screen. If valid, the admin gains full access to the dashboard and functionalities. The admin can manage employees, products, categories, and customers. The admin can set profit margins, update stock levels, and monitor low-stock alerts. In addition, the admin can oversee all sales records, generate and export reports, and view sales trends with graphical insights. The admin also has authority to update or delete records where necessary. After performing these operations, the admin can log out and the session will be terminated.

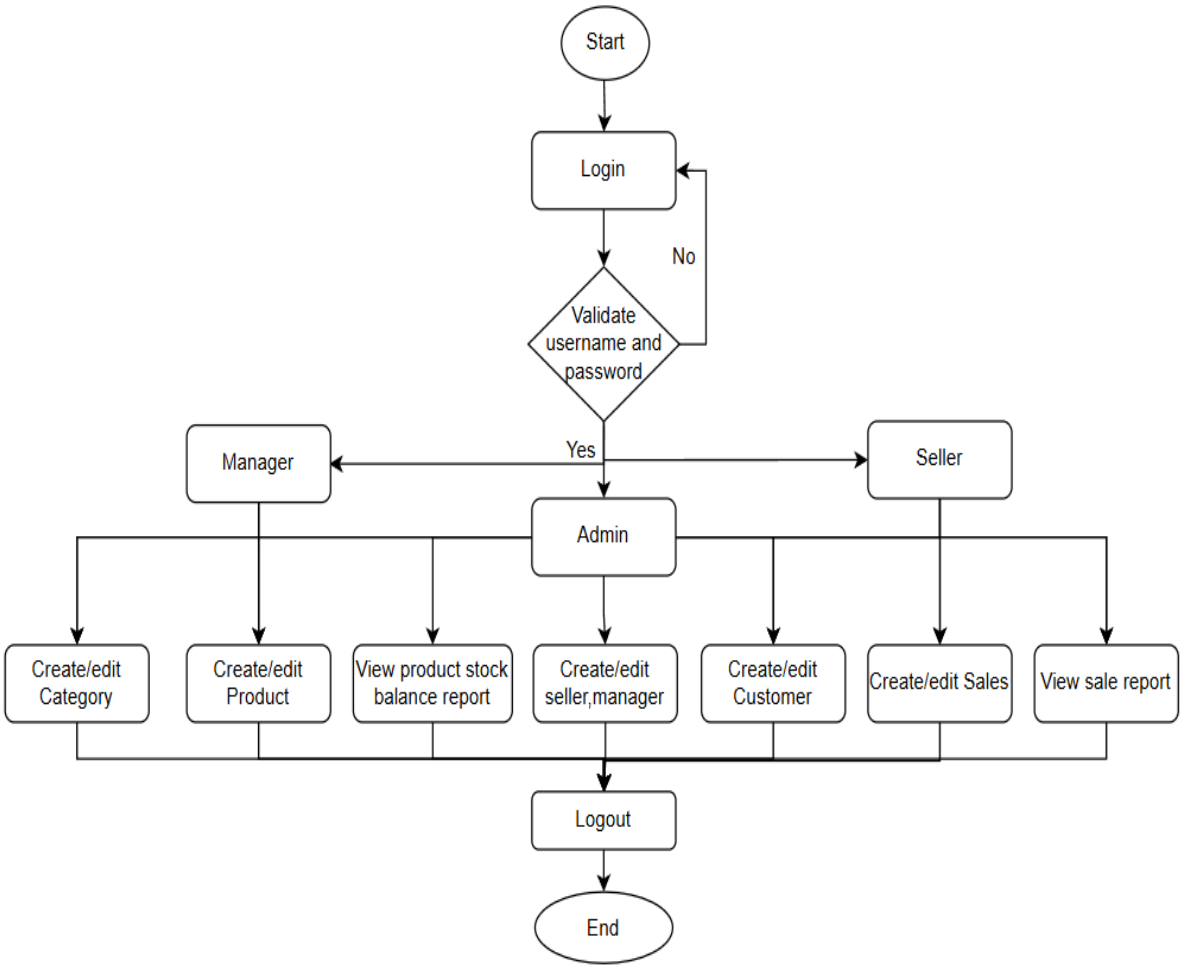

Figure 1: System Flow Diagram for Admin

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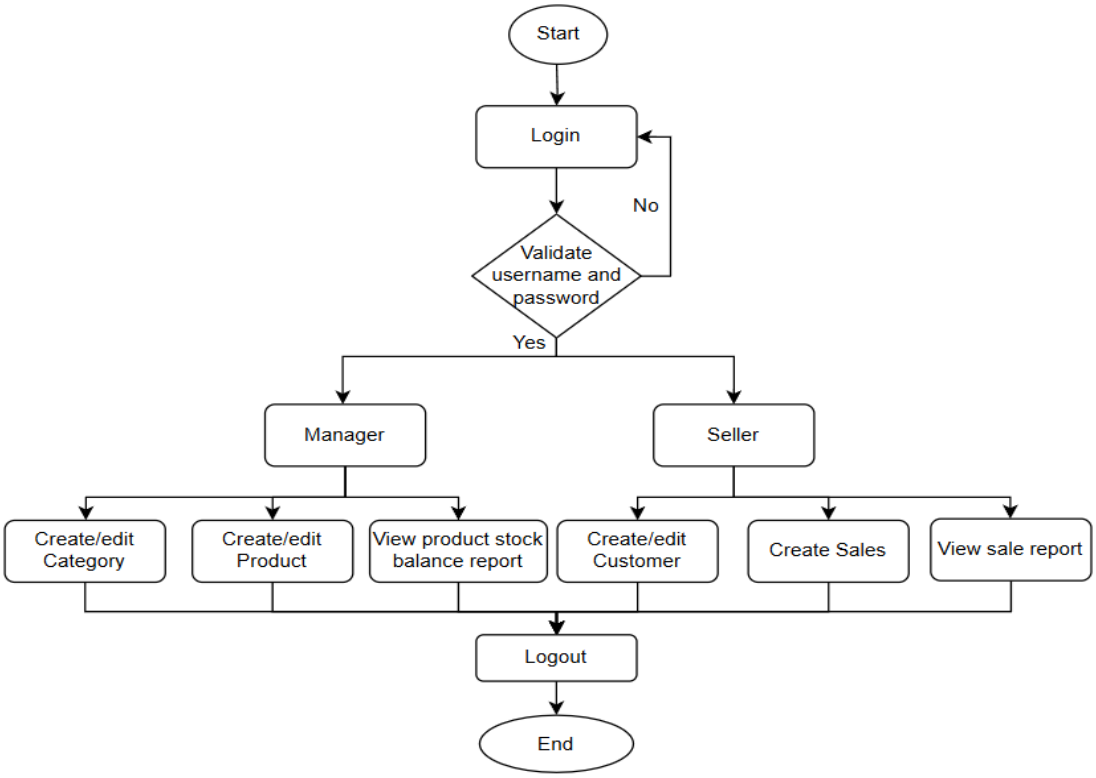

Figure 2: System Flow Diagram for Manager and Seller

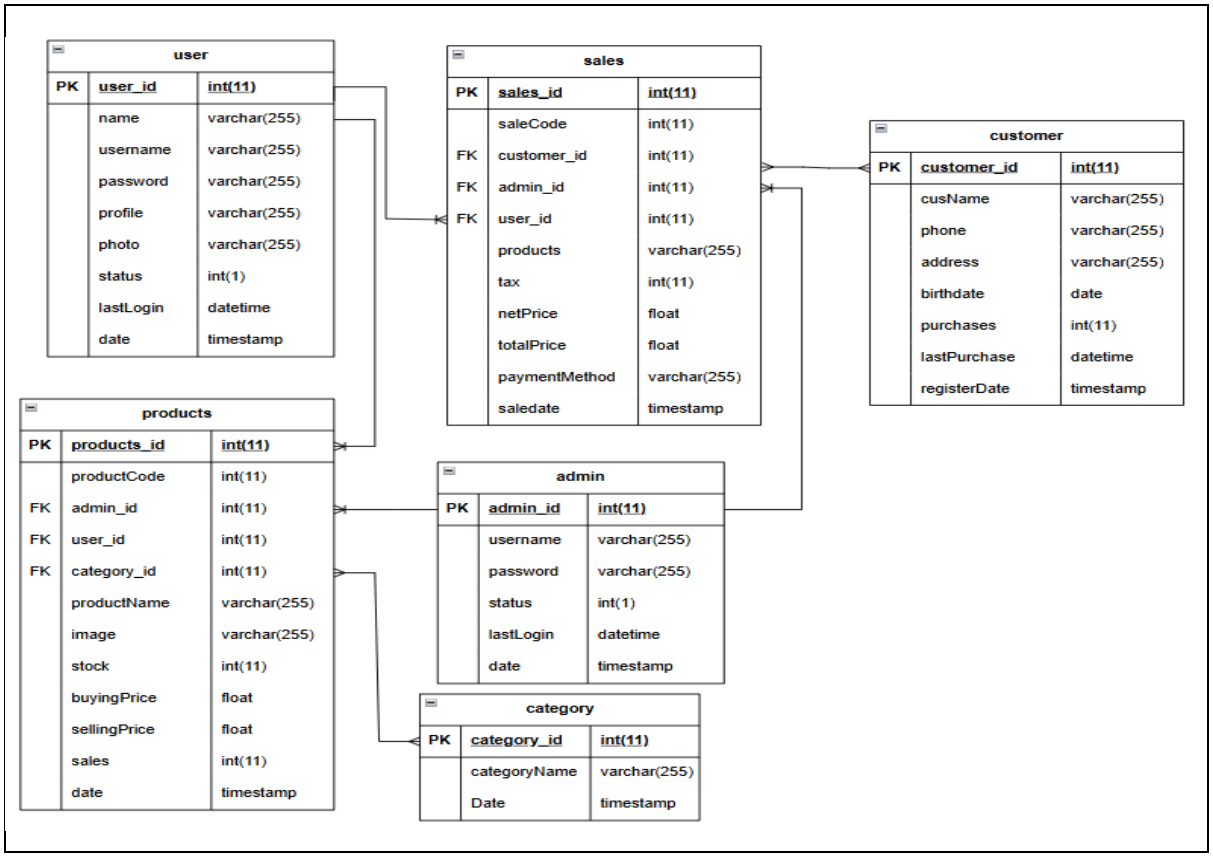

Figure 2: Database Design

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An Entity Relationship Diagram (ERD) defines the logical structure of the Merchandise Management system database and illustrates how entities are related. Each entity contains attributes, with primary keys uniquely identifying records and foreign keys linking related data. The ERD also applies cardinality notation to represent one-to-many and many-to-many relationships. In this system, the database consists of separate admin and user tables, where both maintain a one-to-many relationship with sales and products, allowing tracking of transactions and inventory management per account. The sales table forms a many-to-many relationship with customers, as multiple customers can be linked to multiple sales. Similarly, the products table has a many-to-many relationship with categories, since products can belong to multiple categories and categories can contain multiple products. Figure 2 presents the database design, showing all tables and their interconnections.

RESULTS

Each page of merchandise management system is designed to benefit directly for the efficiency and effectiveness of business operations. As a result, businesses experience improved operational efficiency, enhanced productivity, and reduced labor costs.

Figure 3: Monthly Sales Report

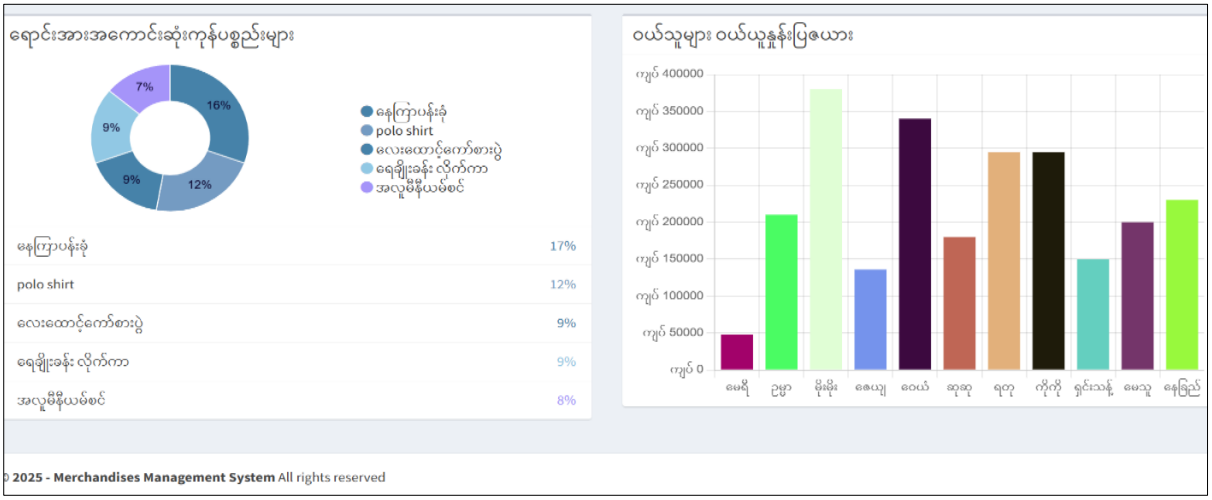

Figure 4: Best Selling Product and Purchase Reports

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Additionally, timely and accurate reports allow managers to analyze sales trends, identify best-selling products, and plan purchases strategically. Customer satisfaction is also improved due to better stock availability and faster service. Overall, the system delivers measurable results in accuracy, cost reduction, time savings, and informed business growth, providing a reliable foundation for sustainable operations.

CONCLUSION

The development of the Household Supplies Sales System has successfully provided an efficient, automated solution for managing inventory, sales, and product information. By reducing manual errors, saving time, and providing real-time data, the system improves operational efficiency and supports informed decision-making. It enhances inventory accuracy, prevents stockouts or overstocking, and streamlines communication between departments. Additionally, the project offered valuable technical and professional learning experiences, including web development, database management, teamwork, and problem-solving. Overall, this system demonstrates the practical benefits of digital solutions in transforming traditional merchandise management into a reliable and productive process.

REFERENCES

[1] Tom Bulter and Kevin Yank, PHP & MySQL Novice to Ninja, 6th Edition, URL: https://books.google.com, 2024.
[2] O'Reilly, Head First PHP & MySQL, 1st Edition, URL: https://www.oreilly.com, 2008.
[3] Tripsite, URL: https://www.tripsite.com.
[4] W3SchoolsOnlineWebTutorials, JavaScript, URL: https://www.w3shools.com.js, 2024.
[5] Matt Doyle, Beginning PHP 5.3, Wrox Press (Wiley Publishing), 2009.
[6] Janet Valade, PHP 5 For Dummies. Hoboken, NJ: Wiley Publishing. ISBN: 0764541668, 2004.

Accepted Date: 30.9.2025
www.ucsh.edu.mm