Consumer Complaint Management System

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Abstract. The Consumer Complaint Management System is a digital platform designed to streamline the process of submitting, tracking, and resolving consumer complaints in an efficient and transparent manner. The system provides consumers with an easy-to-use interface to submit complaints related to products, services, or business practices, while ensuring that complaints are properly documented and addressed in a timely fashion. Beyond consumer benefits, the system supports businesses and regulatory authorities by offering data-driven insights into recurring issues and emerging trends. By maintaining a centralized database, the system enables administrators to generate analytical reports, and identify patterns that help improve consumer protection policies. This fosters transparency and strengthens the trust between consumers and businesses, and also enhances regulatory oversight. Ultimately, the Consumer Complaints Management System empowers consumers to voice their concerns, promotes fair practices, and strengthens the overall consumer rights protection framework.

Keyword: Consumer Complaints, Complaint Management, Transparency, Accountability, Complaint Tracking

INTRODUCTION

The Consumer Complaint Management System is developed to address the growing need for a reliable and efficient mechanism to handle consumer complaints in the digital era. Traditionally, complaints were managed through manual processes, which often led to delays, lack of transparency, and limited accountability. With the increasing demand for consumer rights protection, there is a strong need for a centralized and automated platform that allows consumers to register complaints, track their status, and receive timely resolutions. The system provides an online solution that simplifies the complaint process for consumers while offering administrators and regulatory bodies tools to monitor performance, analyze trends, and improve service quality. By ensuring transparency, accountability, and easy access, the system strengthens the trust among consumers, businesses, and governing authorities.

PROBLEM

The main problems that the Consumer Complaints Management System seeks to address are the lack of transparency and efficiency in complaint-handling processes. In many cases, consumers face difficulties in finding the right authority to submit their complaints, resulting in delays or unresolved issues. Manual systems often lead to lost documents, poor record-keeping, and limited feedback to consumers, which discourages them from raising their concerns.

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APPROACH

The Consumer Complaint Management System is designed as a dual-role platform to simplify the complaint submission and management process. For consumers, the system provides access to the home page, the about page, the announcement page, and the organization page. The unregistered users can browse certain sections, while the registered users gain additional features such as profile management, password reset via email, access to a user guide, and the ability to submit complaints. Once a complaint is submitted, the users can also download it as a PDF or Word file for record-keeping. Figure 1 depicts the system flow diagram for consumer representing data flow within the system.

On the administrative side, the system offers tools for managing announcements, organizations, user accounts, and feedback. Administrators are responsible for handling consumer complaints, which they can review, resolve, or reject. Additionally, the system allows the admins to send investigation updates directly to the user's email, ensuring efficient communication and improved complaint resolution. Figure 2 illustrates the system flow diagram for administrator representing data flow from the administrator perspective.

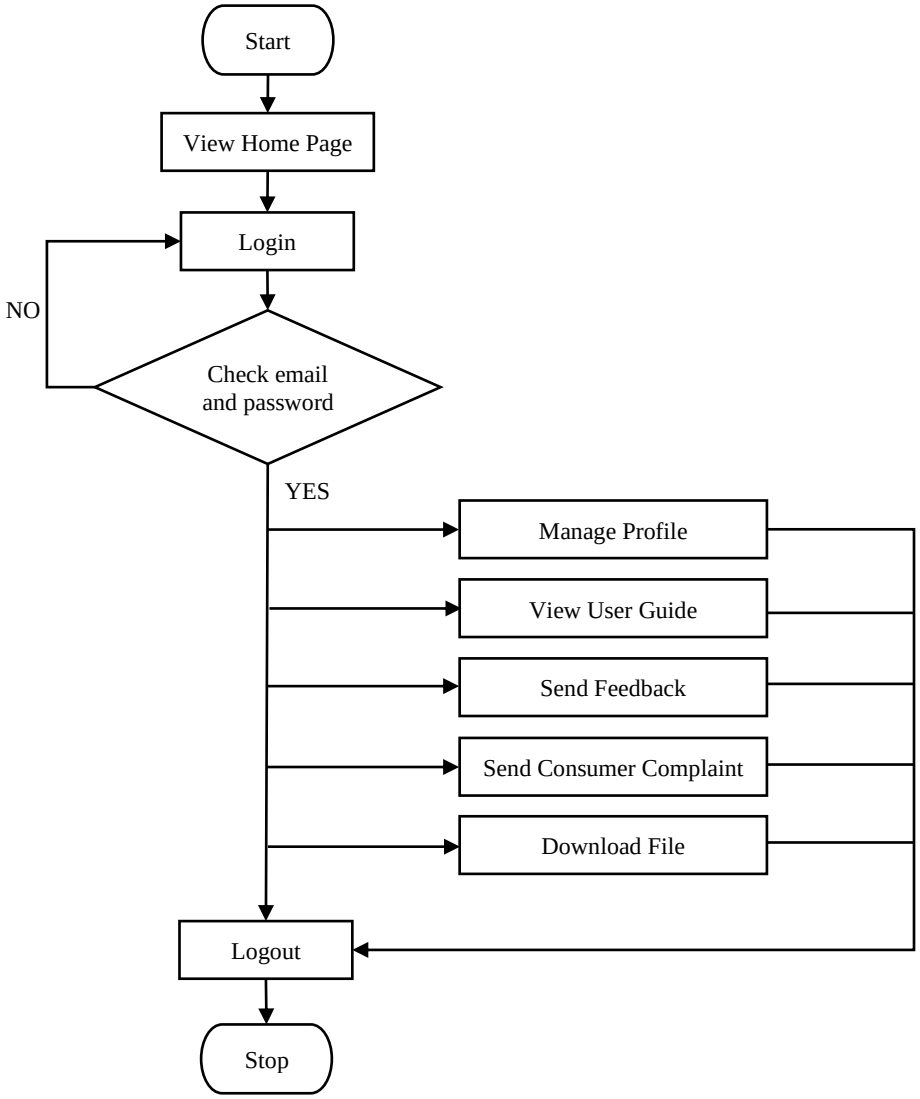

Figure 1: System Flow Diagram for User

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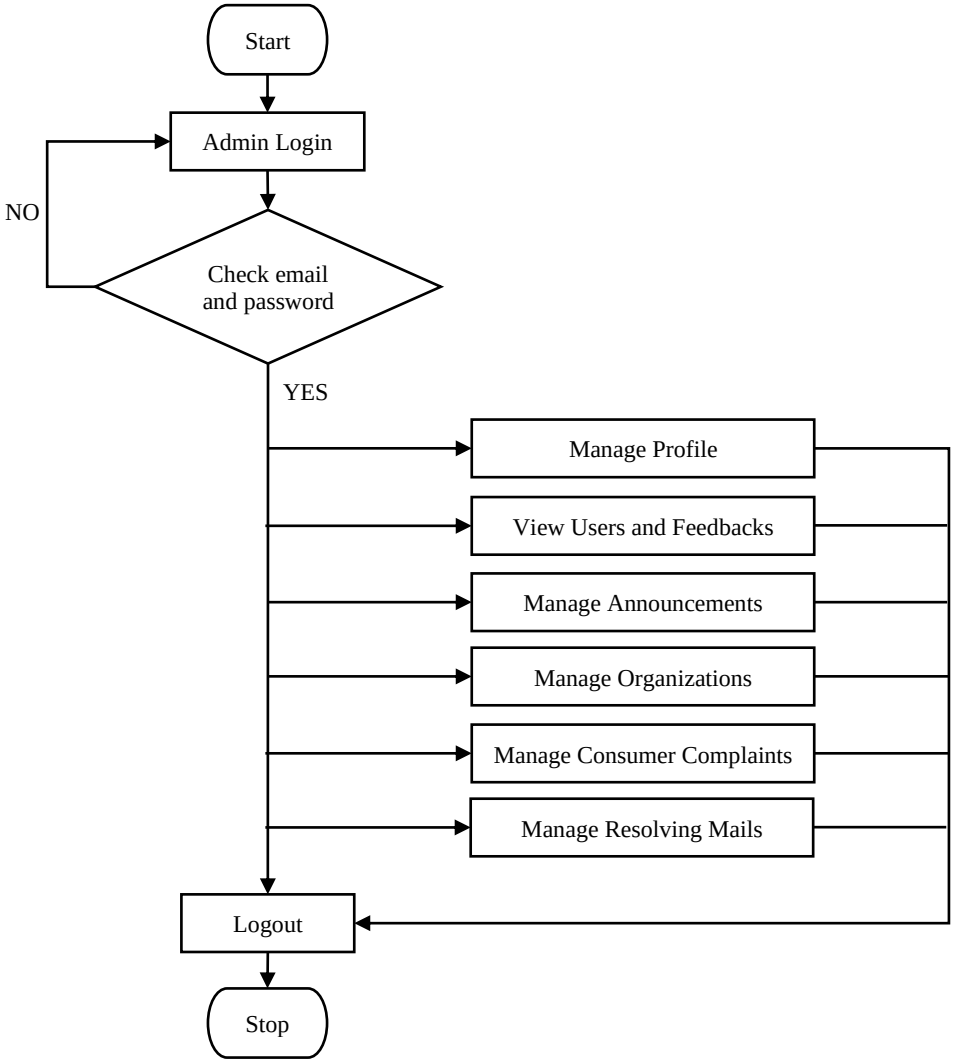

Figure 2: System Flow Diagram for Admin

An Entity-Relationship (ER) diagram uses data modeling techniques that can help define business processes and serve as the foundation for a relational database. In the design of the Consumer Complaint Management System, the ER diagram is constructed to represent the relationships among the entities involved in the system. An ER diagram attribute can be denoted as a primary key, which identifies a unique attribute, or a foreign key, which can be assigned to multiple attributes. A cardinality notation can then define the attributes of the relationship between the entities. In the database, there are six data tables that are Users, Admin, Organization, Announcement, Feedback, and Complaints.

Figure 3 presents the database design for all the data tables and their relationships of the database. The ER diagram for the Consumer Complaint Management System provides a clear visualization of how entities such as users, admin, organization, announcement, feedback, and complaints that interact with each other. Primary keys ensure each record is unique, while foreign keys link related tables, and cardinality notations define the nature of relationships. Together, these tables efficiently manage user information, administrative tasks, organizational

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data, communications, and consumer feedback, creating an organized and effective system for registration and management.

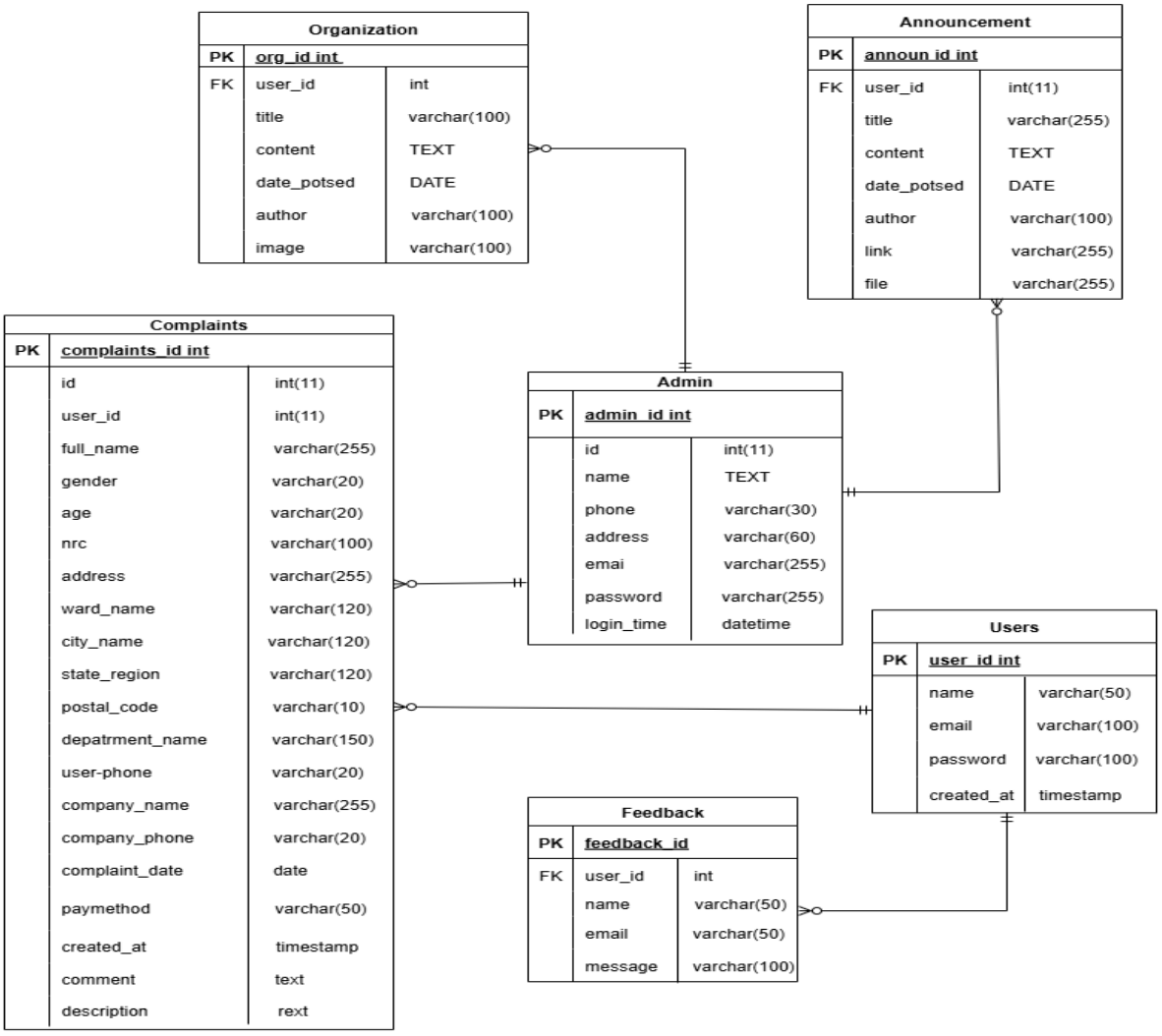

Figure 3: Entity-Relationship Diagram

RESULTS

The result of the Consumer Complaint Management System is a streamlined and transparent platform that effectively manages consumer complaints. Consumers can easily submit complaints regarding products or services, track the status of their submissions in real-time, and receive timely updates on resolution progress. Administrators can efficiently process, categorize, and respond to complaints, reducing delays and human errors. Overall, the system enhances accountability, improves communication between the consumers and businesses, and strengthens consumer protection, fostering the trust and satisfaction among all stakeholders. Moreover, the system also benefits businesses and regulatory authorities. By centralizing the submitted data, the system allows for the identification of recurring issues, generation of data-driven analytical reports, and implementation of programs to improve service quality. The system not only strengthens the trust between consumers and businesses but also ensures the effective protection of consumer rights.

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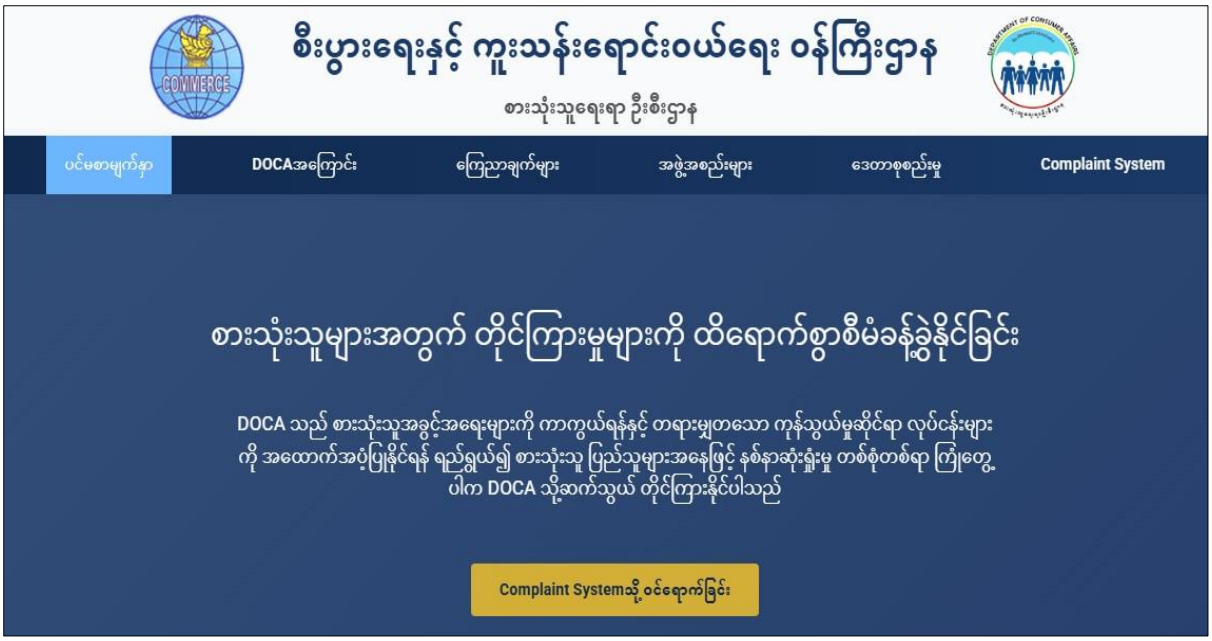

Figure 4: Implementation of the system (User)

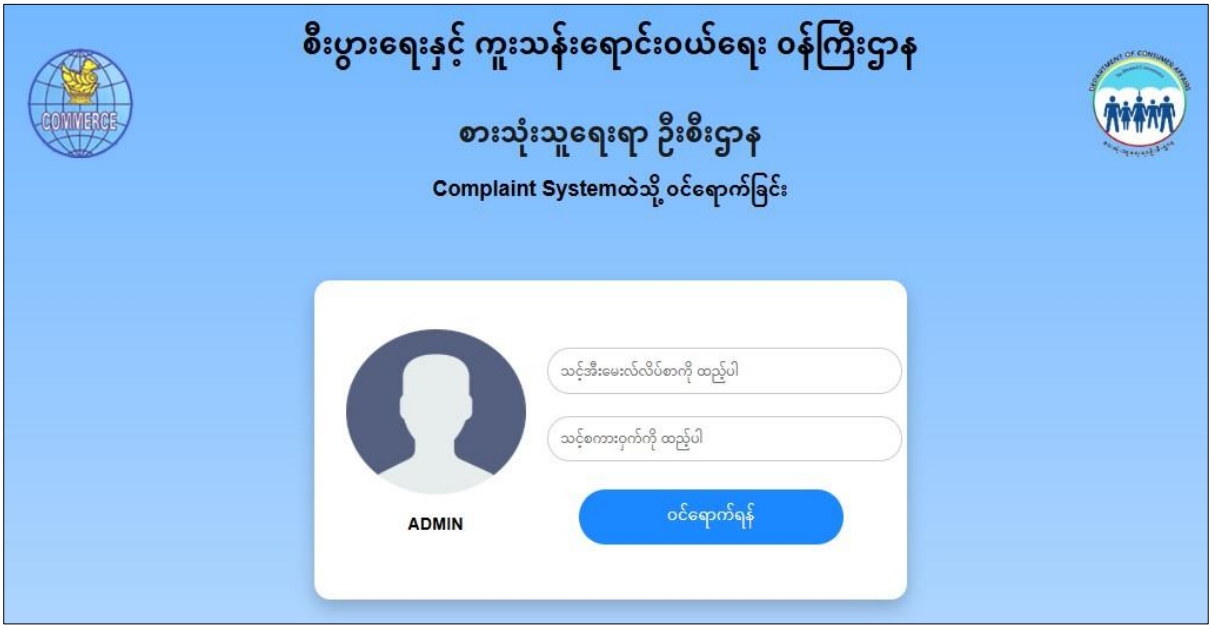

Figure 5: Implementation of the system (Administrator)

CONCLUSION

The Consumer Complaint Management System offers an efficient, transparent, and well-structured platform for handling the consumer complaints. It empowers the consumers to easily submit complaints, track their status, and receive timely updates, thereby ensuring accountability and responsiveness. For businesses and regulatory authorities, the system enables effective categorization, processing, and analysis of complaints, reducing errors and delays. By fostering clear communication and building trust, the system improves service

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quality and strengthens the consumer protection. Ultimately, the system serves as a vital tool for promoting fair practices and enhancing the overall consumer satisfaction.

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