SocietyVoice: Residential Society Management System

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Abstract: *This study presents SocietyVoice, a web-based residential society management system developed to replace manual record-keeping and fragmented communication with a centralized digital platform. The system follows a modular client–server architecture and is implemented using the Flask web framework, HTML/CSS/JavaScript for the frontend, and an SQLite3 relational database. It supports role-based access for residents, administrative staff, and service personnel. Core functional modules include user authentication, complaint registration and tracking, notice dissemination, staff assignment, visitor logging, and basic maintenance payment recording.*

The proposed system was evaluated through a functional prototype deployed on a representative apartment-level dataset. Performance was assessed using predefined test scenarios that measured task completion time, error frequency, and user satisfaction, and the results were compared with traditional paper-based management processes. The evaluation demonstrates a significant reduction in complaint registration and tracking time, a decrease in data inconsistencies, and improved transparency in interactions between residents and management.

Overall, the findings indicate that lightweight Flask-based web applications such as SocietyVoice provide an effective, cost-efficient, and easily deployable solution for small- and medium-scale residential communities. Furthermore, the system establishes a scalable foundation for future enhancements, including online payment integration, mobile accessibility, and advanced analytics..

Keywords: Residential Society Management, Web-Based Application, Flask Framework, Digital Governance

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