Smart AI-Based Living Link System Society

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ABSTRACT

A society management system is an all-embracing software solution aimed at managing and automating the processes of residential societies, complexes, and gated communities. This system allows for effective handling of daily running of the estate's operations, for instance, accounting, maintenance, security, voice and video communication, and management of community activities. Some of the core features common in such platforms are payment solutions for dues and fees, request for maintenance, rooms and facility bookings, visitors' management, and efficient means of communication for residents and management teams. It also usually contains the event modules, for documents storage, and for voting on the society decisions, using exemplary democratic means.

KEYWORDS: *Maintenances Of Society, Community Automation, Society, Water Service.*

Introduction

A Living Link System is a comprehensive solution designed to streamline the managing and operations of domestic societies, such as house, gated community, and housing cooperatives. This system integrates various implementation to manage homelike information, memorandum, financial transactions, and facility providing, security, and conservation requests, all through a centralized platform. The Living Link System is a vital tool for the modern domestic societies, addressing the challenges of managing large community with diverse needs. By integrating various functionalities into a single platform, this system improving the overall living experience for homelike, while also simplifying the controlling responsibilities of the managing committee. As domestic societies continue to grow and evolve, the implementation of such a system becomes increasingly essential for maintaining capability, transparency, and harmony within the community. Incorporating new tools and technologies into a Living Link System can significantly improving its capability, security, and user experience.

Literature Review

One of the key aspects of Living Link Systems is their ability to automate and simplify controlling tasks such as conservation scheduling, billing, and accounting. Early systems focused primarily on financial managing and conservation tracking, but contemporary solutions have expanded to include features like visits managing, facility booking, and grievance redressed mechanic LLS. Researchers like Smith and Jones (2015) have highlighted the importance of the integrating these features is to provide a comprehensive managing solution that addresses the diverse needs of homelike. Another significant area of the research is the role of technology in upgrading memorandum within housing societies. Modern LLS platforms leverage mobile applications, LLS alerts, and email notifications to ensure timely and effective memorandum between the managing committee and homelike. According to a study by Chen et al. (2017), the adoption of these technologies has led to improved homelike satisfaction and engagement, as they provide a convenient way to stay informed about civilization events, announcements, and problem. Data security and the privacy and concerns have also been a focal point in the literature survey on Living Link Systems.

Problem Statement

Upgrading Capability and Transparency in Domestic Civilization Managing Domestic societies, such as apartment complexes and gated community, involve a diverse range of controlling tasks that need to be managed effectively to

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ensure smooth operations and maintain homelike satisfaction. Traditional methods of managing these tasks are predominantly manual, involving paper-based records, physical notice boards, and inperson meetings. These methods are prone to errors, inefficiencies, and a lack of transparency, leading to dissatisfaction among homelike and increased workload for managing committees. This system will be usable for the working people to do their community related work within less time.

Objective

- Enhanced Memorandum
- Financial Transparency
- Data Security and privacy
- Homelike Engagement and Satisfaction
- Future-Ready Systems.

Proposed System

- **User Managing:** Centralized database for homelike and staff information, with easy update capabilities.
- **Billing and Payments:** Automated invoicing, online payment options, and expense tracking.
- **Facility Managing:** Online booking solution for common facilities and tracking of conservation requests.
- **Security Managing:** Digital visitor managing system, and emergency alert notifications.
- **Document Managing:** Secure, cloud-based storage for important documents accessible to all homelike.

Specific Requirements

Functional Requirements:

- User Registration and Profile
- Admin Registration
- Admin Control Panel
- Maintenances and Event
- Complain.

Non-Functional Requirements:

- Response Time
- Reliability
- Usability
- Scalability
- Accessibility

Details of Hardware and Software

Hardware Requirements:

- Intel i3 processor.
- 4 GB RAM.
- 500 GB Hard disk
- Minimum OS Requirement Windows 7 or above.

Technology Used:

- Front End - (Java)
- Backend – (PhP, Html)
- Database – Fair DB

Software Used For Development

- Android Studio Code.

Architecture

A block diagram is a simplified graphical representation of a system, process, or concept. It uses blocks (often depicted as rectangles or other shapes) connected by lines or arrows to illustrate the relationships, flow, and interactions between different components or stages within the system. Block diagrams are used across Market research and analysis, Customer service and support, Business intelligence and analytics. Environmental impact assessment and mitigation, business, and computer science, to visualize and simplify complex systems.

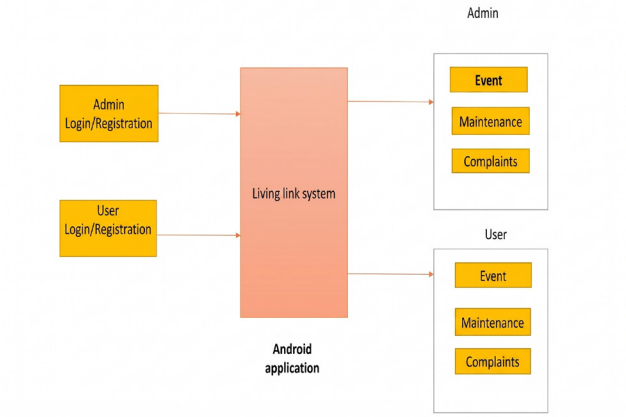

Fig. No. 1: Block Diagram

Use Case Diagram A use case diagram, a key element of the (UML), emerges from a Use-case analysis, serving as a visual representation of the system's convenience. It illustrates actors, their objectives (depicted as use cases), and interdependencies among these use cases.

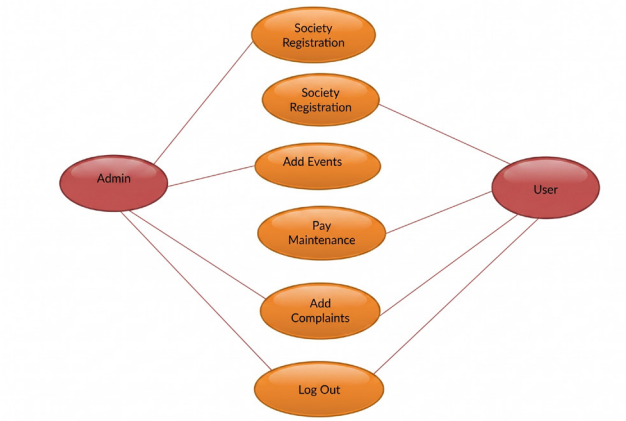

Fig. No. 2: Use Case

Execution Time Graph Representation

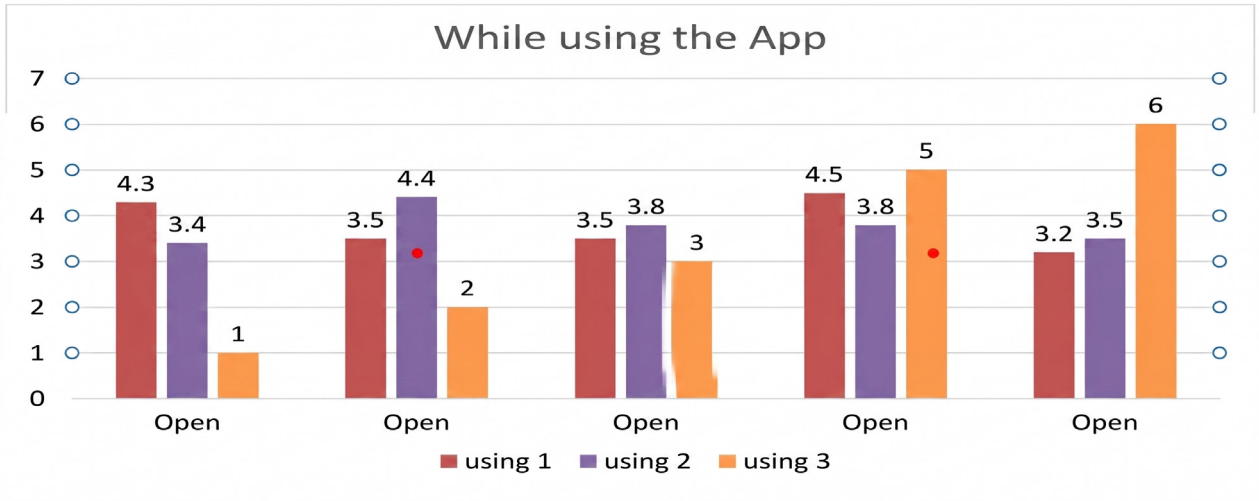

Fig. No. 3: Accuracy Graph

The execution time required to run an application depends on several factors, Applications with complex algorithms and numerous technique typically take longer to execute. Processor speed, number of cores, available RAM, and disk speed all impact execution time.

Advantages and Limitations

Advantages

- Effortless Administration: Automate tasks and workflows for reduced manual effort.
- Enhanced Security: Advanced surveillance and access control for improved safety.
- Seamless Communication: Facilitate communication among residents, staff, and management.
- Personalized Services: Offer tailored amenities and services for enriched living experiences.
- Data-Driven Insights: Analyze data for informed decision-making and optimized resource allocation.

Limitations

- Initial Investment: High upfront costs for implementation and infrastructure.
- Complexity: Steep learning curve for users and administrators.
- Dependence on Technology: Vulnerability to technical issues and system downtime.

Future Work

The current prospects of Living Link Systems are most likely to be the economic development depending on the progress of technologies and user demands. The key areas in which the focus will be made are capability, security, usability, and sustainability. Here are some key areas where Living Link Systems are likely to evolve: Automate content generation for tasks such as writing, editing, and proofreading.

Living Link Systems are likely to evolve:

- Automated Smart Solutions and AI Implementations.
- Improving User Experience.
- IoT Data Analysis Integration of Smart Home.

Conclusion

The Living Link System project is a transformative initiative that will revolutionize the managing of domestic societies. By automating technique, upgrading memorandum, ensuring security, and providing transparency, the system will significantly improve the capability and quality of life for all homelike. The project's forward-thinking approach and adaptability to future technologies ensure it will continue to meet the evolving needs of modern community, fostering a more connected, effective, and harmonious living environment. This project aims to address the myriad challenges posed by traditional manual technique, which are often time-consuming, error-prone, and lack transparency.

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