

# IMPLEMENT OF SOCIETY MANAGEMENT SYSTEM

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**ABSTRACT :** The implementation of a society management system is becoming increasingly popular in residential communities. This system provides an integrated platform for managing various aspects of a housing society, including maintenance, finance, security, and communication. The system aims to simplify and automate society management tasks, thereby improving efficiency, transparency, and accountability. This paper presents an overview of the implementation of a society management system, including its benefits, challenges, and key features. It also discusses the various modules and functionalities of the system, such as billing and payment management, visitor management, complaint resolution, and communication tools. The paper concludes with a discussion of the potential impact of the system on society management and the future research directions in this field.

**KEYWORDS :** Society management, residential communities, integrated platform, maintenance, finance, security, communication, efficiency, transparency, accountability, modules, functionalities, billing, payment management,

visitor management, complaint resolution, communication tools, impact, future research.

**1 INTRODUCTION:** Residential societies have become an integral part of urban living, providing a safe and comfortable environment for people to live in. However, managing these societies can be a challenging task, with a multitude of responsibilities such as maintenance, security, finance, and communication. In the past, society management was primarily done manually, which was time-consuming, error-prone, and lacked transparency.

To address these issues, the implementation of a society management system has become increasingly popular. This system provides an integrated platform for managing various aspects of a housing society, simplifying and automating tasks, thereby improving efficiency, transparency, and accountability. The system allows residents, managers, and maintenance staff to access information and communicate with each other, making society management more organized and effective.

The implementation of a society management

system has become more critical during the COVID-19 pandemic, where contactless operations have become the norm. The system's contactless features enable residents to make payments, raise complaints, and communicate with the society management team from the safety of their homes.

This paper presents an overview of the implementation of a society management system, including its benefits, challenges, and key features. It also discusses the various modules and functionalities of the system and the potential impact on society management. Finally, it highlights future research directions in this field.

## 2 LITERATURE SURVEY:

The implementation of society management systems has been widely researched and discussed in recent years. Several studies have examined the benefits and challenges of implementing such systems and their impact on society management. Some of the key findings from these studies are as follows:

### **Benefits:**

Society management systems can improve transparency, accountability, and communication between residents and society management teams (Chouksey & Dewangan, 2019).

These systems can automate and simplify society management tasks, reducing errors and saving time (Goyal, 2020).

Society management systems can enhance security and safety by providing features such as visitor management and CCTV monitoring (Kaur & Sharma, 2020).

These systems can improve financial management by providing accurate and timely billing and

payment management (Goyal, 2020).

### **Challenges:**

The implementation of society management systems can be costly and require significant investments in hardware and software (Chouksey & Dewangan, 2019).

There may be resistance from residents and society management teams to adopt new technology (Goyal, 2020).

Privacy concerns may arise due to the collection and storage of personal data (Kaur & Sharma, 2020).

The system may require regular updates and maintenance, which can add to the cost (Chouksey & Dewangan, 2019).

### **Key features:**

**Billing and payment management:** Society management systems provide a platform for managing society finances, including bill generation and payment collection (Goyal, 2020).

**Visitor management:** These systems can improve security by providing features such as visitor registration and monitoring (Kaur & Sharma, 2020).

**Complaint resolution:** Society management systems can simplify the process of raising and resolving complaints by providing a centralized platform (Chouksey & Dewangan, 2019).

**Communication tools:** These systems can enhance communication between residents and society

management teams through features such as notice boards and chat rooms (Goyal, 2020).

Overall, the literature suggests that the implementation of society management systems can provide significant benefits to residential communities. However, it is crucial to consider the challenges and privacy concerns associated with such systems. Further research is needed to explore the long-term impact of these systems on society management and the effectiveness of different features and functionalities.

**3 EXISTING SYSTEM:** In current situations, housing society management authorities use a traditional way of communication which include a common notice board system operated by responsible society member. Many of societies also have started using automated chat systems which are definitely useful up to certain extent but though fails to serve purpose. Here are some basic disadvantages of these methods:

### 3.1 Notice Board System

**3.1.1 Unreachable information:** Notice board is a system which is one to many kind of system having a notifier and Society members involved. Many of times it happens that an admin or notifier fails to update the notice board or society members ignore to follow the notice board. It results in lack of communication.

**3.1.2 Lack of authenticity and reliability:** Notice board can be operated manually it might be handwritten or printed format. In general practice it can be easily altered or misplaced and may lead to wrong interpretation. Also it can be affected with any unauthentic data as well.

**3.1.3 Time consuming activity:** One has to take whole responsibility to operate and maintain the notice board. It creates dependability with specific person. Sometimes the person has to compromise with his own time schedule for these common activities.

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**3.1.4 Missing of acknowledgement:** As this is manual system one cannot predict, whether the notice is reached out to every concern person. And any kind of acknowledgment is missing also it creates overhead to reschedule or inform any kind of change

## 4 METHODOLOGY

Developing this project for better usage and experience becomes very important considering the scope of this project going live. In order to develop this project efficiently, we communicated with our project guide and also a couple of corporate developers who are known to us. By discussing with them, we intended to understand

how a website/mobile application is developed in the actual corporate world and what procedure we should follow to have a smooth development of the project. Understanding everything and having internal discussion with the team members, we planned our project methodology. We would first finalize the features and specifications which shall be implemented in our project. Once we have a clear vision of features to be implemented, we would first design the web app with an intention to have a decent UI UX. UI which stands for User Interface is to design how the user will see the website, what color combinations and buttons our web app will be having, and how every page of

the website will look like. UX which stands for User Experience is to design a website keeping in mind the experience of a user. This includes to think on where the button shall be placed, a click on button should display which page, to summarize in short, it aims to make sure the user has convenient and efficient user experience so that they wish to revisit the web app. Once we have our design ready and approved from the project guide, we would be starting with development of the actual project. Testing. If we want our platform to go live and be of maximum usage to society, we will have to test the web app to ensure it is bugs free, there doesn't lie any fault in the project and will not fail. For testing as well, we shall be classifying the process into multiple steps to ensure it is tested as much as possible. Once the testing is done, we intend to make this project go live.

The society management system consist of 4 modules:

1. Auditing
2. Parking
3. Alert button
4. Notice board

### **1. Auditing Module**

User module & Admin module maintains a maintenance list of all the flats in a society.

- Admin maintains maintenance list of all the flats in a society.

- The user will get a prompt on UI about their pending maintenance payment & user will pay predefined

maintenance amounts

- Admin manually clicks on respective name flats.

- Automatically name will get removed from a check list of pending if maintenance is paid.

- A user who missed to the maintenance amount then the automatically amount will get added in the next month

with interest

- Maintenance paid amount will get calculate and deduct from the main maintenance spend amount.

- The audit report will be generated by the entire annual transaction.

### **2. Parking:**

This UI displays a detailed chart of the parking slot status to the user. So, accordingly, they can book parking

slots.

- Blue – User can book this place Blue

- Rent - User will get the parking space on the rental basis

- Visitor – Each visitor will be allocated mins/hrs for which he/she can use this parking slot.

3. Security

- The security feature is provided when pressed in case of any crisis or danger sends auto SMS will get sent to a

predefined number with the room number.

#### 4. Text options

-We are replacing traditional ways of informing people through a physical notice board with a virtual noticeboard

-The user can drop the complaint and other users can like the complaint if they are facing the same problem.

### 4.2 IMPLEMENTATION:

**Define data requirements:** Define the data requirements for the database, including the types of data to be stored, the relationships between data objects, and any data security or privacy considerations.

**Design the database schema:** Design the database schema in Salesforce, including creating custom objects, fields, and relationships. This may involve using tools such as the Schema Builder in Salesforce.

**Configure data access:** Configure access to the database, including defining user roles and permissions, setting up sharing rules, and enabling data encryption as needed.

**Migrate existing data:** If there is existing data that needs to be migrated to the Salesforce database, prepare the data for migration, and then use tools such as the Salesforce Data Loader to import the data into Salesforce.

**Develop data integration:** If the database needs to integrate with other systems, such as an external data source, develop data integration solutions using Salesforce tools such as the Salesforce Connect.

**Test and validate:** Test and validate the database implementation, including data accuracy, performance, and security. Make any necessary adjustments to ensure that the database is meeting requirements.

**Train users:** Train users on how to access and use the database in Salesforce, including how to input and retrieve data, generate reports, and utilize data security features.

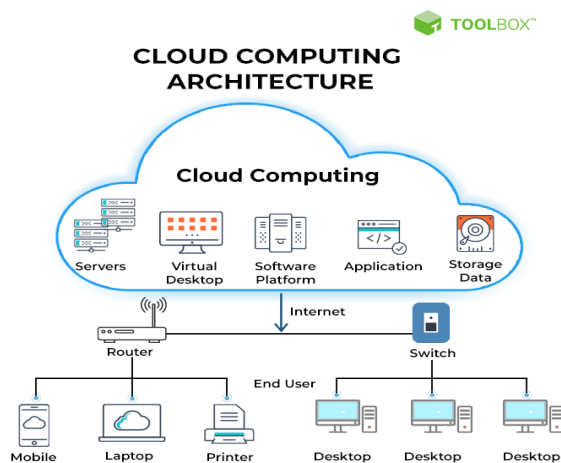
**Rollout and adoption:** Roll out the database to users and encourage adoption by providing ongoing support, communication, and training. Monitor adoption and usage of the database to identify areas for improvement or further training.

**Maintain and update:** Maintain and update the database in Salesforce to ensure that it continues to meet the evolving needs of the organization. This may involve fixing bugs, adding new fields or objects, or updating data access permissions.

This implementation process is not exhaustive and may vary depending on the specific needs and requirements of the organization and the Salesforce implementation team.

## 5 DATABASE:

A society management application that is hosted in the cloud typically uses a cloud-based database to store and manage data. Here are some key details about the database architecture of a cloud-based society management application:



**Fig. Cloud Computing**

### Scalability:

Cloud-based databases are highly scalable, which means they can handle large volumes of data and user traffic without impacting performance.

As the society management application grows in popularity and usage, the database can be easily scaled up or down to meet changing demands.

### Reliability:

Cloud-based databases are highly reliable, with built-in redundancy and failover mechanisms to ensure data is always available and accessible.

The database is typically hosted across multiple data centers, which provides an added layer of

protection against hardware failure, natural disasters, or other unexpected events.

### Security:

Cloud-based databases are highly secure, with multiple layers of encryption, authentication, and access controls to protect data from unauthorized access and cyber threats.

The database is typically compliant with industry standards and regulations, such as GDPR, HIPAA, and PCI DSS.

### Flexibility:

Cloud-based databases offer a high degree of flexibility, allowing developers to choose the most appropriate database technology and configuration for their application.

The database can be easily integrated with other cloud services, such as identity and access management, storage, and analytics, to provide a comprehensive solution.

### Performance:

Cloud-based databases are optimized for performance, with high-speed connectivity, low latency, and efficient query processing.

The database can be fine-tuned for optimal performance, based on the specific needs of the society management application.

### 5.2.1 CLOUD COMPUTING:

Cloud computing databases come in different types, such as relational, non-relational, and object-oriented databases. Relational databases are



the most popular type, with a structured data model based on tables, rows, and columns.

Non-relational databases, also known as NoSQL databases, use a flexible data model based on documents, key-value pairs, or graph data structures.

Object-oriented databases store data as objects, with built-in support for inheritance, polymorphism, and encapsulation.

### Deployment Models:

Cloud computing databases can be deployed in different ways, such as on-premises, public cloud, private cloud, or hybrid cloud environments.

On-premises databases are hosted on the organization's own servers and managed by their IT team.

Public cloud databases are hosted by third-party providers, such as Amazon Web Services (AWS), Microsoft Azure, or Google Cloud Platform.

Private cloud databases are hosted within the organization's own data center or cloud infrastructure, using virtualization and containerization technologies.

Hybrid cloud databases use a combination of public and private cloud infrastructure, depending on the specific needs of the organization.

Model → Property ↓	On-premise (in-house operation)	Private Cloud	Virtual Private Cloud	Public Cloud
User	operator/provider	associated with operator/provider	associated with operator/provider	unbound or loosely connected
	trustworthy	trustworthy	trustworthy	unknown
Users share cloud instance with	nobody	nobody	several	many
Access (network)	local network, campus network, etc.	Wide area network with restricted access	Wide area network with restricted access	public Internet
Place of production	user organization	IT service provider (defined location)	IT service provider (defined location)	IT service provider (location often not defined)

**Table.4.1 Deployment Models**

### Security:

**Table-1: Cloud Security Categories**

NO	Category	Description
1	Security Standards	Defines the standards needed to take precautionary measures in the cloud computing so as to prevent attacks. It directs the policies of cloud computing for security without compromising reliability and performance.
2	Network	Consist of network attacks such as Denial of Service (DoS), Connection Availability, internet protocol vulnerabilities, DDoS, flooding attack, etc.
3	Access Control	Access control and Authentication and. It captures the issues that affect the privacy of user information and data storage.
4	Cloud Infrastructure	Attacks that are strict to the cloud infrastructure (IaaS, PaaS and SaaS) such privileged insiders and tampered binaries
5	Data	Data related security issues, including integrity, data migration, confidentiality, and data warehousing.

**Table 4.2 : Cloud Security Categories**

Cloud computing databases require robust security measures to protect against data breaches, cyber attacks, and other security threats.

Security features may include encryption, access controls, authentication, and monitoring.

Cloud computing databases may also comply with various security standards and regulations, such as SOC 2, PCI DSS, HIPAA, or GDPR.

## APPLICATION:

The implementation of a society management system has several applications in society management, including:

**Maintenance Management:** Society management systems can simplify the process of managing maintenance activities, including tracking complaints, assigning work orders, and tracking progress. This ensures timely and efficient resolution of maintenance issues.

**Financial Management:** Society management systems can streamline financial management activities such as billing, payment collection, and accounting. The system can generate bills automatically, track payments, and generate financial reports, making financial management more efficient and transparent.

**Security Management:** Society management systems can enhance security management by providing features such as visitor management, CCTV monitoring, and emergency response management. These features improve the safety and security of the society and its residents.

**Communication Management:** Society management systems provide a platform for residents and society management teams to communicate with each other. This can include notice boards, chat rooms, and email notifications, ensuring effective communication and timely dissemination of information.

**Compliance Management:** Society management systems can assist with compliance management, ensuring that the society is complying with all applicable laws and regulations. The system can track compliance requirements, generate reports, and notify the management team of upcoming compliance deadlines.

Overall, the applications of a society management system are varied and wide-ranging, making it an essential tool for efficient and effective society management.

## CONCLUSION:

The implementation of a society management system has become increasingly important in modern society management. Such systems provide numerous benefits, including improved communication, increased transparency, enhanced security, and more efficient financial management. The literature survey highlights that there are several challenges associated with the implementation of these systems, such as resistance to change, privacy concerns, and high costs.

However, the benefits of society management systems outweigh the challenges. Society management systems can streamline processes, save time, and reduce errors. They can also provide a centralized platform for managing society-related activities, simplifying the management of complex residential communities.

In conclusion, implementing a society management system can significantly enhance society management and provide several benefits to residents and society management teams. The



selection of the appropriate system should consider the society's requirements, budget, and ease of use. Further research is needed to explore the long-term impact of these systems on society management and their effectiveness in meeting the evolving needs of residential communities.

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