

Resolver Application

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ABSTRACT

Resolver is a complaint management system designed for citizens to report and resolve civic issues in their community. The system is user-friendly and accessible, allowing citizens to easily submit complaints and track their progress until resolution.

Resolver allows citizens to report a wide range of issues such as potholes, broken streetlights, illegal dumping, and noise pollution. To file a complaint, citizens can access the Resolver website application. The user-friendly interface guides users through a simple process to identify the issue, provide details, and submit supporting documentation if necessary.

Once a complaint is submitted, Resolver assigns it to the relevant authority or agency responsible for resolving the issue. The authorities can track and manage the complaints in their respective dashboards, ensuring that they are addressed promptly and efficiently. Resolver provides regular updates to both the authorities and the citizens on the status of the complaint until it is resolved.

Overall, Resolver is an essential tool for citizens to take ownership of their community's well-being and actively participate in resolving civic issues. It provides a reliable and efficient mechanism for reporting and addressing complaints, fostering a sense of community engagement and collaboration between citizens and authorities.

Keyword: - complaints, grievances, citizens, civic issues, municipal corporation, authorities, public services, urban infrastructure, roads, water supply, garbage disposal, sanitation, public health, parks, streetlights, drainage, encroachments, potholes, noise pollution, air pollution, traffic congestion, online portal, helpline, resolution, follow-up, accountability, transparency, efficiency, responsiveness, redressal, escalation, monitoring, evaluation, improvement.

1. INTRODUCTION

Filing complaints is an important aspect of modern-day governance and consumerism. However, traditional complaint-filing methods can be time-consuming and inefficient, often resulting in delayed or unsatisfactory resolutions. To address these issues, a scalable complaint-filing web application has been developed, which offers users a seamless and efficient way to file their complaints.

This web application is designed with a focus on scalability, ensuring that it can handle a large volume of users and complaints without compromising performance.

The application provides users with a user-friendly interface to submit their complaints, with an option to attach relevant documents and evidence to support their claims.

The application's architecture ensures that complaints are automatically assigned to the relevant authorities, streamlining the complaint resolution process. Users can track the progress of their complaints through the application and receive timely updates on their status.

The application also incorporates robust security measures to protect user data, including industry-standard security protocols and a dedicated reporting system to report any inappropriate content or behavior.

This scalable complaint-filing web application offers an efficient, secure, and hassle-free way for users to file their complaints and ensure timely resolution. It represents a significant step forward in improving the efficiency and effectiveness of complaint filing in modern-day governance and consumerism.

In addition to providing a user-friendly interface, the application also prioritizes the security of user data. It uses industry-standard security measures and protocols to protect user information and prevent any unauthorized access.

1.1 OBJECTIVE

Our main objective of this web application is to connect citizens directly and to provide a fair price to both citizens and the authorities. The goal of this project is:

- To provide a user-friendly platform for individuals and organizations to file complaints efficiently and seek timely resolutions.
- To handle a large volume of complaints and users without compromising on performance or security.
- To handle complaints across various categories and automatically assign complaints to relevant authorities for timely resolution.
- To improve customer satisfaction by providing an efficient, user-friendly, and secure platform for filing complaints and seeking resolutions.

Additional objectives for complaint monitoring:

- To provide administrators with the ability to monitor and manage complaints efficiently.
- To enable administrators to view the status of complaints and track their progress.
- To provide administrators with tools to analyze complaint data and identify trends and patterns.

1.2 DRAWBACKS OF THE EXISTING SYSTEM

- 1) **Lack of Awareness:** Many citizens are unaware of the existing complaint management systems, leading to low utilization of the systems.
- 2) **Limited Access:** Some of the systems, such as mobile applications, are only accessible to citizens who have smartphones and internet connectivity, which limits their effectiveness in reaching a wider audience.
- 3) **Delayed Response:** Despite the use of technology in managing complaints, response times can still be slow, leading to frustration among citizens.
- 4) **Limited Scope:** Some systems, such as Swachhata App and Swachh Bengaluru, focus primarily on cleanliness and sanitation issues and may not be effective in addressing other civic problems such as traffic congestion and road repair.
- 5) **Insufficient Feedback Mechanism:** While most systems provide updates on the status of complaints, there is a lack of a robust feedback mechanism that enables citizens to provide feedback on the effectiveness of the resolution process.

2. LITERATURE SURVEY

Many research papers have been written and published on the subject over the course of the preceding few years. All the papers have their own advantages and disadvantages.

1. "Complaint Management System for Improving Public Services: A Study of Bangalore City Corporation" by N. Raghavendra Rao and R. Jagannathan (2013)

The study by N. Raghavendra Rao and R. Jagannathan (2013) examines the implementation of a complaint management system by the Bangalore City Corporation (BCC) to improve public services. The study found that the system improved the responsiveness of BCC officials to complaints and reduced the time taken to resolve them. The system was also found to be cost-effective and efficient in managing complaints. The study suggests that the system can be further improved by enhancing citizen awareness and participation. The study recommends the need for periodic evaluation of the system to ensure its effectiveness. The authors suggest that the system can be used to enhance citizen engagement and improve service delivery. The study emphasizes the importance of transparency and accountability in complaint management systems. The study suggests that the system can be replicated in other urban local bodies in India. The study highlights the need for strong political and administrative support for the effective implementation of complaint management systems.

2. "Smart Cities and Citizen Complaint Management System" by H. B. Mahesh and K. R. Kavyashree (2017)

The study "Smart Cities and Citizen Complaint Management System" by H. B. Mahesh and K. R. Kavyashree, published in 2017, proposes the development of a smart city complaint management system for Bangalore to improve public services. The authors suggest that the system should incorporate citizen feedback to enhance citizen engagement and service delivery. They propose a three-layer architecture for the system: the citizen layer, the service provider layer, and the data layer. The citizen layer would provide citizens with a user-friendly interface to report complaints, while the service provider layer would manage complaints and resolve them. The data layer would store and analyze data to identify trends and patterns in complaints. The authors suggest that the system would improve the effectiveness of complaint management and enhance citizen satisfaction with public services. They also recommend the adoption of open data policies to improve transparency and accountability in the management of complaints.

3. "Development of a Complaint Management System for Urban Local Bodies in India: A Case Study of Bangalore City" by S. Kumar et al. (2016)

The study conducted by S. Kumar et al. in 2016 analyzes the development and implementation of a complaint management system for urban local bodies in India, using Bangalore City as a case study. The authors identified the need for an effective grievance redressal system for improving service delivery and enhancing citizen engagement. The study involved the design and development of an online complaint management system and a mobile application to enable citizens to lodge complaints easily. The authors found that the system improved accountability and transparency in the governance process and enhanced citizen satisfaction with public services. However, the authors also identified challenges in the implementation of the system, such as the need for proper training of officials and the need to increase citizen awareness about the system. Overall, the study highlights the potential of complaint management systems in improving urban governance and citizen participation in India.

3. METHODOLOGY

The following are the basic modules in the project:

1. **Citizen Registration:** The system allows citizens to register themselves with their basic details such as name, address, and contact information. This will help in tracking complaints and communicating with the citizen throughout the complaint resolution process.
2. **Complaint Submission:** The system allows citizens to submit complaints related to civic issues such as garbage collection, potholes, water supply, and street lights. The complaints can be categorized and prioritized based on their severity.

3. **Complaint Tracking:** The system allows citizens to track the status of their complaints, including updates on when the complaint was received, assigned to officials, and resolved. This will help in providing transparency to citizens and improving trust in the system.
4. **Assigning Complaints:** The system automatically assigns complaints to the appropriate officials based on the type of issue and the location of the complaint.
5. **Analytics and Reporting:** The system has the capability to generate reports and analytics on the number and types of complaints received, resolved, and pending. This will help in identifying areas of improvement and monitoring the performance of officials.
6. **Complaint Categorization:** A categorization system helps to classify complaints into different categories such as potholes, garbage, streetlights, etc., making it easier for officials to assign complaints to the relevant department.
7. **Mobile Accessibility:** The system will also be accessible through mobile to enable citizens to submit complaints and track their status on the go.
8. **Communication and Notifications:** The system will provide notifications to officials as soon as a complaint is registered and assigned to them via mail.
9. **Data Security and Privacy:** A robust data security and privacy system that ensures that citizen data is protected and confidential information is not leaked or misused.

Admin Functionalities:

1. **Dashboard:** The admin has access to a dashboard that displays the number and status of complaints received, resolved, and pending.
2. **Complaint Management:** They can manage complaints, including assigning them to officials, monitoring their progress, and closing them once resolved.
3. **Official Management:** The admin can manage officials, including adding new officials, assigning them to departments, and monitoring their performance.
4. **Reporting and Analytics:** The admin has access to reports and analytics on the complaints received and resolved, officials' performance, and citizen satisfaction levels.
5. **System Configuration:** The admin can configure the system settings, including complaint categories, notification settings, and escalation rules.

User Functionalities:

1. **Registration and Login:** Users can register on the platform and log in using their credentials.
2. **Complaint Submission:** Users can submit complaints related to civic issues with detailed descriptions and attachments.
3. **Complaint Tracking:** Users can track the status of their complaints and receive regular updates on their progress.

3.1 SYSTEM ARCHITECTURE

The users must register and then log in to the application. While registering the user must provide a valid number and email. Once a valid username and password are obtained, the user can log in to the application and perform different operations.



Fig-1 System Architecture

3.2 RESULTS

A full-fledged complaint-filing web application should allow users to create accounts, file complaints through a form, track the status of their complaints, and communicate with staff members. The system allows users to submit complaints, track their status, and receive updates on their resolution. It includes features such as automatic complaint routing, prioritization, and escalation, as well as a dashboard for managers to monitor complaint status and performance metrics. The system is built with user-friendly interfaces, security measures, and database management systems to ensure that data is stored securely and confidentially.



Fig-2 User Registration Page

Figure 2 is the user registration page which has fields to capture the user's basic information, such as name, address, and contact details. The page will also prompt users to create a username and password, which they will use to log in to the system.

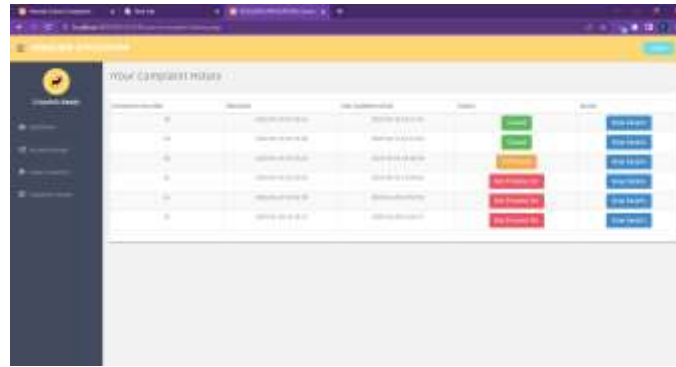


Fig-3 Track Registered Compliant Status

Figure 3 is The "Track Complaints" page which allows citizens to check the status of their registered complaints. The page shows the date and time of complaint registration, the current status of the complaint, and any updates on the resolution process. Citizens can use this page to monitor the progress of their complaints and to provide additional information or feedback.

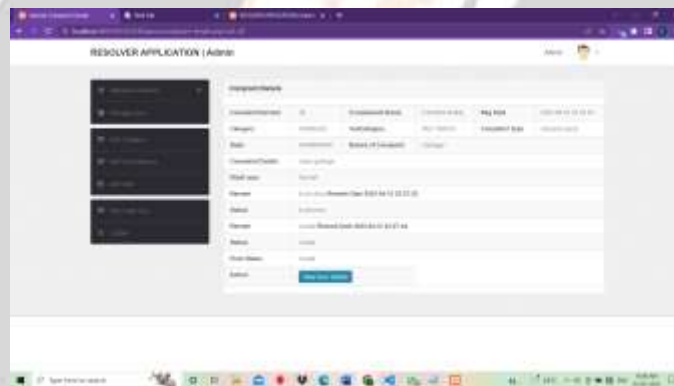


Fig-4 Admin Page

Figure 4 is the admin dashboard which provides a centralized platform for officials to manage complaints efficiently. Key features would include real-time updates on complaints, a categorization system, and analytics and reporting tools to monitor performance and identify areas of improvement. The dashboard would also allow officials to assign complaints, escalate unresolved issues, and communicate with citizens effectively.

4. CONCLUSION

In conclusion, a complaint management system for civic problems in Bangalore is crucial to ensure efficient and transparent service delivery. This system will provide citizens with an easy and convenient way to report issues and concerns related to their civic duties and enable the government to manage complaints efficiently and transparently. This system addresses challenges such as resistance to change, data quality and security, integration with existing systems, and adequate resources.

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