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Complaint Management System

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ABSTRACT: A Complaint Management System (CMS) is a web-based platform that enables government agencies and local municipalities to manage public complaints effectively. This system provides a centralized database for the registration and resolution of complaints from citizens. The CMS allows citizens to submit complaints through an online portal, providing relevant details such as the type of complaint, description of the issue, related documents, state, district, and place. The complaint is then automatically routed to the appropriate department or representative for resolution. The actions and feedback are displayed as notifications. The CMS aims to improve government transparency and accountability by providing citizens with a convenient and efficient way to voice their complaints and have them resolved in a timely manner. The system also helps government agencies to identify areas of improvement in their operations and processes, and implement measures to prevent similar complaints from reoccurring. By implementing a CMS, government agencies can also demonstrate their commitment to quality customer service and establish a positive reputation with the public.

KEYWORDS: CMS, Government Agencies, Local Municipalities, Public.

I. INTRODUCTION

The role of government agencies and local municipalities in addressing public complaints is critical in maintaining the trust and confidence of citizens. Traditional methods of handling public complaints, such as calling a hotline or sending an email, can be time-consuming and may lead to delayed resolution. A Complaint Management System (CMS) provides a more organized and efficient approach to managing public complaints. It is a powerful tool that helps the government to manage and resolve public complaints efficiently. The CMS allows users to register and login into the system, with different access levels assigned to each user type, including an admin and a user. Citizens can register to submit a complaint and track its progress, while the admin has access to all the complaints and can assign them to the appropriate department for resolution. The system allows users to select the type of complaint they want to file, along with the date and time of the incident. It also provides an option to categorize the complaint. This makes it easy for government agencies and local municipalities to categorize and prioritize complaints. It allows citizens to provide a description of their complaint in detail and any supporting documents, such as photos or videos which helps in understanding the nature of the complaint and taking appropriate action. The system records the issue and resolution of the complaint, which helps in tracking the progress of the complaint until resolution. It also allows citizens to provide feedback on the resolution of the complaint, which helps in improving the quality of services provided by government agencies and local municipalities. The system assigns a unique ID to each complaint to ensure proper tracking and management, which enhances transparency and customer satisfaction. The CMS captures all necessary information such as the complaint type, description, date, and time of submission. Once the complaint is registered, it is assigned to the relevant department for resolution. The department can also update the status of the complaint in the system, including the date and time of resolution, and the measures taken to resolve the issue. These complaints are displayed as notifications. This ensures that customer complaints are resolved quickly, which helps build customer loyalty. Furthermore, the system provides valuable data that the government can use to improve its operations and public service. The system tracks the number of complaints received, the types of complaints, and the time taken to resolve them. This data can be analysed to identify trends, areas of improvement, and potential risks, and the government can take appropriate actions to address these issues and prevent similar complaints from occurring in the future.

In addition to improving customer satisfaction, the complaint management system can also help reduce costs and increase efficiency. The system automates the complaint management process, which reduces the need for manual intervention and streamlines the complaint resolution process. This helps to minimize the time and resources required to resolve complaints.

II. LITERATURE SURVEY

Complaints are emotional expressions of customers due to mismatches in the acceptance of the quality of services or products offered and are good momentum as input because they create an opportunity for organizations to identify



deficiencies that exist so as to immediately develop recovery strategies to improve quality service. Customer complaints that are not handled properly can adversely affect the level of customer retention, profitability, and organizational image. According to Barlow and Moller, complaints submitted to a company are a gift because customers still want to talk to the company and want the company to make improvements in the future. Well-done complaint management will have an impact on increasing customer loyalty. Complaints that are not immediately dealt with quickly will incur huge recovery costs and can guide customers to migrate and provide negative information to other potential buyers. Providing optimal services to complaints, it will increase customer loyalty and can minimize the impact of other losses arising from terrible complaint management. One private hospital in Central Java has developed an e-complaint system to help complaint management since 2017. E-complaint is a facility for submitting complaints and suggestions online which can be accessed by customers directly or used by hospital officials who receive complaints.

The purpose of making an e-complaint application system is to make it easier for the Duty Manager to determine the level of complaints so that it will be easy to assess and determine follow-up complaints. In addition, it is an organizational tool for evaluating complaint management according to the level and as a data center for complaint information in order to make improvements (quality improvement). E-complaint systems can accommodate cross-unit coordination for the resolution of complaints, are able to provide complaint information to the unit or supervisor in real time, document the progress of complaints, as well as provide statistical data on the unit of cause, the most frequent problem/complaint (the frequency), the seriousness of the complaint, and the level of complaint using the SAM level (Seriousness Assessment Matrix) which has been modified by setting a target time for the completion of complaints by the hospital. During the two-year implementation, there has never been an evaluation of how the e-complaint system is implemented for complaint management, especially in terms of responsiveness (time of complaint management) and quality improvement (improving service quality) at the hospital. According to Yusof & Yusuff, an evaluation of an application system is important to assess the effectiveness and success of the application with various evaluation methods, one of which is the HOT FIT model. Evaluation using the HOT FIT approach is not only to see whether a technology is acceptable or applied but also to look at other characteristics such as human factors and related organizational factors that provide benefits to the organization. This method can be used to evaluate systems in health services that link technology, people, and organizations to produce system benefits. HOT FIT model is a method for evaluating an application system judged from the aspects of Human, Organizational, Technology, and Net Benefit.

The suitability of these three factors can affect the success of a system. This method can be used in evaluating the performance, effectiveness, and impact of health information systems on health facilities. The HOT FIT method involves eight dimensions, i.e. System Quality, Quality Information, Service Quality, System Use, User Satisfaction, Structure, Environment, and Net Benefits. This study aimed to analyze the e-complaint application system in complaint management at the hospital by looking at the aspects of Human, Organizational, Technology, and Net Benefit to determine responsiveness and quality improvement. From this study, it is expected to find out the benefits of the e-complaint system and constraints that occur in the application, so it can be input and improve the optimization of the e-complaint application system.

III. PROPOSED SOLUTION

A complaint management system is a crucial tool for the government to handle customer complaints effectively and ensure customer satisfaction. It is essential to design an efficient and reliable system to manage complaints that can be accessed easily by customers through the online portal. Whenever users see some problems around themselves like garbage overflowing, drainage leakage, traffic issues, burglar, etc. He/She can take picture and add some description about the situation. Once complaint is made then the admin can view the complaint. Administrator can view the complaints raised by the users and will provide the updates depending on the work done. Admin will promote the problems to IN PROGRESS status whenever problem solving is started. Once problem is solved admin will promote it to closed stage.

The scope of the complaint management system should be defined, including the types of complaints that will be handled, the system through which customers can submit complaints, and the process for resolving complaints. The system should be designed to allow customers to submit complaints via online portal. The complaints should be logged in a central system and assigned to relevant departments or employees for review and resolution. The complaint management system should include features such as automated acknowledgment of complaint receipt, real-time tracking of complaint status, and reporting tools to monitor complaint trends and measure the effectiveness of the system. The system should be able to categorize complaints, prioritize them based on severity, and escalate them if necessary.



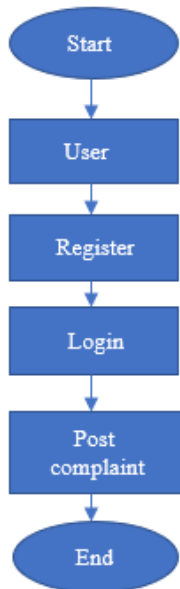
An effective complaint management system can help governments to identify areas for improvement and address issues promptly, resulting in higher customer satisfaction, loyalty, and retention. It is essential to monitor the complaint management system continuously and make necessary improvements to provide the best customer experience.

IV. MODULE DESCRIPTION

- Login
- User module
- Admin module
- Complaint submission

LOGIN

- This module provide secure access to registered users and administrators. It enables users to register and then log in to the system using their credentials.
- Once logged in, users can post complaints while administrators can view them.To ensure that only authorized users can access the system, registration is required.
- The registered users are considered authorized while others are unauthorized. This ensures that only users who have been verified can access the system and post complaints.
- When an authorized user logs in, the system will display an alert message saying "login successful."
- This provides alert to the user that they have successfully logged in and can now access the system.
- If an unauthorized user tries to log in, the system will raise an alert message saying "No user found." This prevents unauthorized users from accessing the system and posting complaints.
- On the administrator side, there is no registration form available. Instead, a default email ID and password are used to log in to the system.
- This simplifies the process for administrators and ensures that only authorized personnel have access to view user complaints.
- Overall, this module provides a secure and efficient way for registered users to post complaints and for administrators to view and manage them. It ensures that only authorized users can access the system and helps maintain the integrity of the complaint management process.

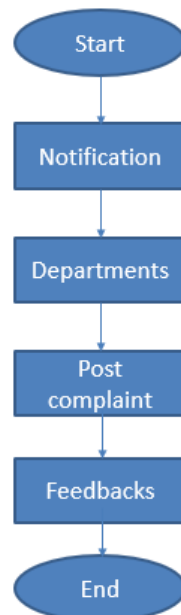


USER MODULE

- **Dashboard:** The user must first log in to the application with their credentials. After successful authentication, they are directed to the dashboard. The dashboard is a page that provides an overview of the user's activities, notifications, and other relevant information.



- **Notifications:** The dashboard contains notifications about admin actions. These notifications inform the user about any recent changes or updates made by the administrator. For instance, the admin might have added a new feature or updated an existing one. These notifications help the user stay informed about the application's changes.
- **Departments:** The dashboard has various departments for different problems. These departments categorize the user's issues based on their nature or type. For example, there might be separate departments for Health, Municipal, Education, etc. This feature allows users to easily navigate to the appropriate department for their specific problem.
- **Complaints and Posts Section:** The dashboard displays new complaints as images in the posts section. This feature helps users visually identify and track their complaints. Whenever a user raises a new complaint, the application automatically generates an image that represents the complaint. These images are then displayed in the posts section for easy reference.
- **Feedback Section:** Only feedback posted by the user can be viewed in the feedback section. This feature allows users to view their feedback on the application's various features. The feedback section provides users with a platform to voice their opinions about the application's strengths and weaknesses. The application only displays feedback posted by the user to ensure that users can only view and modify their own feedback.



ADMIN MODULE

- **Dashboard:** The admin must first log in to the application with their credentials. After successful authentication, they are directed to the dashboard. The dashboard is a page that provides an overview of the admin's activities, notifications, and other relevant information.
- **Notifications:** The dashboard contains notifications about user actions. These notifications inform the admin about any recent user activities, such as a new complaints and feedbacks being posted.
- **Adding Categories:** The admin can add categories that are displayed on the user complaint form. These categories help users to categorize their complaints and ensure that the right department handles the complaint. For example, the admin might add categories like Garbage Collection, Road Repair, or Health Hazards to the user complaint form.
- **Managing User Complaints:** The admin can manage user complaints based on the departments. This feature helps the admin to efficiently handle complaints by directing them to the appropriate department. The admin can sort complaints by department, view the details of the complaint, and take action to resolve it. For example, if a user posts a complaint about garbage collection, the admin can assign the complaint to the Municipality department.



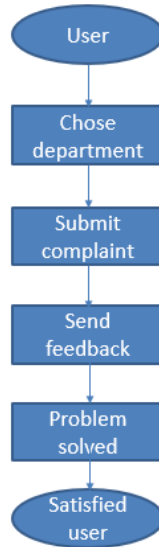
- **Managing User Details:** The admin can manage user details such as name, email, district, place, phone number, and address. This feature helps the admin to keep track of user information and enables them to provide better support to the users. The admin can view and update user information as required.



COMPLAINT SUBMISSION

- **Department Selection:** The module displays different departments that users can select when posting a complaint. These departments are designed to gather to different types of issues that users might encounter in their surroundings. For example, the Health department might handle complaints related to health hazards, while the Municipality department might handle complaints related to garbage collection or street cleaning.
- **Relevant Department Selection:** When a user has a problem, they can select the department that is most relevant to their issue. This ensures that the complaint is directed to the department that is responsible for handling such issues. For example, if a user sees garbage on the street side for over a month, they can post a complaint in the Municipality department, as that department would be responsible for handling such complaints.
- **Complaint Submission:** Users can post complaints related to problems they see in their surroundings. The module includes a dropdown menu that displays different categories of complaints, and users can select the category that best fits their problem. For example, the categories might include garbage collection, street cleaning, road repair, or health hazards.

- **File Attachment:** Additionally, this module includes the facility to attach files. This allows users to include additional information or evidence to support their complaints, such as images or videos. For example, a user might take a photo of the garbage on the street side and attach it to their complaint. This helps the relevant department to understand the issue better and take appropriate action.



V. CONCLUSION

In conclusion, we have proposed and introduced a complaint management system to enable citizens to register complaints against problems they are facing that can be solved by the government. Our system takes advantage of the prevalence of online networks and offers a simple and efficient way for citizens to post complaints. By allowing citizens to upload pictures and provide the location of the problem, our system streamlines the complaint process and ensures that complaints are directed to the appropriate department for resolution. One of the major benefits of our complaint management system is its accessibility. Citizens can submit complaints from anywhere and at any time, using a mobile phone or computer with internet access. This ease of use is particularly important for citizens who may not have the time or resources to register complaints in person.

Another benefit of our system is its ability to provide real-time tracking of complaints. Citizens can monitor the status of their complaints and receive updates on their progress. This feature not only ensures that citizens are kept informed, but it also helps to build trust between citizens and the government.

Overall, our complaint management system has the potential to improve the relationship between citizens and the government by providing a simple, efficient, and transparent method for citizens to register complaints. As we continue to develop and refine our system, we are confident that it will become an invaluable tool for ensuring that citizens' concerns are heard and addressed in a timely manner.

VI. FUTURE ENHANCEMENT

- Current systems are personal complaint management systems for a particular organization. They are expensive and do not solve the regular problems faced by the public. However, it seems to imply that existing complaint management systems are designed specifically for a particular organization and may not be effective in addressing the concerns of the general public. Additionally, the statement suggests that these systems are expensive, which may limit their accessibility and affordability to the general public.
- Our system has many departments, and each department administrator has the right to solve the problems.
- The unseen complaints and feedbacks are displayed on the admin front page until they are seen by an admin.
- In the future, we can add Aadhar verification, Google Maps location, and OTP to the mobile app to protect against fake users," suggests that the complaint management system is intended to be secure and protect against fraudulent or fake complaints. Aadhar verification is an identity verification system used in India, while Google Maps location and OTP (one-time password) can help to authenticate the location and identity of the user filing the



complaint. These measures can help to ensure the integrity of the complaint management system and prevent misuse.

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