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WEB APPLICATION FOR SPECIAL LABS INFRASTRUCTURE MAINTENANCE FOLLOWUP

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ABSTRACT

The complaint management system ensures appropriate documentation and verification, which expedites the reporting and resolution of issues for interns, instructors, and students. Faculty and students have the option to file complaints, which are first examined for validity by the administrator before being approved. In order to preserve accountability, faculty and interns also contribute to the verification of cases that have been settled. After approval, a distinct Task ID is created and the maintenance crew is informed so they may conduct the necessary action. In order to facilitate systematic tracking, the system classifies complaint statuses as "On-going," "Pending," or "Completed." In addition to ensuring effective communication amongst stakeholders and confirming each complaint before forwarding it for resolution, the administrator manages the entire workflow. In order to maintain efficiency and transparency while addressing the problems, the maintenance staff updates task statuses. The technology enhances coordination and automates notifications, which reduces delays, improves reaction times, and promotes an organized workflow. This method promotes communication between all departments concerned, increases efficiency, and guarantees quicker issue resolution.

Keywords: Complaint Management, Issue Resolution, Automated Notification, Workflow Efficiency

1. INTRODUCTION

Maintaining an orderly institutional climate and guaranteeing prompt issue resolution depend on an effective complaint management system. Manual documentation is a common component of traditional complaint-handling procedures, which can cause delays, misunderstandings, and a lack of responsibility. By giving students, instructors, and interns a digital platform to file complaints, the suggested approach solves these issues and guarantees accurate documentation, verification, and tracking. The system classifies statuses as "On-going," "Pending," or "Completed" for methodical monitoring, automates alerts, and gives each complaint a unique Task ID. While the maintenance crew is alerted to take the necessary action, administrators supervise the verification of complaints, guaranteeing prompt resolution. The method increases productivity, reduces delays, and promotes a systematic approach to problem solving by simplifying communication and increasing transparency.

The methodical process of complaint management helps businesses effectively handle, monitor, and address problems. To maintain accountability and openness, it entails the filing, recording, confirming, and resolving of complaints. A well-designed complaint management system improves issue resolution efficiency, cuts down on delays, and facilitates communication amongst stakeholders. By classifying complaints according to their status—for example, "On-going," "Pending," or "Completed"—

the system enables systematic monitoring and real-time tracking. In order to ensure that problems are resolved quickly, automation is essential in alerting the appropriate authorities, such as administrators and maintenance teams. By offering a methodical and prompt way to address issues, efficient complaint management not only increases organizational productivity but also boosts consumer happiness.

The methodical process of recognizing, addressing, and effectively resolving issues inside an organization is known as issue resolution. In order to remedy the issue, it entails recording complaints, confirming their veracity, allocating duties, and methodically monitoring progress. A clear resolution procedure avoids misunderstandings and delays by guaranteeing accountability, openness, and prompt action. By assigning issues to various statuses, such as "On-going," "Pending," or "Completed," stakeholders are able to track developments in real time. An additional factor that improves issue resolution efficiency is automation and improved communication between users, administrators, and maintenance staff. Through the prompt and systematic handling of issues, an efficient issue resolution system increases customer satisfaction, operational management, and response times.

A key component of contemporary systems is automated notification, which sends out alerts and updates in real time to guarantee prompt communication amongst stakeholders. A complaint management system's automated notifications notify administrators when a complaint is filed, notify the maintenance team when it is accepted, and notify users of the progress of their issues. By doing this, manual follow-ups are no longer necessary, which cuts down on delays and speeds up response times. Throughout the issue resolution process, notifications can be issued via email, SMS, or in-system alerts, guaranteeing that the appropriate people are kept aware. The system's automation of communication improves productivity, reduces misunderstandings, and guarantees a well-organized workflow, all of which contribute to quicker and more efficient problem solving.

2. LITERATURE SURVEY

In this system, Victoria Oguntosin [1] et al. have suggested In any university community, complaint management has shown to be a distinctive and effective way to gauge employee and student satisfaction. In addition to ensuring that the University provides the best possible service to its personnel and students, it has contributed to process improvement and change. Even if the use of complaint management has greatly improved, manual complaint management is still inefficient. In order to enhance the way complaints are processed and examined within the university, this project aims to create a web-based complaint management system for the university community using JavaScript as the programming language and MongoDB server as the database. This study found that because it made the procedure easier, students were actually interested in using an online platform to file grievances. However, as technology develops, the web-based complaint management system may undergo a number of enhancements and developments. Any business that wants to guarantee the highest level of client satisfaction must address complaints. Digital (electronic) or traditional (paper-based) complaint management techniques are also possible. The main goal of complaint management is to make sure that any issues that are brought to an organization's attention are promptly addressed and that complaints are tracked effectively. Tracking and monitoring complaints is difficult, and handling each one by hand will be time-consuming and ineffective. At the moment, many colleges lack an automated method for monitoring and managing complaints. Students have found the traditional complaint process to be quite stressful because it necessitates numerous journeys to the relevant offices in order to guarantee that their problems will be addressed.

In this system, Lovely Singh Bhadouria [2] et al. have suggested a Complaint Management System, which is widely used by all businesses and management as one of the modern tools for increasing productivity. It offers a time-saving and corruption-eradication online solution to the public's problems. By monitoring the status of public complaints submitted to the department, the complain management system aims to facilitate the coordination, monitoring, tracking, and resolution of complaints. This site will assign complaints to several departments, and the administrator of each department will address the applicant's issue. If the applicant's complaint is not addressed within a week, it will be immediately forwarded to higher authorities, who will address the issue and take

action against the administrator for failing to review the applicant's complaints. The system will be able to display reports such as administrator performance reports, department-specific pending complaints, closed complaints, and open complaints. Administrators will receive recognition for their efforts if their performance report is exceptional. There will be a distinct area on this portal that details the government-provided services for those in need, which many people are unaware of. The system will save the public a great deal of time and money.

In this system, Shooq Alharbi [3] et al. have suggested Healthcare professionals, patients, network service providers, application developers, and researchers have all recently shown a great deal of interest in M-health, or mobile health. There are numerous helpful healthcare applications for mobile phones, including psycho-education, symptom evaluation, resource finding, and therapy progress monitoring. The creation of an Android-powered smartphone application was the main goal of this project. The proposed system's primary goal is to assist a significant segment of the population: individuals with Alzheimer's disease. By granting them a small memory, the system may help them remember everything they need to do in order to live, potentially preventing the disease from progressing too quickly. The technology offers the best care because it is impervious to damage or forgetfulness. In addition to reminding individuals of their families through memories, family images, and information, the proposed system design presented in this study also contains reminders about hospital appointments, prescription dates, and dosage amounts. 44 million individuals worldwide suffer with Alzheimer's disease, a chronic neurological illness. Alzheimer's sufferers suffer from memory problems as a result of the disease, which significantly disrupts their day-to-day activities. The frequency of Alzheimer's disease is increasing, with 160 million people worldwide expected to have the condition by 2050, in contrast to other chronic illnesses. The illness affects not just the patient but also others who provide care, such as friends, family, and carers [1–3]. Alzheimer disease patients experience a number of issues, including memory recall, cognitive decline, and communication and decision-making difficulties.

Sneha Alve, [4] Ms. These days, the internet and the things it allows us to do to interact with other people are commonplace in people's lives. Nobody is unaware of what the internet is or does not use it. We use the internet in all facets of our lives, whether they are personal or professional. It simplifies life. Additionally, we can use an online complaint management system to address any organization's unsatisfactory and unacceptable products or services. A web application called "Web Application For Complaint Tracking And Resolving" was created to handle different concerns at the college and hostel. Our system's goals are to facilitate the coordination, monitoring, tracking, and resolution of complaints, as well as to give organizations an efficient tool for recording complaint data, using that data to pinpoint problem areas, and enhancing service. An instrument for improving an organization's performance is a complaint management system. This technique aids in identifying the organizations' trouble spots. It reduces the effort required for manual labour. This is a useful tool for handling complaints within a certain time frame. For tracking complaints, a complaint management system is helpful. This system uses the internet to function. Users can upload a photo and post a complaint using the three modules of this system, and the appropriate authorities will handle it. In accordance with the quality of the service, users can provide feedback to the system and view the progress of past complaints. In the event that a person forgets their password, they can retrieve it by email. If that authority is unable to handle the complaint within a given time frame, they provide the administrator with an explanation for the delay. After that, you can take action based on the condition. The administration responds to the complaint.

In order to address the issues with the current system, Ms. Vishakha Babardesai [5] et al. suggested the "Web Application for Complaint Tracking and Resolving" system, which offers a simple method of resolving user-generated issues. Additionally, it improves user services and organizational standards while cutting down on processing time. Through prompt complaint processing, this suggested system greatly aids in lowering individual discontent. This system reduces paperwork, improves problem understanding, makes it simple to monitor complaints, identifies trouble spots within the company, uses resources more efficiently, saves processing time, manages records, is easy to use, and shows concern for users. As of right now, we have finished the database

connectivity and developed a simple GUI for user and complaint registration.

3. RELATED WORK

The utilization of Information and Communications Technology (ICT) in the educational sector cannot be overemphasized. Educational system across the globe is under immense pressure to use ICT to improve the system. An Automated Complaint and Report Management System is one of the tools to achieve this goal. Over the years, the method by which complaints and reports are managed in some Nigeria Universities has not been digitalized and automated. This work presents a web-based system for complaint and report management which was developed using PHP, an open-source scripting language. The system analysis and design were carried out using the Object-Oriented Analysis and Design Methodology (OOADM). The database was created using MySQL and the interface designed employed CSS, JavaScript and HTML. A Supervised Machine Learning algorithm was utilized and basically used for the classification of the complaints. The result obtained shows that the developed system proved to be a better, easier, faster, reliable and more secured method for improving complaint and report handling for fair and prompt response in order to ensure effectiveness and efficiency in tertiary institutions. This is highly recommended to the management of Rhema University, Nigeria as it works towards being among the best 300 universities in the whole world

4. METHODOLOGY

When it comes to managing issue reporting and resolution within an organization, the suggested complaint management system offers a methodical and effective approach. Through a centralized website, it allows interns, instructors, and students to file grievances, guaranteeing accurate tracking and recording. Following submission, the administrator reviews the complaints for confirmation before approving them. After approval, a distinct Task ID is created, and automated alerts are sent to the maintenance staff to remind them to perform the appropriate action. In order to ensure responsibility in the resolution process, faculty and interns can also confirm instances that have been addressed. By classifying complaints as "On-going," "Pending," or "Completed," the system enables users to monitor the status of their complaints in real time. Administrators manage the entire process, making sure that valid complaints are handled and informing the maintenance crew when necessary. As they address problems, the maintenance crew updates task statuses, encouraging responsibility and openness. The technology improves operational efficiency and reduces issue resolution delays by automating notifications and expediting stakeholder contact. Its well-organized workflow guarantees quicker reaction times, enhances departmental coordination, and promotes a more systematic and efficient complaint-handling procedure.

A. STUDENT

Students can report problems with campus infrastructure, facilities, or other issues through the student module. Students are able to file complaints with pertinent information, such as the category, description, and corroborating documentation. Upon submission, the administrator receives the complaint for confirmation. In order to provide transparency in the resolution process, students can monitor the status of their complaints and receive alerts of updates.

B. FACULTY

Because they can both file complaints and confirm that issues have been rectified, faculty members have two roles in the system. Similar to students, faculty members have the ability to file complaints, guaranteeing that administrative and academic issues are taken care of. Before declaring a problem as addressed, they can also confirm that it has been handled correctly, adding another level of assurance. This aids in preserving quality control in problem solving.

C. ADMIN

The admin module is in charge of managing the complaint handling procedure as a whole. Before authorizing the resolution of complaints, administrators examine and confirm their validity. The system notifies the maintenance staff and generates a unique Task ID upon approval of a complaint. Administrators can also keep tabs on any pending grievances, provide status updates, and guarantee that problems are resolved quickly. They serve as the main point of contact for overseeing and arranging the work flow for the maintenance crew, instructors, and students.

D. MAINTENANCE TEAM

As soon as the administrator approves a complaint, the maintenance team is notified. They are in charge of fixing the problem by executing the required steps and updating the task's status appropriately. Based on how the resolution process is progressing, they can mark complaints as "On-going," "Pending," or "Completed." This module guarantees the maintenance crew has accountability for addressing issues and clear instructions.

E. PROCESSES

The complaint management workflow, from issue reporting to resolution, is described by the process's module. It covers actions like filing a complaint, confirming with the administrator, creating a task ID, notifying the maintenance team, providing status updates, and final verification. By ensuring a methodical and planned approach to complaint processing, the module reduces delays and boosts productivity.

F. REPORTING ISSUES

The complaint entry point is the issue reporting module. It gives teachers and students an organized way to file concerns with pertinent information. The module guarantees accurate issue documentation, facilitating effective tracking and resolution. In order to clarify the reported issue, users can additionally attach supporting papers or photographs.

G. ADMIN VERIFICATION

Verification of complaints prior to their approval for settlement is the main emphasis of this module. To avoid system abuse, the administrator manually examines every complaint to ensure it is legitimate. Following verification, the maintenance team is alerted and the complaint is given a Task ID. The integrity of the complaint management system is preserved by this module, which makes sure that only valid concerns are handled.

H. TASK ID CREATION

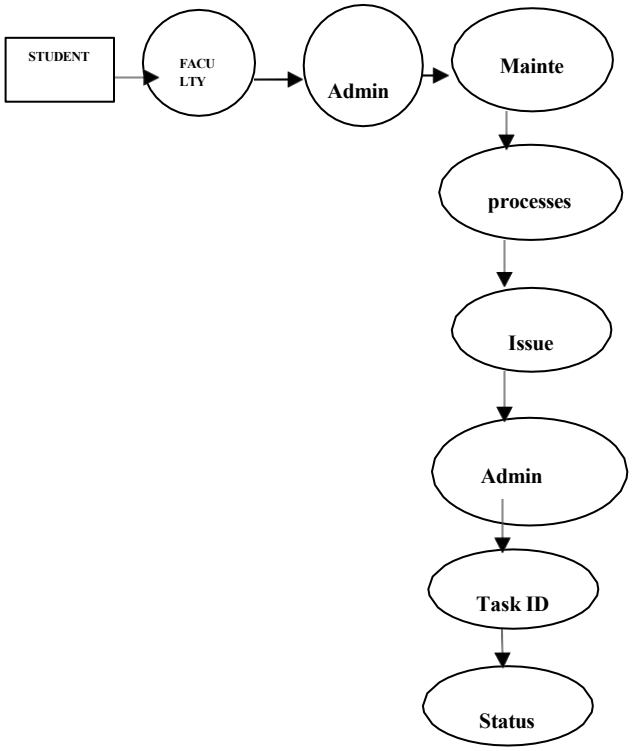
Every complaint has its own Task ID created after admin approval. This ID aids in methodically monitoring complaints and connecting them to the status of their resolution. All parties involved, including students, instructors, administrators, and the maintenance crew, may effectively refer to a particular issue thanks to the Task ID, which also guarantees accurate recordkeeping.

I. STATUS UPDATES

The status update module makes it possible to track complaints in real time. Depending on the progress, the maintenance staff changes each issue's status to "On-going," "Pending," or "Completed." Students, instructors, and administrators can see these updates, guaranteeing openness and informing all parties involved about the resolution procedure.

5. RESULT AND DISCUSSION

The institution's internal problem-solving process is now much more efficient thanks to the complaint management system's installation. The methodical process guarantees that grievances are accurately recorded, validated, and monitored. The automated notification system guarantees that the administrative and maintenance staff receive fast updates, and students, instructors, and interns may all quickly file grievances. All parties involved may now trace the status of reported concerns in real time thanks to the establishment of a distinct Task ID for every complaint, which has simplified monitoring. Response times have decreased, and the administrative and maintenance teams are better coordinating, according to the examination of complaint resolution data. By classifying complaints into "On-going," "Pending," and "Completed" stages, the resolution process is transparently visible. In order to improve accountability and guarantee that problems are adequately addressed prior to closure, faculty and interns are essential in confirming instances that have been resolved. Additionally, the system reduces manual errors and delays brought on by conventional complaint-handling techniques. All things considered, the complaint management system has increased the efficacy of issue resolution, streamlined workflow, and optimized communication. The solution facilitates a quicker, more structured, and transparent procedure by automating notifications and guaranteeing a methodical approach. The findings show that incorporating digital technologies into complaint processing improves stakeholder collaboration and institutional management as a whole.



System flow diagram

6. CONCLUSION

By offering a methodical and open approach to problem solving, the complaint management system increases productivity. The technology guarantees accurate documentation, real-time tracking, and methodical verification by allowing interns, instructors, and students to electronically file grievances. Automated notifications improve reaction times and minimize delays by streamlining stakeholder communication. Sorting complaints into "On-going," "Pending," or "Completed" categories improves accountability and makes it easier to track resolutions. Furthermore, the maintenance team's responsibility to update task statuses guarantees that problems are resolved quickly. All things considered, the system maximizes workflow effectiveness, reduces human error, and promotes a responsive, efficient, and well-structured complaint-handling procedure.

7. FUTURE WORK

Future improvements to the complaint management system will concentrate on adding cutting-edge functionalities like chatbot integration for immediate question response, AI-driven issue classification, and predictive maintenance. Enhancing accessibility through the use of a mobile application will enable users to simply file and monitor complaints. Furthermore, by incorporating data analytics, organizations can gain insights into persistent problems and take preventative action. To better protect data privacy and stop unwanted access, role-based access control and improved security measures will be implemented. Adding support for many languages to the system can improve usability for a wide range of users. The system will be more reliable and scalable for wider institutional use thanks to these enhancements, which will also increase efficiency, automation, and user experience.

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