MINI PROJECT REPORT ON

“CAMPUS MAINTENANCE MANAGEMENT APP”

Submitted by

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ABSTRACT

In response to the prevalent inefficiencies in handling plumbing and electrical complaints within college campuses, we propose the development of an innovative mobile application. This solution aims to revolutionize the existing manual processes, addressing issues such as delays, miscommunication, and a lack of transparency.

The key technical components of our proposed system include robust user authentication and authorization mechanisms, cutting-edge mobile app development techniques, effective database management, real-time communication capabilities, and the implementation of an intelligent task assignment algorithm.

Through rigorous user authentication and authorization, we ensure the security of the system, while the mobile app development focuses on creating an intuitive interface for seamless complaint submission and user interaction. The database management system is designed to efficiently store and retrieve maintenance data, and real-time communication features provide instant updates for all stakeholders. The task assignment algorithm optimizes the allocation of maintenance tasks, enhancing overall system efficiency.

This mobile application seeks to redefine the management of maintenance complaints in colleges, offering an integrated, transparent, and responsive solution. By mitigating delays and improving communication, we aim to provide a safer and more convenient experience for the college community.

INTRODUCTION

In the ever-evolving landscape of educational institutions, the efficient management of infrastructure maintenance issues has emerged as a pivotal aspect of ensuring a safe and conducive environment for learning. Within this context, our initiative took on the challenge of developing a comprehensive mobile application to address the complexities associated with plumbing and electrical complaints within college campuses, specifically tailored for the College Parent-Teacher Association (PTA) committee. This document encapsulates the journey of conceptualizing, designing, and implementing the innovative solution, which seeks to revolutionize the traditional methods of handling maintenance concerns for the PTA.

The existing manual processes for managing plumbing and electrical complaints often lead to delays, miscommunication, and a lack of transparency, posing challenges for administrators, maintenance staff, and the broader college community. The mobile application aims to tackle these issues head-on by leveraging advanced technologies and methodologies, with a focus on user authentication, mobile app development, database management, real-time communication, and task assignment algorithms.

This document serves as a detailed exploration of the technical foundations, design considerations, and anticipated benefits of the proposed mobile application. Through an in-depth analysis of each technical aspect, the aim is to provide a holistic understanding of the application's functionality and its potential positive impact on the daily operations of educational institutions, specifically benefiting the College PTA committee. By streamlining the process of reporting and resolving maintenance issues, the application aspires to contribute to an environment that is not only safer but also more transparent and user-friendly for all stakeholders involved in the PTA community.

PROBLEM

1. Background or context of the problem

Managing maintenance issues within educational institutions, particularly in plumbing and electrical systems have been a persistent challenge. The manual processes in place often result in delays, miscommunication, and a lack of transparency. Recognizing the specific needs of the College Parent-Teacher Association (PTA) committee, which plays a crucial role in fostering collaboration, we identified the need for a tailored solution. This led to the conceptualization of a Campus Maintenance Management App designed to streamline the reporting and resolution of maintenance issues for the PTA committee. The app aims to provide a user-friendly platform that enhances communication, task assignment, and timely issue resolution, ultimately contributing to a safer and well-functioning educational environment.

2. Formal definition of the problem

The problem involves the ineffective management of plumbing and and electrical maintenance in educational institutions, with a focus on the challenges faced by the College Parent-Teacher Association (PTA) committee. Current manual processes result in delays, miscommunication, and a lack of transparency, impacting timely issue resolution. This inefficiency poses safety safety risks and inconvenience to the college community. The specific needs of the PTA committee highlight the necessity for a tailored Campus Maintenance Management App, aiming to streamline reporting, enhance communication, and and ensure prompt issue resolution within the committee's responsibilities.

3. Plain text description of the problem

In colleges, managing plumbing and electrical issues is a hassle due to manual processes causing delays and confusion. The College Parent-Teacher Association (PTA) committee faces challenges in coordinating and resolving these problems efficiently. To simplify this, we aim to develop a user-friendly Campus Maintenance

Management App tailored for the PTA, streamlining communication and ensuring prompt issue resolution for a safer educational environment.

4.Example illustration

Imagine the HOD of a particular department discovering a water leak on one of the bathrooms. Using the Campus Maintenance Management App, they quickly report the Issue with the details. The app notifies the sergeant in real-time, efficiently assigns the task to maintenance staff, and allows for transparent updates. This streamlined process ensures prompt issue resolution, reducing inconvenience for students and teachers.

The user-friendly interface of the app enhances communication, making the entire experience seamless for the PTA committee.

5.Potential users of your solution

Sergeant,HODs of various departments,Principal.

The intuitive idea behind the proposed solution

The intuitive idea behind the proposed Campus Maintenance Management App is to create a user-centric platform that simplifies the process of tracking and resolving maintenance issues within the college environment. The user interface is designed with a focus on ease of use, ensuring that all users can navigate the app effortlessly.

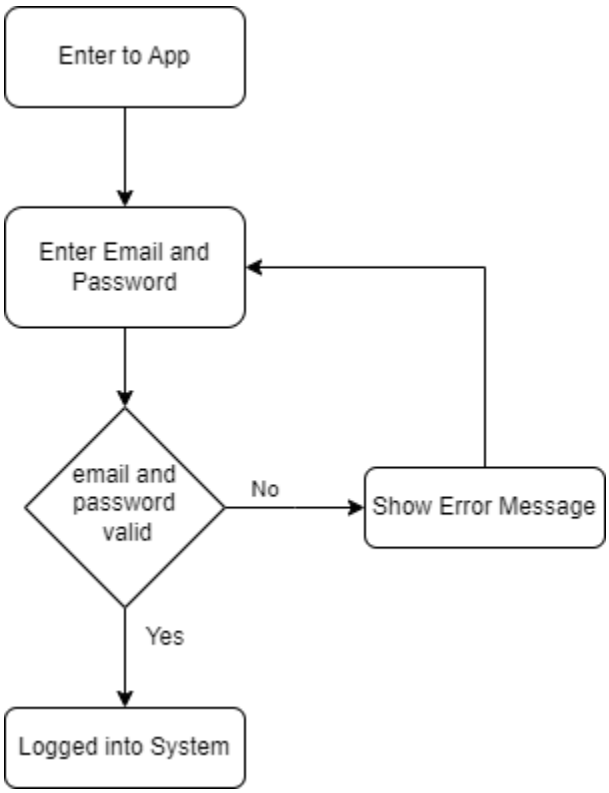
Key features include a straightforward tracking mechanism, allowing users to effortlessly monitor the status of reported issues. Real-time notifications keep all stakeholders informed about ongoing tasks, fostering transparent communication. The task assignment algorithm optimizes the resolution process by intelligently allocating tasks to the appropriate personnel.

The design encourages collaboration, providing a centralized hub for communication and updates. Whether checking the status of an issue or providing updates, the app's simplicity ensures a seamless experience for all users. This approach empowers users, irrespective of technical expertise, to

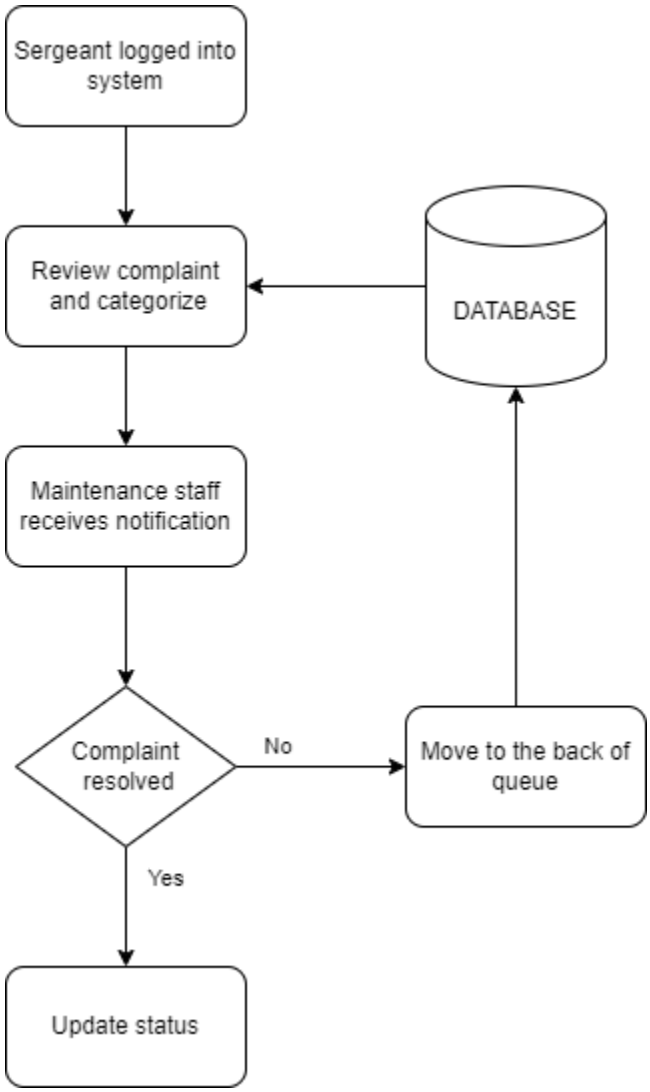
actively participate in and contribute to the efficient management of maintenance concerns within the college community.

WORKFLOW DIAGRAM

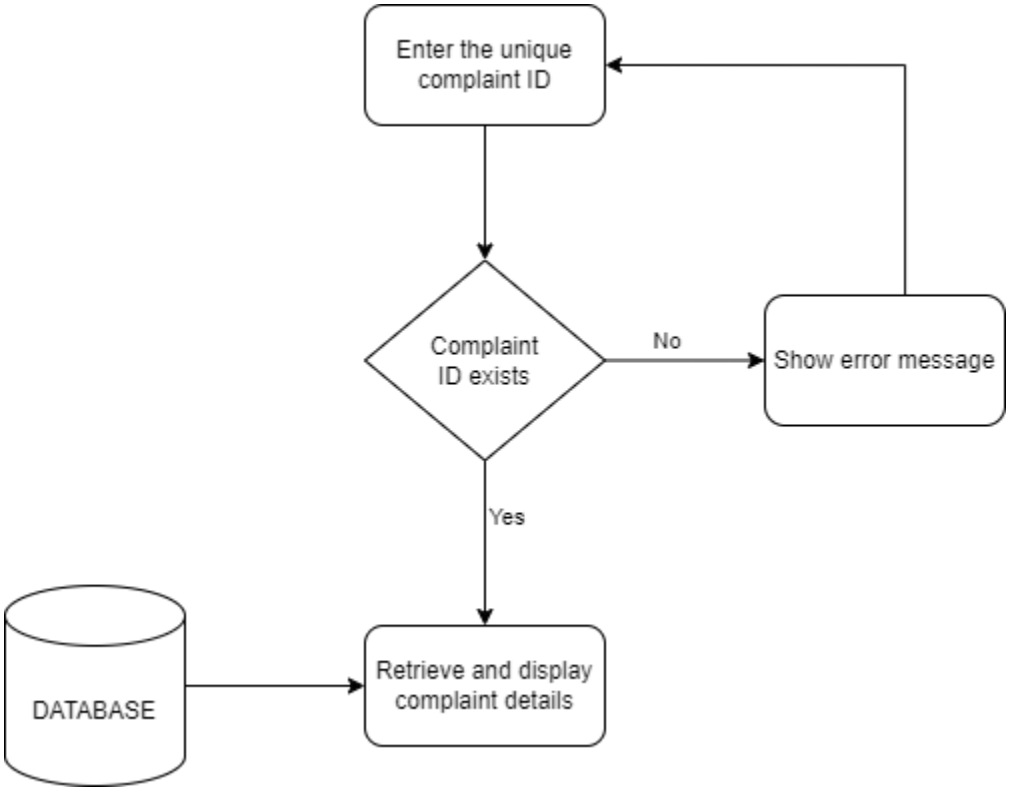
User Authentication



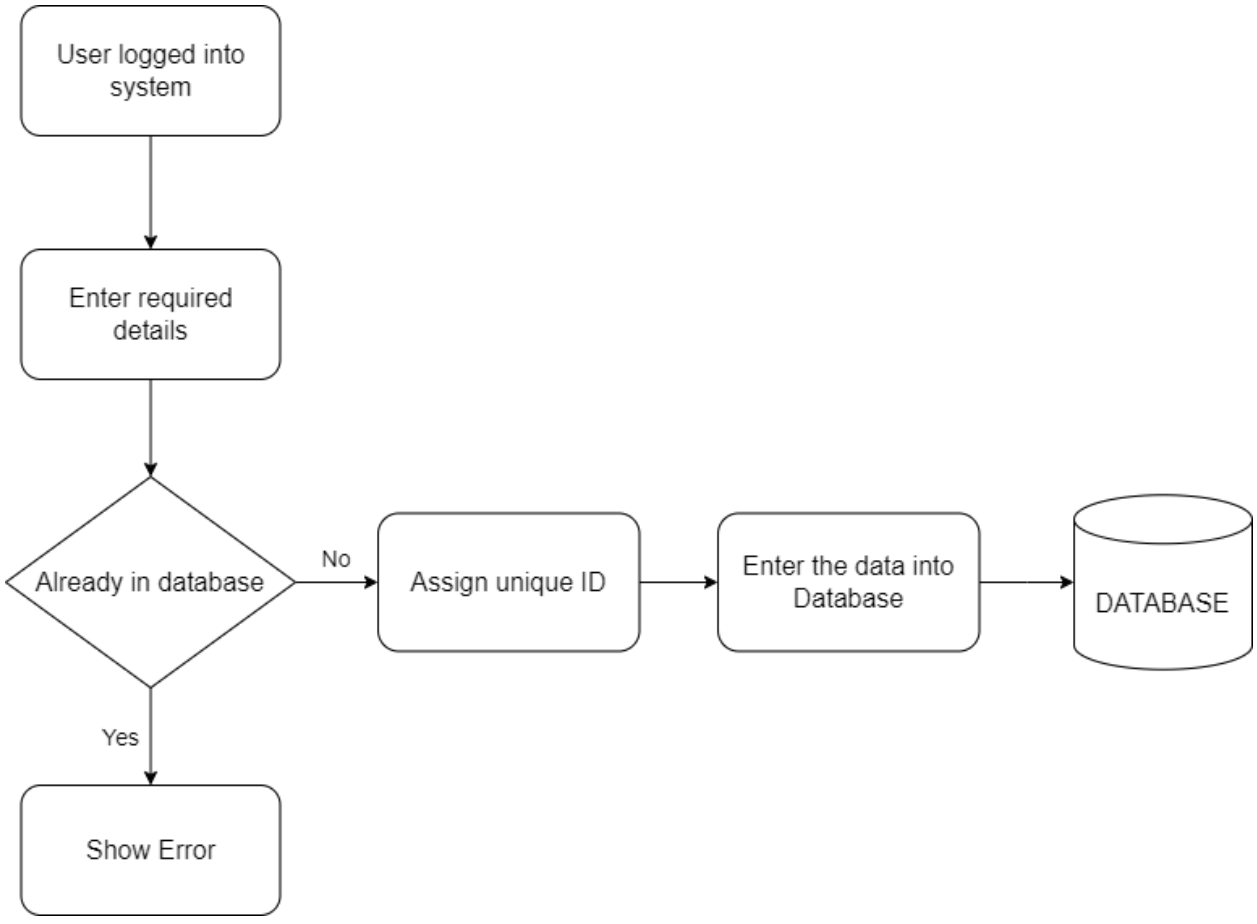
Complaint Handling Entry



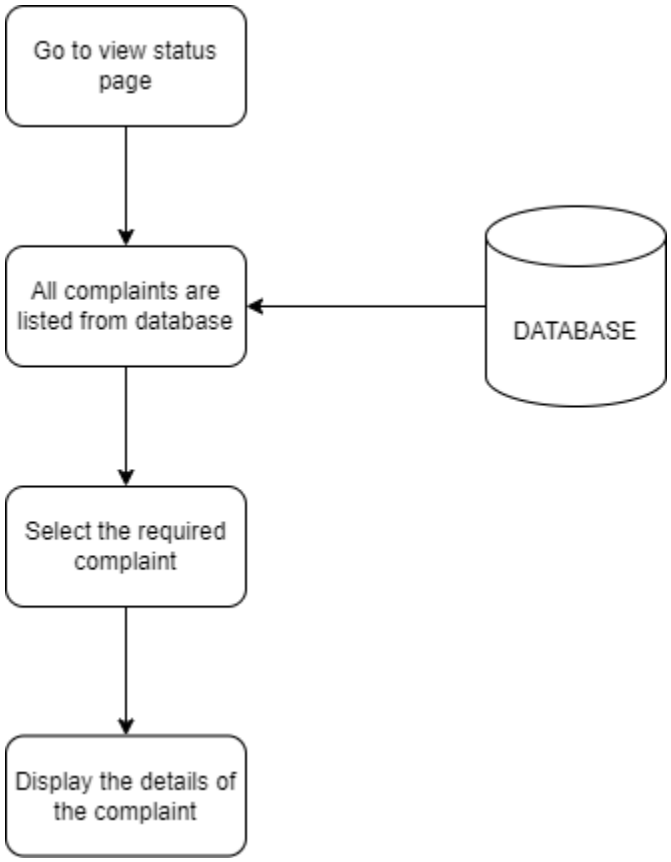
Complaint Search Entry



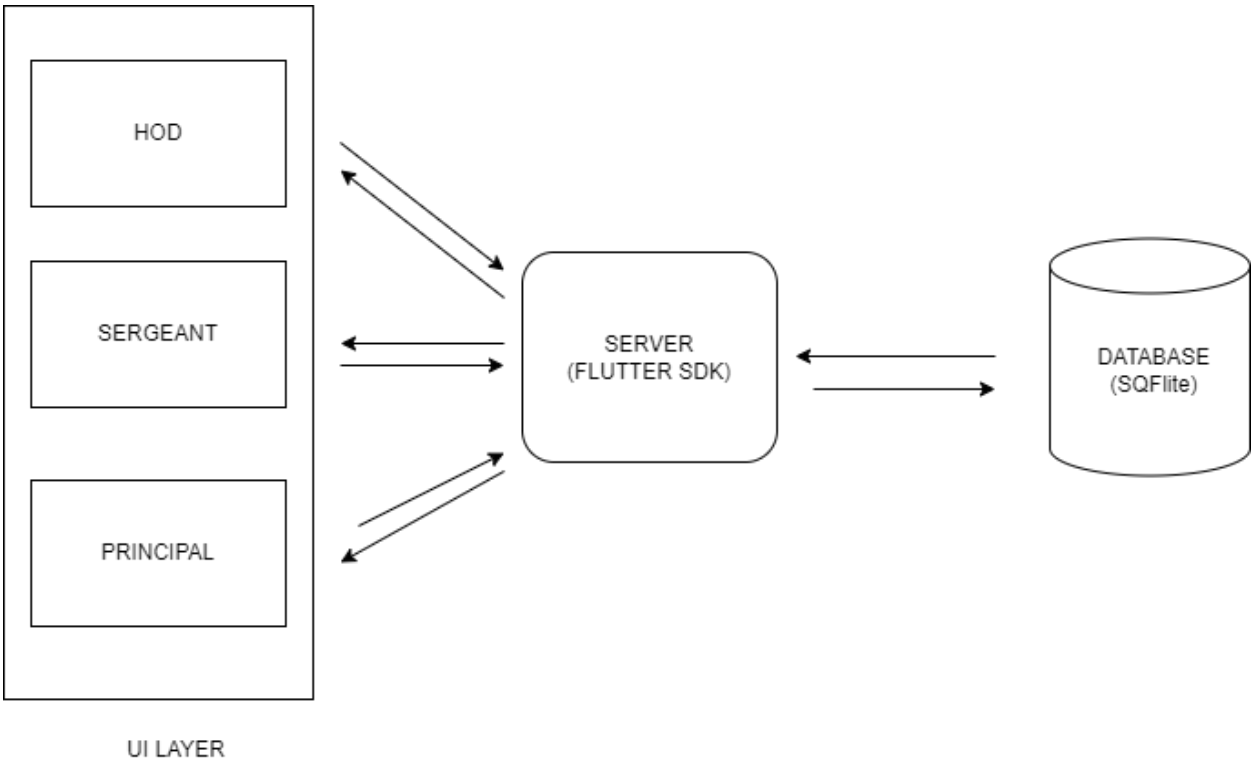
Complete Submission Entry



All Complaints Entry



Architectural Diagram



Database Diagrams