**CHAPTER 1: INTRODUCTION**

**1.1 Background**

Traditional methods of managing building-related complaints face challenges in terms of efficiency and communication. As a solution, there is a growing need for innovative approaches and technologies that can streamline the complaint submission process, enhance issue resolution, and improve overall tenant satisfaction. Modern technologies enable the analysis of complaint data, identification of patterns, and more effective communication.

**1.2 Objectives**

The objectives of the project are to streamline the complaint management process, increase efficiency in issue resolution, and enhance communication between building management and residents. The website reduces the burden on staff, promoting an organized workflow and creating a positive environment for both residents and staff.

* **Key Features:**

1. Complaint Submission: Users can submit detailed complaints through a user-friendly interface, ensuring clear communication of the issues they face.

2. Upload Media: Users can upload photos or videos related to their complaints, providing visual evidence and enhancing clarity.

3. Tracking and Updates: Building members can track the progress of their complaints, receiving regular updates on the status and expected resolution timeframe.

4. Feedback Mechanism: The website includes a feedback option for users to provide suggestions, enhancing convenience and effectiveness.

5. Reminders and Notifications: Users can opt to receive reminders and notifications regarding their complaint progress and required actions.

6. Complaint Revision: If users are not satisfied with the resolution, they can upload the complaint again, ensuring their concerns are addressed and reviewed.

**1.3 Purpose, Scope, and Applicability**

* **1.3.1 Purpose**

The purpose of the e-complaint website project is to create a robust and user-friendly platform that optimizes the building complaint handling process. By developing this platform, the project aims to significantly improve tenant satisfaction, streamline property management workflows, and contribute to efficient property management practices.

* **1.3.2 Scope**

The scope of the project is defined by its objectives and intended functionalities. The project focuses on creating a web-based platform where tenants can submit complaints, property managers can assign tasks to maintenance teams, and issues can be tracked and resolved efficiently. The project also includes database management to store complaint data and user information securely.

* **1.3.3 Applicability**

The e-complaint website has broad applicability across various stakeholders:

* Property management companies can use the platform to streamline their complaint resolution processes, enhancing tenant satisfaction.
* Residents will benefit from a user-friendly platform that enables them to conveniently submit complaints and track their status.
* Maintenance teams can efficiently address reported issues, leading to quicker resolutions.
* The project's outcomes and methods have the potential to benefit the wider field of property management and building services by offering valuable insights and solutions.

**1.4 Achievements**

* Development of an intuitive and efficient e-complaint submission platform.
* Improved communication between tenants, property managers, and maintenance teams.
* Streamlined workflow resulting in quicker issue resolution.
* Enhanced resident’s satisfaction and overall property management efficiency.

**1.5 Organization of Report**

1. Summary: Offers a concise overview of project objectives, achievements, and impact.
2. Introduction: Provides context for the e-complaint website project, highlighting challenges in property management and the need for an innovative solution.
3. Methodology: Explains the development process, including web development, database setup, and security measures.
4. Applicability and Impact: Explores the potential benefits of the e-complaint platform for property management companies, residents, and maintenance teams.
5. Challenges and Future Enhancements: Identifies potential challenges in implementation and suggests future directions to enhance the platform's features and usability.

**CHAPTER 2: SURVEY OF TECHNOLOGIES**

**2.1 List of Technologies**

The essential technologies for developing your e-complaint website for building management include:

1. HTML, CSS, JavaScript: Fundamental web development languages that structure content, design the interface, and enable interactive features.
2. PHP: A server-side scripting language used for processing forms, handling data, and managing interactions with the server.
3. Node.js: A runtime environment that allows server-side execution of JavaScript, enabling asynchronous operations and real-time communication.
4. Bootstrap: A front-end framework that facilitates responsive design, ensuring your website functions well on various devices.

**2.2 Details of Mentioned Technologies**

**1.** **HTML, CSS, JavaScript**

These core technologies enable us to create a user-friendly and interactive interface for users to submit and track building-related complaints. HTML structures the content, CSS enhances the design, and JavaScript provides dynamic functionality for an engaging experience.

**2. PHP**

PHP plays a crucial role in processing user submissions and managing data on the server side. It processes complaint forms, stores information in databases, and interacts with other technologies for seamless complaint management.

**3. Node.js**

Node.js empowers server-side JavaScript execution, facilitating real-time interactions and asynchronous operations. It's especially useful for building features like instant chat and notifications on your e-complaint website.

**4. Bootstrap**

Bootstrap streamlines the development process by providing responsive design components. This ensures your e-complaint website is accessible and visually appealing across different devices, from desktops to mobile phones.

**2.3 Frontend Features**

Frontend features using HTML, CSS, JavaScript, and Bootstrap Leveraging these technologies.

* Create user-friendly complaint submission forms using HTML forms.
* Enhance the user interface with CSS styling for a visually appealing look.
* Employ JavaScript for client-side form validation and dynamic content rendering.
* Utilize Bootstrap's responsive design components for seamless adaptability.

**2.4 Backend Features**

Utilizing PHP and Node.js for the backend:

* Registration of user and admin.
* Process and validate user-submitted complaints using PHP.
* Store relevant data in databases for effective tracking and analysis.

**CHAPTER 3: REQUIREMENTS AND ANALYSIS**

**3.1 Problem Definition:**

The e-complaint website for building management aims to address challenges related to efficiently managing complaints and grievances within residential or commercial buildings. The system's primary objective is to provide a platform that streamlines the complaint submission process, enhances issue resolution, and promotes effective communication between building management and residents. By doing so, it seeks to improve overall tenant satisfaction and building maintenance.

**3.2 Requirements Specification:**

**User Registration and Authentication:**

* Users should have the ability to register accounts securely.
* Secure login functionality is essential for users to access the complaint submission and tracking features.

**Complaint Submission and Tracking:**

* Building members must be able to submit complaints through an intuitive and user-friendly interface.
* A tracking mechanism is required to allow users to monitor the progress of their submitted complaints.
* Regular updates should be provided regarding the status and expected resolution timeframes.

**Media Upload and Storage:**

* Users should have the option to upload relevant media, such as images or videos, to support their complaints.
* Uploaded media must be securely stored and associated with the respective complaints.

**Feedback Mechanism:**

* The system should include a feedback mechanism that enables users to provide suggestions or comments on the resolution process.

**Reminders and Notifications:**

* Users should receive reminders and notifications regarding their complaint progress and any required actions from their end.

**Complaint Revision:**

* The system should allow users to revise and resubmit complaints if they are not satisfied with the initial resolution.

**3.3 Software and Hardware Requirements:**

**Software Requirements: Development Environment:**

* HTML, CSS, JavaScript, PHP, Node.js: Core technologies for building and implementing the website's frontend and backend.
* Visual Studio Code: Integrated development environment for coding and testing.
* MySQL or SQL Server: Database management system for storing complaint data and user information.

**Programming Languages and Frameworks:**

* HTML, CSS, JavaScript: For frontend development and user interface design.
* PHP: For processing user-submitted forms, managing data, and interacting with the server.
* Node.js: For enabling real-time communication and asynchronous operations.
* Bootstrap: For responsive design and consistent user experience.

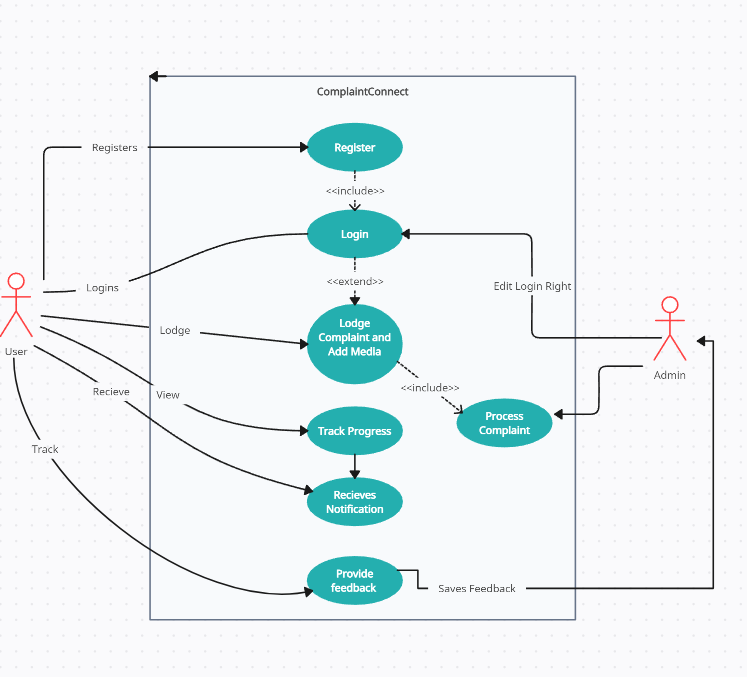
**Database Management:**

* MySQL or SQL Server: To store and manage complaint data, user information, and interaction records.

**CHAPTER 4: StarUML Diagrams**

StarUML is a popular software modeling tool that allows users to create UML diagrams and models. It aids in designing, documenting, and illustrating the structure, relationships, and functionalities of software systems. StarUML is valuable for software developers, designers, and project managers to create a shared understanding of the software's design and ensure effective communication among team members.

* ER Diagram
* Use Case Diagram
* Class Diagram
* Sequence Diagram
* Activity Diagram
* Use Case Diagram



A diagram of a work flow

Description automatically generated