Integrated Shool Portal For Admin Control And Public Website

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Abstract- *The School Website and Admin Portal project aims to provide an integrated digital platform for educational institutions to manage and present school-related information efficiently. The system consists of two key components: a publicfacing website and a secure admin portal, both connected to a centralized database. The School Website serves as the digital identity of the institution, offering accessible information to students, parents, and visitors. It includes menus such as Home, About, Academics, Gallery, Admission, and Contact, displaying real-time updates directly fetched from the database. The Admin Portal is designed for school administrators to manage backend operations such as maintaining gallery images, publishing achievements and announcements, managing student and staff records, and handling admissions and enquiries. Admins can update content across modules like Sports, Transport, Examination, Events, and more. These updates are instantly reflected on the public website through the shared database.This project improves administrative efficiency, enhances communication between the institution and its stakeholders, and ensures that the school's digital presence remains current and informative. The accompanying User Interface (UI) Diagram visually outlines the layout and navigation structure of both the website and admin portal, highlighting the relationship between various menus and the functionalities they support.*

Keywords- School Website, Admin Portal, Centralized Database, Real-time Updates, Student and Staff Management, Admissions, Gallery, Announcements, Events, UI Diagram, Content Management, Digital Identity.

I. INTRODUCTION

The *School Website and Admin Portal* project is a comprehensive digital solution designed to streamline communication and management within educational institutions. It features a public-facing website to share essential information with students, parents, and visitors, and a secure admin portal for backend operations. Connected through a centralized database, the system enables real-time content updates, efficient student and staff management, and seamless handling of admissions, events, announcements, and other school activities. This integrated platform enhances the school's digital presence and improves overall administrative efficiency.

II. LITERATURE SURVEY

1. Several previous studies and implementations have explored the development of web-based systems for school and academic management. Research by *A.A. Adeyemo et al. (2013)* emphasized the importance of integrating school management systems with real-time databases to enhance efficiency and reduce administrative workload. Their study highlighted that automation in school operations led to improved record-keeping and faster decision-making.

2. Another study by *Olanrewaju and Adebayo (2015)* discussed the role of web portals in improving communication between schools and parents. They found that dynamic content management and user-friendly interfaces significantly increase stakeholder engagement and transparency.

3. Existing solutions like Fedena, OpenSIS, and EduSec have successfully implemented ERP-based frameworks that manage student records, attendance, examinations, and fee tracking. These platforms also demonstrate how centralized data can be utilized for both internal operations and public information display.

4. Research also supports the integration of content management systems (CMS) to ensure non-technical staff can update website sections like news, gallery, or announcements without developer assistance. Projects discussed in *IEEE Xplore* and *Springer* journals further advocate for role-based admin portals to maintain security and data privacy.

5. Building upon these findings, the School Website and Admin Portal project integrates best practices from past research and modern platforms to deliver a unified, real-time system that enhances both the school's digital presence and internal efficiency.

III. PROBLEM STATEMENT

In many schools, administrative processes and public communication are handled through separate, often manual systems, leading to inefficiencies, data inconsistencies, and

poor user experience. Websites are frequently outdated because content updates require technical knowledge or developer support, making it difficult for school staff to keep information current. Similarly, student and staff records, admission data, announcements, and event details are often maintained in isolated files or spreadsheets, increasing the risk of errors and data loss.

This lack of integration results in slow updates, limited access to critical information, and miscommunication between the institution and its stakeholders—students, parents, and staff. Moreover, managing events, gallery images, examination schedules, transport details, and achievements across disconnected systems adds to the administrative burden.

To address these challenges, there is a clear need for a centralized and user-friendly system that links the public-facing school website with a secure admin portal. Such a system should enable real-time updates, simplify content management, streamline administrative tasks, and ensure that the school's digital presence accurately reflects its current activities and achievements.

IV. PROPOSED SYSTEMMETHODOLOGY

The proposed system is a dynamic, web-based application designed to integrate a school's public website with a secure administrative portal, both connected to a centralized MySQL database. The system is developed using standard web technologies such as HTML, CSS, JavaScript, and Bootstrap for the frontend, ensuring a responsive and user-friendly interface. PHP is employed as the server-side scripting language to handle backend logic, data processing, and session management, while MySQL manages the structured storage of data including student records, staff details, admissions, announcements, gallery images, and other modules.

The public-facing website serves as the school's digital identity, providing real-time information to students, parents, and visitors. Content such as announcements, achievements, examination updates, and gallery images are dynamically fetched from the database, ensuring the website remains current without requiring manual updates in the code. The admin portal is accessible only to authorized personnel and allows them to manage content efficiently through secure login and intuitive form-based interfaces. Administrators can update or delete records related to students, staff, events, transport, academics, and more. These changes are immediately reflected on the website due to the real-time connection with the shared database.

Security is maintained through session-based authentication, preventing unauthorized access to administrative functions. The design also supports scalability, allowing for future integration of role-based access or additional modules. A visual User Interface (UI) diagram accompanies the system to illustrate the layout and navigation flow between the website and the admin portal, showcasing how each module is interconnected. Overall, this methodology ensures streamlined administration, up-to-date public communication, and a cohesive digital platform for school management.

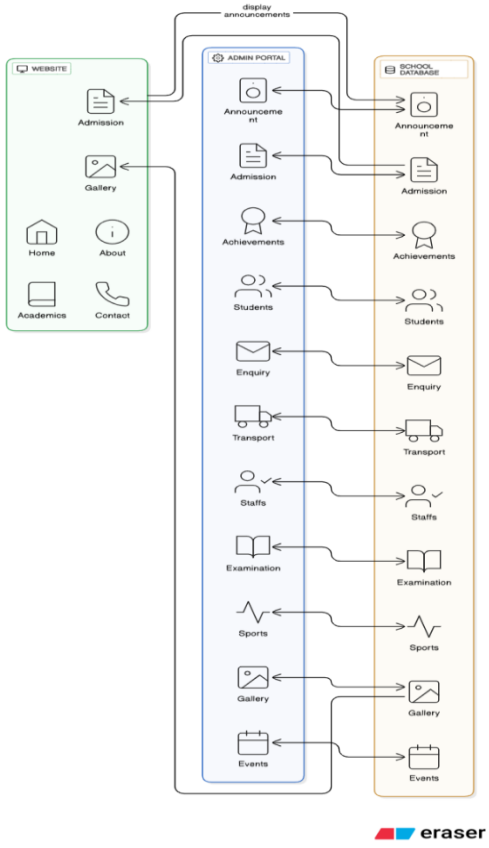

Fig 4.1 Proposed Architecture Design

4.1 User Interface Layer

The User Interface (UI) Layer of the School Website and Admin Portal is designed to provide a seamless and intuitive experience for both public users and administrative staff. This layer acts as the front-end of the system and is responsible for all user interactions.

For the public-facing school website, the UI includes well-structured and responsive pages such as Home, About, Academics, Gallery, Admission, Events, and Contact. These pages are built using HTML, CSS, JavaScript, and Bootstrap to ensure compatibility across devices. Content is dynamically

loaded from the database, allowing real-time display of announcements, achievements, event updates, and gallery images. The UI is clean, visually appealing, and easy to navigate, ensuring that students, parents, and visitors can access information without confusion.

For the admin portal, the UI includes a secure login page followed by a dashboard interface that provides access to different modules such as Student Management, Staff Management, Gallery Control, Admissions, Enquiries, and Announcements. Each module features form-based interfaces for adding, updating, and deleting records. The design emphasizes usability and clarity, making it easy for non-technical staff to manage the website content and school records effectively. Real-time feedback, form validation, and user-friendly controls enhance the overall administrative experience.This UI layer bridges the users with the application logic, ensuring that all operations are executed through an interactive, responsive, and accessible interface tailored to each user role

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4.2 Business Layer

The Business Layer of the School Website and Admin Portal serves as the core logic processing unit of the system. It acts as the intermediary between the User Interface (UI) and the Data Layer (Database), handling all data-related operations, enforcing rules, and ensuring secure, consistent execution of tasks.

Developed primarily using PHP, this layer is responsible for processing requests from both the public website and the admin portal. When a user interacts with the UI—such as submitting an admission form, updating student records, uploading a gallery image, or publishing an announcement—the business layer validates the input, applies the necessary logic, and performs database operations accordingly. It ensures that only authenticated and authorized users can access or modify specific resources, thus enforcing role-based access control where applicable.

This layer manages session handling, form submissions, data validation, CRUD operations (Create, Read, Update, Delete), and error handling. For example, when an admin uploads a new event, the business layer checks the data format, processes the image, stores the information in the database, and triggers an update on the public website.

By separating the logic from the UI and data layers, the business layer ensures modularity, maintainability, and scalability of the application. It plays a crucial role in maintaining data integrity, enforcing business rules (e.g., admission criteria, update permissions), and ensuring a smooth and secure workflow between user actions and database interactions.

4.2 Data Access Layer

The Data Access Layer (DAL) is responsible for managing all interactions between the application and the centralized MySQL database. It provides a structured and secure method to retrieve, insert, update, and delete data used by both the public-facing website and the admin portal.In this system, the DAL is implemented using PHP scripts that utilize SQL queries to perform database operations. These scripts act as an interface between the Business Layer and the MySQL database, isolating direct database interactions from the core application logic. This separation ensures better security, easier maintenance, and more efficient debugging.

The DAL handles data requests such as fetching announcements, gallery images, student records, staff details, admission entries, and more. It ensures that only valid and sanitized queries reach the database, preventing vulnerabilities like SQL injection. For example, when an admin submits a form to add a new event, the business layer passes the request to the DAL, which then executes the corresponding SQL INSERT command.By encapsulating database logic within this layer, the application maintains a clean and modular structure. It enables developers to make changes to database schema or query logic without affecting the UI or business logic, thus supporting scalability and future upgrades.

V. CONCLUSION

The School Website and Admin Portal project provides an efficient, integrated solution for educational institutions to manage and present school-related information digitally. By combining a public-facing website with a secure admin portal, the system ensures real-time updates, centralized data management, and seamless communication between the school and its stakeholders. The layered architecture—comprising the user interface, business logic, and data access layers—promotes modularity, security, and ease of maintenance. With features such as dynamic content display, secure admin access, and automated data handling, the system enhances administrative efficiency and ensures that the school’s online presence remains informative, engaging, and up to date.

VI. FUTURE ENHANCEMENT

To further improve the functionality and scalability of the School Website and Admin Portal, several future

enhancements can be considered. One key improvement is the integration of role-based access control, allowing different levels of admin users such as principals, teachers, and clerks to access specific modules based on their roles. Student and parent login portals can be added to provide personalized dashboards, academic progress tracking, and communication with staff.The system can also be enhanced with SMS and email notification features to alert parents about important updates such as exam schedules, events, or fee dues. Mobile app integration can provide easier access for users on smartphones, improving usability and engagement. Additional modules like online fee payment, library management, attendance tracking, and academic performance analytics can be implemented to make the system more comprehensive. Furthermore, shifting to cloud-based hosting can improve performance, scalability, and remote access, making the system future-ready for wider adoption.

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