

Web based Scalable School Management System & Full Team Absent

Dynamic Scalable School Website With Customization

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Abstract:

This project is aimed at creating a dynamic and scalable school website that is highly customizable and easy to maintain. The website is built using modern web development technologies such as Node.js and Express on the backend and EJS and Tailwind CSS on the frontend. The website has three user roles - Student, Teacher, and Admin - each with their unique profile and access privileges.

The key feature of the website is the Admin Panel, which is only accessible to the admin and provides an easy way to customize the website without requiring any knowledge of coding. Using a rich text editor, the admin can create pages and style them without any hassle. This makes the website highly customizable and easy to maintain, allowing the admin to make changes as and when required. With its scalable architecture and easy-to-use interface, this website provides a one-stop solution for all the information needs of the students, teachers, and administrators.

Keywords- web; database; student; dynamic; teacher;

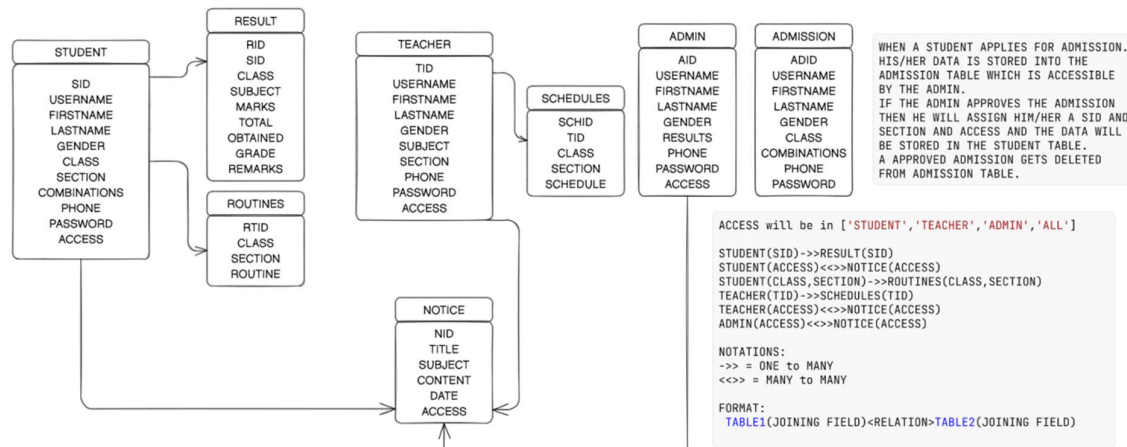
Introduction:

In today's world, having an online presence is essential for any institution, including schools. A school website serves as a primary source of information for students, teachers, and parents. A dynamic and user-friendly website can greatly enhance the overall experience for the website users. This project aims to develop a dynamic, user-friendly, and customizable school website that requires minimal maintenance.

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Design:

Database Schemas (Using UML Diagram):



Backend:

The backend of the website is built using Node.js and the Express application framework. Express is a popular framework for building web applications in Node.js that provides a robust set of features for web and mobile applications. We use Node.js and Express to handle HTTP requests, manage the database connection, and handle server-side rendering of the HTML pages.

In addition to the standard features provided by Express, we also use several middleware packages to add extra functionality to the application. For example, we use the body-parser middleware to parse incoming request bodies, the express-session middleware to handle user sessions, and the connect-flash middleware to display flash messages to the user. These middleware packages help us to simplify the development process and make it easier to build complex web applications.

Frontend:

The frontend of the website is built using EJS (Embedded JavaScript) as the view engine and Tailwind CSS as the stylesheet. EJS is a simple templating language that allows us to generate HTML pages dynamically. We use Tailwind CSS to style the HTML pages and make them responsive on different screen sizes. The combination of EJS and Tailwind CSS makes it easy to develop dynamic and user-friendly web pages.

User Roles:

The website has three user roles: Student, Teacher, and Admin. Each user has a unique profile that contains all necessary information based on their role.

Student:

The student can view their class/course details and all relevant information, such as their schedule, results, and notices.

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Teacher:

The teacher can view their subject, position, and all relevant information, such as their schedule and notices.

Admin:

The admin can edit the database and validate students or teachers. The purpose of the Admin role is to manage the website and ensure that it is functioning properly. The Admin role has access to the Admin Panel, which provides an easy way to customise the website according to their needs, such as adding new pages, updating content, or changing the layout. This helps to ensure that the website remains up-to-date and relevant to the needs of its users.

Admin Panel:

The Admin Panel is a key feature of the website that provides an easy way for the admin to customise the website without requiring any knowledge of coding. The admin can create and edit pages using a rich text editor and style the pages using Tailwind CSS. The Admin Panel is accessible only to the admin and is designed to simplify the customization process for the website.

Conclusion:

The purpose of this project is to develop a school website that is easy to use, maintain, and update. The website is designed to provide all necessary information to students and teachers, such as class/course details, schedules, results, notices, and other relevant information. The Admin role has access to the Admin Panel, which enables them to manage the website and ensure that it is up-to-date and relevant to the needs of its users. By using modern web development technologies, we have created a dynamic and user-friendly website that requires minimal maintenance.

Reference -

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