

# Major Project Presentation ON SCHOOL ADMIN SYSTEM



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**Session 2024–2025**

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# Team Introduction

**Team Name:** TechTitans

We are a team of three members:

- **Member 1:** Pulkit Baid (21ESKIT088)
- **Member 2:** Lokesh Kumar Saini (21ESKIT065)
- **Member 3:** Priyal Jangid (21ESKIT086)

# Introduction

- A centralized solution for managing student records, staff details, fee management, attendance, and scheduling.
- Aim: To improve efficiency and reduce manual errors.
- Inspiration: The need for digital transformation in educational management.

# Challenges

- Challenges faced in traditional school management:
  - Manual record keeping leads to errors.
  - Difficulties in fee collection and tracking.
  - Limited accessibility for parents and staff.
  - Inefficient attendance management.

# Objective

- Develop a system to:
  - Automate and digitize school management tasks.
  - Provide a user-friendly interface for all stakeholders.
  - Enhance accessibility to student data and records.
  - Integrate real-time reporting and analytics.

# Literature Survey

## 1 Key Challenges in School Administration:

- Limited use of digital platforms in smaller institutions.
- Existing tools are expensive and lack customization.
- Manual systems prone to inefficiencies.

## 2 Insights from Existing Solutions:

- Studies show the importance of automation for resource management and scalability.
- Need for secure, user-friendly systems for school environments.

# Research Gap

- Lack of affordable and scalable school management solutions.
- Minimal integration of attendance tracking, fee management, and performance analytics in one system.
- Limited support for real-time access by students and parents.



# Proposed Work

## 1 Modules:

- Student and Staff Records
- Fee Management System
- Attendance Tracker
- Timetable Scheduler
- Analytics and Reporting

## 2 Key Features:

- Role-based access (Admin, Teacher, Parent, Student).
- Real-time data updates.
- Secure login and data encryption.

# Tools and Technology

## 1 Frontend Development:

- React.js: A popular JavaScript library for building dynamic and responsive user interfaces.
- HTML5 and CSS3: Standard technologies for structuring and styling web pages.
- Bootstrap/Tailwind CSS: A front-end framework for designing responsive and mobile-first websites.
- Material-UI: It is an open-source React component library that implements Google's Material Design.

## 2 Backend Development:

- Express.js (with Node.js): Express is a web application framework for Node.js. It handles routing, API requests, and backend logic. Node.js allows JavaScript to run on the server.

## 3 Database Management:

- MongoDB: MongoDB is a NoSQL database that stores data in flexible, JSON-like documents (called BSON). Unlike traditional relational databases (like MySQL or PostgreSQL), MongoDB does not use tables or rows. will be used for storing and managing application data.

# Tools and Technology

## 4 APIs and Communication:

- RESTful APIs: REST (Representational State Transfer) will be used to define the communication between the frontend (React) and backend (MongoDB).

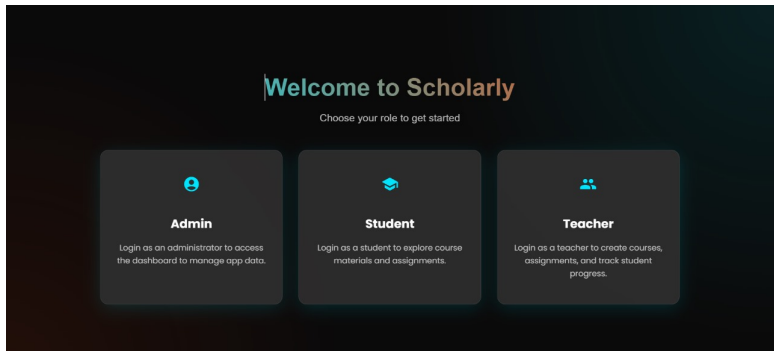
## 5 Testing Tools:

- Selenium: A tool for automating browser testing. It will be used to perform UI testing to ensure that the system behaves as expected for users.
- Postman: Postman is an API (Application Programming Interface) development tool which helps to build, test and modify APIs.

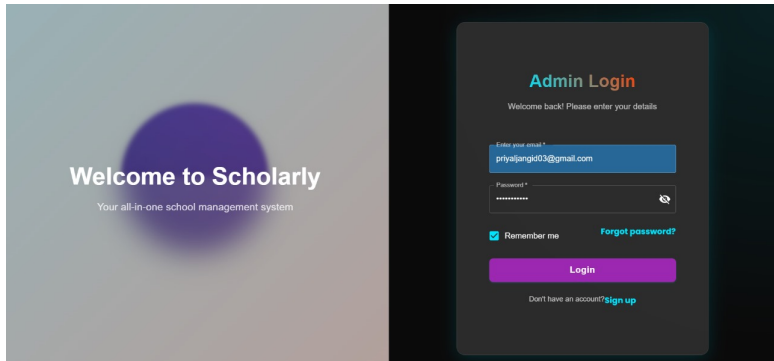
## 6 Project Management and Collaboration Tools:

- Slack / Microsoft Teams: For team communication and collaboration during the development process.

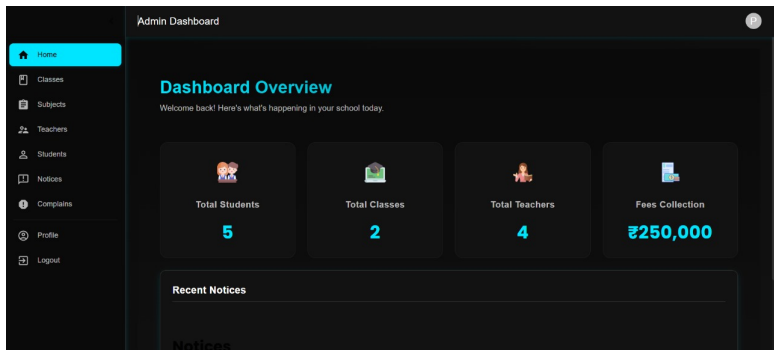
# Project Screenshot



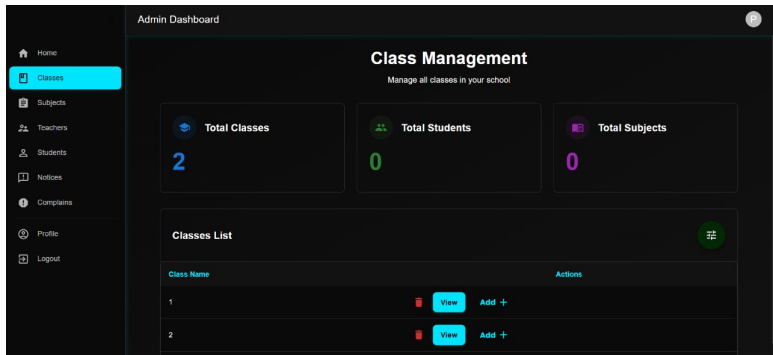
# Project Screenshot





# Project Screenshot



# Project Screenshot



The screenshot displays an 'Admin Dashboard' with a dark theme. On the left is a sidebar menu with options: Home, Classes (highlighted in red), Subjects, Teachers, Students, Notices, Complaints, Profile, and Logout. The main content area is titled 'Class Management' with the subtitle 'Manage all classes in your school'. It features three summary cards: 'Total Classes' with a value of 2, 'Total Students' with a value of 0, and 'Total Subjects' with a value of 0. Below these is a 'Classes List' table with two rows. Each row has a 'Class Name' column and an 'Actions' column containing a trash icon, a 'View' button, and an 'Add +' button.

Class Name	Actions
1	 <a href="#">View</a> <a href="#">Add +</a>
2	 <a href="#">View</a> <a href="#">Add +</a>

# Project Screenshot

The screenshot shows an Admin Dashboard with a sidebar on the left containing navigation links: Home, Classes, Subjects (highlighted), Teachers, Students, Notices, Complaints, Profile, and Logout. The main content area is titled 'Subject Management' with the subtitle 'Manage all subjects across your school'. It features three summary cards: 'Total Subjects' (10), 'Classes' (2), and 'Total Sessions' (880). Below these is a 'Subjects List' table with columns for Subject Name, Sessions, Class, and Actions. The table lists English, Maths, and Science, each with 120 sessions and 1 class, and a 'View' button in the Actions column. A search icon is visible in the top right of the Subjects List section.

Admin Dashboard

## Subject Management

Manage all subjects across your school

**Total Subjects**

10

**Classes**

2

**Total Sessions**

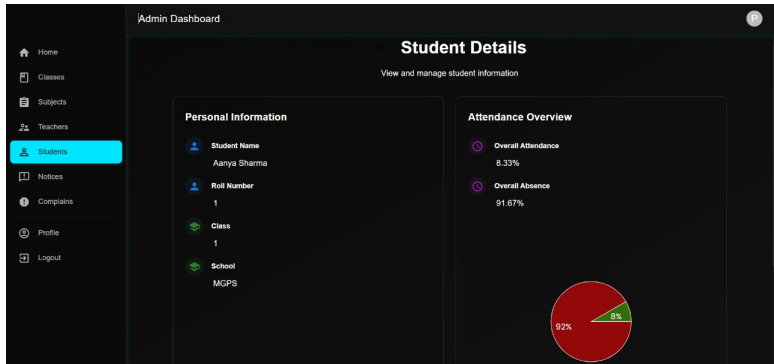
880

### Subjects List

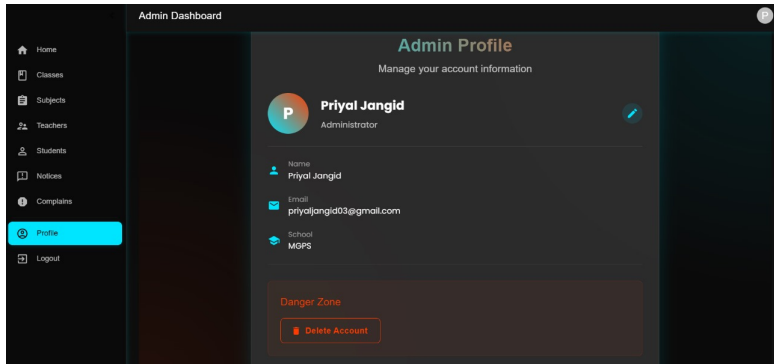
Subject Name	Sessions	Class	Actions
English	120	1	<a href="#">View</a>
Maths	120	1	<a href="#">View</a>
Science	120	1	<a href="#">View</a>



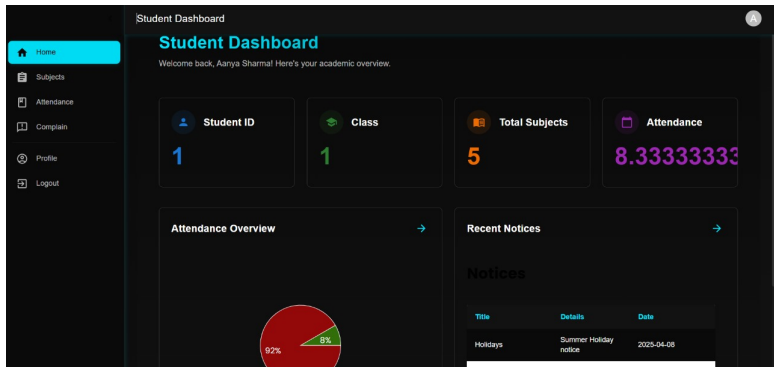
# Project Screenshot



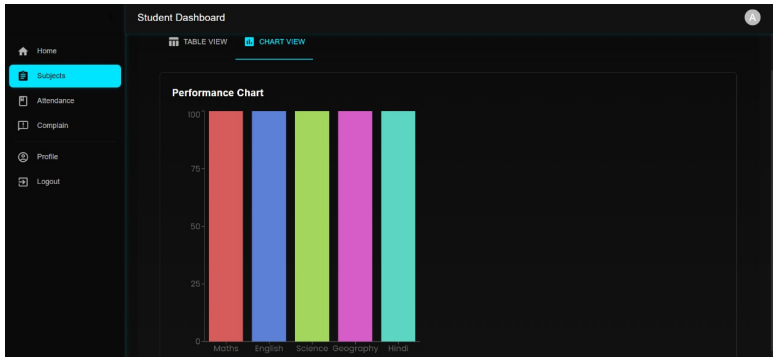
# Project Screenshot



# Project Screenshot



# Project Screenshot



# Project Screenshot

The screenshot displays a 'Student Dashboard' with a sidebar navigation menu on the left. The menu includes 'Home', 'Subjects', 'Attendance' (highlighted in blue), 'Complain', 'Profile', and 'Logout'. The main content area is titled 'Student Dashboard' and contains the instruction 'View your attendance records and performance across all subjects'. Below this, there is a section titled 'Attendance Records' which contains a table with the following data:

Subject	Present	Total Sessions	Attendance Percentage	Actions
English	10	120	8.33%	<a href="#">^ DETAILS</a>

Below the table is an 'Attendance Details' section with a table showing individual attendance records:

Date	Status
2025-04-08	<a href="#">Present</a>
2025-04-01	<a href="#">Present</a>
2025-04-02	<a href="#">Present</a>

# Expected Outcome

The School Administration System is expected to deliver the following outcomes upon successful implementation:

- A centralized platform for managing school operations efficiently.
- Reduced manual errors and time consumption.
- Enhanced data security and privacy.
- Easy scalability and adaptability for schools of all sizes.
- A cost-effective solution compared to existing systems.

Thank you!