COLEGIO DE MONTALBAN
INSTITUTE OF COMPUTER STUDIES

Software Design Proposal - Learning Management System for Colegio de Montalban portal

1. **Background**

   With the increasing rate of technology integration in education, improved approaches to learning are required. Unfortunately, a lot of the current systems are unable to meet the changing demands of educators and students in the modern digital environment. A thorough learning management system that meets the particular needs of modern teaching and learning situations is clearly in demand.

2. **Problem**

   While the school portal provides basic functionalities such as profiles, grades, course enrollment, and schedules, it lacks the robust features required for effective online learning. Educators and students face challenges in managing assignments, communicating, and tracking progress within the current system. As such, there is a pressing need to enhance the school portal with dedicated modules for online learning, enabling educators to create dynamic, interactive, and engaging learning experiences.

   Despite the growing importance of online learning, our school portal is limited in its ability to facilitate interactive and engaging learning experiences for students and teachers. The absence of dedicated Learning Management System (LMS) modules within the portal hinders our ability to harness the full potential of digital technologies in education.

   Key Challenges:

   Limited Online Learning Resources: The current school portal primarily provides static information such as grades and schedules, with minimal support for interactive learning resources such as course materials, assignments, and discussions.

Lack of Collaboration Tools: Students and teachers lack dedicated tools for collaboration and communication within the portal, making it difficult to engage in meaningful discussions, share resources, and provide feedback on assignments.

Inefficient Assignment Management: Manual assignment submission and grading processes are time-consuming and prone to errors, hindering the efficiency of teachers and limiting timely feedback for students.

Accessibility and Flexibility: The lack of online learning capabilities within the portal restricts access to education for students who require flexible learning options due to factors such as distance, disabilities, or scheduling conflicts.

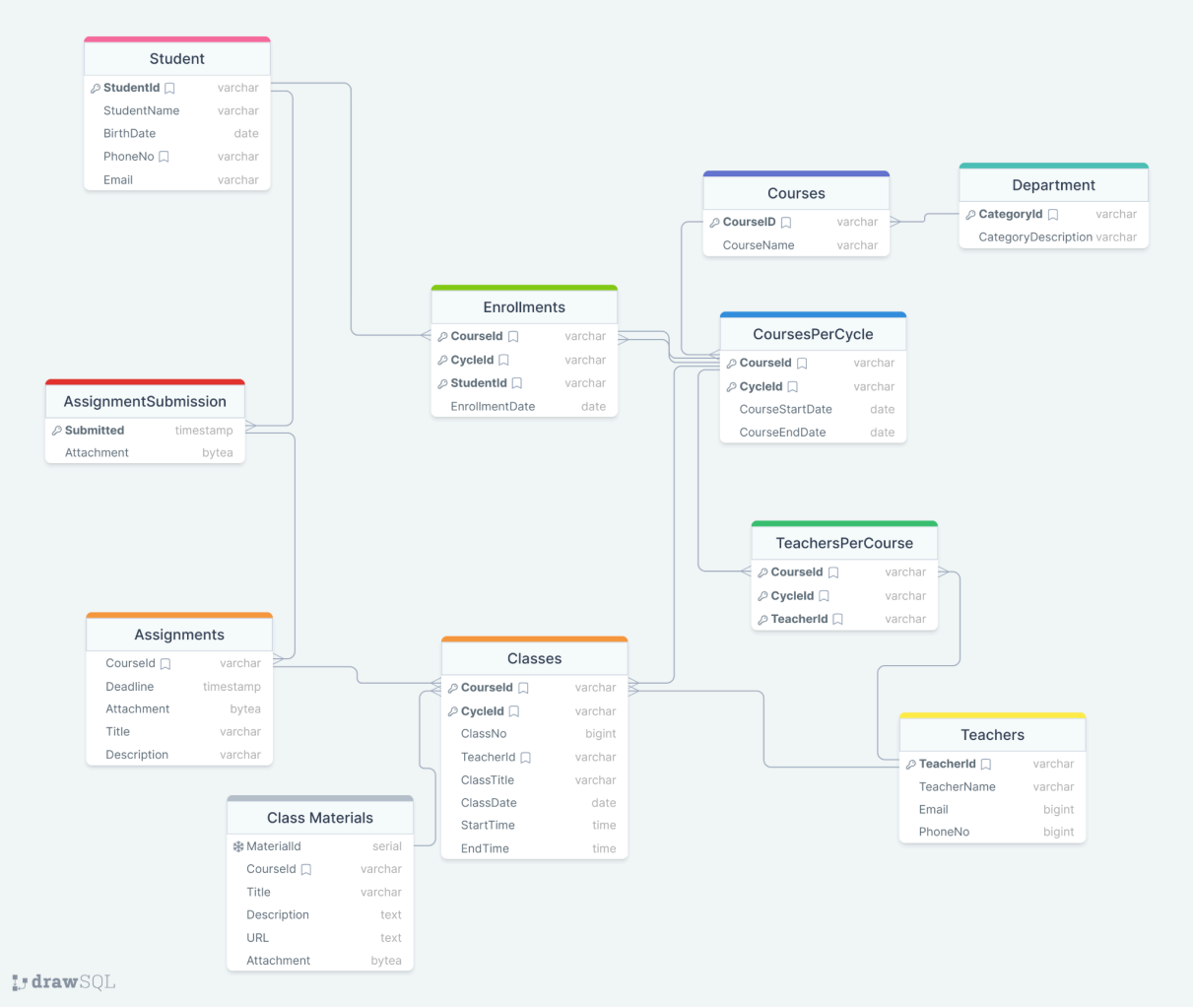
Scalability and Future-Readiness: As the demand for online learning continues to grow, our school portal must be equipped with scalable and adaptable features to meet the evolving needs of students and teachers in the digital age.

3. **Objectives**
    - Enhance communication and collaboration between educators and students.
    - Streamline assignment creation, submission, and grading processes.
    - Provide real-time feedback and performance tracking for students.
    - Promote personalized learning experiences tailored to individual student needs.
    - Ensure data privacy and security for all users.
    - Support seamless integration with existing educational tools and platforms.
4. **Features**
    - User authentication and role-based access control to ensure secure access to resources.
    - Course creation and enrollment management to facilitate organization and administration of classes.
    - Assignment creation, submission, and grading functionalities with support for various file formats.
    - Announcement and messaging system for communication between educators and students.

- Discussion forums and collaborative workspaces to encourage peer interaction and knowledge sharing.
- Calendar integration for scheduling classes, assignments, and deadlines.
- Gradebook and progress tracking tools to monitor student performance and learning outcomes.
- Customizable themes and branding options to reflect the identity of educational institutions.
- Mobile compatibility for access on smartphones and tablets, ensuring flexibility and accessibility.

5. Initial design

The initial design of the classroom management system will prioritize user experience and functionality. A responsive frontend interface will be developed using HTML/CSS/JavaScript, providing intuitive navigation and seamless interaction across devices. The backend will be powered by Django, leveraging its robust framework for server-side logic and data management. PostgreSQL will be utilized as the database management system, ensuring scalability, reliability, and data security. The system will undergo rigorous testing and iteration to ensure alignment with user requirements and industry standards.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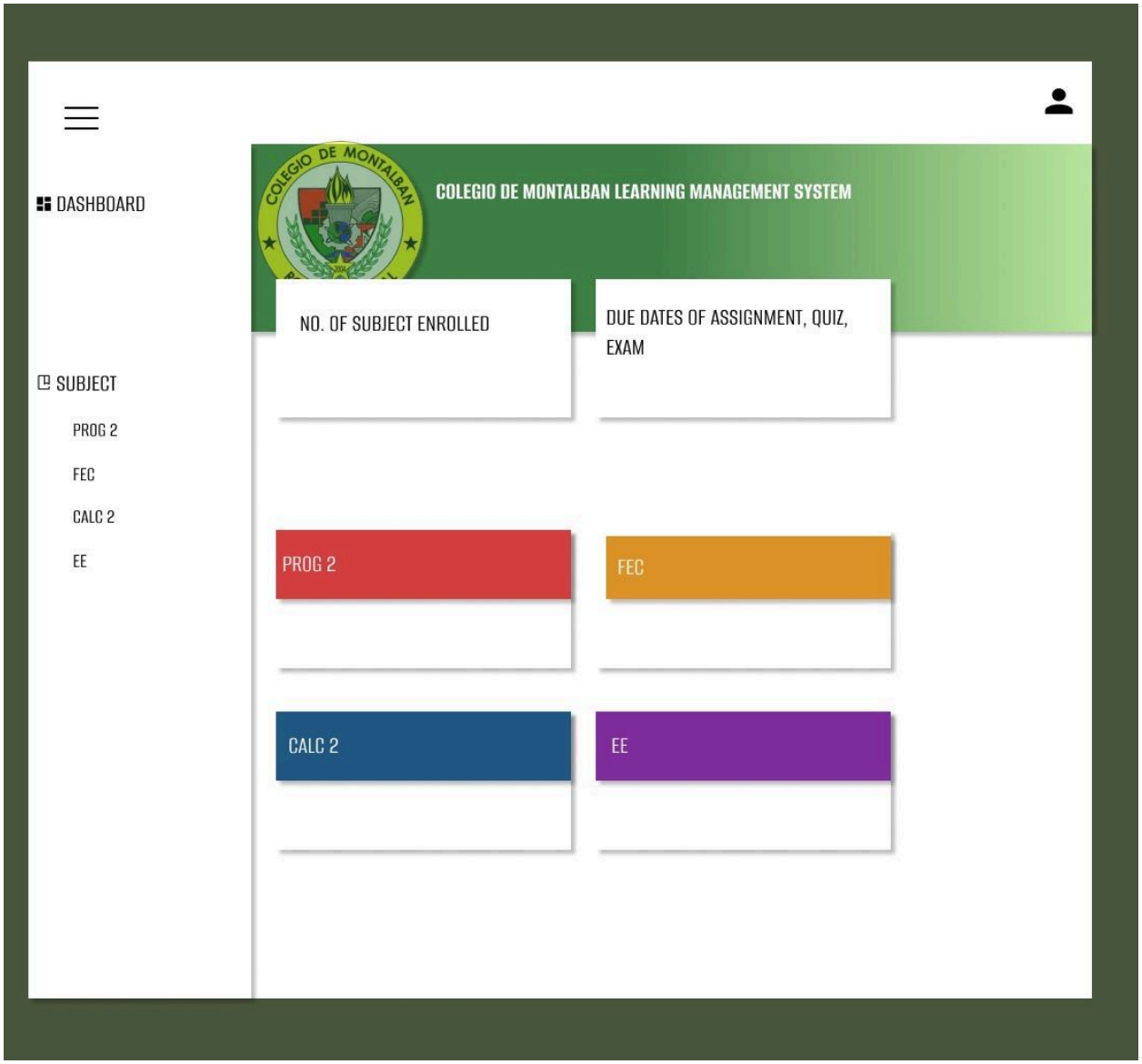
DASHBOARD
SUBJECT
PROG 2
FEC
CALC 2
EE
COLEGIO DE MONTALBAN LEARNING MANAGEMENT SYSTEM
NO. OF SUBJECT ENROLLED
DUE DATES OF ASSIGNMENT, QUIZ, EXAM
PROG 2
FEC
CALC 2
EE