

Project 2: Enhanced Learning Management System (LMS)

Objective: Develop an LMS with multiple roles, including instructors, students, and sponsors.

Roles:

- **Admin:** Oversee platform operations.
- **Instructor:** Manage courses and assessments.
- **Student:** Enroll in courses and complete assessments.
- **Sponsor:** Fund students and track their progress.

Features Included:

1. **DB Design:**
 - Design a schema on your own with your research.
2. **CRUD:**
 - Make CRUD operations based on database design.
3. **Proper Comments:**
 - Ensure all code includes clear explanations and documentation.
4. **Data Filtering and Searching:**
 - Students can search for courses by name, instructor, or difficulty level.
 - Sponsors can filter students by status or progress.
5. **Data Pagination:**
 - Paginate course lists, student records, and sponsorship details.
6. **Authentication:**
 - Role-based authentication using Django Groups.
7. **Analytics:**
 - Admin dashboard: Display metrics like total users, active courses, and student enrollments.
 - Sponsor dashboard: Show sponsorship impact, student progress, and fund utilization.
8. **Emailing:**
 - Notify students about course deadlines and assessment results.
 - Notify sponsors about progress reports.
9. **Notification:**
 - Alerts for instructors on course completion rates and student engagement.
 - Notifications for students about new assignments and due dates.
10. **Payment (Optional):**
 - Allow sponsors to fund courses or students via payment gateways.
11. **Deployed (Optional):**
 - Host the application on free source.
12. **Testing and Documentation:**
 - Provide detailed API tests and user/developer documentation.