

Course Project Report: Online Learning Platform

Course: DA 215: Database Lab

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Project Overview

The objective of this project was to design and implement a mini version of an online learning platform (similar to Coursera or Edx) using core database concepts. The system includes functionalities for students, instructors, course management, assessments, and interactions.

Objectives Achieved

1. Student Registration and Payment Module

- Implemented secure student sign-up with unique ID and payment status verification.
- Stored user details and payment info in the database.

2. Instructor Registration

- Developed an instructor onboarding system with credential input and verification.

3. Content Management by Instructors

- Instructors can upload video links, add files/text-based resources, and create exams.
- File and metadata are stored in organized schema-linked tables.

4. Course Enrollment and Interaction for Students

- Students can browse courses, register, access video lectures, and appear for exams.
- All activity is logged and tied to student IDs for traceability.

5. Completion Certificate Generation

- Automated certificate generation upon satisfying course completion criteria.

6. Discussion Forum per Course

- Created individual discussion boards allowing students and instructors to post and reply.

7. Centralized Instructor Announcements

- Built a dashboard for instructors to post announcements visible to all enrolled students.

8. Course Recommendation System

- Implemented basic logic to suggest new courses based on past activity/enrollments.

9. Flexible Exam System

- Allowed multiple attempts per exam.
- Highest/latest marks stored as per student selection or default policy.

10. Additional Feature: Admin Dashboard

- Created an admin panel for system overview, user management, and activity analytics.