



Project Proposal on Web Engineering

Project Title : Online Education Website

Course Code: CSTE 3206

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Abstract

Our online education platform streamlines education with roles for admins, teachers, and students. Admins manage users, log trails, and system data. Teachers create classes, upload materials, and communicate. Students sign up, engage with quizzes, download materials, and connect with peers and teachers, fostering a collaborative and efficient virtual learning environment.

Motivations:

- Empowering Education Accessibility
- Efficient User Management
- Transparency through Log Trails
- Empowering Educators
- Interactive Learning Environment
- Flexibility for Students

Major Features:

- Admin, Teacher, Student roles for tailored access and functionality.
- User management, log trail monitoring, and system data oversight.
- Class creation, material uploads, and seamless communication tools.
- Quizzes, material downloads, and peer/teacher interaction features.

Techonology Stack:

- HTML, CSS, JAVASCRIPT(Frontend)
- PHP (Backend as a Service)
- MySQL (Relational Database)

Tools:

- VS Code (as editor)
- Git and Github (For version control)
- Xampp (Control panel)
- Browser (Google Chrome)

Modules

Modules details

- User Management Module
- Admin Dashboard Module
- Teacher Dashboard Module
- Student Dashboard Module
- Quizzes and Assessments Module

Personalized features to enhance user experience

- User-Centric Content
- Machine Learning Algorithms
- Course Recommendations
- Real-Time Updates
- Interactive Notifications
- Progress Tracking
- Feedback Integration
- Privacy Controls
- Integration with Other Modules
- Continuous Improvement

Authentication System Description:

We will implement a seamless and secure authentication system designed to simplify the onboarding process for students. Instead of relying on external credentials, students are issued a unique Student ID during the admission process. This Student ID serves as the key for accessing the online education platform. We wouldn't depend on any paid API.

E-R diagram:

The system consists of 8 entities:

Admin, Teacher, Student, Assignment, Assignment Answer, Class, Department, Class Quiz.

Admin : admin, admin_id, username, password

Teacher : teacher, teacher_id, username, password, department_id, about

Student: student_id, class_id, username, password, status

Assignment : assignment , assignment_id , teacher_id, class_id

Assignment Answer: assignment_id, student assignment id , student_id,

Class : class_id , class, class_name

Department : department_id

Class Quiz : class_quiz_id , teacher_class_id, quiz_id

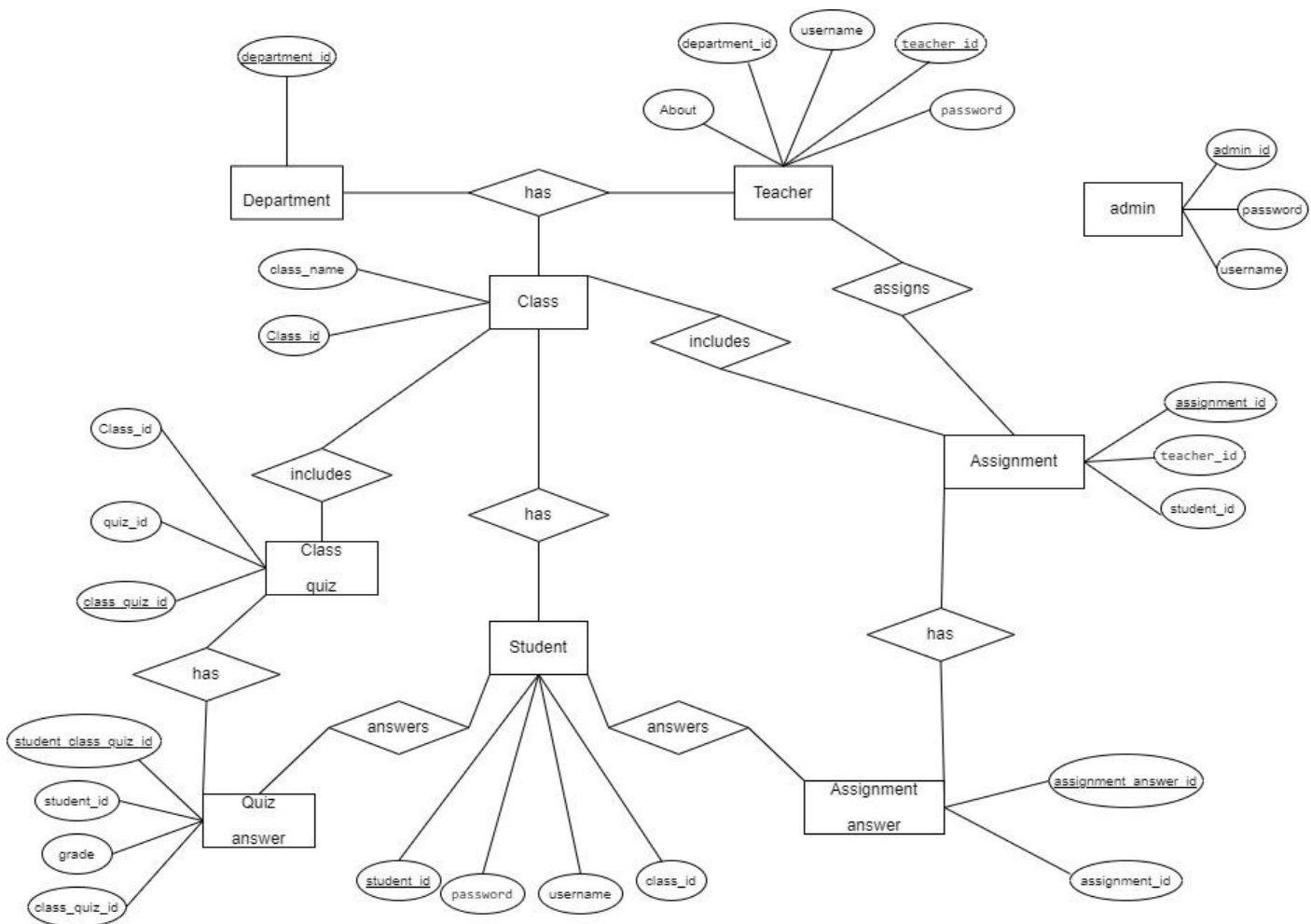


Figure : E-R diagram for Online Education Website

Schema diagram :

Primary key:

admin_id

teacher_id

student_id

assignment_id

student assignment_id

class_id

department_id

class_quiz_id

Foreign key :

Teacher:

- department_id (foreign key referencing department.department_id)

Student:

- class_id (foreign key referencing class.class_id)

Assignment Answer:

- assignment_id (foreign key referencing assignment.assignment_id)
- student_id (foreign key referencing student.student_id)

Assignment:

- teacher_id (foreign key referencing teacher.teacher_id)
- class_id (foreign key referencing class.class_id)

Class Quiz:

- teacher_class_id (foreign key referencing class.class_id)
- quiz_id (foreign key referencing the relevant quiz table)

Quiz Answer:

- class_quiz_id (foreign key referencing class_quiz.class_quiz_id)
- student_id (foreign key referencing student.student_id)

Online Education Website

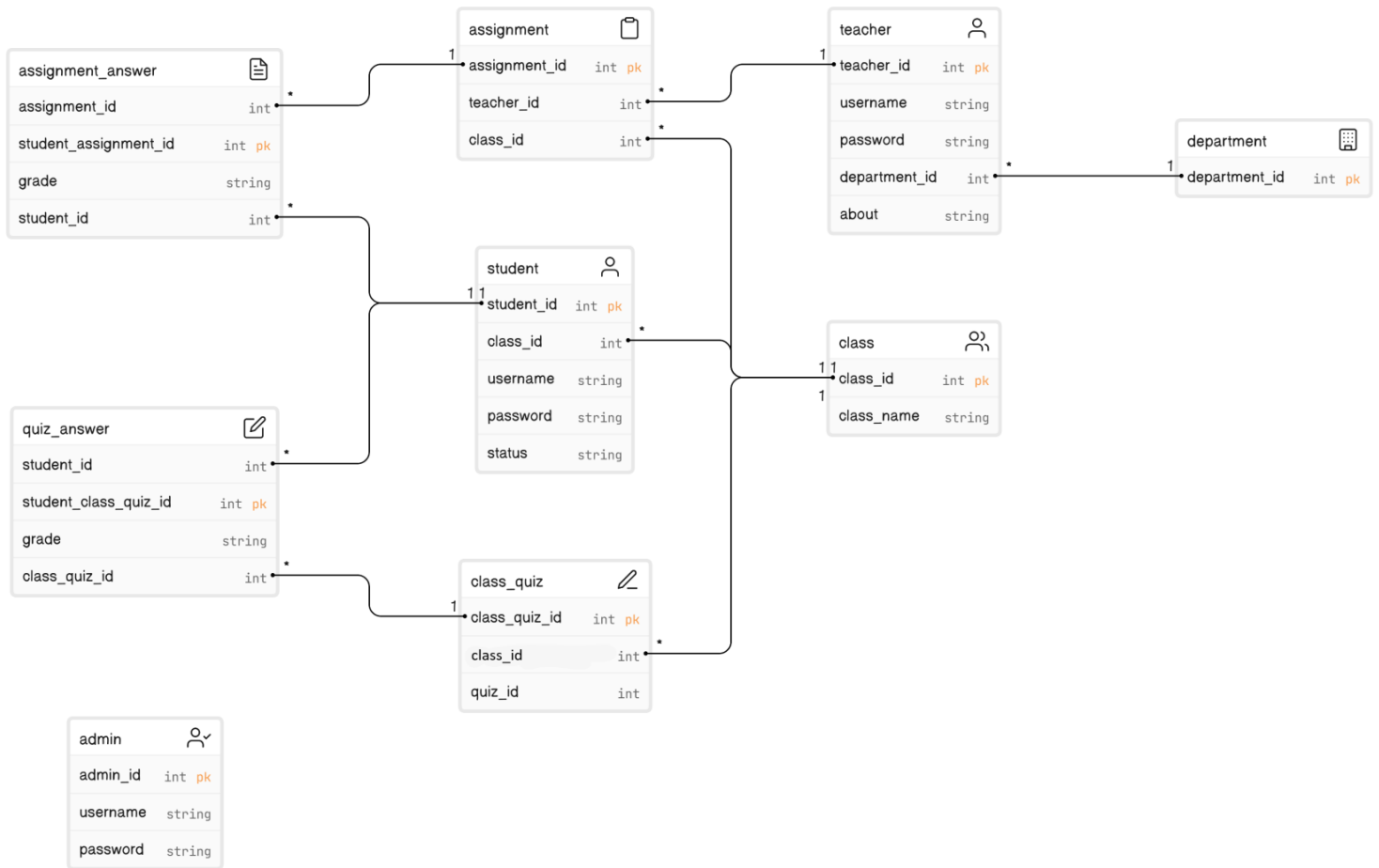


Figure : Schema diagram for Online Education Website

Interaction diagram :

The sequence diagram has mainly a login page under login page there are three user interaction (Admin Dashboard, Teachers' homepage, Students' homepage)

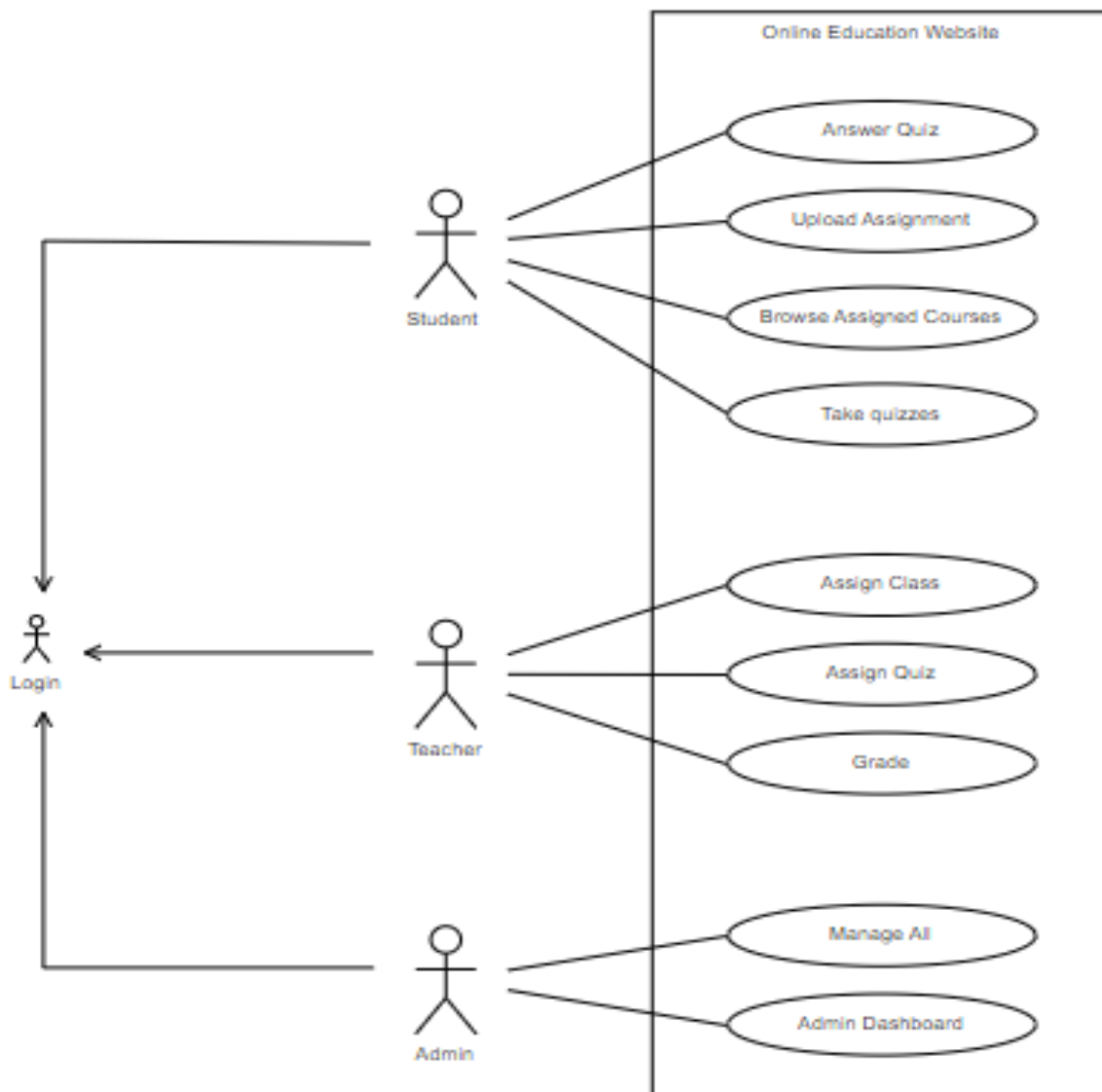


Figure : Interaction diagram for Online Education Website