

Course Management System - Team 12



Motivation

Trainly.io is an alternative to expensive and conventional means of obtaining knowledge. Rather than shelling out thousands of dollars on tuition to college, we, at Trainly.io are offering the knowledge at affordable costs with certification of that knowledge.

System description

Our system offers a platform which can register users, enroll students into courses, track their progress and offer certification on completion, provide faculty members to offer courses and answer students' questions.

Features implemented

- An admin can register a new user on our application.
- An administrator can authenticate both a faculty user and a fellow administrator.
- Based on student's ID, our application provides a categorized list of student's courses, categorized based on currently enrolled, completed, of interest.
- A student user can enroll into a course.
- The application can be used by the student to mark the completion of the course material.

Features implemented contd

- Our application can be used to list completed and incomplete materials in order for a student enrolled in the course.
- If the student has completed all the materials, and had payed for the course, then the student receives a certificate of completion.
- Based on the student ID, the student can obtain their account history.

Additional functionality implemented by our team

- Added a user friendly interface to the given database project.**
- Sanitized user input to protect the database from SQL injection attacks.**
- Secured the passwords in the database via bcrypt algorithm.**
- Listing all the introductory level courses.**

Additional functionality implemented by our team

- List the users transferred by the country.
- List the questions based on the number of likes.
- Quiz question grader.



Additional functionality implemented by our team

- **Average time spent on courses.**
- **List the most curious students.**
- **Quizzes offered as course material (with grading).**

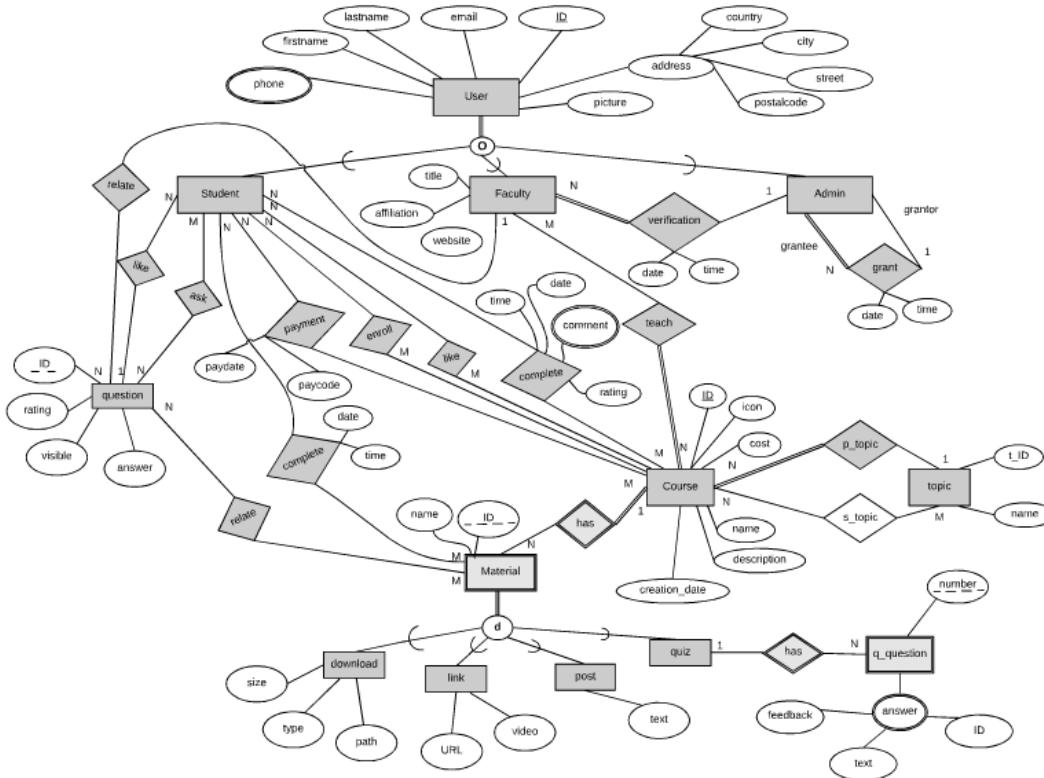
System Architecture

- Database management system being used in this application is SQLite3.**
- We have mainly used jinja v2.8, python, flask-wtf forms for the development of front end of this application.**
- bcrypt library for securing the passwords.**

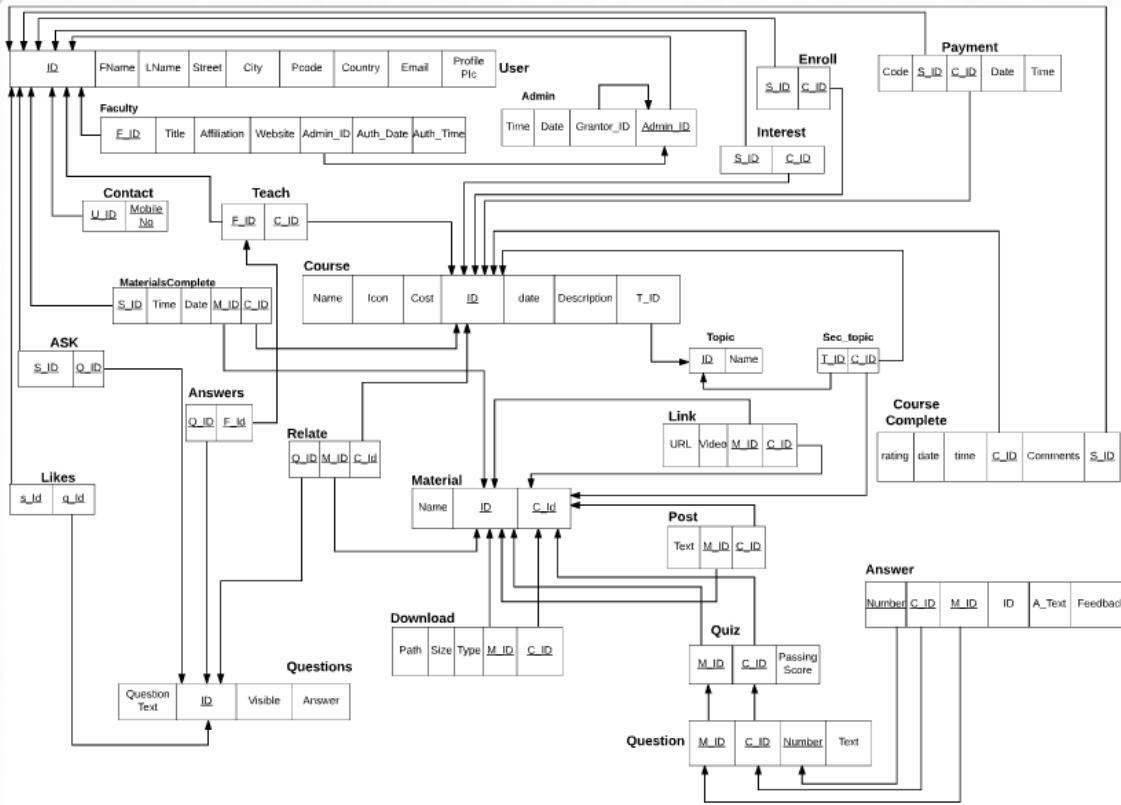
System architecture

- travis for the continuous integration.
- All the libraries and the packages used interact with each other through the Flask web framework.

Database design



Entity Relationship Diagram



Relational model

Source of the data for each table

Each table in the database has been populated with data custom generated to complement the design of our application requirements.

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