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Project Details –

<u>Statement</u> – Quiz Master – V2

It is a multi-user app (one requires an administrator and other users) that acts as an exam preparation site for multiple courses.

<u>Approach</u> – The Q-Fi project is a web-based quiz application designed to help students take quizzes based on their enrolled courses. It utilizes Vue.js for the frontend, Flask for the backend, and SQLite for data storage, ensuring efficient quiz management. The system includes an admin panel for managing courses, subjects, and questions, along with a user panel for students to attempt quizzes and track performance. Authentication and authorization are handled using JWT tokens, ensuring secure access ans used Celery for easy management for schedule tasks. Future enhancements could include real-time tracking, questions, and leaderboard integration for better engagement.

Frameworks and Libraries –

The Q-Fi project leverages several frameworks and libraries to ensure robust functionality:

Flask: A lightweight web framework used for handling API requests, authentication, and database interactions.

Flask-JWT-Extended: Implements JSON Web Token (JWT) authentication for secure user login and access control.
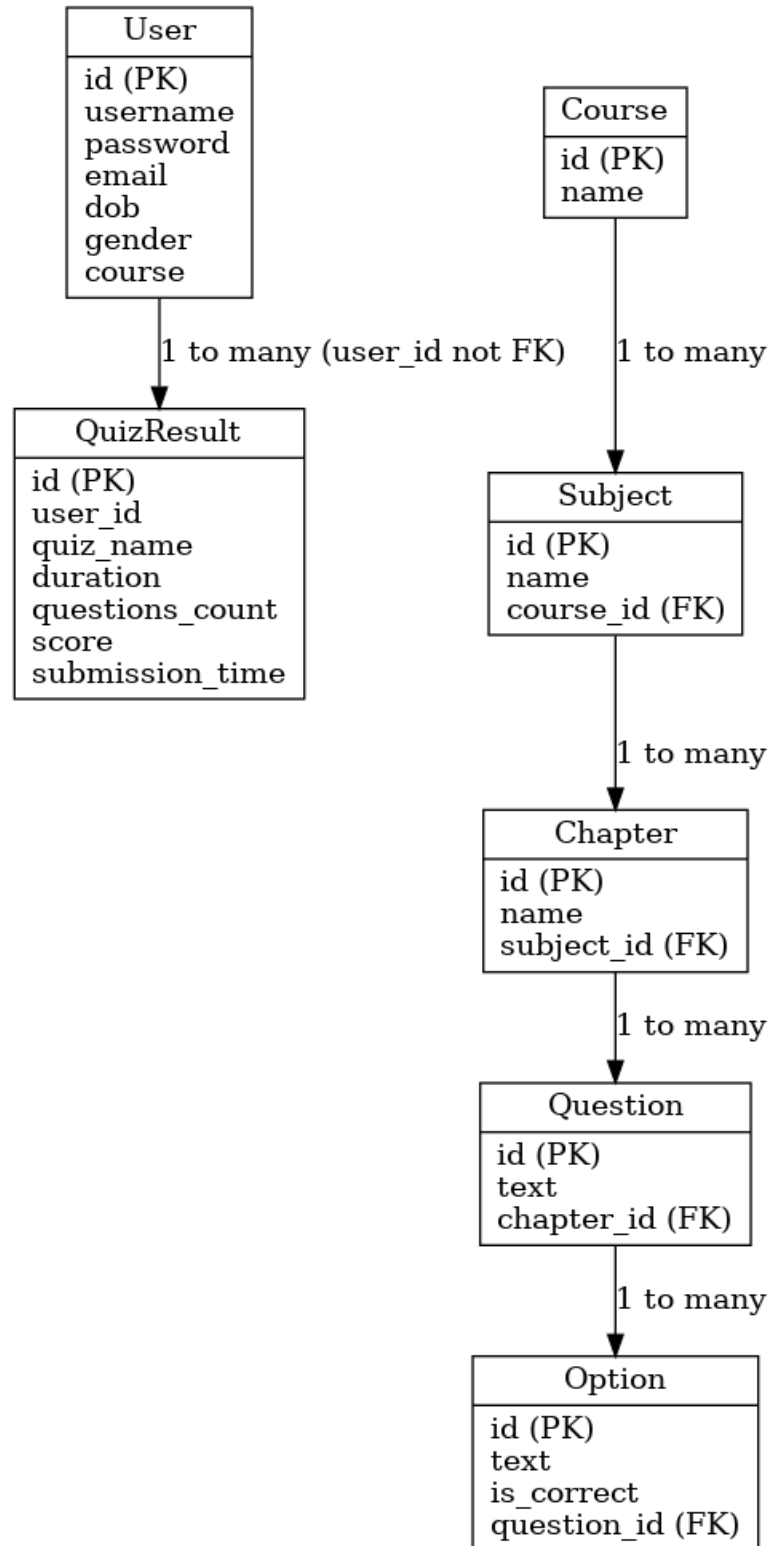
Flask-CORS: Enables Cross-Origin Resource Sharing (CORS) to allow frontend and backend communication.

Flask-SQLAlchemy: Manages database interactions using an ORM with SQLite as the primary storage.

SQLite3: A lightweight database for storing user data, courses, subjects, and quiz-related information.

Smtplib & Email MIME: Handles email notifications, such as password recovery and quiz results.

CSV & io: Supports data export/import functionalities for quizzes and user performance tracking.

User
id (PK)
username
password
email
dob
gender
course

Course
id (PK)
name

1 to many (user_id not FK)

1 to many

QuizResult
id (PK)
user_id
quiz_name
duration
questions_count
score
submission_time

Subject
id (PK)
name
course_id (FK)

1 to many

Chapter
id (PK)
name
subject_id (FK)

1 to many

Question
id (PK)
text
chapter_id (FK)

1 to many

Option
id (PK)
text
is_correct
question_id (FK)

PROJECT DEMONSTRATION VIDEO LINK--

https://drive.google.com/file/d/1ZvAeskBnzptabXo1eZEYrcl45MVd
BEd4/view?usp=sharing