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I am Surendra Prajapat. Currently in the diploma level of the IITM BS Online Degree program. Along with this I am also enrolled in a B.Tech degree program in Electronics and Communication Engineering at CTAE Udaipur. During second semester of my college I came to know about my interest in Data Science and Research, and that time my friend told me about about this program. And After that day there is no looking back. I am so grateful to be a part of this amazing program.

Description

The goal is to create an interactive platform where teacher (admin) can put there chapter-wise and topic-wise quizzes for the students across various subjects and students can come there and attempt different different MCQ based quizzes for numerous subjects and chapters.
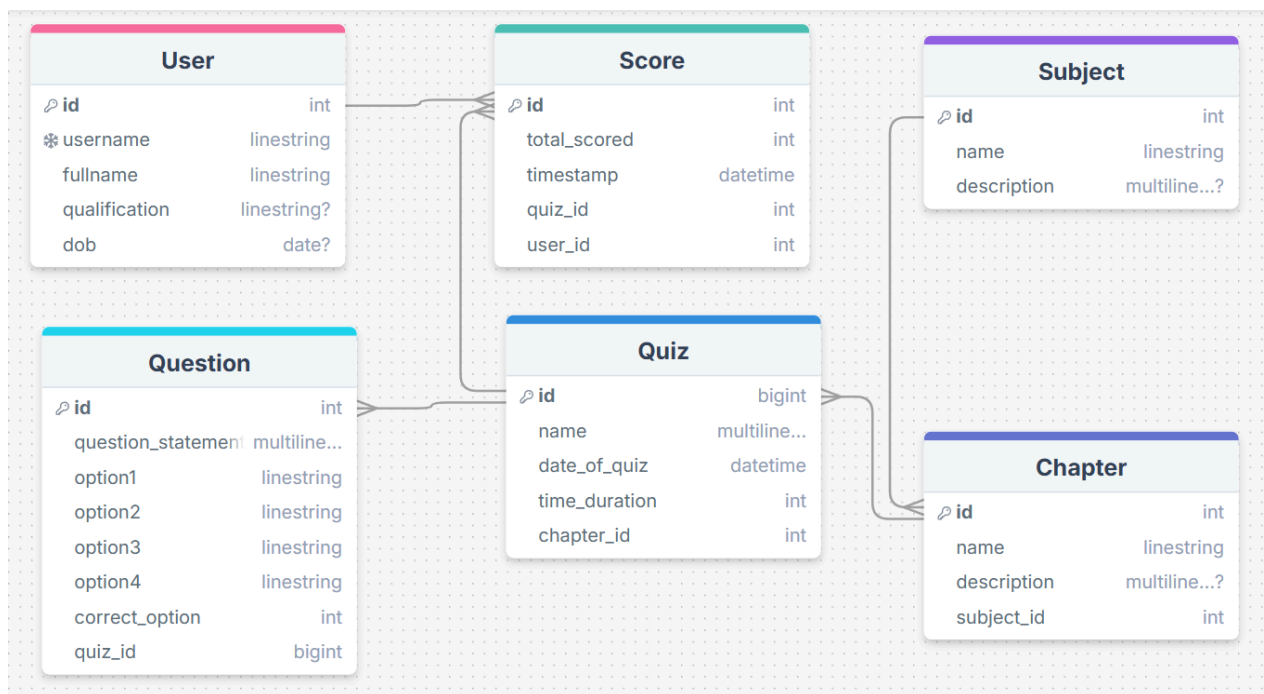
Technologies used

Front-end: Jinja2, HTML, CSS, Js
Database: Sqlite
Back-end: Flask, flask_sqlalchemy, flask_login, dotenv, flask_wtf,

DB Schema Design

API Design

The API provides structured access to quiz-related data using Flask and follows RESTful principles and returns JSON responses.
`/api/subject` -> Retrieves subjects from the database.

`/api/quiz` -> Retrieves all available quizzes.

`/api/score` -> admin, fetches all user scores, and regular user, fetches only their own quiz scores.

Architecture and Features

```
quiz_master_22f1001907/
├── app/
│   ├── static/
│   │   └── css/
│   │       └── style.css
│   ├── templates/
│   │   ├── admin/
│   │   │   ├── add_chapter.html
│   │   │   ├── add_question.html
│   │   │   ├── add_quiz.html
│   │   │   ├── add_subject.html
│   │   │   ├── admin_view_chapter.html
│   │   │   ├── admin_view_quiz.html
│   │   │   ├── admin_view_result.html
│   │   │   ├── dashboard.html
│   │   │   ├── edit_chapter.html
│   │   │   ├── edit_question.html
│   │   │   ├── edit_quiz.html
│   │   │   ├── edit_subject.html
│   │   │   ├── manage_chapters.html
│   │   │   ├── manage_questions.html
│   │   │   ├── manage_quizzes.html
│   │   │   ├── manage_subjects.html
│   │   │   └── manage_users.html
│   │   ├── all_quiz.html
│   │   ├── attempt_quiz.html
│   │   ├── dashboard.html
│   │   ├── home.html
│   │   ├── layout.html
│   │   ├── login.html
│   │   ├── quiz_result.html
│   │   ├── register.html
│   │   ├── results.html
│   │   ├── view_chapters.html
│   │   └── view_quizzes.html
│   ├── __init__.py
│   ├── forms.py
│   ├── models.py
│   └── routes.py
├── .gitignore
├── requirements.txt
└── run.py
```

User Authentication – Secure login with password hashing.

Quiz Management – Create, update, delete and attempt quizzes.

Automatic Timer – Quiz auto-submits when time runs out.

Result Tracking – Users can view scores and progress summary.

Data Visualization – Charts for quiz performance analytics for admin and users.

Video

https://drive.google.com/file/d/1oaOChBi6f0KvEP1kCqTuhUcngBhYMvD-/view?usp=sharing