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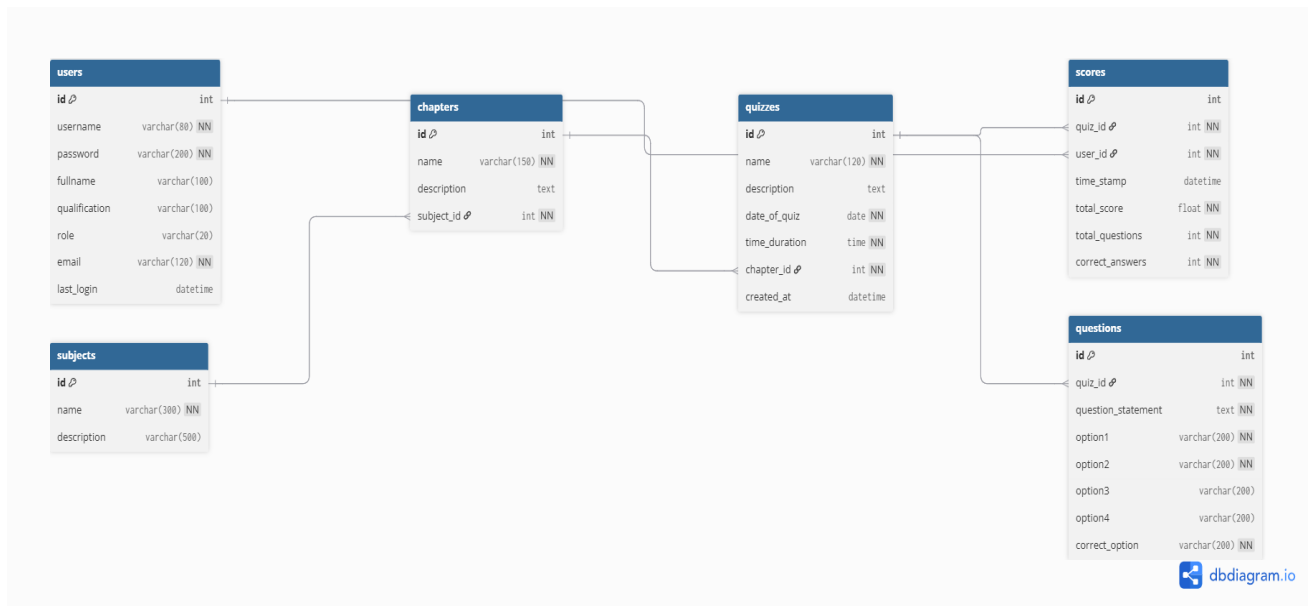Email: 21f2000338@ds.study.iitm.ac.in

Description

This project implements a full-stack quiz management system that supports user and admin roles, enabling quiz creation, participation, and performance tracking. The system features scheduled reports, secure authentication, and content management.

Technologies Used

- **Backend**: Python (Flask), SQLAlchemy, Flask-Mail, Flask-Login, Celery

- **Frontend**: Vue.js (with Axios)

- **Database**: SQLite

- **Task Scheduling**: Celery + Redis

Purpose Behind Technologies

- **Flask**: Lightweight and modular backend framework for API development.

- **Flask-Login**: Handles session-based user authentication and role-based access.

- **Flask-Mail**: Sends performance reports and reminders via email.

- **SQLAlchemy**: ORM for managing relational database interactions efficiently.

- **Celery + Redis**: Handles daily/recurring background tasks like email reminders.

- **Vue.js**: Reactive frontend framework for dynamic dashboards and form-based CRUD operations.

- **SQLite**: Lightweight local DB ideal for fast prototyping and academic applications.

- **Flask (app.py)**: Core backend API logic, authentication, and routing.

- **Frontend (Vue.js)**: Admin dashboard, user interface, and routing logic.

- **Celery & Redis**: Handles asynchronous background tasks like reminders and reports.

- **Flask-Mail**: Manages transactional and scheduled email delivery.

- **SQLAlchemy ORM**: Used for database modeling and relational mappings.

Video Link:
https://drive.google.com/file/d/1j0g6uZlRxdhPHvEpN5nDIbXkHnty2ES3/view?usp=drive_link