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I am a B.Tech student taking this course for supplementary knowledge and qualification.

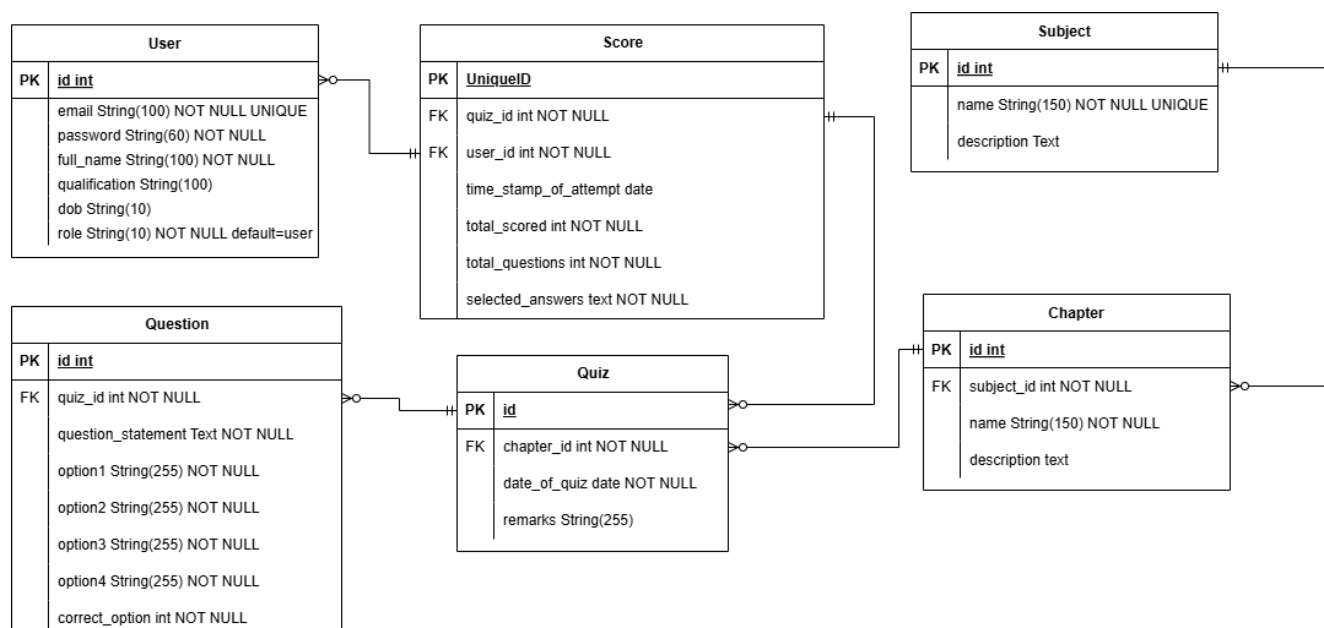
Description

The project requires us to create an application that allows its users to attempt quizzes on various topics and view their scores. One admin exists who manages all features such as creating subjects, chapters and quizzes.

Technologies used

- flask - Framework for building web applications
- jinja2 - For rendering html pages
- os - To define system path for the database
- flask-SQLAlchemy - ORM (Object-Relational Mapper) that allows you to interact with the database using Python classes
- flask-session - A Flask feature used to store user-specific data across multiple requests
- datetime - A Python module for handling dates and times. It is used for setting quiz dates and tracking timestamps
- JSON - to store and retrieve user-selected answers

DB Schema Design



API Design

No external APIs were used

Description of routes:

- `"/register"` - Registration page for users
- `"/login"` - Login page for admin and users
- `"/logout"` - Logout route
- `"/admin_dashboard"` - Dashboard for admin
- `"/user_dashboard"` - Dashboard for users
- `"/admin/subjects"` - Subject management page for admin
- `"/admin/subjects/delete/<int:subject_id>"` - Subject deletion route for admin
- `"/admin/chapters/<int:subject_id>"` - Chapter management page for admin
- `"/admin/chapters/delete/<int:chapter_id>"` - Chapter deletion route for admin
- `"/admin/quizzes/<int:chapter_id>"` - Quiz management page for admin
- `"/admin/quizzes/delete/<int:quiz_id>"` - Quiz deletion route for admin
- `"/admin/questions/<int:quiz_id>"` - Question management page for admin
- `"/admin/questions/delete/<int:question_id>"` - Question deletion route for admin
- `"/admin/subjects/edit/<int:subject_id>"` - Subject edit page for admin
- `"/admin/chapters/edit/<int:chapter_id>"` - Chapter edit page for admin
- `"/admin/quizzes/edit/<int:quiz_id>"` - Quiz edit page for admin
- `"/admin/questions/edit/<int:question_id>"` - Question edit page for admin
- `"/admin/users"` - User summary page for admin
- `"/view_quizzes/<int:subject_id>"` - Quiz view page for users
- `"/attempt_quiz/<int:quiz_id>"` - Quiz attempt page for users
- `"/quiz_results/<int:quiz_id>"` - Quiz result page for users
- `"/quiz_summary"` - Summary of all quizzes for users
- `"/user_search"` - Search page for users
- `"/admin_search"` - Search page for admin
- `"/admin/users/delete/<int:user_id>"` - User deletion route for admin

Architecture and Features

Inside the main folder:

`app.py` - flask application file

`templates` - folder with html templates

`static` - folder with stylesheet

`models` - folder with models file

`instance` - folder with database instance

Main Features:

- CRUD operation on Subjects, Chapters and Quizzes by admin
- Quiz attempt by users

- Results summary for users
- User management for admin
- Search features for admin and users
- Database to store data across sessions

Additional features:

- Confirmations before deletion
- JSON based answer storage

Video

https://drive.google.com/file/d/1GVIF4-BnX_QUPo_IYFtXEBKqEt6l34z3/view?usp=sharing