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DESCRIPTION

This is a Quiz Master app with two types of logins: one for users , that is students who can participate in quizzes and view their scores, and another for admins , quiz creators who can create different subjects and different quizzes in them and manage quizzes for their students .

TECHNOLOGIES USED

Python – The core programming language used to develop the backend logic of the app.
HTML – to define the structure and content of web pages.
Bootstrap – To make the frontend aesthetically appealing and easily navigable .
Jinja – To Fill web pages with various contents like quiz questions and scores.
SQLite –   Database to store quizzes, users, and scores.
Flask – To run the backend and connect everything together.

DB SCHEMA DESIGN :

1. User class
    a. id : integer , primary key
    b. username : string , unique , cannot have null value
    c. password : string , cannot have null value
    d. full_name : string , cannot have null value
    e. qualification : string
    f. dob : date
2. Subject class
    a. id : integer , primary key
    b. name : string , cannot have null values
    c. description : text

3. Chapter class
    a. id : integer , primary key
    b. name : string , cannot have null values
    c. description : text
    d. subject_id: integer , foreign key , cannot have null values
4. Quiz class
    a. id : integer , primary key
    b. chapter_id : integer , foreign key , cannot have null values
    c. date_of_quiz : integer , cannot have null values
    d. time_of_duration : date, cannot have null values
    e. remarks : text
5. Question class
    a. id : integer , primary key
    b. quiz_id : integer ,foreign key , cannot have null values

      c. question_statement : text , cannot have null values
      d. option1 : string , cannot have null values
      e. option2 : string , cannot have null values
      f. option3 : string , cannot have null values
      g. option4 : string , cannot have null values
      h. correct_option : string , cannot have null values

6. Score class
      a. id : integer , primary class
      b. quiz_id : integer , foreignkey , cannot have null values
      c. user_id : integer , foreign key , cannot have null values
      d. time_stamp_of_attempt : default datetime , cannot have null values\
      e. total_scored : integer , cannot have null values

In general all the classes' primary key is id . There is a relationship established between quizzes and chapters and scores and quizzes .

ARCHITECTURE AND FEATURES

Architecture:

As per the recommended flash app structure
1. Contains the database schema and all routes that connect the database to the frontend templates.
2. Templates folder is used to serve the html files
3. Static folder contains the css
4. The instance folder has the database defined
5. env contains the required python libraries used to build the application

Features :

The login pages open to ,

★ **User Login** : Users enter their username and password. If correct, they can access their account.
★ **Admin Login** : Admins enter their username and password to access the admin panel .
★ **Register User** – A new user must enter a unique username, password, full name, qualification, and date of birth to register.

User Dashboard :

● After logging in, users land on the homepage, where they can:

    ○ Select a subject from a list of available subjects.
    ○ Choose a chapter under the selected subject.
    ○ If quizzes are available in the chapter, they will be displayed.
    ○ Users can start a quiz, answer questions, and submit responses.
    ○ Once completed, users can view their scores

Admin Panel :

- Admins have full control over managing quizzes and users. They can:

  - **Create New Subjects:** Add a subject name and description.
  - **Manage Users:** View all registered users, delete users, and access their quiz scores.
  - **Edit or Delete Scores:** Admins can modify quiz scores or remove them if necessary.
  - **Manage Subjects and Chapters:** Add new chapters under existing subjects.
  - **Create Quizzes:** Add quizzes under specific chapters, defining questions, options, and correct answers.

Video Link :

https://drive.google.com/drive/folders/1zGMWszCbb3HCvJkxtxiY_aauTx2ug34z?usp=sharing