PROJECT SUMMARY

Author
SASHAANK JAYAKUMAR
ROLL NO : 23F3001778
EMAIL ID: 23F3001778@STUDY.IITM.AC.IN

Description
This project involves developing a **Quiz Master web application** that allows users to create, manage, and participate in quizzes. The platform will feature user authentication, customizable quiz settings, real-time scoring, and an intuitive interface to enhance the quiz experience.

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, foreign key, 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

ARCHITECTURE AND FEATURES

Architecture: As per the recommended flash app structure

- Contains the database schema and all routes that connect the database to the frontend templates.
- Templates folder is used to serve the html files
- Static folder contains the css
- The instance folder has the database defined
- 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.
- 2.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 DEMONSTRATION LINK:

https://drive.google.com/file/d/1OIlJxmfX0dXRQtJdZ04qD-t9des_tUUl/view?usp=drivesdk