

Author

Akruti Shrikant Pagar

21f2000338

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

Description This project is a quiz portal web application that enables users to register, attempt quizzes, and track their performance. The admin can create and manage quizzes, chapters, and subjects. The system provides analytics, including quiz attempt history and performance summaries, through tables.

Technologies Used

- **Flask:** For backend web development and routing.
- **Jinja2:** For rendering dynamic templates.
- **SQLite:** Database Tables.
- **SQLAlchemy:** For management of database models.
- **Bootstrap:** For responsive front-end design.

User : id (INTEGER, PRIMARY KEY ,AUTOINCREMENT),
username : (String ,UNIQUE ,NOT NULL), password:
(String, NOT NULL), fullname : (String, NOT NULL),
qualification : (String),
dob : (String)

Subject :

id : (INTEGER ,PRIMARY KEY, AUTOINCREMENT)
name: (String , NOT NULL), description : (
String)

Chapter :

```
id : (INTEGER ,PRIMARY KEY ,AUTOINCREMENT),
subject_id : ( INTEGER , NOT NULL),  name : (
String , NOT NULL),  description : ( String)
FOREIGN KEY (subject_id) REFERENCES Subject(id) ON DELETE CASCADE
```

Quiz :

```
Id : ( INTEGER PRIMARY KEY AUTOINCREMENT),
Name: ( String ,NOT NULL),  chapter_id : (
INTEGER NOT NULL),  remarks : ( String),
FOREIGN KEY (chapter_id) REFERENCES Chapter(id) ON DELETE CASCADE
```

Question :

```
id : (INTEGER PRIMARY KEY AUTOINCREMENT,)
quiz_id :( INTEGER ,NOT NULL),  statement : (
String, NOT NULL),  option_1:( String ,NOT
NULL),  option_2 : (String,NOT NULL),
option_3 : ( String , NOT NULL),  option_4 :
(String , NOT NULL),  correct_answer : ( String,
NOT NULL),
FOREIGN KEY (quiz_id) REFERENCES Quiz(id) ON DELETE CASCADE
);
```

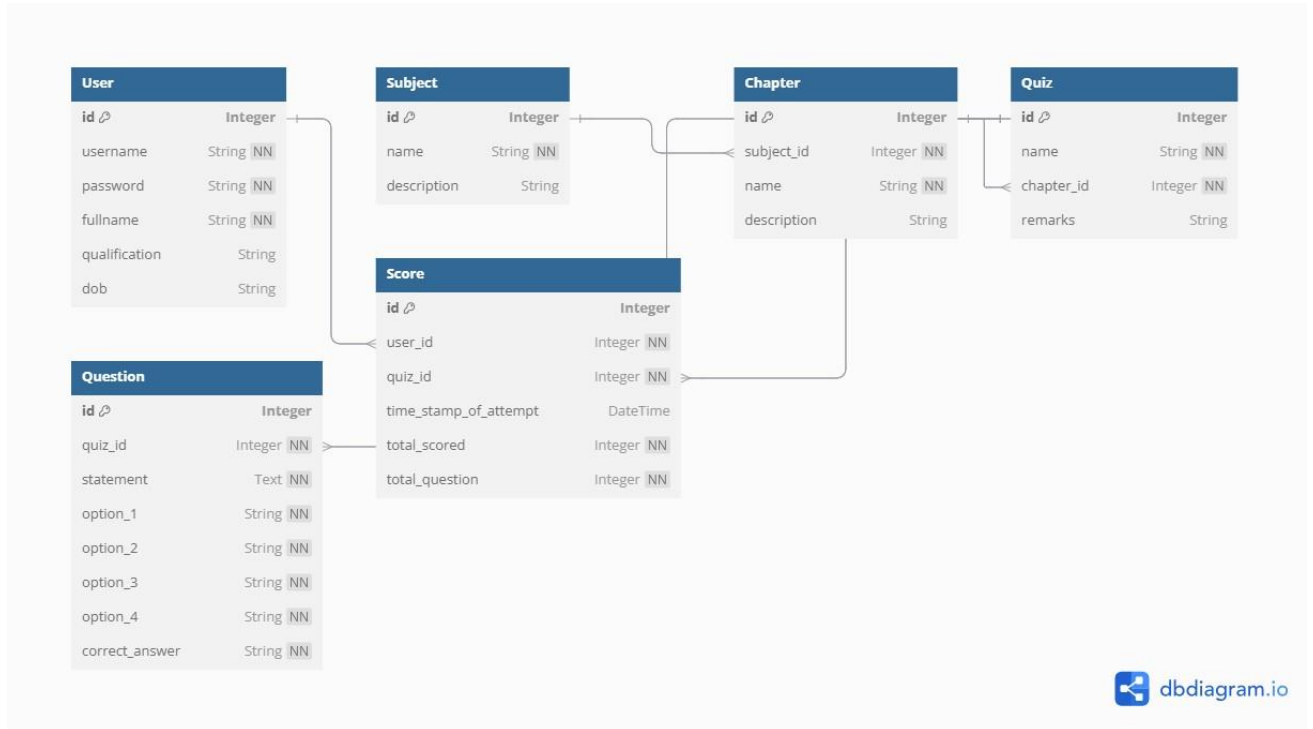
Score :

```
id : (INTEGER , PRIMARY KEY , AUTOINCREMENT),
user_id : ( INTEGER ,NOT NULL),

quiz_id : (INTEGER , NOT NULL),  time_stamp_of_attempt :
(DATETIME DEFAULT CURRENT_TIMESTAMP),  total_scored : ( INTEGER ,
NOT NULL),  total_question: ( INTEGER , NOT NULL),
```

FOREIGN KEY (user_id) REFERENCES User(id) ON DELETE CASCADE,
FOREIGN KEY (quiz_id) REFERENCES Quiz(id) ON DELETE CASCADE

ER Diagram:



Architecture and Features

The project follows an MVC (Model-View-Controller) architecture:

- **Models (models.py)**: Defines database schemas.
- **Controllers** : Handles user requests and logic.

- **Templates (templates/)**: Stores HTML templates rendered using Jinja2.

Features Implemented:

- **User Authentication**: login/logout system.
- **Quiz Management**: Admin can create subjects, chapters, and quizzes.
- **Quiz Attempt & Scoring**: Users can attempt quizzes and receive feedback.
- **Analytics & Reports**: Users can track their scores; admins get an overview of user performances.
- **Tables**: Details about quizzes ,users, scores and attempts .

Video: https://drive.google.com/file/d/1k1XtAjWmd1SuLj_aehc1hqUhcFTLjhcv/view?usp=sharing