**PROJECT DOCUMENTATION**

**Quizzasac is a Java-based quiz application that leverages Swing for its graphical user interface and MySQL for database management. It offers a platform for users to test their knowledge across various subjects through interactive quizzes.**

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**Features**

* **Diverse Subject Quizzes: Access a wide range of quizzes on different topics.**
* **User-Friendly Interface: Engage with an intuitive GUI built using Java Swing.**
* **Score Tracking: Monitor your performance with real-time score updates.**
* **Custom Quiz Creation: Create and share your own quizzes with others.**

**Technologies Used**

* **Java Development Kit (JDK) 18+: Core programming language.**
* **Java Swing: For building the graphical user interface.**
* **MySQL Workbench: Database design and management.**

**Installation**

1. **Clone the Repository: ```bash git clone** [**https://github.com/rajsaumyaa/quizzasac.git**](https://github.com/rajsaumyaa/quizzasac.git)
2. **Set Up the Database:**
   * **Install MySQL Workbench.**
   * **Create a new database named quizzasac\_gui\_db.**
   * **Execute the provided SQL script (quizzasac.sql) to set up the necessary tables and data.**
3. **Configure Database Connection:**
   * **Navigate to the JDBC.java file located in the src/database directory.**
   * **Update the following constants with your MySQL credentials: ```java private static final String DB\_URL = "jdbc:mysql://127.0.0.1:3306/quizzasac\_gui\_db";**
   * **private static final String DB\_USERNAME = "your\_username"; private static final String DB\_PASSWORD = "your\_password";**
4. **Compile and Run the Application:**
   * **Use an Integrated Development Environment (IDE) like IntelliJ IDEA or Eclipse.**
   * **Import the project.**
   * **Build and execute the Main.java file located in the src directory.**

**Usage**

* **Taking a Quiz:**
  + **Launch the application.**
  + **Select a subject from the available options.**
  + **Answer the questions presented.**
  + **Submit your answers to receive your score.**
* **Creating a New Quiz:**
  + **Access the 'Create Quiz' section.**
  + **Enter the quiz title and select the subject category.**
  + **Add questions along with multiple-choice answers, specifying the correct one.**
  + **Save the quiz to make it available for others.**

**Database Schema**

**The application uses a relational database with the following primary tables:**

* **CATEGORY:**
  + **category\_id (Primary Key)**
  + **category\_name**
* **QUESTION:**
  + **question\_id (Primary Key)**
  + **category\_id (Foreign Key referencing CATEGORY)**
  + **question\_text**
* **ANSWER:**
  + **answer\_id (Primary Key)**
  + **question\_id (Foreign Key referencing QUESTION)**
  + **answer\_text**
  + **is\_correct (Boolean indicating if the answer is correct)**

**Ensure that foreign key constraints are appropriately set to maintain referential integrity.**

**Contributing**

**Contributions are welcome! To contribute:**

1. **Fork the repository.**
2. **Create a new branch: ```bash git checkout -b feature-branch-name**
3. **Make your changes.**
4. **Commit the changes: ```bash git commit -m 'Add new feature'**
5. **Push to the branch: ```bash git push origin feature-branch-name**
6. **Submit a pull request detailing your changes.**

**License**

**This project is licensed under the MIT License. See the** [**LICENSE**](https://github.com/rajsaumyaa/quizzasac/blob/master/LICENSE) **file for more information.**

**For any questions or issues, please open an issue in this repository.**