

## **Entities:**

### **1. User:**

- Attributes: UserID, Username, Email, Password, Profile information (e.g., name, avatar), User type (e.g., student, teacher), Subscription status (if applicable).

### **2. Quiz:**

- Attributes: QuizID, Title, Description, Duration, Difficulty level, Creator (UserID of the user who created the quiz), Creation date, Category or subject.

### **3. Question:**

- Attributes: QuestionID, Text, Image (if applicable), Type (e.g., multiple-choice, true/false, open-ended), Difficulty level, Points.

### **4. Answer:**

- Attributes: AnswerID, Text, IsCorrect (a boolean indicating if this is the correct answer), QuestionID (foreign key to associate the answer with a question).

### **5. QuizAttempt:**

- Attributes: AttemptID, UserID, QuizID, Start time, End time, Score.

## **Relationships:**

### **1. User - Quiz (Creator):**

- Users can create quizzes, so there's a one-to-many relationship between User and Quiz. One user can create multiple quizzes.

### **2. User - QuizAttempt:**

- Users can attempt quizzes, so there's a one-to-many relationship between User and QuizAttempt. One user can make multiple quiz attempts.

### **3. Quiz - Question:**

- A quiz consists of multiple questions, so there's a one-to-many relationship between Quiz and Question. One quiz can have many questions.

### **4. Question - Answer:**

- A question can have multiple possible answers, but typically, only one is correct. This is a one-to-many relationship between Question and Answer.

### **5. Quiz - QuizAttempt:**

- Users attempt quizzes, resulting in QuizAttempts. This is a one-to-many relationship between Quiz and QuizAttempt. One quiz can have multiple attempts by different users.

6. **User - Subscription** (if applicable):

- If your application offers premium features or subscriptions, there may be a one-to-one or one-to-many relationship between User and Subscription entities.